SaMED 2ND

INTERNATIONAL MEDICAL STUDENTS CONGRESS SARAJEVO 2016

ABSTRACT BOOK

4th of February – 7th of February

Sarajevo

ORGANIZED BY

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2nd International Medical Students' Congress Sarajevo 2016

February 4 th – February 7th 2016, Sarajevo
Bosnia and Herzegovina

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TOZAR®

atorvastatin

Snažan, provjeren, pouzdan

Otvara put

Pakovanje:
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Bosnalijek d.d., Jukićeva 53, Sarajevo, BiH

BH.TOZ.2015.01

ODOBRENE INDIKACIJE:
Primarna hiperholesterolemija, hiperlipidemija, hipertrigliceridemija, disbetalipoproteinemija.

KONTRAINDIKACIJE:
Preosjetljivost na atorvastatin i/ili pomoćne komponente ovog lijeka, aktivne bolesti jetre, miopatije, trudnoća, dojenje.

NAJČEŠĆE NUSPOJAVE:
Mučnina, bol u stomaku, zatvor, vjetrovi, slabo varenje, glavobolje, bolovi u mišićima, slabost, proljev i nesanica.

MJERE OPREZA:
Nekadašnja oboljenja jetre, zloupotreba alkohola, porast serumskih transaminaza, miopatija, rabdomioliza.

DOZIRANJE I NAČIN UPOTREBE:
Uobičajena početna doza lijeka je 10 mg, jedanput na dan. Doza se po potrebi može povećati, a prilagođavanje doza se vrši u intervalima od 4 sedmice ili dužim. Film tablete treba progutati cijele, s čašom vode. U toku terapije, ne treba piti više od dvije male čaše soka od grejpfruta na dan (ukupno 200 ml).

Januar, 2015.

BOSNALIJEK

CONTENT

TENVAL®

valsartan

TENVAL duo®

valsartan/hidroklortiazid

NOVO

Siguran štit

- Brza i dugotrajna kontrola krvnog pritiska
- Smanjena učestalost kašlja vs. ACEI
- Protektivni učinci u i izvan kardiovaskularnog sistema

Pakovanje:

TENVAL® (valsartan)
Film tablete 80 mg x 28; 80 mg x 30
Film tablete 160 mg x 28; 160 mg x 30

TENVAL duo® (valsartan/hidrohlortiazid)
Film tablete (80+12,5)mg x 28; (80+12,5)mg x 30
Film tablete (160+12,5)mg x 28; (160+12,5)mg x 30

Lijek se izdaje na ljekarski recept.
Bosnalijek d.d., Jukićeva 53, Sarajevo, BiH

BH.TEN.2015.02.

ODOBRENE INDIKACIJE: TENVAL®: Liječenje esencijalne hipertenzije u odraslih, kao i hipertenzije u djece i adolescenata uzrasta od 6 do 18 godina. Liječenje simptomatskog zatajenja srca u odraslih pacijenata, u slučajevima kada se inhibitori angiotenzin konvertirajućeg enzima (ACE inhibitori) ne mogu primijeniti, ili kao dodatno liječenje uz ACE inhibitore kada se beta blokatori ne mogu primijeniti. **TENVAL duo®:** Liječenje esencijalne hipertenzije u odraslih, u kojih krvni pritisak nije adekvatno kontroliran monoterapijom s valsartanom ili hidroklortiazidom.
KONTRAINDIKACIJE: TENVAL®: Preosjetljivost na aktivnu supstancu i/ili na bilo koju od pomoćnih supstanci u sastavu lijeka; teško oštećenje funkcije jetre, bilijarna ciroza i holestaza, drugi i treći trimestar trudnoće; istovremena primjena antagonista angiotenzinskih receptora, ili inhibitora angiotenzin konvertirajućeg enzima, s aliskirenom u pacijenata s dijabetesom ili oštećenom funkcijom bubrega (GFR <60 mL/min/1,73 m2). **TENVAL duo®:** Preosjetljivost na valsartan, hidroklortiazid, druge sulfonamidne lijekove i/ili na bilo koju od pomoćnih supstanci u sastavu lijeka, drugi i treći trimestar trudnoće, teško jetreno oštećenje, bilijarna ciroza i holestaza, teško bubrežno oštećenje (klirens kreatinina <30 ml/min), anurija, refraktorna hipokalijemija, hiponatrijemija, hiperkalcijemija i simptomatska hiperurikemija, istovremena primjena antagonista angiotenzinskih receptora ili inhibitora angiotenzin konvertirajućeg enzima s aliskirenom u pacijenata s dijabetesom ili oštećenom funkcijom bubrega (GFR <60 mL/min/1,73 m2).
NAJČEŠĆE NUSPOJAVE: TENVAL®: Vrtoglavica, umor, hipotenzija, mučnina, proljev, kašalj, omaglica, glavobolja, osip, svrbež, hiperkalijemija, hiponatrijemija, reakcije preosjetljivosti. **TENVAL duo®:** omaglica, sinkopa, zamagljen vid, hipotenzija, umor, tinitus, dijareja, mijalgija.
MJERE OPREZA: TENVAL® i TENVAL duo®: Ne preporučuje se istovremena primjena sa suplementima kalija, kalij štedećim diureticima, zamjenskim solima koje sadrže kalij ili s drugim agensima koji mogu povisiti nivo kalija (heparin, itd.). U pacijenata s blagim do umjerenim oštećenjem jetre, bez holestaze, valsartan treba primjenjivati oprezno. Depleciju natrija i/ili volumena treba korigovati prije početka liječenja s valsartanom, npr. smanjenjem doze diuretika. Pacijente s primarnim hiperaldosteronizmom ne bi trebalo liječiti s valsartanom, jer njihov renin-angiotenzin sistem nije aktiviran. Kao i u slučaju ostalih vazodilatatora, neophodan je poseban oprez u pacijenata sa stenozom aortnog ili mitralnog zaliska ili s opstruktivnom hipertrofičnom kardiomiopatijom.
DOZIRANJE I NAČIN UPOTREBE: TENVAL®: Preporučena početna doza u liječenju hipertenzije iznosi 80 mg jedanput na dan. Antihipertenzivni efekt se pouzdano ispoljava unutar 2 sedmice, a maksimalni efekti lijeka se ostvaruju unutar 4 sedmice. U nekih pacijenata, u kojih krvni pritisak nije adekvatno kontrolisan, doza se može povećati do 160 mg, odnosno, do najviše 320 mg. Također, valsartan se može primjenjivati u kombinaciji s drugim antihipertenzivima. Dodatak diuretika, kao što je hidroklortiazid, dodatno će sniziti krvni pritisak u ovih pacijenata. U liječenju zatajenja srca, preporučena početna doza valsartana je 40 mg dva puta na dan. Titriranje doze do 80 mg, odnosno, 160 mg dva puta na dan, treba provesti tako da se doza do one najveće povećava tokom najmanje dvije sedmice, ovisno o pacijentovoj podnošljivosti liječenja. Potrebno je razmotriti smanjenje doze diuretika koji se primjenjuju istovremeno. Najveća dnevna doza primijenjena u kliničkim ispitivanjima iznosila je 320 mg u podijeljenim dozama. Valsartan se može primjenjivati s drugim lijekovima indiciranim kod zatajenja srca. Međutim, ne preporučuje se trostruka kombinacija ACE inhibitora, beta blokatora i valsartana. Može se primijenjivati u liječenju hipertenzije kod djece starosne dobi iznad 6 godina i to početna doza je 40 mg jedanput na dan za djecu težine ispod 35 kg, a 80 mg jedanput na dan za djecu težine 35 kg i više. Dozu treba prilagoditi vrijednostima krvnog pritiska. **TENVAL duo®:** Jedna tableta jedanput dnevno. Potrebno je procijeniti klinički odgovor na **TENVAL duo®** nakon uvođenja terapije, te ukoliko krvni pritisak i dalje nije pod kontrolom, doza se može povećati povećavanjem bilo koje komponente lijeka do maksimalne doze od 320 mg valsartana i 25 mg hidroklortiazida.

BOSNALIJEK

FOREWORD

Dear students and colleagues,

On behalf of Medical Faculty University of Sarajevo I would like to give all the participants a warm welcome to the 2nd International medical students congress organized by the Association of students of Medical Faculty in Sarajevo.

We are proud and delighted to have the opportunity to welcome more than 300 young scientists and future doctors from 30 different countries in Europe, South America, Asia and Africa to Sarajevo, a city, which has been a crossroad between East and West, a meeting place for different cultures and diversity of people and ideas throughout its history.

Success we achieved last year was an incentive and also an imperative for us to make this year's congress an even more successful scientific event. We are hoping to make SaMED our longterm project which will help us promote our Faculty, University, City and Country.

Striving for excellence in medical education and medical profession is about integrating intercultural dimension and global perspectives into the teaching-learning process and research. The Congress will provide international platform where future doctors and scientists can share their research findings and ideas on various themes in the field of medicine. I would like to acknowledge the excellent contributions by the authors whose work will be presented through oral and poster presentations during the Congress. Their work shows us how brilliantly talented students we have, who will become the future leaders of medicine.

As Dean of Faculty of Medicine, I am proud of our capable, smart, enthusiastic, hardworking students who are constantly giving their best in organising events like SaMED.

I am pleased that SaMED 2016 will be place where cooperation between different fields of science will be achieved. Participants will be able to listen lectures about medicine, but also about leadership, economy in medicine and scientific research in general, so that they can improve their skills and learn something new, which they do not have the opportunity to listen to every day.

At last but not least, this Congress will hopefully bring you many new friendships and experiences and I am hopeful it will serve as an inspiration for future collaborations and exchange of ideas throughout your medical carriers.

Wishing you lots of success in your work during the Congress and pleasant stay in Bosnia and Herzegovina and Medical Faculty in Sarajevo.

Yours sincerely

Professor Almira Hadžović-Džuvo, MD, PhD
Dean of Medical Faculty
University of Sarajevo

FOREWORD

Dear participants, colleagues and friends,

It is with great pleasure that we welcome you to the 2nd International Medical Students' Congress in Sarajevo – SaMED 2016. This Congress is an official project of the Association of Students' of the Medical Faculty in Sarajevo. SaMED 2015 was a great experience and we now have an obligation to work even harder so that SaMED can be even bigger and better in years to come.

I am proud to be the leader of a magnificent team of young women and men, who were working for the last year so that you can feel good in Sarajevo. This year I am ending my education at the Faculty of Medicine in Sarajevo and SaMED will be something that will always remain with me as something special.

The Congress itself provides an excellent environment for medical students from around a world to interact through various scientific lectures and activities. Medicine is an endless pool of knowledge, and saying that, we will all have something to learn during the congress. It is going to be an amazing opportunity to gain insight into new ideas and concepts, as well as form new friendships between nations, faculties, and students. We hope that we are going to become an annual meeting and that each year the number of foreign and domestic participants will increase.

We are delighted to have you here, taking part in this event, and we hope that you will have a great time in Sarajevo! The SaMED 2016 Organizing Committee will do all it can for you in the next four days, and we hope to see you next year in even greater numbers.

Best regards.

On behalf of the Organising Committee,

Malik Ejubović,
Student vice-dean of the Faculty of Medicine
President of the ASMF
President of the Organising Committee of the 2nd SaMED

FOREWORD

Dear students and colleagues,

From February 4-7 2016, Sarajevo will host The International Medical Students' Congress 2016 (SaMED), which will be held under the auspices of Faculty of Medicine, University of Sarajevo. This Congress is the second one, of what we hope will become a tradition in young scientists gathering under the organization of Students Association Faculty of Medicine in Sarajevo. Students and young doctors will surely get an opportunity to discuss key points of scientific and professional policies and strategies, which will encourage and enable them to continue with improvement of their future scientific and professional work, through contacts with colleagues from other regions.

Organization of the Congress is the result of engagement and efforts by all members of the Scientific and Organizing Commitee, especially young colleagues from the Students Association. It is our hope that the presented programme will meet expectations, that attendants will take active part in the discussion. Through such exchange of experiences, participants will enrich knowledge of their own, which would doubtlessly be useful for their future practice. Also, we sincerely hope that Sarajevo, with its spirit of the Orient in the heart of Europe, and its Olympic charm, will inspire you to achieve unforgettable impressions. Above all, we wish to all participants success in their work and a pleasant stay in our city.

Associate Professor Radivoj Jadrić, MD, PhD
President of the Scientific Board of the 2nd SaMED

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(br. rješenja: 04-07.10-662/13)

Lijek se izdaje na ljekarski recept.
Bosnalijek d.d., Jukićeva 53, Sarajevo, BiH

ODOBRENE INDIKACIJE:
Prevencija aterotrombotičkih promjena u pacijenata s infarktom miokarda, cerebrovaskularnim inzultom i perifernim arterijskim okluzivnim oboljenjem, sa koronarnim sindromom

KONTRAINDIKACIJE:
Preosjetljivost na klopidogrel i/ili pomoćne komponente lijeka, akutna krvarenja

NAJČEŠĆE NUSPOJAVE:
Nazalna krvarenja, hematomi na koži, pojava krvi u urinu, krvarenja iz GI trakta.

MJERE OPREZA:
Hirurški i stomatološki zahvati, traume, jetrena i bubrežna oboljenja

DOZIRANJE I NAČIN UPOTREBE:
Klopidogrel bi se trebao primjenjivati u pojedinačnoj dnevnoj dozi od 75 mg. Pacijenti s akutnim koronarnim sindromom: akutni koronarni sindrom bez elevacije ST segmenta (nestabilna angina ili non-Q infarkt miokarda): liječenje s klopidogrelom treba započeti s pojedinačnom udarnom dozom od 300 mg, a zatim nastaviti s dozom od 75 mg, jedanput na dan (uz acetilsalicilnu kiselinu u dozi od 75 mg do 325 mg na dan). Rezultati kliničkih ispitivanja podupiru trajanje liječenja do 12 mjeseci; akutni infarkt miokarda s elevacijom ST segmenta: liječenje s klopidogrelom sprovodi se dozom od 75 mg, jedanput na dan, a započinje s primjenom udarne doze od 300 mg klopidogrela u kombinaciji s acetilsalicilnom kiselinom, uz trombolitik ili bez njega. U pacijenata starijih od 75 godina liječenje s klopidogrelom ne treba započinjati primjenom udarne doze. Kombinirano liječenje treba započeti što ranije je moguće nakon pojave simptoma, a treba ga nastaviti kroz najmanje 4 sedmice.

Maj, 2014.

BOSNALIJEK

Session I

Anatomy

Histology

Pathology

Radiology

META-ANALYSIS: CURRENT STUDIES OF CONTRAST ENHANCED ULTRASOUND (CEUS) USE FOR FUTURE CLINICAL PRACTICE

(Oral presentation)

Authors: AISMA MEIJERE[1], Elīna Gelderiņa[1]
Mentor: Mārīte Ūbele MD PhD[2]

[1] University of Latvia, Faculty of Medicine, Riga, Latvia
[2] Department of Radiology, Hospital of Tukums, Latvia

INTRODUCTION: Microbubble US contrast agents serve as additional reflectors into the bloodstream increasing the sensitivity of imaging. The first application of CEUS was in the heart for myocardial perfusion measurement. In addition, CEUS is now used mainly for the detection of liver malignancies.

AIM: The aim of this meta-analysis was to evaluate the current studies of CEUS with the means of using it for future diagnostic purposes.

MATERIALS AND METHODS: We searched PubMed database for relevant articles published from 2014/01/01 to 2015/12/31. Search terms included terms for CEUS and contrast enhanced ultrasound. The following studies were excluded: (1) article types that weren't review or clinical trial, (2) articles about cell lines or animals; (3) languages other than English, (4) text availability without Free full text.

RESULTS: A total of 35 articles were identified initially using the search strategy above. Titles and abstracts of all identified studies were reviewed to exclude those that were clearly irrelevant. A total of 12 potentially relevant articles were fully reviewed with the full text. The overall accuracy of CEUS for the diagnosis of different diseases ranged from 23,4% to 100% with the lowest accuracy for hemangioma of newly detected nodules at hepatocellular carcinoma (HCC) surveillance and the highest accuracy for symptomatic carotid artery stenosis. The other results were 40% for myomatous hepatic angiomyolipoma, 43,18% for prostate cancer (PCa), 52,9% for hepatic alveolar echinococcosis (HAE), 67,43% for atherosclerotic lesions ($p<0.001$), 76% for neuroendocrine tumours of the gallbladder (GBNET), 77,2% (T staging) and 78,4% (N staging) for gastric cancer staging ($p=0.001$), 90,3% for focal liver lesions (FLL), 93% for hepatic metastases from colorectal carcinoma and 93,2% for HCC detectability.

CONCLUSION: Considering the results, we can conclude that in this moment CEUS is ready to be used in daily practice as a first line diagnostic method, although its accuracy can differ between different diseases. More research is needed to further our knowledge for use of CEUS.

Key words: contrast enhanced ultrasound, internal medicine, clinical practice, radiology

DEVELOPMENT OF VISUAL STRUCTURES IN GUINEA PIG

(Oral presentation)

Authors: ALEKSANDRA KOVAČIĆ, Mario Kovač
Mentor: Ivan Čapo TA

Department of Histology and embryology, Faculty of Medicine Novi Sad, University of Novi Sad

INTRODUCTION: Histogenesis of the visual system is the process that results in the creation of organ representing the door through which external informations coming into the brain. Very little information is available on histogenesis of visual system in guinea pig.

AIM: The aim of this study was to investigate histological characteristics of prenatal development of the eye in guinea pig.

MATERIALS AND METHODS: The research included upon 5 pregnant female albino guinea-pig, which gave 15 fetuses ages 20, 25, 30, 35, 40 days. Fetuses were removed from their mother by Caesarian section under urethane anesthesia, and euthanized by intracardiac perfusion with a solution of Zamboni fixative.Three fetuses were used at each age group (E20, E25, E30, E35, E40). After appropriate fixation, the tissues were embedded paraffin block, cut in the frontal plate. Histological sections were stained with hematoxylin and eosin.

RESULTS: We determined: in E20 – development of lens vesicle and differentiation of the eye cup to the outer pigmented layer and an inner nerve layer of the retina. E25 – forming the lens and lens fibers by cell elongation in the equatorial plane. E30 - forming a layer of small neuroblastic cells, inner reticular layer and immature ganglionic layer of the retina. E35 - the formation of the pigment layer of the future iris and ciliary body. E40 - differentiation of neuroblastic cells of the retina in the outer and inner layer with the outer reticular layer between.

CONCLUSION: During the histogenesis of the visual system in guinea pig comes to the formation and maturation of mature eye structures.

Key words: eye, development, guinea pig

MORPHOMETRIC ANALYSIS AND ANATOMICAL VARIATIONS OF THE CIRCLE OF WILLIS

(Oral presentation)

Authors: EMIR SOKOLOVIĆ[1], Sadžida Hadžić[1]
Mentor: Amela Kulenović, MD, PhD[2]

[1] University of Sarajevo, Faculty of Medicine, Sarajevo, Bosnia and Herzegovina
[2] Department of Anatomy, Faculty of Medicine, Sarajevo, Bosnia and Herzegovina

INTRODUCTION: The Circle of Willis is an arterial anastomotic ring on the base of thebrain, uniting arteries from two systems: the verterbrobasilar and the carotid.There are different variations of the Willis's circle. From the diagnostic aspect, knowing these variations may be useful as it may help differentiate blood vessels hypoplasia from blood vessels spasms, withstanding from using aneurisms as a diagnosis etc.

AIM: The goal of our research is to study arterial branches, dimensions, and frequency of variations of arterial blood vessels in regards to the Circle of Willis, comparing our results with research from relevant literature, and attaining any eventual conclusions regarding our research topic.

MATERIALS AND METHODS: For our research materials, we used 30 adult brains which we studied via the classic method of dissection. Our careful analysis of the specimens confirmed the presence of diversity among our subject of study, as did morphometrical dissection of components of the Circle of Willis.

RESULTS: Interestingly, of the dissected brains in 90% of the specimens there was a classical type of ring or "ideal" anastomotic ring where every segment is of normal size. In the remaining 10% of cases variations in caliber were noted, as well as placement or ramification of cerebral arteries. The variations identified are: hipoplastic posterior communicating artery, fetal posterior communicating artery, broad attachment of the two anterior cerebral arteries, and variability of separation of anterior choroidal artery. The median diameter and span of the basilar artery and the left cerebral artery in our research is not congruent with the results of other research results.

CONCLUSION: Given that the results of our research confirms the variations in the circle of Willis are common, we can conclude that knowing the anatomical variations is of utmost importance, as unawareness of these aforementioned variations may result in diagnostic mistakes.

Key words: brain, circle of Willis, anatomical variations

CORRELATION BETWEEN HER2 STATUS FROM CORE NEEDLE BIOPSIES (CNB) AND SURGICAL SPECIMENS OF INVASIVE DUCTAL BREAST CARCINOMA (IDC)

(Oral presentation)

Authors: GORAN BOKAN[1], Nikolina Bosancic[1]
Mentor: Ljiljana Tadic Latinovic MD, PhD[2]

[1] University of Banja Luka, Faculty of Medicine, Banja Luka, Bosnia and Herzegovina
[2] Department of Pathology, University Clinical Center of Republic of Srpska, Bosnia and Herzegovina

INTRODUCTION: Breast cancer is the most common malignancy affecting women. CNB procedure is now widely taken as the standard procedure for a breast cancer diagnosis. The assessment of HER2 status is particularly important for qualifying patients for trastuzumab treatment of IDC. HER2 assessment in CNB of IDC could be contribute to a better therapy schedule. However, due to its relatively smaller sample size and tumor heterogeneity, the biomarker assessment performed on CNB samples may be less reliable than in surgical specimens.

AIM: The aim of this study is to explain the relationship/correlation between HER2 immuno-histochemistry (IHC) assessment scores in paired CNB and surgical tissue selections of IDC.

MATERIALS AND METHODS: We retrospectively examined 50 female patients with breast carcinoma without neoadjuvant chemotherapy who underwent CNB and surgical resection at the Department of Pathology, in University Clinical Center of Republic of Srpska, Banja Luka. IHC assessment of HER2 were made from paraffin-embedded tumor samples from CNB and surgical specimens with internal and positive control. HER2 was firstly determined by IHC and scored as 0 to +3 + according to ASCO/CAP (American Society of Clinical Oncology/College of American Pathologists) guideline. Samples with IHC HER2 +2 were further examined by CISH and the tumor was considered to have HER2 amplification if the rate of HER2 gene signals was ≥2,2.

RESULTS: The median age of patients were 58 years. Among the CNB specimens, 18 (36%) cases were rated as a positive. Among the surgical specimens, 16 (32%) cases were rated as a positive. Overall, discrepancies in HER2 scores were noted in 2 (4%) of the paired samples analyzed.Two cases were overscored in the CNB specimens.

CONCLUSION: Our findings support the recommendation that CNB considered the initial procedure to assess receptor status in IDC.

Key words: IDC, HER2, CNB, surgical specimens

INTERVENTIONAL RADIOLOGY IN THE TREATMENT OF MALIGNANT BILIARY OBSTRUCTION

(Oral Presentation)

Authors: JANKOVIC DRAGAN[1], Colakovic Marija[1], Bosnić Zvonimir[1], Brkić Sandra[1]
Mentor: Turk Tajana, MD PhD[2]

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INTRODUCTION: Malignant biliary obstruction is often inoperable at presentation and has a poor prognosis. In the past 30 years, advances in radiological techniques and the advent of new materials have led to increased use of percutaneous approach and thus the elimination of surgical treatment of biliary obstruction. Percutaneous biliary interventions performed by interventional radiologists include percutaneous transhepatic cholangiography (PTC), percutaneous transhepatic biliary drainage (PTBD) and biliary stenting.

AIM: The aim of this presentation will be to review the the indications and technique of percutaneous transhepatic cholangiography and biliary drainage. Based on a single-center experience we are going to briefly discuss the most common etiology of biliary obstruction, rate of repetitive interventions as well as complications management and aftercare.

MATERIALS AND METHODS: We performed a literature review and retrospective study analyzing patients who were treated at Department of Radiology, University Hospital Osijek from January 2013 until December 2015. The data were analyzed using Microsoft Office Excel 2010.

CONCLUSION: These percutaneous interventions are significant in improving the prognosis and quality of life in patients with obstructive jaundice and are currently established methods to palliatively treat neoplastic obstructive jaundice.

Keywords: biliary obstruction, jaundice, drainage, stenting, colangiography

IMMUNOHISTOCHEMICAL EXPRESSION OF CYCLIN A IN PRIMARY TRANSIOTIONAL CELL CARCINOMA OF URINARY BLADDER

(Oral presentation)

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INTRODUCTION: Cyclin A is required for the G1/S cell cycle progression in normal cell lines. With the discovery of inappropriate expression of cyclins in some tumors, it has been hypothesized that cyclins are involved in oncogenesis, acting as proto-oncogenes. Elevated levels of cyclin A expression have been observed in various types of solid tumors,including testicular,prostate and breast carcinoma. Transitional cell carcinoma (TCC) is one of the most common primary malignancy of the urinary tract, which affects transitional epithelium lining from renal pelvis, bladder to proximal two thirds of urethra.

AIM: To evaluate the immunoexpression of cyclin A in primary TCC of the bladder from a patients treated by transurethral resection of the bladder (TUR).

MATHERIAL AND METHODS: Immunohistochemical staining of archival tissue specimens of TCC, obtained from 24 patients, was performed by the labeled streptavidin–biotin–peroxidase method. Cyclin A immunoexpression was evaluated as the percentage of tumor cells with positive nuclear staining and compared with the expression in normal bladder tissue.The results were compared with the tumor stage and grade.Semiquantitative scoring was performed (+++ more than 50% of tumor tissue showed uniform positivity, ++ if less than 50% of positive tumor tissue,+ if less than 10% of positive tumor tissue and - if expression of cyclin A is completely absent).

RESULTS: Diffuse cyclin A expression (+++) was noted in 37.5% of cases,33.3% were scored (++),12.5%(+),while 16.7% showed loss of expression of cyclin A (-).There was a significant correlation between overexpression of cyclin A and tumor stage and grade (p□0.01) - a higher level of expression of cyclin A in tumors with lower tumor stages in relation to the later stages.

CONCLUSION: These data suggest that cyclin A positivity may be associated with aggressive tumor growth and tumor progression. Overexpression of cyclin A is of potential utility in predicting disease progression in patients with TCC.

Keywords: cyclin A, immunohistochemistry, transitional cell carcinoma, urinary bladder

USING QUESTIONNAIRE TO EVALUATE PATIENT'S RENAL FUNCTION PRIOR TO CONTRAST-ENHANCED EXAMINATION - VIABLE METHOD?

(Oral presentation)

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INTRODUCTION: Medical institutions throughout the world are using serum creatinine measurement or eGFR (estimated glomerular filtration rate) to evaluate patients' renal function routinely before most of the examinations using contrast media. However, studies have shown only very little percent of patients have impaired renal function and this inspired us to search for a quicker, cheaper and as efficient way of detecting such patients.

AIM: To evaluate whether questionnaire is an efficient method of identifying patients with impaired renal function prior to contrast-enhanced examination.

METHODS: Study was done in Vilnius University Hospital Santariskiu Klinikos. We reviewed 215 questionnaires, 70 (32.6%) were selected for further examination. For inclusion the criteria were: serum creatinine measured less than 180 days prior to the contrast-enhanced examination, adult patient and fully completed questionnaire. Our questionnaire contained 10 questions about risk factors which may have an impact on patient's renal function. Data for patients' age, gender, contrast-enhanced examination date, serum creatinine measurement date and the result were acquired from hospital's internal database. Patients were stratified into two groups using eGFR (calculated using CKD-EPI formula): <60 mL/min./1.73m^2 and >60 mL/min./1.73m^2.

RESULTS: 9/70 patients (12.9%, 95% CI: 5.89%-24.4%) had <60 mL/min./1.73 m² eGFR. Patients' mean age was 52 (±15.87), women 45.7% (n=32), men 54.3% (n=38). Mean date difference between serum creatinine measurement and contrast-enhanced examination was 42 (±55) days, median 12.5. Questionnaire's sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) in detecting patients with lower than 60 mL/min./1.73m² eGFR were calculated. Sensitivity (100%, 95% CI: 66.37%-100%), specificity (9.84%,95% CI: 3.7%-20.19%), PPV (14.06%, 95% CI: 6.64%-25.02%), NPV (100%, 95% CI: 54.07%-100%).

CONCLUSION: Our questionnaire has sensitivity of 100% when detecting whether patient has eGFR lower than 60 mL/min./1.73 m². NPV is 100%, which leads to possible usage when patients with good renal function have to be identified (as a possible alternative or addition to serum creatinine measurement.

Keywords:renal function, questionnaire, creatinine

INTRAUTERIN MRI EVALUATION OF CONGENITAL DIAPHRAGMATIC HERNIA

(Oral presentation)

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INTRODUCTION: Congenital diaphragmatic hernia (CDH) can be one of the most clinically challenging neonatal conditions. Congenital diaphragmatic hernia (CDH) affects approximately one in every 4000 live births. CDH has traditionally been classified as posterolateral (Bochdalek hernias) and anterior (Morgagni hernias). Survival rates vary significantly among various centres (66-90%), but this values could be much lower considering the fact that many neonates with CDH die before reciving adequate diagnostic evaluation and neonatal care.

AIM: This is a case report of a 36 weeks old fetus with posterior congenital diaphragmatic hernia.

MATERIALS AND METHODS: We used 1,5 T MRI machine to verify ultrasound findings of leftsided intrathoracic mass in 36 weeks old fetus. Standard MRI sequences were used.

RESULTS: We have found large conglomerate of small intestine loops occupying left hemithorax, with left lobe of the liver herniated into the diaphragmatic defect. Ipsylateral pulmonary hypoplasia and contralateral mediastinal shift were noticed. Place of herniation was demonstrated, occurring on posterior part of left hemydiphragm, finding consistent with Bochdalek hernia. No associated anomalies were found. MRI finding with poor prognosis in terms of postnatal survival and morbidity associated with CDH.

CONCLUSION: Herniation of abdominal contents into the thorax due to diaphragmatic defect is a rare congenital anomaly with concomitant pulmonary hypoplasia and pulmonary hypertension. MRI plays main role in evaluation of CDH, including determination of specific hernia type, evaluation and exclusion of associated malformations and complications, especially pulmonary hypertension and consequent right heart failure. Prenatal diagnosis has significant prognostic value of postnatal mortality and mobidity related to complications of CHD.

Keywords: Congenital Diaphragmatic hernia, fetal MRI

PRENATAL VITAMIN C DEFICIENCY ON TEETH DEVELOPMENT IN GUINEA PIG FETUSES

(Oral presentation)

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INTRODUCTION: Beside the pro oxidative role of vitamin C it is also an essential factor in the process of collagen synthesis. Guinea pigs are precocial rodents with full prenatal dental development. Besides humans guinea pigs belong in a unique species that are not capable of synthesizing vitamin C. The importance of vitamin C on tooth development has not been tested yet.

AIM: The aim of the research is to investigate the effect of prenatal vitamin C deficiency on teeth development of guinea pigs.

MATHERIAL AND METHODS: The study encompassed 14 fertilized female albino guinea pigs. Their diet was comprised of vitamin C-free food and ad libitum water enriched with vitamin C. The 10th day of fertilization, experimental group was depleted of vitamin C. Deprivation lasted until the 50th day, after which the females were sacrificed and their fetuses taken out. Viscerocranium of fetus were fixed and dehydrated, after which they were embedded in paraffin and longitudinal sections were made. Masson tree chrome stain was used for histology.

RESULTS: The lack of vitamin C during intrauterine development in experimental animals lead to: decrease of density and diameter of tooth pulp capillary; decrease of thickness of predentin and dentin layers; lack of dental enamel and lag of direct ossification process of the alveolar bone.

CONCLUSION: Intrauterine deprivation of vitamin C in guinea pigs led to relevant histological changes on all tooth structures and surrounding tissues.

Keywords: teeth development, guinea pig, vitamin C, scurvy

MORPHOMETRIC ANALYSIS OF ANATOMICAL VARIATIONS OF HYPOGLOSSAL CANAL IN DIFFERENT NATIONS

(Oral presentation)

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Mentor: Bojana Krstonošić, MD PhD[1]

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INTRODUCTION: Canalis nervi hypoglossi is steam structure localaised above condilys occipitalis and front side parts of foramen occipitale magnum. It goes from inside to front and outside. N. hypoglossus leaves cranium trough this structure. A. meningea posterior, a.pharyngea ascendens and plexus venosus canalis nervi hypoglossi are also localised in this canal.

AIM: The goal of this study was to determine and define the detailed anatomy of the hypogolssal canal, including difference between nations.

MATERIALS AND METHODS: We used 25 skuls of grown people from all parts of Balkan, unknown age, which are part of Osteological collection of Department of Anatomy on Faculty of Medicine in Novi Sad. Sex of craniums is determined using Protocol modified by Ferembach [22] and Buikistra [23], and which includes visual analysis of 10 cranium characteristic.

RESULTS: The results of our study show that there is no statistically significant differences for measured parameters between gender and, between sides of analyzed skulls. The external orifice of the hypoglossal canal is usually present in the anterior area, whereas the internal orifice is mostly located in the middle area of the occipital condyle. According to its shape, hypoglossal canal is classified into six types : Type I: Simple canal; Type II: Canal with bone spine placed either on external or internal aperture; Type III: Canal with two or more spines placed anywhere in canal; Type IV: One canal aperture separated with bone bridge; Type V: Canal separated with septum on two or more canals; Type VI: Missing canal.

CONCLUSION: There is no statisticaly significant difference bitween measured parameters in gender or side of craniums. But, there is difference between nations. The biggest similarity in measured parameters was noticed between our skuls and Egyptian skuls.

Keywords: Hypoglossal canal; Occipital condyle; Morphometry; Population differences; Human skull.

Session II

Biochemistry

Dermatology

Pathophysiology

Pharmacology

Physiology

MORPHOMETRIC ANALYSIS OF PINEAL GLAND CONDITION AT MELATONIN ADMINISTRATION ON THE BACKGROUND OF BETA-ADRENORECEPTORS BLOCKADE

(Oral presentation)

Authors: ZAKRUT'KO A.A., Kryvchanska M.I., Gritsyuk M.I.
Mentor: Pishak Vasily Pavlovich MD, professor

INTRODUCTION: It's well known that the ultrastructure of pinealocytes changes, submitting to circadian rhythm - serotonin is synthesized at the day time and melatonin – at night.

AIM: to estimate the peculiarities of morphometric state of the pineal gland at the blockade of the beta-adrenoreceptors by propranolol, using the evaluation of the results based on a complex study.

METHODS AND MATERIALS: experimental, physiological, biochemical, histological, electron microscopic, morphometric, statistical; experiments were conducted on 72 nonlinear mature male albino rats (administration of propranolol (2.5 mg / kg) and melatonin (0.5 mg / kg)).

RESULTS: The morphometric study of pineal gland, conducted on laboratory rats suggests the following conclusions.The action of propranolol in the pineal gland caused changes of morphometric parameters. The percentage of dark pinealocytes has increased to 49 ± 1,4% at 02.00 and to 49 ± 1,1% at 14.00 ($P < 0.05$); the percentage of light pinealocytes has decreased to 51 ± 1,4% at 02.00 and to 51±1.3% at 14.00. A tendency of reduction of the pinealocytes nuclear volume to 288,7 ± 12,34 mkm3 at 02.00 and 288,2 ± 12,67 mkm3 at 14.00 was observed. We haven't found the degenerative processes in pinealocytes. The additional usage of melatonin insignificantly modifies indices of pinealocytes state that can be explained by reduced stimulation of these cells due to increased blood concentrations of the product of exogenous origin. Thus, dark pinealocytes registered at 02.00 were 52 ± 1,3% and 51±1,4% at 14.00; light one - 48±1,7% at 02.00 and 49±1,5% at 14.00. The pinealocytes volume was 284,9 ± 12,41 mkm3 at 02.00 and 285,1 ± 12,12 mkm3 at 14.00.

CONCLUSIONS:
1. All these morphometric parameters of pinealocytes are important for establishing of the morphological equivalents of pineal gland hormonal function.
2. Beta-adrenoblocker propranolol reduces the indices of equivalents of the pineal gland function.

Keywords: melatonin, pineal gland, adrenoreceptors.

PHYTOPFOTODERMATITIS

(Oral presentation)

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INTRODUCTION: Phytophotodermatitis is a phototoxic cutaneous eruption due to skin exposure to furocourmarins combined with ultraviolet light. Bizzare linear patterns, ranging from erythema to bullae with residual hyperpigmentaion, is the clinical clue to this diagnosis. Avoidance of furocoumarins in direct sunlight can prevent recurrences.

AIM: The aim of review was to assess overlapping symptoms of phytophotodermatitis and other skin diseases.

SUBJECT AND METHODS: The medical history of patients who were treated from pfytophotodermatitis in Universitiy Hospital Centre Osijek

RESULTS: Phytophotodermatitis typically manifests as a burning erythema that may subsequently blister.Similar symptoms may occure in other conditions, so it is often diagnosed as allergic contact dermatitis,cnidaria envenomation, dermatologic manifestations of herpes simplex, drug- induced bullous disorders, initial evaluation and management of the burn patient, irritant contact dermatitis, porphyria cutanea tarda. responsible plants include: parsley,parsnips,celery,carrot,fig,lime, several species of wild flowers (umbelliferae). Phytophotodermatitis is a phototoxic reaction entirely independent of the immune system; that is, phytophotodermatitis can occur in any individual. Any age may be affected

CONCLUSION: It is important for a physician to be aware of phytophotodermatitis because it may often be misdiagnosed .

Keywords: phytophotodermatitis,furocourmarins,ultraviolet light

BULLOSUS PEMPHIGOID – case report

(Oral presentation)

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Pemphigoid bullosus is chronic, relatively common dermatosis bullosus which occurs as bubbles on erythematic surface. Average age when this disease occurs is around 76 but it can rarely happen on children and the occurrence ratio between male and female gender is 1,8:1. Disease can be induced by some medicine, usually antihypertensives or diuretics, PUVA therapy and X-rays. Sometimes, pemphigoid bullosus is affilated with system disease of connective tissue, as well as with some other diseases (pemphigus, colitis ulcerosus, psoriasis, kidney diseases). We report a case of a girl aged 29 with the sudden appearance of alterations on skin of both arm pits, in form of bubbles, as well as on the arm where it was placed fistula for dialysis, on abdomen, lower extremities and lower third of the face. The patient was transplanted kidney due to chronic renal failure; a year ago her transplanted kidney was rejected by the body, so since 2014. she is on dialysis treatment. The appearance of skin changes was associated with the use of Eritropoetin. Histopathological examination and direct immunofluorescence of skin bioptate proved bullosus pemphigoid diagnosis. The therapy included Metilprednisolone amp.i.v. 80mg daily, with gradual reduction, local therapy and stopped treatment with Eritropoetin. A few days after initiation of therapy there was a significant regression of skin changes, pruritus was reduced, without new bull appearence.

Key words: bullosus pemphigoid, insufitientio renalis, eritropoetin

GENETIC TESTING AND PERSONALIZED MEDICINE: PHARMACOGENOMICS AND CARDIOVASCULAR DISEASES

(Oral presentation)

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INTRODUCTION: In a time of wide scientific breakthroughs and technological advancements in genetic testing and molecular diagnostics, personalized medicine (PM) has the capacity to detect the onset of disease at its earliest stage, prevent the progression of disease, and optimize the treatment of a disease. PM seeks to find the right person for the right test, with the right interpretation.

AIM: The aim of this study was to explore potential benefits of personalized medicine approaches in treatment of cardiovascular disease

MATERIALS AND METHODS: This research combines widely area of pharmacogenomics in cardiology studies and analyses them with the latest data set obtained from PUBMED data bases (which showing us more than 1700 publications from this field). We focus our research on recently discovered medicaments, which found their application because of promising discoveries in treatment of cardiovascular disease, such as clopidogrel, warfarin and statins.

RESULTS: To comprehensively assess the pharmacogenomic evidence of routinely used drugs for clinical utility, physician should be very skilled in the field of pharmacogenomics. Highlighting this exciting stage of rapid discovery is the development of clinical guidelines that incorporate genetic information to guide warfarin, clopidogrel, and statin therapy to reduce the risk of toxicity.

CONCLUSION: PM field is rapidly becoming an integral component of improvement of health care systems. We have to ensure clear data with efficacy and adverse drug reactions in cardiology. The promise of precious medicine can be implemented with other further studies which can lead to easily treatment decisions.

Key words: personalized medicine, genetic testing, molecular diagnostics, pharmacogenomics, cardiology, ethical issues, improvement of health care system

AGGREGATION ACTIVITY OF PLATELETS IN SUBCLINICAL AND CLINICAL HYPOTHERIOSIS

(Oral presentation)

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INTRODUCTION: Incidence of thyroid dysfunction in Russian population takes the first place among endocrinological diseases. Thyroid hormons have different effect on hemostasis system. It is proved that subclinical and true thyroid dysfunctions are related to hypocoagulation and hypercoagulation. The data of platelets function in patient with thyroid dysfunction are contraversal.

AIM: The aim of our work is to study platelet section of hemostasis in subclinical and clinical hypotheriosis.

MATERIALS AND METHODS: 30 patients with thyroid hypofunction under dispensary control were investigated. The diagnosis is established on the complains, disease anamnesis, functional and clinical investigations. Control group includes 30 healthy volunteers who do not have thyroid dysfunction. Depending on thyroid status data, clinical manifestations and complications groups were made. The first group – patients with subclinical thypotheriosis, level of thyrotropic hormone is 8,07 uIU/ml , average dose of thyroxin is 66,66 mcg, the second group – patients with clinical hypotheriosis, thyrotropic hormone is 4,87 uIU/ml , the dose of thyroxin is 90,63 mcg.

RESULTS: We made a comparative analysis of these groups. According to investigation the prolongation of total coagulating activity is stated which has a tendency to hypocoagulation. The decrease of total amount of platelets is more evident in patients of the second group and their aggregation activity (194,20±6,89×109/l against 235,67±5,73×10^9/l in 1st group patients). Spontaneous aggregation of platelets as well as ADP-induced aggregation, speed of aggregates formation and the maximum value of variable of platelets are decreased in two groups in comparison to control group.

CONCLUSION: The results prove that constant tension of hemocoagulation processes is evident in pateints with thyroid dysfunction which is developed into chronic DIC- syndrome.

Keywords: hypotheriosis, aggregation, platelets

CONDITION OF IONOREGULATIVE RENAL FUNCTION UNDER INFLUENCE OF IMMOBILIZATION STRESS AND ALTERED PHOTOPERIOD

(Oral presentation)

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INTRODUCTION: Stress is characterized by increased activity in all tissues. It is a reactive process that triggers organic and behavioral responses related to a set of physiological changes. Immobilization stress (IS) alters the functioning an internal organs by inducing a metabolic and endocrine imbalance in various organs, including the kidney.

AIM: The aim of investigation was to study pecularities of chronorhythmical rebuilding of ionoregulative function of kidneys in rats under conditions of immobilized stress and altered photoperiod.

MATERIALS AND METHODS: Experiments were conducted with 60 old white male rats. We divided animals into 5 groups: I control (n=20) animals were held in casual light regime (12.00L: 12.00D); II – experimental (n=20) rats were held in conditions of constant light (24.00.00L:00D); III – experimental (n=20) animals were held in condition of constant light (24.00L:00D) + IS.

RESULTS: In rats which were in conditions of IS and hypofunction increasing average of sodium concentration in urine in comparison of control group. High indices were registered in all experimental intervals of a day. In this case in group III batiphase was displaced from 14:00 to 20:00 anaphase from 20:00 to 8:00, amplitude of rhythm increased probably according to the control group. Distal transport in this condition had compensated activation.

CONCLUSION: Immobilization stress alters chronorhythmical organization of ionoregulative renal function, changes phase structure and rhythm amplitude of most studied indexes.

Keywords: renal function, immobilization stress, altered photoperiod.

THE INFLUENCE OF AGE ON THE REPRESENTATION OF SUBCUTANEOUS ADIPOSE TISSUE AND MUSCLE STRENGTH OF BICEPS IN FEMALES

(Oral presentation)

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INTRODUCTION: The parameters of the biceps muscle strength, the ultrasonically measured dimensions of the biceps and the subcutaneous adipose tissue can be used to estimate the physical development of the musculature.

AIM: The aim is to determine the age influence on the development of the muscle strength in biceps and on the representation of the subcutaneous adipose tissue.

MATERIAL AND METHODS: The study included 20 females aged 18 - 25 years and 20 females aged 50 - 60. For each subject, anthropometric parameters were determined, as well as dynamometric parameters of the biceps muscle strength, the ultrasound dimensions of the biceps and the thickness of subcutaneous adipose tissue. Caliper was used to determine the percentage of body fat based on skinfolds around the biceps. The collected data were then statistically analyzed.

RESULTS: There is greater representation of body fat mass in older (30±7.2%) compared to younger women (20±7%) and these values are statistically significant. The ultrasound revealed statistically significant age differences; older women have greater values of subcutaneous fat (1.5±0.26mm) and dimensions of biceps (31.03±3.9mm) than younger women with values of subcutaneous fat (1.2±0.1mm) and dimensions of biceps (29.04±4.2mm). There is greater mean value of muscular strength of biceps in younger women (35±6kg) compared to older women (32±8.5kg). It was established that there is a positive statistically significant correlation between body fat percentage and thickness of adipose tissue (r=0.55), as well as between mean muscular strength and ultrasound measurement of biceps (r=0.37).

CONCLUSION: Older women have greater representation of subcutaneous adipose tissue, while younger women have greater muscle strength of biceps.

Key words: body composition, muscle strength, ultrasound, anthropometric measurement

WHICH MEDICINE IS BETTER FOR THE PREVENTION OF MORPHOLOGICAL POSTIMMOBILIZED CHANGES IN KIDNEYS AND PINEAL BODY: MELATONIN OR EPITHALON?

(Oral presentation)

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INTRODUCTION: One of the actual questions in fundamental medicine is to study functioning of aging organism and to study influence of external factors on different structures of an organism. Understanding the way of changes in organs and systems can help in searching new medicines, which can prevent some morphological changes in organism.

AIM: The aim of investigation was to study peculiarities of peptide medicines in decreasing of some morphological changes in kidneys and pineal gland of old rats, which were caused by one hour immobilized stress (IS).

MATERIALS AND METHODS: Experiments were conducted with 80 mature white old male rats. We divided animals into 4 groups: I control (n=20) animals were held in casual light regime; II – experimental (n=20) rats were held in conditions of one hour IS; III – experimental (n=20) animals were held in condition of IS and administration of melatonin; IV experimental (n=20) animalsbwere held in condition of IS and administration of epithalon.

RESULTS: In rats, which were held in boxes for an hour IS microscopic changes of pineal body and kidneys cells structures were found. In groups, where melatonin and epithalon were administrated during 3 days before IS, we found that administration of exogenous melatonin and epithalon has positive influence to renew poststressor changes of morphological condition of pineal gland and kidneys. However, melatonin has better ability to renew renal functions, to increase antioxidative protection, to decrease intensity of peroxidation, but epithalon – to restore morphofunctional changes in kidneys and pineal gland.

CONCLUSION: The pointed indole and synthetic peptide of pineal gland has been found to have stressprotective ability. Melatonin has better ability to renew functional renal characteristics, to increase antioxidative protection, to decrease intensity of peroxidation, but epithalon – to restore morphofunctional changes in kidneys and pineal body.

Key words: morphology of kidney, pineal gland, melatonin, epithalon, immobilization stress.

EFFECT OF HYPOBARIC HYPOXIA ON THE PROTEOLYSIS AND FIBRINOLYSIS IN ADRENAL GLANDS OF THE RATS ACCORDING TO ALTERED PHOTOPERIOD DURATION

(Oral presentation)

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INTRODUCTION: Hipoxia is one of the conditions of usual mode of mammal's life. Structural-functional change of the adrenal glands is a typical manifestation of organic reaction to hypobaric hypoxia, varying correspondingly to age, sex, combination of environmental factors.

AIM: To study specific characteristics of fibrinolytic and proteolytic processes in tissues of the adrenal glands of immature rats at ordinary conditions of holding and hypoxic conditioning by systemic intermittent hypobaric hypoxia of changes, caused by constant lighting.

MATERIALS AND METHODS: Experiments were carried out on 58 immature laboratoty white male and female rats. Determination of the total, enzymatic and non-enzymatic fibrinolysis in the adrenal glands tissues was conducted according azofibrin lysis; Proteolytic activity was determined according to azoalbumin, azocasein and azocol.

RESULTS: The employed model of intermittent hypobaric hypoxia (equivalent to 4000 m above sea level, 2 hours daily for 14 days) combined with a varying length of the photoperiod (natural duration of photoperiod and constant lighting) causes a different changes of the proteolytic and fibrinolytic activity in the tissues of the adrenal glands of the male and female immature rats with varying intensity depending on the sex of animals and on the duration of photoperiod.

CONCLUSION: Sex differences in the response of tissue proteolysis and fibrinolysis indicators of condition of the main organ of adaptation process in immature animals indicate a genetic-dependent peculiarities of reactivity of response mechanisms of the body to the action of environmental factors on their isolated and combined impact.

Keywords: proteolysis, fibrinolysis, photoperiod, hypobaric hypoxia, adrenal glands.

TREATMENT OF VITILIGO WITH NARROWBAND UVB PHOTOTHERAPY COMBINED WITH VITIX GEL

(Oral presentation)

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Vitiligo is an acquired autoimmune disorder with focal depigmentation of the skin, affecting at least 1-2% of population around the world, both male and female of any race and age. Common sites of pigment loss include the face, hands, groin and hair. Despite significant advances made in the past few years, treatment of vitiligo remains a challenge. Phototherapy with narrowband UVB (NBUVB) with or without certain topical medication is an important therapeutic option for this disorder. Our objective was to assess the efficacy of NBUVB therapy in combination with Vitix gel at patients with vitiligo. This was a retrospective analysis of fourteen treated patients, with vitiligo on different areas of the body and face. They were treated once a week with NBUVB, in combination with Vitix gel applied twice a day on depigmented areas. Initial NBUVB dose was 0,25 J/cm2, with an increase of 0,05 J/cm2 per treatment. The maximum single dose was 1,20 J/cm2 for children or adults with skin phototype II, and 1,50 J/cm2 for adults with skin phototype III. The response was assessed by photographs and by a physical evaluation of the depigmented areas. Five patients have completely recovered their pigmentation on the face in five months, and seven patients have reached approximately 60% (30-90%) of the pigmentation on the face in about eight months. Results of repigmentation on the body are slower, especially on acral portions of the extremities. Mean treatment duration needed to reach approximately 40% (30-90%) of repigmentation on the body and extremities was ten months. This research shows that vitiligo can be successfully treated with narrowband UVB phototherapy combined with Vitix gel.

Keywords: vitiligo, narrowband ultraviolet phototherapy, depigmentation

EFFECT OF SYNTHETIC CANNABINOIDS ON BLOOD BRAIN BARRIER

(Oral presentation)

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INTRODUCTION: In recent years, many adolescents have started to use a popular legal alternative to marijuana called K2\Spice, made primarily of a blend of synthetic cannabinoids. Many of the effects of these compounds are due to their action on the central nervous system (CNS), hence causing the adverse effects and drug dependence among their users. The compound most commonly found in K2\Spice is the potent CB1 agonist JWH-018, therefore most of the research effort has focused on CB1 agonists. The role of other JWH compounds with potent affinity for CB2 has not been elucidated. JWH-015 and AM-630 are cannabinoid (CB2) agonist and antagonist, respectively. Little is known about their effects on the Blood Brain Barrier (BBB).

OBJECTIVES: We hypothesize that the JWH-015 and AM-360 which are synthetic cannabinoids will affect the CNS, specifically Blood Brain Barrier "BBB" integrity, permeability and gene expression.

MATERIALS & METHODS: The effects of JWH-015 and AM-630 were tested on an in vitro BBB model that was constructed with Human Astrocytes (HA) and Human Brain Microvascular Cells (HBMECs). The integrity and function of the in vitro BBB was assessed by measuring transendothelial electrical resistance (TEER), FITC-dextran transport, and JAM-2 expression.

RESULTS: The results showed the combination of synthetic cannabinoids JWH-015 and AM-630 caused a dose (1-5 µM) dependent decrease in TEER values of the BBB.

CONCLUSIONS: In our study, we have observed that the combination of synthetic cannabinoids JWH-015 and AM-630 caused a decrease in TEER values of the BBB; therefore, comprising BBB integrity and increasing FITC dextran transport and JAM-2 expression. These finding may further clarify the effects of synthetic cannabinoids and the role of CB2 on the CNS, specifically their degenerative or protective action on BBB.

Keywords: synthetic cannabinoids, blood brain barrier

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Session III

Pediatrics

Gynecology

INSULIN RESISTANCE PROFILE IN MORBID OBESE CHILDREN WITH AND WITHOUT METABOLIC SYNDROME

(Oral presentation)

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INTRODUCTION: Metabolic syndrome (MS) is characterized by impaired glucose tolerance, hypertension, dyslipidemia and central obesity. Therefore, early diagnosis of the patients, who are at risk of developing MS as in the case of morbid obesity, may help to initiate immediate interventions and prevent the development of complications such as diabetes and cardiovascular diseases.

AIM: The aim of the study is to investigate the difference between insulin resistance (IR) profiles and morbid obese (MO) children with and without MS.

MATERIALS AND METHODS: A total of 239 children participated in the study. Of them 139 were MO and 100 were MO with the diagnosis of MS (MOMS). The parents filled informed consent forms and the study was approved by the Ethics Committee. Anthropometric measurements were performed. Body mass index (BMI) values were obtained. The children with WHO BMI-for age-and-sex percentiles above 99 were defined as MO. Fasting blood glucose and insulin analyses were performed. Homeostatic Model Assessment of IR (HOMA-IR) values were calculated. Statistical analyses were performed using SPSS. $p \leq 0.05$ was accepted as the degree of statistical significance.

RESULTS: The mean±SD values for the ages were 10.0±2.7 years for MO and 10.9±2.7 years for MOMS groups ($p \geq 0.05$). The corresponding BMI values were 27.3± 3.9 kg/m^2 and 28.7± 5.1 kg/m^2 ($p \geq 0.05$). No statistical difference was observed between waist-to-hip (0.94±0.08 *vs* 0.93±0.07) and head-to-neck ratios (1.67±0.14 *vs* 1.64±0.18) of MO and MOMS groups respectively ($p \geq 0.05$). HOMA-IR values were calculated as 2.8±2.2 for MO and 4.0±3.4 for MOMS children ($p=0.017$).

CONCLUSION: It has been demonstrated that HOMA-IR is prominent in the evaluation of IR in MO children. The finding of strikingly elevated HOMA-IR values detected in MO children with MS diagnosis in comparison with the other group is important from the point of view of having almost the same anthropometric measurements as well as BMIs.

Key words: Children, obesity, metabolic syndrome, insulin resistance, HOMA-IR

EPIDEMIOLOGY OF MAJOR CONGENITAL HEART DISEASE IN LIVE-BORN CHILDREN IN SLOVENIA BETWEEN 2007 AND 2012

(Oral presentation)

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INTRODUCTION: Congenital heart defects (CHD) are the most common group of congenital malformations, causing more than third of deaths in children with congenital anomalies in the first year of life. CHD affect 6-8/1000 live-born children, half of which are minor and do not require treatment or are easily corrected later in life. The remainder are major CHD with a subgroup of critical CHD, requiring cardiac surgery or catheter-based intervention in the first year or first four weeks of life, respectively. Failure to treat these CHD may result in severe complications and death.

AIM: To investigate the epidemiology of major and critical CHD in Slovenia between 2007 and 2012.

MATERIALS AND METHODS: The study group consisted of live-born infants with major/critical CHD in Slovenia from 2007 to 2012. Patients were recruited from databases of surgical and interventional referrals, patients with prenatally diagnosed CHD, and Death Registry at National Institute of Public Health. Patients' data were obtained from the labour and delivery records and personal medical records at University Medical Centre Ljubljana (UMCL). All patients, except those who died before referral to UMCL, underwent an echocardiographic examination at UMCL.

RESULTS: During the study, 128839 live births were recorded. Major CHD has been identified in 293 (2,27/1000 live-born) patients, of which 150 (1,16/1000 live-born) had a critical CHD. Both major and critical CHD were more common in males than females (2,59/1000 vs. 1,93/1000 and 1,51/1000 vs. 0,8/1000 live-born, respectively). The commonest anomalies were ventricular septal defect (4,5/10000 live-born), coarctation of the aorta (4,5/10000 live-born), d-transposition of great arteries (2,5/10000 live-born) and tetralogy of Fallot (2/10000 live-born).

CONCLUSION: Our study adds new epidemiologic data for major and critical CHD in Slovenia showing consistency with other studies. Our findings form a basis for further epidemiologic analyses of CHD and investigations of CHD detection in Slovenia.

Keywords: Paediatrics, cardiology, congenital heart defects, epidemiology.

CLINICAL AND ANAMNESTIC FEATURES OF EXERCISE-INDUCED BRONCHIAL ASTHMA DEPENDING ON THE NATURE OF ACETYLATION

(Oral presentation)

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INTRODUCTION: Bronchial asthma is considered to be one of the most common forms of chronic diseases. Over the past 30 years there has been a growth in the incidence of this pathology in the world which threatens global health, social welfare and economic development.

AIM: To study clinical and anamnestic parameters of the phenotype of exercise-induced bronchial asthma in children depending on the type of acetylation.

METHODS AND MATERIALS. To achieve this goal we examined 55 school- children. The first clinical group consisted of 22 children with exercise-induced bronchial asthma phenotype and slow acetylation; the second clinical group included 33 patients with exercise-induced bronchial asthma and fast acetylation phenotype.

RESULTS: The children with the signs of exercise-induced bronchial asthma phenotype and slow acetylation processes have the following features as compared to those with "fast acetylation agents": tendency to the predominance of so-called "late start asthma" and forms of atopic disease in 60% of cases (Pф <0,05); in the "slow acetylators" the birth weight over 4 kg occurred at (19,0 ± 8,6%, Rф <0.05) of cases; burdened family history on both pedigrees was (19,04 ± 9,8%, P <0.05); genealogical index> 0.13 conventional units (48,0 ± 10,9%, Rф <0.05); daytime symptoms fewer than once per month (13,3 ± 8,8%, P <0.05); nocturnal symptoms were observed more than once per month, but fewer than once in 2 weeks (14,3 ± 9,01%, Rф <0.05); the frequency of exacerbations 3-4 times a year to the hospital examination 36% (Rф <0.05). In peripheral blood hemogram of the first group representatives an increase in the absolute number of red blood cells by more than 4.0 T / L was observed in 56.9% (P <0.05); hemoglobin level more than 118 g / l was in 62% of the cases (P <0.05).

CONCLUSION: The study of clinical and anamnestic features of exercise-induced bronchial asthma phenotype in children is of great practical importance to the development of differential diagnostic measures for the verification of different phenotypes with further selection of individualized treatment.

Keywords: bronchial asthma, phenotype, acetylation, children.

ROLE OF C-REACTIVE PROTEIN IN EARLY NEONATAL SEPSIS DIAGNOSING

(Oral presentation)

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INTRODUCTION: Diagnosing generalized infectious and inflammatory diseases in newborns is still one of the urgent problems of neonatology. It is believed that up to 85% of early neonatal sepsis occur during the first 24 hours of life and another 5% - on the next day. However, the lack of clear clinical-paraclinical signs of infectious-inflammatory process in the early neonatal period complicates the diagnosis of this life threatening disease.

OBJECTIVE: To study the diagnostic value of C-reactive protein content in serum of newborns on the second day of life in the early diagnosing of neonatal sepsis.

MATERIALS AND METHODS. Comprehensive clinical and laboratory examination of 100 newborns during the first 48 hours of life was performed. The content of C-reactive protein in blood serum was studied using immunofluorescence analysis. The findings were analyzed by the methods of biostatistics using the principles of clinical epidemiology.

RESULTS: Determining the level of C-reactive protein in serum showed that in most infants the concentration of 10.0 mg / L or more dominated, but this diagnostic test only had a high specificity in targeting relatively high concentration of this protein in the acute phase of the inflammation. It is shown that the content of C-reactive protein in serum of more than 60.0 mg / l as the verification test for early neonatal sepsis had a specificity of 83.8%. With the above results of determining C-reactive protein, the risk of having a generalized infection in the newborn during the first 48 days of life increased by twice: OR - 1,9 (95% CI 1.0 - 3.4).

CONCLUSION: Thus, the content of serum in C-reactive protein is associated to some degree with early neonatal sepsis course, whose clinical manifestations reflect the most informative way the phenomena of neonatal respiratory distress. Although C-reactive protein can not act as the only diagnostic criterion of early neonatal sepsis, it can be quite specific component of sepsis-work in its high results that will improve the diagnostic process to detect early neonatal infection.

Keywords: new-born, sepsis, C-reactive protein.

THE USE OF LEVETIRACETAM AS MONO/POLYTHERAPY DURING THE FIVE-YEAR PERIOD AT THE DEPARTMENT OF PEDIATRICS, UNIVERSITY HOSPITAL CENTRE RIJEKA, CROATIA

(Oral presentation)

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INTRODUCTION: Levetiracetam is established second-generation antiepileptic drug (AED), most commonly approved as monotherapy treatment of focal-onset seizuresand primarly generalized myoclonic and tonic-clonic seizures, and also as adjunctive treatment for refractory epilepsy. It has been shown to be effective in adults, children, infants and even premature neonates with epilepsy. Side effects include behavioural disturbances in some patients, not cognitive impairement like first-generation AED.

AIM:The aim of this study was to determine whether levetiracetam was the first-choice AED in our Epilepsy Centre and if it is used more often in monotherapy or polytherapy.

MATERIALS AND METHODS: This is a retrospective, observational study. Duringthe period of January 2010 to December 2015, several parameters, such as epilepsy type, the frequency of prescribing levetiracetam in mono/polytherapyand side effects were evaluated.

RESULTS:A total of178(51% girls, 48% boys) pediatric patients with epilepsy were enrolled.The age of the examinees was between 0 and 19 years (mean 12,9). Primarly generalized epilepsy was diagnosed with 85(47%) patients, while focal epilepsy was present in 93 patients (52%). Refractory epilepsy had 63 patients (35%) which is in accordance with commonly reported datas in clinical trials. During this period we treated 122 (68%) patients with levetiracetam as first AED in monotherapy. In 56 (31,46%)patients levetiracetam was introduced as adjunctive treatment for refractory epilepsy, most offten with valproic acid(15%) and lamotrigin(11%)in rationale polytherapy. Side effects in form of bihevioural disturbances had 4 (2%) patients.

CONCLUSION: In this study, we have proved that levetiracetam is probably the best of all the newer AED, with favorable tolerability and safety profile.It is probably the AED that is most free from side effects, highly effective, broad-spectrum and mostly used as the first-line choice in monotherapy.

Keywords: epilepsy, levetiracetam, monotherapy, pediatric population

A CASE OF A RARE GENETICAL DISORDER BY THE NAME OF GAUCHER DISEASE AND ITS TREATMENT WITH CEREZYME

(Oral presentation)

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INTRODUCTION: Gaucher disease is a rare genetic disorder characterized by the deposition of glucocerebroside in cells of the macrophage-monocyte system. The disorder results from the deficiency of the enzyme glucocerebrosidase. The disease was first mentioned in 1882 by french doctor Philippe Gaucher. He wrote that fat-like substances called cerebrosides collect in organs.

CASE PRESENTATION: A 10 year old boy with the diagnosis of Gaucher disease that was diagnosed at age 4. At that point in time the child had constant pressing pain in the abdominal region for a few weeks along with the presence of hepatomegaly, splenomegaly and trombocitopenia. He was sent to a doctors council to determinē the diagnosis and for genetic analysis. Since then he has received Enzyme replacement therapy (ERT) which consists of imiglucerase (Cerezyme) that is administered intravenously every second week at a pediatric day hospital. Prenatal and antenatal growth is according to his age category. There were no complications during pregnancy or labor.

The childs parents are both young (35 years old). There have been no reported genetic abnormalities between the relatives. Currently the clinical symptoms have lessened based on the administered therapy. The boy has become more active although he grows tired faster than other kids his age, there have been cases of nose bleeds and frequent forming bruises. This lessens his quality of life. At the age of 10 the patient has objectively delayed growth in terms of weight and height but his mental development is not affected.

CONCLUSION: Although Gaucher disease is rare its effect on the patient is considerable with the adverse effect of lessening the quality of life. It's something pediatrics and general practitioners should know of to minimize the risk of passing by such a patient. The before mentioned therapy of Cerezyme is effective for lessening the clinical manifestations in Gaucher disease.

Keywords: Gaucher disease, rare, glucocerebrosidase, genetic disorder, Cerezyme

INFANT FEEDING AND RISK OF ALLERGIC DISORDERS IN CHILDHOOD

(Oral presentation)

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INTRODUCTION: Type of nutrition during infancy may cause later child health outcomes including allergy. Some studies suggested that breast-feeding was associated with a lower incidence of asthma, wheezing and allergic rhinitis. However, there is no consensus whether it can help prevent different allergic disorders.

AIM: The aim of this study was to assess the relation between type of infant feeding and developing allergic disorders in childhood.

MATERIALS AND METHODS: It was a cross-sectional study in Gonabad, Iran in 2011. Multi-stage sampling method was used to select 1627 students between 12-18 years of age. The International Study of Asthma and Allergies in Childhood [ISAAC] questionnaire was used to gather information on allergic symptoms. The Chi-Square and Fisher's exact tests were used to compare qualitative variables between groups. Odds ratios and 95% confidence intervals (CI) were calculated to show the strength of association. P-value <0.05 was considered statistically significant.

RESULTS: Mean age of children was 14.5±1.7 years. 53.8% were male while 46.2% were female. 73% of children used only mother's milk during their infancy. Current rash, wheezing, watery eyes, nose block, and eyelid inflation, itchy nose and itchy eye were not correlated with type of infant feeding, but current rhinitis, watery nose and red eye were significantly associated with type of infant feeding (p-value<0.05). formula-feeding and cow's milk-feeding significantly increased the chance of experiencing any type of allergy during the life comparing to breast-feeding with Odds Ratios (95% confidence interval) of 1.36(1.03 to 1.78) and 1.61(1.15 to 2.26) respectively.

CONCLUSION: Feeding infants with formula and cow's milk may increase the risk of developing some allergic symptoms in childhood.

Keywords: allergy, breastfeeding, children, risk factor

NEONATAL RISK FACTORS OF RETINOPATHY OF PREMATURITY: A HISTORICAL COHORT STUDY

(Oral presentation)

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INTRODUCTION: Recent technological advances in neonatology have increased the survival rate of very low birth weight infants, which has led to a correspondingly increased incidence of retinopathy of prematurity (ROP) in this group of infants.

AIM: The aim of this study was to identify neonatal risk factors for severe ROP in premature babies.

MATERIALS AND METHODS: A historical cohort study was undertaken In Shiraz from January 2006 to April 2010. All premature neonates with gestational age (GA) of <34 weeks or birth weight (BW) of <2000 g were included in the study.

RESULTS: During the study, 1095 premature infants were recruited. 363(33.2%) infants presented various degrees of ROP (249 infants without treatment and 114 were treated with laser). Bivariate logistic regression showed that GA [OR=0.68 (95% CI 0.62 to 0.75)], BW [OR=0.997(95% CI 0.996 to 0.998)], length [OR=0.84 (95% CI 0.80 to 0.89)], and head circumference (HC) [OR=0.73 (95% CI 0.66 to 0.80)] had significant inverse relation with developing ROP and there is no statistical association between sex of neonates and ROP (p value=0.054). However, after adjustment in multivariate logistic model, only GA and HC remained in the model as independent risk factors. Adjusted OR for H.C was 0.8 (95%CI: 0.71- 0.90) and Adjusted ORs for GA<=28weeks, and 28weeks<GA<32weeks, were 4.32 (95%CI: 1.76-10.57) and 3.5 (95%CI: 1.56-7.83) in comparison with GA=32 weeks.

CONCLUSION: Gestational age and head circumference at birth were the most important risk factors for severe ROP in our study.

Keywords: Retinopathy Of Prematurity, Neonatal risk factors, Gestational age, Head circumference.

Abbreviations: OR, Odds Ratio; CI, Confidence Interval

THE 5th BLOOD TYPE: TREATMENT OF HEMOLYTIC DISEASE OF THE NEWBORN

(Oral presentation)

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INTRODUCTION: Hemolytic disease of the newborn involves a disease that occurs as a result of discrepancies blood elements between pregnant women and fetus. Hemolytic disease of the newborn occurs with Rh incompatibility, and with incompatibility ABO system. From the laboratory results are the most important positive Coombs test, a high percentage of erythroblasts in the blood of the newborn and increase in bilirubin over 15 mg%.

AIM: Show a possibility of treatment with 5th blood type. The goal of therapy is the removal of large quantities of bilirubin in the body of the newborn, which causes paralysis of cellular respiration.

MATERIALS AND METHODS: This is experimental work. This treatment can only be achieved by replacing the blood of the newborn (eksangivnotransfusion), where at the same time and replaces the blood of newborns. In preparation for the 5th blood type we take concentrate of erythrocytes and dissolved in the plasma volume which is appropriate for the quantity of erythrocytes we took. The blood is made of packed red blood cells blood group 0 Rh negative and AB plasma.This blood component is filtered and irradiated, and ready for use.

RESULTS: In the lab, we proved that it is possible to make a 5th blood type, one additional composition that enable fast and effective treatment of diseases of the newborn

CONCLUSION: Hemolytic disease of the newborn (HDN) is a consequence of the mother's alloimmunization towards fetal erythrocyte antigens. The possibility of treating blood group has advantages because it reduces the additional sensitization with right choice of blood components.

Keywords: eksangvinotransfusion, blood group, Coombs test, HDN.

DEMOGRAPHIC CHARACTERISTICS OF WOMEN UNDERGOING IN-VITRO FERTILIZATION (IVF)

(Oral presentation)

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INTRODUCTION: Infertility (sterility, barrenness) is defined as a state of inability to conceive after a year of unprotected intercourse. Ovulation problems, uterine tube problems, endometriosis, other problems with uterine etiology, chromosomal problems, spermatogenesis disorders, and azoospermia, are stated as the most common causes of infertility.

OBJECTIVE: The main objective of this research was to analyse demographic characteristics (age, level of education, place of residency, duration of marriage) of women treated in one infertility clinic in Sarajevo, Bosnia and Herzegovina, with respect to the duration of their infertility.

MATERIALS AND METHODS: Retrospective, descriptive epidemiological study was performed, based on detailed anamnestic data for 96 couples who were treated at Bahceci IVF center in Sarajevo from 1 January 2015 to 1 June 2015.

RESULTS: According to age, women were classified in five groups: 18—24 (5.2%), 25—29 (21.9%), 30—35 (37.5%), 36—39 (24.0%) and 40 or older (11.5%). Of the total population, 55.2% of women graduated faculty. Regarding the place of residence, 75% of women live in big cities. Average duration of infertility was 5.0 years, without difference between women who live in small towns (5.2) and those who live in big cities (5.0), nor women who graduated high school (5.3) and women who graduated faculty (4.8).

CONCLUSION: Most of our participants were 30-35 years old, have graduated faculty and live in a big city. We did not find the difference in the participants' duration of sterility regarding their place of residence nor level of education.

Keywords: infertility, Bosnia and Herzegovina

NEWBORN CHARACTERISTICS AND OBSTETRIC ANAL SPHINCTER INJURY

(Oral presentation)

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INTRODUCTION: Obstetric anal sphincter injury (OASI) is a major complication of vaginal delivery. OASI after vaginal birth can remain unrecognized and leave serious consequences in terms of anal incontinence. The rate of OASI based on clinical detection is up to 5%, however postpartum ultrasound have shown OASI in up to 41% women. OASI contribute to fecal incontinence and poorer quality of life, which is why it is important to know risk factors for its occurrence and ways how to prevent it.

AIM: We wanted to evaluate the association between different demographic and obstetric parameters and presence OASI.

MATERIALS AND METHODS: This is a retrospective study, which involves 134 women (median age 31 years), who underwent endoanal ultrasonography between years 2010-2015. In the study we compared two groups in the group one were 84 women suffered OASI. Selection of possible risk factors for sphincter damage was based on clinical expertise and a review of the scientific literature. All needed data were obtained from medical records. The presence of OASIs was diagnosed with endoanal ultrasonography. For data analysis, we used two-tailed tests: unpaired Student's t-test and χ^2 test. Data were analyzed using Microsoft Excel, 2010.

RESULTS: Greater size of the baby ($p < 0.00857$), greater birth weight ($p < 0.00289$) and head circumference ($p < 0.00136$) were found to increase the risk of perineum rupture during childbirth.

CONCLUSION: In summary, this research found the following variables to be independent risk factors for OASI: birth height and weight, as well as greater head circumference. With findings of our study, we can select women with higher risk of perineum injury and in these; we can make ultrasound examination right after birth and detect even small damage to anal sphincter. With early repair, we can avoid long-term consequences and help them to recover faster and improve their quality of life.

Keywords: Obstetric anal sphincter injury, endoanal ultrasound, risk factors, vaginal childbirth

EFFECTS OF HORMONAL CONTRACEPTION ON VAGINAL FLORA, CAN CONTRACEPTIVE USE LEAD TO VULVOVAGINAL CANDIDIASIS (VVC) OR BACTERIAL VAGINOSIS (BV)

(Oral presentation)

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INTRODUCTION: There is a wide choice of birth-control methods available today. These include the following methods: natural family planning; barrier and hormonal methods; IUCD; permanent methods and emergency contraception. The etiology of vulvovaginal candidosis (VVC) is multifactorial and bacterial vaginosis (BV) as the most frequent cause of vaginal discharge in reproductive-age women. The etiology of BV remains unknown; however, the condition is traditionally characterized by an alteration in normal vaginal microbiota.

AIM: The aim of our study was to find out whether the use of hormonal contraceptives has any effect on microbiota of the vagina in the contraceptives users.

MATERIALS AND METHODS: We searched PubMed database for relevant articles published from 2010/01/01 to 2015/12/31. We conducted a systematic review of previously published results on the internet to re-analyze the effects of hormonal contraceptives on the vaginal flora. The following studies were excluded: article types that weren't review, articles about cell lines or animals; languages other than English.

RESULTS: Although the yeast genus Candida is part of the normal vaginal microbiota, VVC constitutes one of the most common clinical problems worldwide**.** Candida albicans was the most common species of vaginal flora for contraception users. Among all the contraceptive methods, OC is referred to as the most common cause, the next following method is the injection and IUCD. VHR use as a contraceptive method is convenient and easy to use, it does not alter the physiological vaginal ecosystem and therefore does not significantly affect the health of the vagina.

CONCLUSION: We conclude that there is a close relationship between contraceptive use and contaminate the vagina with Candida species. There was significant relationship in respect to age, marital status of the screened persons and the prevalence of vaginal colonization. Also non-contraceptive users observed incidence of candida, which leads to the conclusion that not only the hormonal contraceptive but also other triggers (number of partners, hygienic compliance with co-morbidities, diabetes mellitus, level of education and socio-economic factors) play a role in the vaginal microflora development.

Keywords: candida albicans, vulvovaginal candidiasis, bacterial vaginosis, contraceptive users, clinical practice, gynecology, sexual dysfunction, vaginal discharge

SEVERE HAEMORRHAGE AND TRANSFUSION IN OBSTETRICS AND GYNECOLOGY

(Oral presentation)

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INTRODUCTION: Pregnant women are at risk to develop complications due to illness related to pregnancy or pre-existing disease. Also, there is a risk of hemorrhage during childbirth, Caesarean section, as well as any gynecological surgery. Recent retrospective studies have found high fresh frozen plasma (FFP) to packed red blood cell (pRBC) ratios during trauma resuscitation to be associated with improved mortality.

AIM: To review all gynecologic and obstetric (OB/GYN) patients admitted to the Intensive Care Unit (ICU) and to determine the causes and outcomes of these admissions. The administration of pRBC and FFP was also considered due to new guidelines for massive transfusion (1:1 FFP:pRBC ratio).

METHODS: A retrospective study and analysis of data from OB/GYN patients admitted for critical care management, during 10-years (2006-2015) period, at the University Department of Anesthesiology, Reanimatology and Intensive Care, University Hospital Centre Osijek.

RESULTS: A total of 8481 patients were admitted to ICU. 101(1,23%) of all ICU patients were OB/GYN. Out of all, 57(54,81%) were gynecologic and 47(45,19%) were obstetric patients. The median age was 42 years. The average stay in ICU was 6,48 days. The most common cause of admission was respiratory insufficiency in 76(51,01%) followed by vital functions monitoring in 19(12,75%) and hemodynamic instability in 18(13,13%) patients. Blood transfusion was required in 48,21% of all patients, while severe bleeding resulting in hemorrhagic shock was presented in 7(4,38%) patients. Patients were given blood components: FFP, pRBC,thrombocytes,colloids and crystalloids. FFP and pRBC were administered from 1:1 to 1:6 ratio. Maternal mortality rate was 11(10,58%) which included 3 patients with severe hemorrhage.

CONCLUSION: Team approach in management of OB/GYN patients in the ICU may decrease mortality and morbidity. Further investigation is necessary prior to recommending routine 1:1 FFP:pRBC ratio.

Keywords: obstetric patients,gynecology patients,ICU,hemorrhage,transfusion

CONGENITAL HEART DISEASE IN SLOVENIA: DETECTION AND ESTIMATION OF POTENTIAL IMPROVEMENT BY PULSE OXIMETRY SCREENING

(Oral presentation)

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INTRODUCTION: Congenital heart defects (CHD) are the commonest congenital malformations (6-8/1000 live-born infants). Half are minor and require treatment, if any, later in life, whereas major and critical CHD require treatment (surgical or catheter- based) in the first year or first four weeks of life, respectively. Otherwise, severe complications and death may occur. CHD screening includes prenatal ultrasound and physical examination of newborns, however, some patients remain undetected at discharge. For these, pulse oximetry has proved to be beneficial in CHD screening.

AIM: To investigate the proportion of infants with late detection of major/critical CHD and estimate the potential for improvement by pulse oximetry screening.

MATERIALS AND METHODS: The study group consisted of live-born infants with major/critical CHD in Slovenia from 2007-2012. We recruited patients from five databases and retrieved data from their personal medical records. We sought when each patient's CHD had been detected – On time (prenatally or before discharge from the maternity hospital) or Late (after discharge or at autopsy). We excluded patients with chromosomal aberrations, oesophageal atresia, diaphragmatic hernia, preterm babies at <34 gestational weeks and those born at home.

RESULTS: Of 128839 live births, 255 patients with major CHD were included in the study. Of these, 139 had critical CHD. On-time detection occurred in 209 (82%) and 124 (89,2%) patients with major and critical CHD, respectively. Late detection occurred in 46 (18%) and 15 (10,8 %) patients with major and critical CHD, respectively. Out of 15 late-detected patients with critical CHD, 9 had coarctation of the aorta, 3 hypoplastic left heart syndrome, 2 aortic stenosis and 1 tetralogy of Fallot. In 2 patients, CHD was discovered post-mortem.

CONCLUSION: CHD detection in Slovenia is very good, however some left-sided critical CHD remain undetected. We believe improvement in detection could be achieved by additional pulse oximetry screening.

Keywords: Paediatrics, cardiology, congenital heart defects, screening, pulse oximetry.

EDWARD'S SYNDROME

(Oral presentation)

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INTRODUCTION: Trisomy 18, also known as Edwards syndrome, is a condition which is caused by a error in cell division, known as meiotic disjunction. When this happens, instead of the normal pair, an extra chromosome 18 results (a triple) in the developing baby and disrupts the normal pattern of development in significant ways that can be life-threatening, even before birth.

OBJECTIVE: The aim of our case study was to present that although Edwards syndrome is a severe genetic abnormalty resulting in median lifespan of five to fifteen days, there are cases where infants can survive longer than a year, even to the age of ten.

SUBJECT AND METHODS: The medical history of two female patients with Edwards syndrome were analyzed.

RESULTS: In the last ten years at the Clinical Hospital Centre in Osijek were born seven children with Edward's syndrome. They all had the characteristic signs of the syndrome, but the two girls that we monitored were somewhat uncharacteristic. The first baby was born in 2013, the syndrome is diagnosed at birth. Characteristics that accompanied the child syndrome are heart failure, brain malformations, hypotonic, psychomotor retardation. The second child was born in 2014, also syndrome diagnosed at birth. It had all the signs of the syndrome, which are determined immediately after birth cariogram.

CONCLUSION: Even Edward's syndrome is rare, and described in books as lethal in first month of birth – it doesen't have to be like that always.

Keywords: Edward's syndrome

Surgery

DIFFERENT PERSPECTIVES TO KIDNEY TRANSPLANTATION

(Oral presentation)

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INTRODUCTION: It's well known that end stage renal diseases (ESRDs) have no such proper treatment. Millions of people around the world are suffering and they obligate to go to dialysis every week, 3 to 7 days. Dialysis has some complications and it is uncomfortable. For these reasons, most of ESRDs patients are waiting for a organ transplantation. Unfortunately, we have lack of organ donors.

AIM: That is the moment our research came up. Our idea is finding a solution to desperate patients who are waiting for a kidney in their whole life. It is only a hypothesis but it has some good promises about future.

RESULTS: There is lots of statistical informations about dialysis that is not a perfect cure. Huge machines can not do exact thing that our small kidney does. Even, after years of dialysis treatment, ESRDs patients are heading to find a matching organ donor. It is very hard to find it because of immunological identities. Therefore scientists introduced us with a new side of transplantation world. Now, there is some structural ways and biochemical ways to prevent from these problems.

CONCLUSION: Scaffolds are years away from clinical using. Building a whole new organ is very complex thing to do. That's why, hiding a different organ behind of a barrier would be easier to do. It will also make body to accept xenograft transplantations. So there would not to be any reason to wait for an allograft transplantation. There might be also some biochemical ways to prevent from kidney problems but it is not cleared yet. All of them will be discussed in the presentation.

Keywords: kidney transplantation, ghost organ, scaffolds, immune barriers, biochemical kidney.

DIAGNOSIS OF OSTEOID OSTEOMA: A CASE REPORT

(Oral presentation)

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INTRODUCTION: Osteoid osteoma is a benign tumor that develops from osteoblasts. It usually occurs in the long bones of young male adults, and is not bigger than 1.5 - 2 cm. Symptoms are not specific, depending on the location of the tumor. The most usual sing is severe dull pain that does not spread and is persistent throughout 24 hours with significant increase at night.

CASE PRESENTATION: We present a case of a 16 year old patient admitted to the orthopaedic clinic due to severe night pain in left leg in the last 15 days. Standard exam showed pain during palpation in the projection of distal lateral part of left femur.

The first radiography scans (RTG) did not show changes but due to characteristic pain, RTG was repeated. Scans have showed barely noticeable hyper dens area in a projection of lateral epicondyle of left femur. Computed tomography and magnetic resonance imaging scans revealed a ring-shaped radiolucency consistent with a central nidus of osteoid osteoma. It also showed sclerotic bone and peripheral oedema. The lesion was resected and pathohistological analysis confirmed the diagnosis. Patient postoperative course continued in the paediatric clinic where he recovered successfully.

CONCLUSION: With this case we want to present the difficulties of making a diagnosis of osteoid osteoma due to non-specific symptoms and small dimensions which in some cases make them hardly seen on RTG scans. It is of an extreme importance to do detailed anamnesis for every patient. Doctors did not give up on this patient due to important anamnestic data that they used to expand the diagnostic procedures which were helpful in proving the diagnosis and therefore curing the patient in time. Six months after surgery our patient is symptom-free with no evidence of recurrence.

Keywords: Osteoid osteoma, non-specific symptoms, anamnesis

LUNG CANCER SURGERY

(Oral presentation)

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INTRODUCTION: Lung cancer is the most common malignant neoplasm and surgery is the most efficient method of treating it. If done so in the early stages of cancer, patients can achieve a full recovery.

AIM: The aim of this study was to determine the age, gender and smoking habits of our participants, the amount of each surgical method that was performed and the amount of each histological type of lung cancer found in our participants.

MATERIALS AND METHODS: Our participants were patients that had underwent lung cancer surgery in the Clinical Department of Thoracic Surgery, University Medical Centre Osijek, starting January 1st 2010 until December 31st 2014. All data were taken from our patient's medical records.

RESULTS: Out of total 191 participants, 139 of them were male and 52 female. Age median is 61. There were more smokers than non-smokers, and more male participants amongst smokers. Lobectomy is the most common used surgical method in treating lung cancer, performed in 78 (40.8%) participants. It was confirmed that adenocarcinoma is the most common histological type with 59 (43.1%) participants diagnosed, followed by squamose cell carcinoma with 48 (35.0%) participants diagnosed (p=0,097). Adenocarcinoma was by far more common in female participants than in male, and it was more common in non-smokers (p=0,009). Patients with adenocarcinoma were younger than patients with squamose cell carcinoma.

CONCLUSION: There were more male participants and smokers, than female and non- smokers. Lobectomy is the most common used surgical method. Adenocarcinoma is the most common histological cancer type in our participants.

Keywords: adenocarcinoma; lobectomy; lung cancer; surgical methods

PRESENCE OF BIOMARKERS (ER, PR, HER2/NEU) AND THEIR CONNECTION WITH PROLIFERATION INDEX Ki-67 AND GRADE OF THE TUMOR IN PATIENTS WITH BREAST CARCINOMA

(Oral presentation)

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INTRODUCTION: Estrogen(ER) and progesterone(PR) hormone receptors are found in breast cancer cells that depend on them to grow. HER2 is a human epidermal growth factor. Ki-67 is a proliferation index strictly associated with cell proliferation. They are all biomarkers and can be used for disease prediction and prognosis.

AIM: To examine the frequency of hormone and HER2/neu receptors and to explore their connections with Ki-67 proliferation index and tumor grade.

MATERIALS AND METHODS: A retrospective study was conducted on Clinic for surgical oncology in Clinical center University of Sarajevo using the patients' histories in 6 month period. There were 69 patients, mean age 59.94 (min 32, max 79). Patohistological exams were taken and examined in detail. Collected data were analysed using SPSS 13.0 programme.

RESULTS: Results showed presence of ER in 84.06% and PR in 79.71% of patients. This showed a significant positive correlation between presence of ER and PR ($r=0,471306;p<0,05$). Strong positive correlation is found between presence of ER and proliferative index Ki-67 ($r=0,999892;p<0,05$). Presence of PR and Ki-67 were also in positive correlation ($r=0,469110;p<0,05$). HER2/neu was positive in 24.64% patients. Presence of HER2/neu receptors was in mild negative correlation with ER, PR and Ki-67 which was statistically insignificant. Only HER2/neu had a positive correlation with tumor grade ($r=0,368388;p<0,05$).

CONCLUSION: Patients with positive hormone receptors are more frequent comparing to the patients with positive HER2/neu receptors. This study indicates that expression of PR strongly increases with the presence of ER. The expression of PR and ER increases with proliferative index. Negative correlation of HER2/neu with ER, PR and Ki-67 indicates that as expression of HER2/neu increases, proliferative index and presence of hormone receptors are decreased. Only HER2/neu was positively correlated with tumor grade which means that higher graded tumors have higher HER2/neu and lower ER and PR receptors.

Keywords: breast carcinoma, patohistological exam, grade of the tumor

ANALYSIS OF LACERATIONS OF FLEXOR TENDONS IN HAND WITHIN PATIENTS WHO ARE OPERATED IN TWO-YEAR PERIOD IN CLINICAL CENTER OF VOJVODINA

(Oral Presentation)

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INTRODUCTION: Hand is involved in nearly all activities of people. Therefore, injuries of hands are very common. Nearly 20% of all the visits in Emergency room is because of hand injuries. Of these, approximately 30% are tendon injuries. It's of great importance to follow and understand all possible factors that can influence to frequency of these injuries.

AIM: Our aim is to see how are sexes, sides, age, mechanism of injuries influencing the frequency of flexor tendon injuries, and which flexor muscles and which fingers are most commonly injured.

MATERIAL AND METHOD: This is retrospective study proceed on data gathered from medical histories of 100 patients who are treated in Clinical center of Vojvodina since November the1th 2014. until November the1th 2015. Ethical committee gave it's permission for using these data.

RESULTS: Our results have showed that majority of population is male in young adult period. Hurting right hand is more frequent than left. Mechanism of injuries is most commonly hitting, throwing, falling on or squishing glass objects. Most commonly injured flexor muscle is m.flexor digitorum profundus.

CONCLUSION: Importance of understanding the nature of flexor tendon injuries is huge because of it's frequency, influence of one's quality of life, and costs which one society spend on individual with flexor tendon injuries.

Keywords: hand, flexor, laceration, tendon, injuries,

LAPAROSCOPIC NEPHRECTOMY WITH THE VAGINAL EXTRACTION

(Oral presentation)

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University of medicine and pharmacy IASI

INTRODUCTION: The first laparoscopic nephrectomy was performed by Clayman in 1991.Since then, this intervention has become as the reference technique for the nephrectomy. The incisions are smaller, rehabilitation andshorter average lengths of stay.However, extraction of the operational piecetory required to perform a laparotomy greater or less depending on the size of the tumor or the kidney to external rioriser. The iliac incision, commonly realized, is actually a little anatomical incision imposing amputate muscles large abdomen. In addition to being frequently painful during the post operative period, these incisions can be complicated by incisional hernias that will often be difficult to repair because cen-giant in a very muscular area with few strong fascia used for the parietal repair. The Pfannenstiel incision Reduced disfigurement but extracting the kidney by this route is sometimes difficult and dangerous especially in obese patients .

AIM: Laparoscopic nephrectomy is the technical minimally invasive but which finishes with invasive extraction incision and therefore moreor less decaying to the abdominal wall. Vaginal extraction pathway inthe woman responds to this problem

MATERIALS AND METHODS: It is the sharing of two Technical daily used Surgery: firstly, nephrectomy performed by laparoscopic surgeons urologists; on the other hand, extraction a body vaginally, gesture regularly performed by surgeons gynecologists practicing hysterectomies vaginally. In the nephrectomy technique with externalizing vaginal, abdominal incisions So as to summarize three or four incisions for trocar.

RESULTS: Laparoscopic nephrectomy with the vaginal extraction is a technique in good achievable surgical security conditions, with suites Postoperative simplified. It is still recommended to have some experience vaginal surgery to allow easy the first Douglas cul de sac. This route of extraction Evaluation is soin particular our prospective Service in terms of pain and term rehabilitation. Six months afterthe program began, the results seem encouraging but requireto be validated in the long term.

CONCLUSION: The first laparoscopic nephrectomies with transvaginal extraction were performed in 1993. Although this extraction route has many advantages, it is not often used in routine urological practice. The procedure involves two stages, the first corresponding to conventional laparoscopy followed by transvaginal extraction via a posterior semi-circular colpotomy. In addition to its cosmetic advantages, this method precludes the need for abdominal incision, which can cause postoperative pain and discomfort. The only skin incisions necessary therefore are three or four port incisions, thereby reducing the risk of postoperative incisional hernia. Transvaginal nephrectomy is ideal in obese patients in whom it reduces parietal morbidity.

Key words: vaginal nephrectomy, Laparoscopic nephrectomy, Renal cancer.

NEW ENDOSCOPIC APPROACH FOR THE AORTIC VALVE REPLACEMENT

(Oral pressentation)

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INTRODUCTION: The first human totally endoscopic aortic valve replacements reported was performed in France. Surgeons have successfully replaced the aortic valve in two patients without opening the chest during surgery. For aortic valve replacement, cardiovascular surgeons usually have to make a large incision in the patient's chest, this endoscopic approach shows potential for improving quality of life of heart patients by offering significantly reduced chest trauma.

AIM: The evaluation of this new endoscopic approach for the aortic valve replacement and of it's potantial benefits in improving the quality of life for heart patients

METHODS: Compared to trans-catheter aortic valve implantation (TAVI) in witch we implant a new valve and we just leave the diseased valve in place, and sometimes that is still one of the limits of this therapy, the endoscopic approach allows removal and ''true replacement'' of the native calcified valve which might, in theory, reduce long term embolic rates or paravalvular regurgitation. Totally endoscopic aortic valve replacement (TEAVR) has not previously been feasible, because the currently available designs of stented tissue valves do not allow them to fit through a trocar. The recent advent of sutureless bioprostheses, mounted on a compressible self-expanding nitinol stent, has made this possible

RESULTS: This technique was performed on two patients who were 82 and 93 years of age and had aortic valve stenosis. They spent about 2 and a half hours under cardiopulmonary bypass, but the actual implantation of the device took only 45 minutes. Both patients were discharged from the hospital in a week and have had no serious complications. This endoscopic sutureless aortic valve replacement in 2 elderly patients is another exciting development in potential options for treatment of severe symptomatic aortic stenosis.

CONCLUSION: If larger studies show that this approach to aortic valve replacement is effective with an acceptable mortality and morbidity, it will offer an intermediate option between standard surgical aortic valve replacement and transcatheter aortic valve implantation. But Further clinical experience and technical development are necessary to shorten operation times and to assess further the potential postoperative benefits of TEAVR

Keywords: endoscopy, aortic valve, TEAVR

SINGLE INCISION ROUX-EN-Y GASTRIC BYPASS

(Oral presentation)

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INTRODUCTION: In this study, we present single incision Roux-en-Y gastric bypass in 14 patients, focusing on describing the surgical technique.

AIM: The aim of this study is to describe the SILS technique and to evaluate its short term outcomes.

MATERIALS AND METHODS: The study group was comprised of 14 patients who underwent single incision laparoscopic gastric bypass at the Cleveland Clinic Bariatric and Metabolic Institute between March 2012 and February 2013 using a single vertical 2.5–3 cm intra-umbilical incision,3-ports placed trans- fascially, and a liver suspension technique.Short-term outcomes were evaluated.

RESULTS: Weight loss was approximately 20.6 Kg (±7) after 4 months with no needed re-operation or readmission during the 90 days after surgery.

CONCLUSION: ILS is a safe technique with promissing post-operative results.

Keywords: single incision laparoscopic surgery, single incision gastric bypass

CELL TRANSPLANTATION OF CORD BLOOD IN PATIENTS WITH THE EXTREMITIES TROPHIC DISORDERS OF VENOUS ETIOLOGY

(Oral presentation)

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INTRODUCTION: The search for new methods of complex treatment of venous ulcers of the lower limbs is a key issue of modern phlebology, because despite the constant work of histopathologists, surgeons and pharmacists on the prediction of wound healing the wound is almost unattainable goal.

AIM: was to conduct a comparative analysis of mathematical index of healing speeds of the ulcer in patients with donor cell transplantation of cord blood and without it.

MATERIALS AND METHODS: Cryopreserved cell suspension was taken from "Institute of Cellular Therapy." Clinical studies conducted involving patients with venous trophic ulcers undergoing surgery for correction of venous outflow from the lower extremities to the background of conservative local therapy, but the healing of the ulcer not occurred for a long time (2 to 5 years). Group I (control) received only basic and conservative local therapy. Group II (main) before conservative treatment under local anesthesia subfascial under the ulcerative defect cell suspension with the following parameters: the content of nuclear cells - 0,11-3,7×109, the number of mononuclear cells - 15-60%; the content of hematopoetic cells bearing the surface markers CD34+, CD45+ and CD117+, CD45+, respectively equal to (0,85±0,20) and (1,52±0,39) % has been injected. The viability of cells - 80 ± 10%. Further mathematical index determined speed healing of the ulcer in the Popova formula of Kravtsov modification on the 5th, 15th and 21st day after the transplantation. Index = ((V-V1)/ (V×T))×100 %, where: V - the volume of wound size at this time, V1 - volume of wound size after a specified time interval, T - number of days between the first and subsequent measurements.

RESULTS: In the main group of patients the activation of the regenerative process through active ulcer granulation, which reduced its depth from the first days after transplantation has been observed. The healing process has been supported by marginal epithelialization, which moved on ulcerative defect on all sides and its radius reduced. Mathematical speed healing index significantly increased (1.5 times) in the experimental group compared with the control group ($p<0.05$).

CONCLUSIONS: Transplantation of cord blood cells to patients with chronic venous trophic ulcers resistant to conventional therapy leads to stimulation of their own mechanisms for ulcer healing.

Keywords: trophic ulcers, cord blood, transplantation

LONG-TERM FUNCTIONAL OUTCOME OF LAPAROSCOPIC ANTI REFLUX SURGERY

(Oral presentation)

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INTRODUCTION: Medical treatment of gastro esophageal reflux is associated with relapse in 30% of cases. In these patients, the best therapeutic option is surgical treatment, performed laparoscopically. However, there are few data on long-term functional outcome.

AIM : To determine long-term results of laparoscopic antireflux surgery the mechanisms involved in patients with worse results.

METHODS: We studied patients operated for reflux disease. They had either total or partial laparoscopic fundoplication. These patients were contacted to assess postoperative improvement, satisfaction and asked about the occurrence or not of a persistent postoperative dysphagia.

RESULTS: Seventy one patients were included (Nissen in 61% of the cases and Toupet in 39%). After an average period of 52.4 months, 80 % of patients were satisfied. 58% were completely improved, while 31% were partially improved after surgery. Persistent reflux symptoms reflux were observed in 8 patients and postoperative dysphagia was reported by 11 patients. Gastroesophageal reflux revealed by chronic cough was the only independent parameter associated with bad functional results in our patients.

CONCLUSION: Laparoscopic anti reflux surgery is associated with a high frequency of satisfaction. However, patients with chronic cough respond less better to surgery. Strict selection of the patients before surgery must be done, to improve the functional results after anti reflux surgery.

Keywords: Gastroesophageal reflux disease – Surgery – Laparoscopy

A CASE OF LAPARASCOPIC DOUBLE GALLBLADDER REMOVAL

(Oral presentation)

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INTRODUCTION: Double gallbladder is a rare congenital anomaly, which can present a problem/challenge for the surgeon who performs laparoscopic cholecystectomies. It is a very rare entity with an incidence of 1/4000. The ratio of incidence between men and women is almost equal, though favouring the female gender at 1:1,7.

AIM: The aim of this case is to document possible treatment of the anomaly as an aid to those encountering it for the first time during an operation and to increase awareness of this anatomical variation.

MATERIALS AND METHODS: We present a case of double gallbladder which was diagnosed during the operative procedure. 28-year old woman came to us complaining of right upper quadrant pain, which had occurred several times in the form suggestive of biliary colic.

RESULTS: Despite the finding of a double gallbladder intraoperatively, laparoscopic removal without any complications was performed. Pathohistologic examination showed a gallbladder with two entirely separate lumens divided by a 5mm thick septum. Obviously visible were two cystic ducts.

CONCLUSION: It is important to diagnose the anomaly before the procedure, but this only occurs in 50% of cases. Both the radiologist and the surgeon need always be aware of the possibility of the existence of a double gallbladder. Preoperative knowledge of anatomical anomalies is of great importance from the point of view of undesired injuries to the biliary system and of postoperative complications.

Keywords: gallbladder, double, laparoscopic cholecystectomy, anomaly

SUPEROXIDE DISMUTASE INFLUENCE ON PREVENTING FREE RADICAL PROCESSES AT NASOINTESTINAL INTUBATION

(Oral presentation)

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INTRODUCTION. Nazointestinal intubation (NII) is used in acute intestinal obstruction (AIO). NII supports decompression of intestinal and improvement microcirculation in the intestinal wall, but leads to its traumatization, helping to strengthen the free-radical processes.

AIM. To determine the effect of NII in AIO on the level of free radical processes in the postoperative period and to evaluate the effectiveness of recombinant superoxide dismutase (RSOD) on the intensity of oxidative stress.

MATERIALS AND METHODS. The study involved 95 patients operated on for AIO. The patients were divided into two groups: I, control, traditional treatment was performed, 49 patients; II, the main, 46 patients received basic treatment and RSOD. Each group was divided into two subgroups: Ia (13) and IIa (14) - without NII; Ib (36) and IIb (31) - with NII. On admission to hospital, on the first, third and sixth day after operation we had evaluated: indicators of blood serum chemiluminescence (CL): spontaneous luminosity (SL) and iron- induced CL (Height of quick flash (HQF) and light sum of slow flash (LSSF)).

RESULTS. Before the operation in both study groups there were no indicators of significant differences of CL. Values of SL, HQF, LSSF were higher 10,4–14,6% in group Ib, than in Ia at the first day after operation, and 2,6–6,6% on third day. In group IIb we found a slight excess of those indicators when compared with group IIa.

CONCLUSION. NII leads to amplification of free radical oxidation. At the same time the use of RSOD greatly minimize the negative effects of therapeutic measures.

Keywords: Nazointistinal intubation, acute intestinal obstruction, free-radical process.

WIDESPREAD ADENOCARCINOMA COMPLICATED BY ABSCESS FORMATION IN YOUNG PATIENT.

(Oral presentation)

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INTRODUCTION: Colorectal cancer is the third most common cancer in the world. It usually occurs in people older than 50 years. And only 5% cases occure under 50 years. Abscess formation is rare complication developing in 2-6% of all cases.

AIM: We report a case of 33 years old man with colorectal cancer complicated by abscess formation. The accurate preoperative diagnosis of abscess formation related to colon cancer has been hampered.

MATERIALS AND METHODS: This patient was admitted to the hospital with history of 5 days abdominal pain in the left upper quadrant and temperature 38*C. Palpation has revealed painfull infiltrate size 15x10 cm. There were no evidence of any rigidity and rebound tenderness. Roentgenography has shown liquid levels and gas in the bowel loops. CT scan has revealed the inflammatory infiltrate and large formation in the colon's splenic flexure with a narrowing. Abscess was punctured and drained with ultrasound control. 30 ml of pus was obtained. Fistulography has found connection between the abscess cavity and bowel lumen. The patient's condition hasn't improved after 7 days conservative therapy. Irrigoscopy hasn't given clear outcome. Therefore we have performed a colonoscopy which confirmed diagnosis of the colon tumor.

RESULTS: We have performed a laparotomy and found a colonic tumor spreading to greater curvature of the stomach, small intestine wall and the left rectus abdominis muscle. The tumor was removed. Pathological examination revealed adenocarcinoma without invasion in resection margins. The patient has consulted with medical geneticist and hereditary colorectal cancer syndromes were excluded.

CONCLUSION: Abscess formation is unusual condition associated with colorectal cancer. The differential diagnosis for colonic abscess includes acute pancreatitis, Crohn's disease and perforation by foreign body. Colorectal cancer in young patients needs to exclude hereditary syndromes.

Keywords: colorectal cancer, colonic abscess, abscess formation, adenocarcinoma.

MODERN TREATMENT OF TRAUMA PATIENTS USING IMPLANTS BASED ON POROUS NIKELID TITANIUM WITH NATURAL CALCIUM- PHOSPHATE COATING.

(Oral presentation)

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INTRODUCTION: Osteoporosis (OP) is one of the most prevalent diseases of the human musculoskeletal system in the world. The most serious complication of osteoporosis is fracture of the proximal femur. Most surgical interventions do not provide 100 % of the desired result. 1/5 operated patients have repeatedly complications.

AIM: To evaluate the results of surgical treatment of hip joint pathology using natural calcium - phosphate coating (NCPhC).

MATERIALS AND METHODS: The research is based on observation of 20 patients with closed fractures of the femoral neck. (Middle age 71 ± 0.7)The coverage of improved prosthesis allows for enhanced osteoinductive and osteoconductive properties of the implant as a whole (the acetabular component of the hip endoprosthesis has porous nikelid titanium insert pins and a screw cap; the femoral stem of prosthesis is made of titanium alloy VT-6 and has porous nikelid titanium (PNiTi) inserts. The clinical and radiologica research methods were used during this work.

RESULTS: All patients was made the total hip arthroplasty (THA) using author's elaboration. On control X-rays in 4 and 7 weeks the positive results of treatment were revealed in 100 % of the cases. There is strongly marked osteogenesis in the implat area revealed by moderate hyperplastic reaction of the bone tissue. There was no area of the resorption and no cancellous bone tissue regions with low x-ray opacity (P = 95.5%, in case of t = 2) During late postoperative X-ray diagnostics of "implant - bone" area (in a 1-1.5 year) it was revealed lasting stability of the implant and no areas of resorption.

CONCLUSION: These implants with natural calcium- phosphate coating are effective for pointed nosologies treatment, to improve the outcome of treatment and greatly improve patient`s quality of life.

Keywords: calcium - phosphate coating, arthroplasty, implants.

Epidemiology

Otorinolaringology

Dentistry

Other

MEDICAL STUDENTS ATTITUDE TOWARDS EMBRYOLOGY KNOWLEDGE AND ITS APPLICATION IN PRE-CLINICAL AND CLINICAL MEDICINE

(Oral presentation)

Authors: ALEKSANDRA ZDRAVKOVIĆ, Milan Žunić
Mentors: Ivan Zaletel, Nela Puškaš

INTRODUCTION: Embryology as a basic pre-clinical subject is a necessary prerequisite for understanding the complexityof humandevelopment. Certain subjects relay heavily on medical students embryology knowledge, since it represents the basis for understanding the development of normal anatomical structures and pathological processes within different diseases.

AIM: The aim of this study is to examine the attitude of senior medical students towards the use ofembryology in their pre-clinical and future clinical medical practice.

MATERIALS AND METHODS: The study was done at the School of Medicine, University in Belgrade. A total of 370 senior medical students at their final sixth year, participated in the research.Data were collected using a short anonymous questionnaire which explored students attitude towards embryology as a medical subject. Each answer was rated on a five-point Likert scale.

RESULTS AND DISCUSSION: Given results show that 80.2%of the studentsagree or strongly agree that embryology is an important subject for the proper understanding and mastering of gynecology, pediatrics (23.1%) and pathology (11.4%). 41.4% of the studentsagreed or strongly agreed that embryology was of great importance for their medical education, while only 29.1% of students agreed or strongly agreed that embryology is important for future clinical medical practice. An interesting result is that 42.2% of students think that they alone haven't spent enough time studying histology and embryology during their medical studies.

CONCLUSION: Taking into account the obtained results we can conclude that medical students have a positive attitude towards embryology. This positive attitudeshould be used as an additional motive for further development of embryology courses, with special emphasis on the practical application of acquired histology knowledge in clinical medical practice.

Keywords: embryology, medical students, pre-clinical, clinical medicine, medical education.

Acknowledgment: This work is a part of "MedSAP Research Network" project, supported by the U.S. Embassy in Belgrade (Award Number: SRB100-15-GR-355)

STYLOID SYNDROME. SYMPTOMS, THE OPTIMIZATION OF DIAGNOSIS, TREATMENT OPTIONS

(Oral presentation)

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INTRODUCTION: Styloid syndrome is a disease caused by irritation of the surrounding structures by hypertrophic styloid process with abnormal angulation. It is often undetectable because of low awareness of doctors of different specialties.

AIM: The aim of our research is to determine the optimal methods of diagnosis, to develop a treatment strategy.

MATERIALS AND METHODS: There were examined 52 patients (8 male and 44 female) at the ages from 35 to 78 years, who had been detected the disease from November 2012 to October 2015. 88,5% of patients were instituted conservative therapy, 11,5% - surgical.

RESULTS: We used a method of pre-hospital diagnosis – digital examination of the oropharynx, but the most effective method of diagnosis is CT scanning of styloid process with 3D - reconstruction. Most cases showed positive effect from nonsurgical treatment: persistent effect (absence of symptoms for more than 6 months) was observed in 57,7% of patients, moderately persistent (less than 6 months.) in 30,8%, and no effect was observed in 11,5% of patients, which were performed surgical treatment such as resection of the styloid process.

CONCLUSION: A digital examination can be performed as a primary diagnosis, but more significant diagnosis requires special techniques such as 3D-CT. We can say based on the presence of a positive effect from conservative therapy in 88.5% of patients in comparison with 11.5% of patients whom we had to institute surgical treatment because of lack of conservative therapy effect ($\chi 2=58,5$; $p<0,0001$) that there is no need to institute surgical treatment in the initial phase of treatment of this pathology.

Keywords: styloid syndrome, oropharynx, digital examination.

APPLICATION OF NUMERICAL SIMULATION ON BLOOD FLOW THROUGH THE AORTIC ARCH

(Oral presentation)

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INTRODUCTION: Modeling pipe systems with the fluid flow is a complex problem and one that demands extraordinary precision. Cardiovascular diseases are the most common cause of death for humans in the last decade. Some of these cardiovascular diseases affect part of the aorta. The understanding of the way fluid flows through the aortic arch, flow characteristics and the influence of the flow on aorta's wall is very important in order to make better predictions on the progress of disease.

AIM: The comparison of different blood models (Newtonian and non-Newtonian) with theoretical and experimental results. Description of the physics of the blood flow through the aortic arch and accompanying phenomena. The understanding of arteriosclerosis development and its influence on the flow structure.

MATERIALS AND METHODS: The geometry of aortic arch is constructed from the series of CT scans, so that 3D model is created. Finite volume method is used for time and space discretization of the blood flow. Tools used for this kind of numerical simulation are: in-vesalius (creating 3D models from CT scans), STAR CCM+ (numerical discretization, calculation and visualization of results), C++ (defining the inputs for blood flow), MATLAB (creation of the input curve and plotting the results).

RESULTS: Velocity profiles, flow structure, creation of secondary and reverse flow, pressure drop on different control volumes of aortic arch are shown. Relation between the secondary flow and aortic arteriosclerosis development is confirmed. The phenomena of reverse flow in certain moment of cardiac cycle, given by the numerical simulations, coincide with theoretical and experimental results.

CONCLUSION: Numerical simulations are used for better understanding and prognosis of diseases such as aortic aneurism and arteriosclerosis. For this kind of diseases, stenosis and widening are usually noticed on MRT and CT scans of aorta. CFD could have a signification role in prognosis and treatment of the diseases.

Keywords: aortic arch, blood flow, non-Newtonian behavior, numerical simulation, computational fluid dynamics

DETERMINANTS OF ALCOHOL CONSUMPTION AMONG HIGH SCHOOL STUDENTS IN FOCA

(Oral presentation)

Authors: BORIS BAKOVIC**,** Ljubisa Kucurski, Vedrana R. Joksimovic, Milena Bozinovic
Mentor: Bojan N. Joksimovic, MD PhD

INTRODUCTION: Alcohol consumption among younger population became every day occurrence in most countries. The age boundaries for drinking alcohol are shifting, and consequences of alcohol consumption are more widespread among adolescents. Aim of this research was to point out factors and consequences among high school population in Foca.

METHODS: Research was conducted on 60 students of first and fourth grade of High school center in Foca in October of 2015. Data were gathered by anonymous epidemiological questionnaire which included 13 closed-end questions.

RESULTS: Results show that great number of high school students consume alcohol, fifteen percent of fourth grade students drank more than 5 drinks per night, and about five percent of first grade students drank more than 5 drinks per night. Forty eight percent of students drink because they want to have good time at parties. As consequences of alcohol abuse twelve percent of them stated that they were drunk at school, ten percent of them were absent from school and two percent of them stated that they had been injured.

CONCLUSION: High school students in Foca drink in range of their age group in region. Results clearly indicate that with increase in age comes to increase in alcohol consumption. Work with parents and inclusion of school psychologist would significantly affect the number of intoxicated students and their absence from school, and will definitely prevent any injuries caused by alcohol consumption.

Keywords: alcoholism, consequences, injuries

EXAMINATION OF KNOWLEDGE ABOUT HIV AND HBV INFECTIONS BETWEEN STUDENTS OF MEDICAL HIGH SCHOOL IN FOCA

(Oral presentation)

Authors: BORIS BAKOVIC, Vedrana R. Joksimovic, Milena Bozinovic, Petar Lakic
Mentor: Bojan N. Joksimovic, MD PhD

INTRODUCTION: Researches show that every day more than million people get infected by some of sexually transmitted diseases. They are caused by more than 30 infective agents, and they are mainly transmitted by sexual intercourse, with possibility of transmission by blood or tissue contact. The aim of this research was to examine knowledge about sexually transmitted diseases, HIV and HBV among students of Medical high school in Foca.

METHOD: This study was conducted on 50 students of Medical high school in Foca, by anonymous epidemiological questionnaire in period of September-October 2015.

RESULTS: On question are HIV and hepatitis B transmitted by sexual intercourse, 70% answered positively. Eighty six percent of students know that HIV can be transmitted during unprotected sexual intercourse. When it comes to question about optimal age to start having sexual intercourses 6% of students stated that it is 15 years, 20% of them stated that it is 16 years and most of them, 52% stated that optimal time for start having sexual intercourses is 18 years.

CONCLUSION: Students posses average knowledge about sexually transmitted diseases. We should positively point out that 52% of students consider age of 18 as optimal age for start having sexual intercourses. If we consider consequences that STD leave behind, then their prevention should be conducted at earliest age.

Keywords: sexually transmitted diseases, HIV, HBV prevention, high school population

THE CONNESTION BETWEEN OBESITY AND HYPERTENSION BY USERS OF PRIMARY HEALTH CARE

(Oral presentation)

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INTRODUCTION: Obesity is a state of positive energy balance, which means that obese people consume more food. Today it is a major cause of hypertension or high blood pressure above 140/ 90mmHg.

AIM: To show dietary habits,the incidence of obesity of primary care users, as well as the evaluation of the risk of developing hypertension in obese.

MATERIALS AND METHODS : The survey was conducted in November 2015 in the Health center of Bijelo Polje. The survey covered 59 users PHC, aged 21-65 years, of both genders with increased body mass. The survey instrument was consisted of a questionnaire of twenty questions, closed type. Data obtained in the survey were processed by methods of descriptive statistics.

RESULTS: The result of overweight (BMI 25-29.9) was 16 (27%). The first stage of obesity (BMI 30 to 34.9) where the risk of cardiovascular disease (CVD) is highly elevated is appcent to 20 (33%) of respondents. The result of those patients with severe obesity (BMI 35 to 39.9) was 16 (27%), and 8 (13%) were with extreme obesity (BMI> 40). Two-thirds of respondents to the 44 (75%) stated that the family has members who are overweighted.

The number of normotensives is 29 of them (48%), which is almost equal to the number of hypertensives 28 of them (47%). Among hypertensives only the 20 patients take treatment, of which 11 of them (55%) make it regularly until the 9 (45%) only when needed.

CONCLUSION: A number of patients suffering from high blood pressure is obese. Treatment of hypertension should focus on proper nutrition, physical activity, regular use of medication and regular education.

Keywords: obesity, hypertension, physical activity

CONTRACEPTIVE USE AND ATTITUDES AMONG STUDENTS

(Oral presentation)

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INTRODUCTION: It is estimated that each year, sexually transmitted diseases are diagnosed in more than 400 million adults. About 60% of STD and infections occur in people younger than 25 years. The main reason of not using the accessible contraceptive methods is shown to be ignorance, lack of knowledge and poor communication skills or passivity.

AIM: The aim of this survey is to represent a realistic picture of the use of contraceptives among students of both sexes when starting sexual relationships, as well as attitude towards the use of contraceptive methods, and responsibility to one's sexual and reproductive health.

MATERIALS AND METHODS: The survey was conducted at "J.U. Dom studenata i učenika" in Podgorica, from Oct. 7th to 14th, 2014. It included 146 students answering an anonymous questionnaire of 23 questions.

RESULTS: From a total of 68% sexually active participants only 33% always use contraception, while 12% never use it. The day after pill was used by 37% of participants, 8% used it without a doctor's consultation. 7% think of abortion as a method of contraception, 2% of the participants aborted, and in 1%, more than once.

CONCLUSION: The results clearly state that there is a need in the Montenegrin society for further education of young people about methods of contraception. In addition, issues related to sexual relationships are usually not discussed among family members or are approached in a way that is not receptive to the young adults. Oral contraceptives have a significant place among contraceptive methods in developed countries, which is not the case in Montenegro. Thus, there is a void to fill with better education and awareness of young people about the sexual activities.

Keywords: students, contraceptive methods, STD, abortion, sexual education

CARBON FOOTPRINT BY CONSUMPTION PATTERNS: A CASE STUDY OF SANTA MARTA-COLOMBIA, 2014. APPROACH FROM THE SOCIAL DETERMINANTS OF HEALTH

(Oral presentation)

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INTRODUCTION: Global Warming is defined as the weather's variability due to the emission of greenhouse gases (GHG) by the human activities. One of the strategies to measure the amount of GHG as the result of the human consumption patterns is the Carbon Footprint (CF) which allows to quantify the volume of carbon dioxide produced by a certain individual that can potentially affect the environment and health of an entire population.

AIM: To estimate the CF for Santa Marta-Colombia by consumption per capita of food, transportation, shopping goods, domestic services and housing, and to relate CF to health determinants such as socioeconomic status (SES) and socio-demographic characteristics of the population.

MATERIALS AND METHODS: A case study was performed with cross-sectional analytical design in Santa Marta-Colombia during 2014. The sample was constituted by 811 citizens who were chosen proportionally to the size of each neighborhood in the city. We applied a survey extracted from the online CF calculator of University of California-Berkeley and used the same calculator to analyze the results.

RESULTS: Santa Marta's average carbon footprint by consumption patterns was 29.95 tCO2e. We found that being 35 years old or younger, having a professional or higher educational level, medium-high and high socioeconomic status, and higher incomes are aspects that increase the CF to 39.4 tCO2e and more.

CONCLUSION: The size of the carbon footprint is an indicator of inequality that shows how individual consumption practices constitute a determinant of health for human collectives.

Keywords: Carbon Footprint, Social Determinants of Health, Health Inequalities.

EPIDEMIOLOGICAL STUDY OF OSTEOPOROSIS IN REPUBLIC OF CROATIA: PRELIMINARY REPORT

(Oral presentation)

Authors: PLECKO M, Naletilic N, Haberle S, Knezic M, Naranđa F
Mentors: Dumic-Cule I, Grgurevic L, Vukicevic S

INTRODUCTION: Osteoporosis is a systemic skeletal disease characterised by reduced bone mass and micro- arhitectural deterioration of bone tissue, leading to increased risk of bone fractures. The diagnosis of osteoporosis is based on determination of bone mineral density, which has the key role in bone strength. Osteoporosis represents a major public health problem because most patients do not obtain their diagnosis and adequate therapy until they develop a serious bone fracture. Considering all circumstances, the need for a new approach towards this condition is gaining on importance. Because of that reason, a new project started in Republic of Croatia, called "Diagnostics and treatment of osteoporosis in postmenopausal women in Republic of Croatia".

AIM: The goal of this project is to raise consciousness on this topic in primary care physicians, which would lead to better diagnostics, treatment and prevention, and as an end-goal securing the highest level of health care for the patient and a possibility to live a healthy life.

MATERIALS AND METHODS: To reach this projects goal, a screening of bone mineral density is being performed in postmenopausal women in collaboration with general practitioners, endocrinologists, rheumatologists, ortopedic surgeons and traumatologists. Women with newly diagnosed osteoporosis will be advised on therapeutic options, establishing a high-quality doctor-patient relationship. The strategy of this project is based on involvement of general practitioners (GPs) who scan through their patient databases, and determinate two categories of patients – NEW (those who weren't using any medications for osteoporosis until this moment) and OLD (those who used or still use medications for osteoporosis). The criteria for one to be categorized as a NEW patient is to be 5 to 10 years in menopause, to have bone fractures, use of glucocorticoides, anticoagulant therapy, endocrinological and metabolic disorders in their medical history, or to have a T-score result ≤-2.5 on a bone densitometry scan (DXA). After defining the total number of patients with valid medical data, they will be invited to the local community health center for a densitometry scan with Sahara densitometer that measures bone density of heel bone, and they'll take a questionnaire on important risk factors for osteoporosis.

RESULTS: In the first stage of this project 192 patients, from seven GPs working in area of Zagreb and Zagreb county, went through this measurement process. The result was that in 49 patients osteoporosis suspecta has been found and they were directed to the local Center for osteoporosis in order to get further diagnosis and adequate medical advice on treatment options and to start their therapeutic process if needed.

CONCLUSION: Basic project strategy is to identify all patients at risk for osteoporosis in Family practice database, and spend a multidisciplinary approach to the prevention, follow-up and treatment of osteoporosis, and in team collaboration of family physicians, endocrinologists, radiologists, physiatrists, traumatologists and University institutions the results scientifically interpret and publish.

Keywords: osteoporosis, epidemiological study, multidisciplinary approach, prevention, treatment

COMPARATIVE ANALYSIS OF HEART RATE VARIABILITY OF RISK AND CAREFUL PROFESSIONAL SKIERS

(Oral presentation)

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INTRODUCTION: Purposeful human behaviour develops and realizes based on dominating motivation. In this case, the backbone factor is the useful adaptive result, according to the professors P. Anokhin and K. Sudakov. It is sports where one of the powerful motives is struggle for overcoming obstacles. Therefore, at the present stage definition of the athlete's level of risk readiness as well as physiological correlates accompanying this activity seems to be the relevant objective.

AIM: Comparative analysis of heart rate variability criteria of professional skiers with various risk readiness.

MATERIALS AND METHODS: 25 male and female professional skiers-volunteers at the age of 20-22 years participated in the research. Sports experience – 4-8 years. Risk readiness of athletes was determined by Schubert's method. Applied a method of a correlation rithmography (KRG) before and after the loading test PWC170. While analyzing the spectral characteristics of HRV power allocated the following ranges: HF, LF, VLF.

RESULTS: After Shubert's test, the athletes were divided into "risk" – 10 and "careful" – 15. The careful skiers have the following figures before the loading test – HF: 873,86 ms2; LF: 1167,43 ms2; VLF: 276,63 ms2. Figures of risk skiers – HF: 1862,25 ms2; LF: 1156,17 ms2; VLF: 468,58 ms2. Figures of the same groups after the loading test: careful – HF: 214,63 ms2; LF: 224,63 ms2; VLF: 159,11 ms2, risk – HF: 241,67 ms2; LF: 199,25 ms2; VLF: 108,17 ms2.

CONCLUSION: It is noted that the waves of parasympathetic nervous system (HF) have the prevailing effect in case of the athletes with the high risk readiness at rest and after the loading test, which tells about great reserves of general physical endurance, which in turn, can apparently be interpreted as their individual peculiarities of heart rate variability regulation, connected with the personal disposition of high risk readiness.

Keywords: risk readiness; professional sport; heart rate variability.

CORONARY HEART DISEASE

(Oral presentation)

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INTRODUCTION: Coronary heart disease (CHD), is a group of ischemic heart diseases, including stable angina, unstable angina, myocardial infarction and sudden coronary death (1,2) Common symptom of CHD is chest pain or discomfort, often propagating to the shoulder, arm, back, neck, or jaw. Occasionally it may feel like heartburn. In about 50% of cases, symptoms occur while exercising and 50% at emotional stress. The pain last only a few minutes and gets better with rest. (3) Shortness of breath may also occur, but sometimes no symptoms are present. The first sign can be a heart attack, other complications are heart failure or serious arrhythmias. (4)

AIM: Our aim is to present a patient's case to realise the importance of the recognizing the CHD, since it is very common.

MATERIALS AND METHODS: Literature review and patient's medical record.

CASE REPORT: Our patient is a 66 year old retired journalist, who occasionally sue for pain in the chest at stress, but not when intensively physically active. His wife, a doctor, believes that it is a reaction to stress. He has a positive family history of cardiovascular disease. We made a physical examination, assessed the CV risk factors, performed lab tests and ECG. They were all normal. But all the same, he was referred to cardiologist, where the diastolic dysfunction was confirmed with echocardiography and critical ST segment denivelation with stress test. The coronarography was proposed and performed. Three vessel disease was the final diagnose, the patient was operated in 4 days, getting three by-passes. Post operational recovery was extremely quick and the results of all tests were normal.

CONCLUSIONS: A good anamnesis and clinical investigation are still the basis and thekey of good clinician.

Advices:

1. Listen to the patient and take seriously his reported problems!
2. Assess patient's risk.
3. Perform.
4. Motivate and inform the patient.
5. Follow up and control the patient for the lifetime!

Keywords: coronary heart disease, communication, doctor-patient relationship, trust, family medicine.

FREQUENCY OF CLASS II DISORDERS AND THEIR RELATION WITH ETHNICITY, GENDER, AGE AND RESIDENCE IN SCHOOL AGE GROUP

(Oral presentation)

Authors: ALBERT MAQELLARA, Albina Bilalli, Elmaza Kollashinac, Merisa Eljezi, Yllzana Aliji.
Mentor: Prof. Ass. Sabetim Çerkezi

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INTRODUCTION: Craniofacial system is characterized with close linkage and mutual coordination between morphology and their functions. Therefore, breakage of harmonically reports between these components, not only of this system, will bring to deviations, conditions that throughout specific periods of growth and development can not be considered inside the framework of what we asses as normal.

AIM: Driven from moments with almost no solution, inclusion of large number of orthodontic disorders, we want to note inclusion of orthodontic disorders in sagittal aspect, with special emphasis in class II and presence or absence of statistical significance between ethnic groups, age, sex and their residence.

MATERIAL and METHODS: We have included in investigation 880 children of school-age-between 7-14 years, of age, from three main ethnicities (Albanians, Macedonians and Turks). From urban areas we have included 581 (70.68%) pupils, and from rural areas 241 (29.32%) pupils. During the examination, except detailed clinical control, we have undertaken five digital photos, extra and intra-orally for each child.

RESULTS: Prevalence of class II, subclass 1, resulted with high percentage (28.35%), in contrary to class II, subclass 2, which has shown values almost three times lower (10.71%) in frecuency. Investigation of protective role for parameters of gender, age, ethnicity and residency, as independent variables in comparison with disorders in sagittal for class II/1 and class II/2 as dependent variables, among investigated pupils.

CONCLUSION: Disorders in sagittal of class II have shown high representation (39.06 %). It has been shown significant difference in comparison between disorders of class II/1 and class II/2.

Keywords: class II/1, class II/2, anomalies in sagittal.

FEAR OF FALLING AND PHYSICAL ACTIVITY AFTER LIMB FRACTURE

(Oral presentation)

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INTRODUCTION: The fear of falling (FOF) is related to medical literature specially to describe patients after 60 years old. FOF is appearing after fracture, trauma and is interlinked to physical activity limitation, revamp normal day-life. The aim of the study: The aim of the study was to measure the patient's fear of falling after primary fracture.

MATERIALS AND METHODS: The data were obtained using authors' survey. 76 questionnaire forms were filled in by patients of Department of Radiology, University Clinical Hospital in Bialystok. Data was analyzed with Statistica 12.5 (Test $\chi 2$, $p<0,05$).

RESULTS: 76 patients (51,31% W, 48,69% M) were included into ours questionnaires research. The average patient was 55 years old (range: 19-90; ±18,72), 171 cm high (150-191; ±11,28), 80 kg weigh (51-110;±14,26), and his BMI was 27,39 (19,19-38,28; ±4,18) which means over-weight. More than 70 % of patients was scared of next falling (awareness patients, AP) and ¾ of them haven't been stopping physical activity. We found statistical significant border relationship (p=0,05) between sex and anxiety scale of next falling (AS). Men more often than women (14,47 % vs. 10,53 %) had chosen moderated fear in AS. More than 87 % of AP had had also problems with communication (p=0,031). Near 95 % of AP had also problems with doing shopping (p=0,002) and 68,18 % despite trauma is still physical active. To compare obesity and normal-weight patients, over-weight patients we found statistical significant (p<0,001) relationship between weigh and low physical activity (28 % vs. 80 % and 65,38 %).

CONCLUSION: Patients after fractures in more cases are afraid of next fracture, but it didn't lead to decrease physical activity. We didn't find statistical relationship between e.g. patients age, coexistence diseases and fear of next fractures.

Keywords: physical activity, limb, fracture

ADAPTATION OF VENTILATORY PARAMETERS TO CONTINUED PHYSICAL ACTIVITY IN ELITE ATHLETES: INFLUENCE OF THE TYPE OF SPORT

(Oral presentation)

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Mentor: Predrag Brkić, MD PhD

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INTRODUCTION: It is well known that continued physical activity leads to adaptive changes of almost every system in the human body. Recent studies suggest that adaptive changes of ventilatory parameters depend on the type of physical activity. There have not been many studies about the difference of ventilatory parameters between different athletes.

AIM: The aim of this study was to research influence of the type of sport to the adaptation of ventilatory parameters as a response to continued physical activity in elite athletes.

MATERIAL AND METHODS: In this study 52 male elite aerobic athletes, 54 elite anaerobic elite athletes and 20 male from sedentary group volunteered to participate. All subjects have been measured for varios spirometric parameters: vital capacity of the lungs (VC), forced vital capacity (FVC), forced expiratory volume in the first second (FEV1), Tiffenau index (FEV1/FVC), peak expirium flow (PEF) and maximal voluntary ventilation (MVV).

RESULTS: Vital capacity, forced vital capacity and forced expiratory volume in the first second have been significantly higher in aerobic athletes compared to anaerobic athletes, as well as compared to the sedentary group ($p<0.05$). Between anaerobic athletes and sedentary group there was no significant difference for those parameters ($p>0.05$). Tiffenau index was significantly higher in aerobic athletes compared to anaerobic athletes ($p<0.05$). Between aerobic athletes and control group there was no significant difference for this index ($p>0.05$). Peak expirium flor as well as maximal volontary ventilation have not been significantly different among tested groups ($p>0.05$).

CONCLUSION: Our results indicate that continued and intensive physical activity of aerobic nature leads to adaptive changes in spirometric parameters (VC, FVC, FEV1, FEV/VC). Related with those results, since there was no significant difference found between these parameters of anaerobic athletes and sedentary group, these results suggest that the type of sport has influence to adaptation of ventilatory parameters.

Keywords: ventilatory parameters, physical activity, spirometry

Session VI

Internal medicine
I

CORRELATION BETWEEN DIFFERENT WAYS OF INFECTION WITH HEPATITIS C VIRUS; WAR INJURY, DRUG ABUSE, SURGICAL PROCEDURES AND BLOOD TRANSFUSIONS

(Oral presentation)

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INTRODUCTION: The hepatitis C virus (HCV) is a blood borne virus and the most common ways of infection are: through unsafe injection practices, inadequate sterilization of medical equipment and the transfusion of unscreened blood.

AIM: To determine relationship between risk factors and infection with HCV. Risk factors include: transfusions before 1996 (after which B&H started screening donor blood for HCV), surgical procedures before 1996, war injury in B&H (1992-1995), IV (intravenous) drug abuse, tattoos and piercings.

MATERIALS AND METHODS: A retrospective study was conducted on 122 patients, 76 males and 46 females, who were hospitalized on Institute for Gastroenterohepatology, KCUS, during 2011 and 2012, with diagnosed chronic hepatitis C. Patients were in different age groups, 23 to 86 years old. We collected information about their exposure to risk factors and their socio-epidemiological status, from their medical records.

RESULTS: According to our results 98.03% of the patients have been exposed to one of the risk factors. From patients in 2011: 61.22% had surgical procedures done before 1996, 24.49% had blood transfusions before 1996, 22,45% abused IV drugs, 18.37% patents were wounded during war, 8.16% were medical staff, 6.12% had tattoos or piercings done more than 10 years ago. Results in our patients from 2012 showed: 34.25% of hospitalized patients had surgical procedures done before 1996, 16.44% were wounded during war, 13.70% had blood transfusions before 1996, 8.22% abused IV drugs and 2.74% were medical staff and were in contact with blood. Most common virus genotype is 1a. 60.66% of patients were unemployed or living on minimal incomes. 6.56% lived in unsatisfying conditions.

CONCLUSION: According to our study, majority of chronic hepatitis C patients in 2011 and 2012 had surgical procedures done before 1996, as a risk factor for HCV infection.

Keywords: hepatitis c, war injury, transfusion, surgery

CASE REPORT: NUTCRACKER SYNDROME

(Oral presentation)

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INTRODUCTION: Nutcracker syndrome is a congenital anomaly which occurs due to entrapment of the left renal vein (LRV) between the aorta and superior mesenteric artery (SMA). Symptoms include hypertension, hematuria, proteinuria and pelvic congestion.

AIM: The aim of our case report was to remind of the nutcracker syndrome as a rare cause of hematuria.

MATERIALS AND METHODS: Complete medical history of the 29-year-old male patient was analyzed.

RESULTS: The patient was admitted to the Department of Nephrology presenting with painless chronic hematuria. Apart from mild sideropenic anemia and proteinuria, he was otherwise healthy. Series of diagnostic tests were made, among which cystoscopy indicated bleeding from the left kidney and color doppler found LRV dilatation upon its compression by SMA. Based on the vascular finding, confirmed by angiography, he was diagnosed with nutcracker syndrome, a rare congenital anomaly. The patient did not develop renal hypertension. Currently, only regular check-ups and peroral iron supplementation is needed.

CONCLUSION: Inexplicable hematuria can be caused by congenital anomalies of kidney vasculature, like the presented nutcracker syndrome, which should be taken into consideration in clinical assessment.

Keywords: nutcracker syndrome, hematuria, proteinuria, LRV dilatation

AN INVESTIGATION OF PROGRESSION OF CHRONIC KIDNEY DISEASE IN PATIENTS WITH RHEUMATOID ARTHRITIS

(Oral presentation)

AUTHOR: KARINA KHARCHENKO

INTRODUCTION: Kidney pathology in patients with rheumatoid arthritis (RA) has more frequently been a cause of disability and mortality in patients with RA. This complication requires a detailed study at all stages of its development in order to prevent its progression.

OBJECTIVE: The aim of the study was to investigate changes in β2-microglobulin of the blood and urine and pro- and anti-inflammatory cytokines at different stages of evolution of chronic kidney disease (CKD) in patients with RA.

MATERIALS AND METHODS: The study involved 113 patients with RA at II-III activity stages. Their average age - 48±5,0 years. The duration of illness by the time of inclusion in the study averaged 12±3,18 years. Groups were formed according to the stages of CKD (I-III). The control group consisted of 20 healthy individuals. Besides general clinical studies patients were identified β2-microglobulin level in the blood and urine, interleukin-1β (IL-1β) and transforming growth factor-β1 (TGF-β1) in the blood using ELISA.

RESULTS*:* The largest proportion of patients with RA have stage II CKD (37.5%). It was found a probable increase in the content of IL-1β ($p<0.05$), TGF-β1 ($p<0.05$) in patients with CKD I compared to the findings of those in the control group and RA patients without nephropathy. As to the β2-microglobulin in CKD I no changes were registered ($p>0.05$). There was a significant increase of the content of all experimental cytokines and β2-microglobulin in patients with CKD III compared to those of patients with CKD of stages I and II ($p<0.05$). The level of TGF-β1 was significantly higher even in patients who had CKD II compared to CKD I ($p<0.05$) in contrast to the values of the remaining parameters.

Keywords: kidney pathology, rheumatoid arthritis

ANTI-NMDA RECEPTOR ENCEPHALITIS WITH AN OVARIAN TERATOMA IN A 35-YEAR-OLD FEMALE: A DIAGNOSTIC CHALLENGE

(Oral presentation)

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In 2007 a new clinical entity was described, anti-NMDA receptor encephalitis, an autoimmune disorder associated with IgG autoantibodies directed against NR1 subunit of the N-methyl-D-aspartate receptor. In a study performed on patients under the age of 30, with encephalitis of unknown etiology, it was established that 40% of identified cases were anti- NMDA receptor encephalitis. The prevalence was significantly higher in women and 65% of all patients were under the age of 18. Another study found that 60% of anti-NMDA receptor encephalitis were associated with tumors such as ovarian teratomas. The classic clinical manifestation begins with a prodromal phase with headache, fever, nausea and vomiting. After 5-14 days patients develop psychiatric symptoms which may include hallucinations, mania, speech impairment, and neurological abnormalities such as seizures, disturbance of consciousness, memory deficit and dyskinesia.

We present a 35-year-old female sent to our hospital from a psychiatric ward, where she was unsuccessfully treated with antipsychotics, after having been involuntary committed. The symptoms began 2 weeks prior the hospitalization with a fever, headache, insomnia and anxiety followed by acute psychosis manifested with aggression and visual hallucinations. During her stay at our hospital, the patient was in a soporific state with autonomic instability presented by recurrent bradycardia and bradypnea which progressed to apnea with consequential intubation and mechanical ventilation. Empiric corticosteroids and plasmapheresis led to temporary improvement of her condition, which eventually deteriorated. As a result, we administrated cyclophosphamide therapy. Simultaneously, anti- NMDA antibodies in CSF and an ovarian teratoma were detected. After surgical removal of the tumor, continued cyclophosphamide therapy and 5 rounds of plasmapheresis, the patient fully recovered.

Our goal is to raise awareness of this syndrome among all clinicians, especially psychiatrists, to search for organic causes in acute psychosis, given the fact that 4-6% of patients with isolated psychiatric episodes have anti-NMDA receptor encephalitis.

Keywords: anti- NMDA antibodies, receptor, teratoma

CLINICAL FEATURES AND TREATMENT STRATEGIES OF PRIMARY CENTRAL NERVOUS SYSTEM LYMPHOMA: A MULTICENTER RETROSPECTIVE STUDY

(Oral presentation)

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INTRODUCTION: Primary central nervous system lymphoma is a rare, highly malignant disease with poor prognosis. The current knowledge about the disease is mostly gathered from prospective clinical trials and the optimal treatment modality is still a matter of debate.

AIM: In this study it is aimed to acquire more information about the clinical features of the disease and the responses to different treatment modalities.

MATERIALS AND METHODS: The archives in Trakya University Hospital, ?nönü University Turgut Özal Medical Center, Pamukkale University Hospital and Erciyes University Hospital researched retrospectively. Demographic, treatment and survival data were retrieved and their statistical analysis was performed. As descriptive statistics number and percentages, arithmetic mean ± standard deviation, median (maximum-minimum) were used. Survival analysis was performed using Kaplan- Meier method.

RESULTS: Median age of patients at diagnosis was 53 (25-76) and out of 28 patients 15 (53.6 %) of them were male. As the symptoms of the disease 18 (66.7%) patients presented headache, 15 (53.8%) presented focal deficit. As initial treatment 26 (92.9%) patients received chemotherapy, while 19 (67.9%) patients were treated with surgical resection and the median overall survival time was 7 months.

CONCLUSION: Achieving complete remission as response to the initial treatment is associated with an improved overall survival. Other survival analysis to compare the impact of all initial treatment methods on overall survival resulted statistically insignificant.

Keywords: Non-Hodgkin Lymphoma, remission, chemotherapy, radiotherapy

ATRIO-VENTRICULAR NODAL REENTRY TACHYCARDIA AND ADRENAL GLAND HYPERPLASIA IN 26 YEAR-OLD PATIENT WITH PSORIASIS EXACERBATING AFTER BETA-BLOCKERS THERAPY

(Oral presentation)

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INTRODUCTION: Atrio-ventricular nodal reentry tachycardia (AVNRT) is a nodal tachycardia with a narrow QRS complexes, that can be treated with percutaneous radiofrequency ablation or symptomatically with antiarrhythmic drugs. One of the most commonly used group of medicines, in AVNRT, are beta-blokers. Unfortunately, there are evidences on exacerbation of the skin lesions of psoriasis in patients treated with this group of drugs. The mechanism of that phenomenon is not fully elucidated. It appears that the main role leads the reduction of calcium levels in cells that effects in excessive proliferation of keratinocytes and polymorphonuclear leukocytes.

CASE: A 26-year old women with the history of long-term hypertension, AVNRT, who underwent two ineffective ablations, adrenal gland hyperplasia and psoriasis was admitted to Department of Cardiology in order to perform third ablation. On admission patient was stabile: HR 100/min, RR 135/80 mmHg. ECG revealed sinus regular rhythm 71/min. Biochemical tests showed no abnormalities.

During hospitalization electrophysiology examination was performed with results of concentric conduction with decrement. However, direct stimulation did not show permanent arrhythmia. A successful slow pathway ablation was performed without complications. The resignation of beta-blockers therapy resulted in an improvement of psoriasis control. After ablation sinus tachycardia was observed, therefore ivabradine was incorporated to the treatment. Patient in good general condition was discharged from hospital.

CONCLUSION: The cardiac pharmacotherapy of AVNRT patients with comorbidities such as psoriasis, should be implemented very carefully and the possibility of exacerbation after particular group of medicines should be taken into consideration. In the case of adverse reactions ablation should be considered as first line treatment method.

Keywords: cardiac pharmacotherapy, atrio-ventricular nodal reentry tachycardia

COMPARISON OF APRI AND FIBROTEST IN ASSESSMENT OF SIGNIFICANT LIVER FIBROSIS IN PATIENTS WITH CHRONIC HEPATITIS C AND CHRONIC HEPATITIS B

(Oral presentation)

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INTRODUCTION: Extent of liver fibrosis is one of the most important factors in determining prognosis and the need for active treatment in chronic hepatitis C (CHC) and chronic hepatitis B (CHB). Noninvasive alternatives such as FibroTest and APRI have been developed in order to overcome the shortcomings of liver biopsy.

AIM: To evaluate the aspartate aminotransferase to platelet ratio index (APRI) as a predictor of the presence or absence of significant fibrosis on FibroTest of patients with CHC anc CHB.

MATERIALS AND METHODS: We retrospectively reviewed the charts of 49 patients with CHC (38 patients) and CHB (11 patients) who underwent FibroTest from February 2008 to October 2015. We subsequently obtained those patients' aspartate aminotransferase (AST), platelets count (PTC) values, along with FibroTest results. Patients were divided into two groups according to their FibroTest scores converted to METAVIR scores (F0-F1, no/minimal fibrosis; F2-F4, significant fibrosis). Putting AST and PTC values into formula we calculated APRI and evaluated it using FibroTest as a reference.

RESULTS: The area under the receiver operating characteristic curve (AUROC) of the calculated APRI for the diagnosis of significant fibrosis was 0,736. For significant fibrosis, an APRI threshold of 0.50 was 72,5% sensitive and 44,4% specific. Positive predictive value (PPV) was 85,3% and Negative predictive value (NPV) was 26,7%.

CONCLUSION: Our study suggests that APRI can identify CHC and CHB related fibrosis with a moderate degree of accuracy. APRI has a better diagnostic value in patients with significant fibrosis than in those with no/minimal fibrosis.

Keywords: APRI, fibrotest, chronic hepatitis c, chronic hepatitis b, liver fibrosis

EXTRACORPOREAL MEMBRANE OXYGENATION IN THE ELDERLY POST-CARDIOTOMY PATIENTS

(Oral presentation)

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INTRODUCTION: An increasing number of elderly pacients are being accepted for cardiac surgeries. The age limit of using extracorporeal membrane oxygenation remains contraversial.

AIM: Evaluation of the outcomes of elderly post-cardiotomy patients who were treated with ECMO in Vilnius University Hospital Sanatariškių klinikos.

MATERIALS AND METHODS: This was a single-centre retrospective study. The outcomes of 64 consecutive adult patients who underwent ECMO placement for the treatment of cardiogenic shock or respiratory failure following cardiac surgery from January 1, 2009 to June 30, 2014 were reviewed. Indications for cardiac ECMO was inability to wean from cardiopulmonary bypass or post-cardiotomy heart failute refractory to medical treatment. Indications for pulmonary ECMO was respiratory failure with low arterial PaO2 despite optimization of mechanical lung ventilation. Patiens were divided into two groups according to age: group 1 (< 70 years) and group 2 (>70 years).

RESULTS: Records of 64 post-cardiotomy patients were reviewed . 44 patiens (age 56±11 years, male/female ratio 19:25) were designated to group 1 (68,75% of all patiens). Mean duration of support was 157±100 hours, 29,5% (n=13) patients survived to hospital discharge. In 3 cases reinstitution of ECMO was performed.20 elderly patients (age 75±4 years, male female ratio 14:6) were designated to group 2 (31,25% of all patients). Mean duration of support was 134±80 hours, 30% (n=6) patiens survived to hospital discharge.

CONCLUSION: ECMO is a valuable tool for treating the refractory cardiogenic shock following cardiac surgery for the patients that otherwise would die. ECMO can be effectively used in elderly cardiac surgery patients with outcomes similar to that of the younger patiens.

Keywords: extracorporeal membrane ocygenation, post-cardiotomy

HEALTH WORKERS' VIEW OF FUTILE THERAPY AND CARE OF DYING PATIENTS

(Oral presentation)

Author : TAMARA ČERVENJAK, MD
Mentor: Dubravka Ivić, MD PhD

INTRODUCTION: Life-sustaining treatment can keep hopelessly ill patients alive and it can be a source of additional suffering for dying patients and their relatives. It should be noted that the aim of restriction of futile therapy is nor to cause neither to accelerate the dying process, but accepting the death as a natural end of incurable condition.

AIM: Our goal is to determine the attitudes of health workers toward the care of dying patients in ICU and possible factors that affect their attitudes.

PARTICIPANS AND METHODS: The participants are anaesthesiologists and intensive care specialists from five hospitals in Croatia. They were interwieved by a questionnaire. Their participation was voluntary and anonimous.

RESULTS: Most participants are against taking care of dying patients in Intensive care units. They justify the provisions of not implementing cardiopulmonary resuscitation in the hopelessly ill, and 78.49% of respondents support the written form provision. Some anesthesiologists (36.07%) support the recall of useless life supportive treatment, and 27.87% of them think that the withholding of treatment is ethically more acceptable than withdrawal. Almost two thirds of respondents would give opioids and sedatives to relieve pain and suffering in dying patients. 72,3% of respondents think that decisions of foregoing life- sustaining treatment should be made by the medical team with inclusion of patient and family members. Specialists with more working experience (>34 years) and most of the women participants are against the abolition of infusions and enteral nutrition.

CONCLUSION: Withholding and withdrawal of useless treatment in dying patients is considered proffesionaly and ethically justified.

Keywords: Life-sustaining treatment, withholding of life-sustaining treatment, withdrawal of life-sustaining treatment

CORRELATION OF STRUCTURAL-FUNCTIONAL AND ELECTROPHYSIOLOGICAL CARDIAC PARAMETERS WITH INDICATORS OF SYSTEM OF HEMOSTASIS IN PATIENTS WITH CHRONIC ISCHEMIC HEART DISEASE

(Oral presentation)

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INTRODUCTION: Prothrombotic disorders of coagulation hemostasis are associated with structural and functional cardiac changes in patients with ischemic heart disease (IHD). Diagnosis of hypercoagulability allows predicting the course of diseases and choosing the correct treatment.

AIM: To analyze correlation between hypercoagulability and structural-functional parameters of the myocardium and electrophysiological properties of the heart in patients with chronic IHD.

MATERIALS AND METHODS: Parameters of hemostasis: levels of fibrinogen, fibrin monomer (FM) and D-dimer have been analyzed in 92 males aged 36-78 years (median 59 years) suffered from stable angina and previous myocardial infarction. According to echocardiography the sizes of the heart chambers in diastole, left ventricular hypertrophy and geometric remodeling have been determined. On electrocardiograms corrected QT intervals (QTc) and QT dispersion (QTd) have been measured. Statistical analysis was done using Statistica for Windows 5.0 (Statsoft, USA).

RESULTS: In 60% of patients with IHD hypercoagulation (levels of FM ≥4 mg/dL) has been discovered. According to results of correlation analysis a significant positive correlation has been found between FM and functional class of heart failure (τ=0,182, p=0,01), the size of the left atrium (τ=0,140, p=0,044), left ventricle end-diastolic diameter (τ=0,139, p=0,04), left ventricular mass index (τ=0,127, p=0,01) and QTc interval duration (τ=0,215, p=0,046). Significantly higher values of FM have been found in patients with left ventricular eccentric hypertrophy compared with normal left ventricular geometry (median of FM - 4.0 and 3,4 mg/dL respectively, p=0,008). In patients with enlarged left ventricular end-diastolic diameter (>6,0 cm) median of FM was 4,0 mg/dL, while patients with normal left ventricular size – 3,4 mg/dL (p=0,03). QTc interval >440 ms found in 16% of patients. Herewith they have higher median value of FM – 8,5 mg/dL against 3,4 mg/dL in patients with QTc≤440 ms (p=0,034).

CONCLUSION: Hypercoagulability (increased levels of FM) is associated with the larger size of the left heart chambers, left ventricular eccentric hypertrophy and prolongation of value of corrected electrical systole, which is important to consider in diagnostic process and treatment of IHD.

Keywords: ischemic heart disease, fibrin-monomers, structural parameters of the myocardium, electrophysiological properties of the heart

CORRELATION BETWEEN HYPERURICEMIA AND LIPID LEVELS IN DIABETES MELLITUS TYPE 2 PATIENTS

(Oral presentation)

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INTRODUCTION: Uric acid (UA) is purine nucleotides metabolism product. Increased levels of uric acid (hyperuricemia) can occur under conditions of decreased excretion, increased production or a combination of these two mechanisms. Hyperuricemia has been considered to be related with dyslipidemia occurrence, and risk factor for cardiovascular disease development in Diabetes mellitus type 2 (DMT2) patients.

AIM: The aim of this study was to determine correlation between circulating uric acid levels and dyslipidemia phenomenon in Diabetes mellitus type 2 patients.

MATERIALS AND METHODS: In the cross-sectional clinical study, 100 patients (62 women and 38 men), aged 35- 90 years, hospitalized at the Clinic of Endocrinology, Clinical Center of University of Sarajevo in period from January to December 2012, were included. According to the uric acid serum level, patients have been divided in two groups -Hyperuricemia (HU; UA>416 µmol/L for male; >356 µmol/L for female; n=50) and Normouricemia (NU, n=50). Biochemical parameters whose values were determined by routine laboratory methods are: uric acid, triglycerides (TG), total cholesterol (TC), low density lipoprotein cholesterol (LDL-C), very low density lipoprotein cholesterol (VLDL-C), high density lipoprotein cholesterol (HDL-C), TC/HDL-C, Atherogenic Index of Plasma (AIP), glucose and HbA1c.

RESULTS: Significantly higher values of TG and AIP were obtained in HU group comparing to control NU group. Negative, significant correlation of UA with TC and HDL-C (rho=-0.316; p=0.025 and rho=-0.399; p=0.004; respectively) and positive significant correlation with LDL-C (rho=0.343; p=0.030) were observed in HU DMT2 group.

CONCLUSION: Unproven association between UA and lipid parameters in NU patient group implies that there is correlation between hyperuricemia and dyslipidemia in Diabetes Mellitus type 2 patients.

Keywords: hyperuricemia, diabetes mellitus type 2, dyslipidemia

Session VII

Internal medicine
II

INFUSIUM OF CALCIUM SENSITIZER LEVOSIMENDAN FOR DIAGNOSTIC AND TREATMENT TO DETERMINE MYOCARDIUM RESERVES IN PATIENTS WHITH NONCORONARY CARDIOMYOPATHY

(Oral presentation)

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INTRODUCTION: Patients with heart failure III-IV NYHA class is one of the most complicated groups of patients. The mortality rate of patients after cardiac surgery is 43%. The possibility for reconstructive surgery in this patients is highly disputable.

AIM: to study possibilities of Levosimendan (LS) infusion to assess myocardium reserves.

MATERIALS AND METHODS: The patient, 56 year-old woman with history of chronic viral myocarditis with immune outcome in cardiomyopathy, heart failure III-IV NYHA, ejection fraction 25%, III grade mitral insufficiency, II grade tricuspid valve and II stage pulmonary hypertension, left bundle branch block and paroxysmal ventricular extrasystole, Cardiac Resynchronization Therapy Devise (CRT-D) implantation ,was attended to the hospital for examination and surgery.0.5-0,1 mcg\kg\min LS infusion (non bolus) of LS was provided in the intensive care unit. Adverse effects were not registered.

RESULTS: ECHO visualized improvement of heart parameters associated whit LS infusion: end-diastolic volume - decreased 14%end-systolic volume–decreased 23,6% stroke volume – increased 15,3% ejection fraction – increased 34,6% pulmonary artery pressure – decreased 34,6%Brain Natriuretic Peptide – decreased 43%. The patient underwent tricuspid valve repair (De Vega annuloplasty), left ventricular repair, chord-save mitral endovascular repair with the use of Carbomedics Optiform №29, left atrium repair. There were no complications within the postoperative period. The patient was extubated in 4,5 hours. The duration of ICU stay was 42 hours.

CONCLUSION: The LS infusion provided for diagnostic and treatment allowed to evaluated the myocardium reserves, reduce the grade of heart dysfunction and perform preserving operation withpositive outcome.

Keywords: cardiotonic agents; heart failure; Levosimendan

QUANTITATIVE ANALYSIS OF CELL-FREE DNA IN SERUM SAMPLES OF PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

(Oral presentation)

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Mentor: Aleksandra Nikolic[1]

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INTRODUCTION: Systemic lupus erythematosus (SLE) is a multifactorial autoimmune disease with unknown etiology. One of the possible reason for self-immunization in systemic lupus is defective clearance of dead and dying cells. The presence of cell free DNA (cfDNA) in circulation is a consequence of cell death and metabolic secretion of active DNA, and can be used for disease monitoring.

AIM: The aim of this study was to investigate cfDNA levels in serum samples of patients with systemic lupus erythematosus.

MATERIALS AND METHODS: Serum samples were obtained from 80 patients with systemic lupus erythematosus and from 53 age and gender matched healthy subjects. PicoGreen reagent was used for the quantification of dsDNA in serum samples and fluorescence was read by Real Time PCR apparatus. Concentration of DNA was calculated from averaged fluorescence readings by extrapolating the standard curve prepared with commercial genomic K562 DNA. Differences between the groups were statistically analyzed using Independent Sample-T Test.

RESULTS: The values of cfDNA concentration measured in serum samples ranged from 1 to 50 ng/µL. The fit of genomic K562 DNA standard curve was r2=0.989. The average cfDNA concentration was increased in patients (19±8 ng/µL) in comparison to controls (15±5 ng/µL) and this difference was statistically significant ($p<0.001$).

CONCLUSION: This study indicates higher level of cf-DNA in SLE in comparison to healthy subjects. The method applied for measurement of cfDNA in serum samples is very sensitive and allows reliable determination of minimal amounts of DNA from biological samples. Follow up of cfDNA levels by this method can be potentially used in future studies and clinical practice follow up of disease activity and response to treatment.

Keywords: cell-free DNA, systemic lupus erythematosus, picogreen

THROMBOEMBOLIC CEREBRAL INFARCTIONS IN A PATIENT WITH A CARDIAC CYSTIC FORMATION: A CASE REPORT

(Oral presentation)

Author: MICHIEL LEMBRECHTS
Mentor: Gilles De Keulenaer, MD PhD

INTRODUCTION: We describe a case of a middle aged man, who was admitted to our hospital with symptoms suggestive for transient cerebral ischemia. Although his cardiovascular risk was high due to hyperlipemia, diabetes, smoking and a family history of cardiovascular disease, an unexpected alternative explanation was found, most likely linked to cardiac surgery during his childhood. Here we describe the diagnosis of cardiac cyste and its differential diagnosis.

CASE REPORT: A 38-years old male, with a history of thoracic surgical interventions during childhood, a benign pituary adenoma, multiple sclerosis and diabetes, was admitted about a month after a brief period of aphasia and facial drooping, which had led to the conjecture of 'stroke in the young'. While a cardiac origin was explored, unexpected trabeculations were seen in the left ventricle wall. Later, MRI-images showed a cystic formation infiltrating the cardial apex.

DISCUSSION: The cardiac cystic structure was suspected to be a direct or indirect cause of the cerebral infarctions. Due to our patient's surgical history, we suspect a gossypiboma to be the most likely explanation of the cyst. Also echinococcosis is a possible cause of cardiac cyst formation and was therefore added to our differential diagnosis.

Keywords: cardiac cystic structure, echinococcosis, thromboembolic cerebral infarctions

LADA - CASE REPORT

(Oral presentation)

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Latent autoimmune diabetes in adults (LADA) refers to the diabetes which fenotypically is presented as slow onset Type 1 diabetes with positive antibodies on β-cells of the islets of Langerhans and consequential function suppression. The case of a 35-year old patient, unemployed mother of two who checked in the Internal medicine clinic at University Clinic Center Tuzla is shown in this work. She had lost appetite and around 5 kg and for the past ten days felt weakness, exhaustion, tiredness, increased urination and thirst which made her worried and frightened. Fifteen days before the examination gliclazide tbl. 60 mg was prescribed due to the glycemic index increase which could not be reduced. Longtime smoker, regular menstruation, does not use contraception, denies other illnesses. In the eleventh gestational week of her second pregnancy, gestational diabetes was diagnosed a year ago, and intensified insulin therapy was started. After the labor, the glycemic index was in order and she was without a therapy for seven months. Based on the clinical symptoms and signs (polyuria, polydipsia, glycemic index over 15 mmol/L, HbA1c index 7.8%), age and clinical report Diabetes mell was diagnosed. Basal insulin and diabetes diet were included in the therapy. For the etiological classification, antipancreas antibodies (ICA and GAD) need to be done, as well as thyroid gland antibodies (antiTPO and antiTg). On the check fifteen days later she claimed to feel better, but says that her obligations and two little children prevent her from eating enough, that her breakfast and lunch are not caloric enough, and that she eats properly in the evening because of which the insulin aspart is added to the therapy. The second check was done after a month, glycemia while starving 5 mmol/L, control HbA1c 7.2%, ICA antibodies 145 IU/ml, GAD antibodies 1813 U/ml, thyroid antibodies (in referent indices) during which the final diagnosis was LADA. Due to the demanding diagnostics it is necessary to carry out a detailed immunological treatment of the patient which fit into the LADA criteria, especially uncontrolled hyperglycemia despite the oral antidiabetics and the existence of other autoimmune diseases.

Keywords: LADA, diabetes mellitus, exhaustion, thirst, urination.

RELATIONSHIP BETWEEN ANTI-CYCLIC CITRULLINATED PEPTIDE ANTIBODIES AND INFLAMMATORY MARKERS IN RHEUMATOID ARTHRITIS PATIENTS

(Oral presentation)

Author: NUDŽEJMA VELADŽIĆ, Hana Smajlović, Anita Risonjić, Ena Šaranović, Amela Dervišević, Nermina Babić, Nesina Avdagić

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INTRODUCTION: Rheumatoid arthritis (RA) is systemic, inflammatory, autoimmune disease, characterized by chronic inflammation of joints and different autoantibodies in serum and synovial fluid.

AIM: of our study was to investigate the relationship between Anti-cyclic citrullinated peptides (Anti-CCP) antibodies and inflammatory markers: C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), blood leukocytes and serum albumin and globulin concentration in rheumatoid arthritis patients.

METHODS: The rheumatoid arthritis patients of both gender (n=84) were divided into three equal groups (n=28): Group RA1 (level 1, 1/2, 2), Group RA2 (level 2/3 and 3) and Group RA3 (level 3/4 and 4). Diagnosis of RA was determined by a rheumatologist based on anamnesis, clinical findings, laboratory tests and radiological examinations. Serum Anti-CCP antibodies concentrations were determined by enzyme linked immune-adsorbent assay (ELISA) and inflammatory markers were detected by standard laboratory procedures.

RESULTS: Serum Anti-CCP antibodies concentrations were significantly lower ($p<0.0005$) in Group RA1 then in both Group RA2 and Group RA3. A significant difference in serum CRP level ($p=0.001$), ESR ($p=0.008$) and globulin level ($p=0.01$) were found when Group RA3 were compared with Group RA1. A significant decrease in blood leukocyte was noted in Group RA1 compared to Group RA2 ($p=0.01$). Significant weak negative correlation between serum Anti-CCP antibodies and plasma fibrinogen concentration ($rho= -0.463$; $p=0.035$) and significant positive correlation between serum Anti-CCP antibodies and serum albumin concentration ($rho=0.416$; $p=0.028$) was observed in Group RA2. There was no significant correlation between serum Anti-CCP antibodies and inflammatory markers in Group RA1 and Group RA3.

CONCLUSION: We find that relation between Anti-CCP antibodies and inflammatory markers, in association with other diagnostic methods and laboratory procedures, can give us useful informations about severity of bone destruction. Usage of other markers and their combinations can give us additionally informations about different aspects of disease and all those findings together are beneficial for prognostic evaluation.

Keywords: Anti-CCP antibodies, inflammatory markers, rheumatoid arthritis

METABOLIC EFFECTS OF TELMISARTAN IN PATIENTS WITH CHRONIC HEART FAILURE AND DIABETES MELLITUS TYPE 2

(Oral presentation)

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Mentor: Pavlyukovich N.D., MD PhD

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INTRODUCTION: The aim of the treatment of coronary artery disease (CAD) and chronic heart failure (CHF) is modification of cardio-vascular risk factors (blood pressure, dyslipidemia, obesity, glucose level). Therefore, choosing the medication for the treatment of patients with CHF and diabetes mellitus type 2 (DM) attention should be given for its metabolic effects.

AIM: The goal was to determine the metabolic effects of telmisartan.

MATERIALS AND METHODS: 98 patients of senile age with combined course of CHF due to CAD complicated by diabetes mellitus type 2 were under investigation. Two main groups were formed: A – 32 patients who were treated according to standard protocol (beta- blockers, aspirin, statin), B – patients for whom telmisartan in a daily dose of 40 mg was prescribed in addition to standard protocol. Levels of basal and post-prandial glycaemia, total cholesterol (TC), low-density lipoproteins (LDL), high-density lipoproteins (HDL) and triglycerides (TG) were measured before treatment and after 3 months.

RESULTS: As the result of the complex treatment significant reduction of basal glycaemia for 33% and post-prandial glycaemia for 18% in group A ($p<0,001$) was observed, but normal values were not reached. Instead, in the group B significantly lower fasting blood glucose levels (4,6±0,18 mmol/L against 8,5±0,82 mmol/L, $p<0,001$) and levels of post-prandial glycaemia were detected together with reaching the normal values. More significant changes of blood lipids spectrum were observed in the group B: evident TC decrease for 16% ($p<0,001$), LDL – for 52% ($p<0,001$), TG – for 12,5% ($p<0,001$) together with increase of HDL for 48% ($p<0,001$) compared to the correspondent values before treatment. Above-mentioned hypoglycaemic, anti-atherogenous effects of telmisartan are probably stipulated by PPARγ- receptor stimulating properties.

CONCLUSION: The addition of telmisartan to the standard protocol treatment of CHF with concomitant type 2 diabetes mellitus showed beneficial metabolic effects, compared with the group that did not receive telmisartan.

Keywords: chronic heart failure, diabetes mellitus type 2, telmisartan, PPARγ-receptors

LONG-TERM MORTALITY AFTER PRIMARY PCI FOR STEMI IN PATIENTS WITN INSULIN-DEPENDENDT DIABETES MELLITUS

(Oral presentation)

Author: PETAR ZLATANOVIC, Stefan Zaharij
Mentor: MD PhD Goran Stankovic

INTRODUCTION: Primary PCI (*pPCI*) is gold standard procedure in the treatment of patients with acute myocardial infarction (AMI) with ST elevation (STEMI). The aim of this study was to investigate the effect of diabetic status on admission at the five-year survival in patients with STEMI treated *pPCI*.

AIM: The purpose of this study is to evaluate the influence of diabetic status on arrival at five year survival in patients with STEMI that were treated with pPCI.

MATERIAL AND METHODS: Consecutive data for 2087 patients admitted in the period form 1.january 2009. to 31. december 2010 with diagnosis of acute STEMI were collected from catheterisation laboratory cardiology clinic CCS electronic database. Patients were divided into 3 groups: those without diabetes mellitus (DM), *IDDM* (*insulin dependent diabetes mellitus*), *NIDDM* (*non-insulin dependent diabetes mellitus*).

RESULTS: 1664 patients (79,7%) did not have DM, 98 (4,7%) had *IDDM* and 325 (15,6%) had *NIDDM*. There was a statistically significant difference in mortality rate among three groups after 30 days, one year and five years after intervention, and the highest rates were recorded at the IDDM patients, then at the NIDDM and the lowest in patients without DM (15.3% vs 8.3% vs 5,9 %, p<0.001 after 30 days; 21.4% vs 15.4% vs 10.9%, p<0.001 after one year and 32,7% vs 24.3% vs 18%, p<0.001 after 5 years). Also, there was a highly statistically significant difference in five-year mortality rate between patients with and without DM (26.2 % vs 17.6%, p<0.001). IDDM was a independent factor when it comes to predicting five-year mortality (HR=1.58, 95% CI 1.07-2.32, p=0.02) whereas NIDDM was not (HR=1,24, 95% CI 0,95-1,63, p=0,12).

CONCLUSION: Diabetic patients had an increased risk of mortality in the short and long- term follow-up after *pPCI*. Insulin-dependent was a single predicting factor after five year follow-up.

Keywords: DM, *IDDM*, *NIDDM*, *STEMI*, *pPCI*

THYROID DYSFUNCTION IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

(Oral presentation)

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INTRODUCTION: Diabetes mellitus type 2 (DM2) and thyroid dysfunction (TD) are the two most common endocrinopathies seen in general population. DM2 is commonly associated with altered thyroid function.

AIM: To investigate the prevalence of TD in patients with DM2.

MATERIALS AND METHODS: We retrospectively evaluated 988 diabetes type 2 patients who were admitted to the Clinic for Endocrinology, Diabetes and Metabolic Diseases Clinical Centre University of Sarajevo (CCUS), between January 1, 2010, and December 31, 2012. For closer investigations we focused on DM2 patients with coexistent thyroid dysfunction (n=64) and additional available parameters: total triidothyronine (T3), total thyroxin (T4), thyroid stimulating hormone (TSH), fasting blood glukose (FBG), glycosylated hemoglobin (HbA1c), serum cholesterol, serum triglycerides, blood pressure and body mass index (BMI).

RESULTS: The prevalence of TD in all DM2 patients was 6,47%. The average age of females patients was 39,88±3,07 years and male patients 41,36±3,29 years. The most common disorder was hyperthyroidism (24 or 37,5%), hypothyroidism was present in 21 (32,8%) patients, while the "other conditions" were recorded in 19 (29,7%) patients. The average duration of DM2 has reached 6,83±0,67 years for male and 12,69±1.25 years for female patients. Insulin therapy was the most common form of therapy. The highest average value of BMI, FBG, cholesterol, triglycerides and TSH were observed in patients with hypothyroidism. Patients with hyperthyroidism had the highest average values of HbA1c. There have been no significant changes in the values of blood pressure between patients with different types of TD.

CONCLUSIONS: This study confirms the association between thyroid dysfunction and DM2 and suggests that all subjects with DM2 should be screened for TD to reduce the mortality rate.

Keywords: thyroid gland; diabetes mellitus type 2

TRANSCATHETER MITRAL VALVE IMPLANTATION (TMVI)

(Oral presentation)

Author: SELMI MONAAM

INTRODUCTION : Mitral valve regurgitation (MR) is one of the most common valvular heart diseases in an ageing population and in patients with heart failure. The transcatheter aortic valve implantation (TAVI) has demonstrated the feasibility of treating valvular heart disease with transcatheter therapy. On the back of this success, various transcatheter concepts are being evaluated to treat other valvular disease, especially mitral regurgitation (MR).

METHODS: The transcatheter treatments currently available for commercial use or under evaluation are predominantly those which attempt to replicate a mitral repair , One of the drawbacks of these devices is failure to eliminate MR completely . Transcatheter mitral valve implantation (TMVI), on the other hand, may provide a valuable alternative by providing a new valve, which when implanted correctly eliminates MR completely while providing a sufficient orifice area. When compared to the aortic valve, the mitral valve has a larger and non-circular saddle-shaped annulus, a complex subvalvular apparatus and potential for left ventricular outflow tract (LVOT) obstruction. These attributes, along with the absence of calcification in MR and high mitral transvalvular gradients, have made development of a transcatheter mitral valve (TMV) device challenging.

RESULTS : a large number of patients are not considered suitable for surgery due to the presence of comorbidities. Therefore this new approch is offering potential treatement for mitral valve regurgitation with a reduced chest trauma wich means less post operative pain, faster recovery time and a potential for improving quality of life of heart patients.

CONCLUSION: The surgical resective and non-resective techniques for patients with severely calcified, hors-shoe like mitral annulus are the gold standard. However, the transcatheter valve implantation (TMVI) into the native mitral valve may be an option in otherwise unmanageable situations due to the presence of comorbidities but Further clinical experience and technical development are necessary to shorten operation times and to assess further the potential postoperative benefits of TMVI.

Keywords: mitral valve regurgitation, transcatheter aortic valve, mitral annulus

CLINICAL AND LABORATORY MANIFESTATION OF TOXOCARIASIS IN CHILDREN.

(Oral presentation)

Author:ZAKHARCHUK SOFIIA
Coordinator: Zakharchuk Oleksandr

INTRODUCTION: The study showed a quite high risk of contamination of children with toxocariasis.

AIM: The highest seropositive rate to toxocariasis antigens was registered in children from mountain native zone (Ukrainian Carpathians).

MATERIALS AND METHODS: While studying the trends of the epidemic process development, the nature of changes and disorders in toxocariasis was revealed a pattern between the antibodies titers to the toxocara antigen during the ELISA and clinical and laboratory data indication. The highest percent of serologically positive results observed in the children with highe osinophilia and a higher point's number of clinical symptoms by Glickman.

RESULTS: While analysis of the incidence and nature of the clinical and laboratory data was revealed that the total number of the main clinical manifestations in patients with toxocariasis (29,19 ± 3,5 points) was much higher than the total number of the clinical manifestations in the children without toxocarosis (7,37 ± 2,4 points).

CONCLUSION: To study the features of serological damage in children population of the region with toxocariasis, as well as age and gender aspects of toxocariasis spread in Bukovyna. Changes of the clinical and laboratory parameters are different and nonspecific.

Keywords: epidemiology, toxocariasis, symptoms, diagnosis, children.

MORPHOLOGICAL CHANGES OF THE ESOPHAGEAL MUCOSA IN PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE AND COMORBID DIABETES MELLITUS TYPE 2

(Oral presentation)

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AIM.: To study morphological changes of the esophageal mucosa (EM) in case of gastroesophageal reflux disease (GERD) in patients with diabetes mellitus (DM) Type 2.

MATERIALS AND METHODS: 65 patients aged from 38 to 76 were examined: the main group included 45 patients with GERD and comorbid DM Type 2 subdivided into the 1st subgroup – erosive GERD (EGERD) and the 2nd one – non-erosive GERD (NGERD); the group of comparison included 20 patients with GERD without comorbid pathology subdivided into the 3rd – EGERD and the 4th – NGERD. Morphological changes were examined by means of the staining techniques with hematoxylin-eosin, bromphenol blue by Mikel-Calvo method, and PAS-positive staining.

RESULTS: Examination of morphometric parameters of EM in case of GERD and DM Type 2 resulted in the detection of a reliable decrease of PAS-positive substances optic density in the connective tissue fibers by 10,6% ($p<0,001$) as compared to the patients with NGERD and DM Type 2, and in the examined individuals with EGERD without comorbid pathology – by 11,4% ($p<0,001$) as compared to the individuals with NGERD with an isolated course. The results of examination of protein oxidative modification (POM) degree were indicative that in patients with EGERD and DM Type 2 the coefficient R/B (correlation of carbonyl and amino groups of proteins) in the epithelial cells of the stratified squamous epithelium, in the enterocytes and connective tissue fibers was reliably higher as compared to the analogical indices in patients with NGERD and DM Type 2 ($p<0,001$) and R/B coefficient in the connective tissue fibers with the 4th group ($p<0,05$).

CONCLUSION. Therefore, the data obtained are indicative of the fact that DM promotes increase of frequency of chronic inflammation in patients with GERD, decrease of optic density of PAS-positive substances and increase of POM degree which were more considerable in case of EGERD.

Keywords: gastroesophageal reflux disease, diabetes mellitus Type 2, morphometric parameters of the esophageal mucosa.

Neurology

Physical medicine and rehabilitation

Oncology

Oftalmology

THE IMPACT OF ELECTRONIC DEVICES LIGHT ON SLEEP QUALITY AMONG STUDENTS OF THE UNIVERSITY OF TUZLA

(Oral presentation)

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INTRODUCTION: There is evidence that blue light, emitted by smartphones, tablets, laptops and many other electronic devices, is impacting on the quantity and quality of the sleep we are getting. Darkness is a natural cue to our bodies that it's time for sleep, but we're circumventing it by staring at bright screens for hours after the sun has gone down. It is the light of these devices, who is prolonged stimulating the pineal gland to secrete melatonin who is stimulating the ascending reticular system.

AIM: My goal is to point out the correlation between disturbances in sleep and the immediate staring on electronic screens before going asleep.

MATERIALS AND METHODS: This descriptive-statistic work includes a sample of 489 students who are regularly viewing at electronic screens just before going asleep, of which 298 women and 191 men aged 18-29 years (Me= 21; ẍ= 23,5). The survey includes several groups of questions about quantitative and qualitative characteristics of their sleep.

RESULTS: The survey results show that 58,3% of the students has an average of 2,4 qualitative sleep disturbances (M0= lack of sleep). 57,3% of students has a reduction in the duration of sleep. 81,8% of respondents feel extreme fatigue, 83,03% has difficulty in concentrating, 60,53% difficulties with preserved wakefulness during the day. From qualitative change 28,22% noticed that regularly feature some of the pathological phenomena. 43,55% of students takes more than 15 minutes to fall asleep (Me= 30 minutes).

CONCLUSION: Light electronic devices complicates and prolongs the process of falling asleep, followed by shortening the duration of sleep.

Keywords: sleep, electronic devices, students, blue light

THE ROLE OF MAGNESIUM IN PAIN

(Oral presentation)

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INTRODUCTION: Magnesium is the fourth most abundant essential ion in the human body. Magnesium plays a fundamental role in many cellular functions, such as metabolism, storage, energy utilization and has an important role in clinical medicine. Magnesium acts as an antagonist at the glutamate subtype of N-methyl-D-aspartate (NMDA) receptors and blocks NMDA-induced currents in a voltage-dependent manner by blocking the receptor channel effects.

AIM: The aim of this study was to determine the usage of magnesium in analgesia in animals.

MATERIALS AND METHODS: Available databases were observed (Medline i Cochrane) for the period of preceding five years. Key words for searching were: experiments, animals, magnesium, analgesia, anesthesia.

RESULTS: Several lines of evidence indicate that magnesium enhances the analgesic effects of opioids, general and local anesthetics. NMDA receptors are important components of pain processing, and their response can be inhibited by ketamine and magnesium, which have a super-additive effect in combination. This may explain in part why analgesia is more effective for the combination than for either compound alone. As a sole drug magnesium demonstrated analgesic efficacy against acute, inflammatory and neuropathic pain in rats. Studies using formalin test in rats provided controversial data. In addition, accumulated evidence suggest link between inflammation and magnesium deficiency. The stimulation of NMDA receptors by glutamate is very important, not only for acute pain but also for chronic pain. The release of glutamate, substance P and CGRP in the spinal cord after nociceptive peripheral stimulation is essential in nociception. Magnesium modulates the release and action of all three neuromediators. Recently, it was demonstrated that low dose of magnesium sulphate added to morphine-ketamine combination administered systemically in rats produces a higher level of analgesia.

CONCLUSION: Magnesium is an antagonist of NMDA receptors and its role in analgesia has a therapeutic perspective.

Keywords: analgesia, therapeutic perspective

THE MOST COMMON CAUSES OF SCHIZOPHRENIA

(Oral presentation)

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INTRODUCTION: Psychiatric disorder that affects around 0.7% of the people during their life, or about 24 billion people in the world is schizophrenia. It is a serious mental illness that affects the ability to think which is also usually connected to chronic problems with behavior and emotion. Common symptoms include hallucinations, paranoia, disorganized or unclear thinking and speech, and all accompanied by significant social and working dysfunctions.

AIM: The aim of this study was to examine the most common factors in the development of schizophrenia. So we observed the way of living including: trauma, stress, socio-economic position and genetics.

MATERIAL AND METHODS: We examined 60 recumbent patients who had been treated at the Psychiatric clinic University Clinical Center of Sarajevo in 2014 with the diagnosis of schizophrenia, both sexes, different ages, level of education and socioeconomic status. It was a descriptive, analytical and epidemiological research.

RESULTS: We realised that the most common cause of schizophrenia is stress (49,0%), then hereditary and traumatic factors with an equal share, total (25,3%), and almost as much (25,7%) are the social conditions of life. This last parameter shows an interesting information that patients with low or extremely low socio-economic conditions of living equally get this mental disorder as well as those with high, or more precisely "without limitation" standard of living. Statistical analysis of (X^2 = 0,434) shows that it is difficult to single out the significant differences in the cause of the occurrence of this disease.

CONCLUSION: According to researches by the World Health Organisation, this study also confirms that hereditary basis (changes on the genes in the regions of the human genome) can create a predisposition for schizophrenia, but also interaction of the environmental factors (stress, trauma, quality of life) have almost the same effect. Low socioeconomic status is in the same ratio as well as extremely high ("no limit") as a possible cause of the occurrence of this disease.

Keywords: schizophrenia, social conditions of life, stress, trauma, heritage

USE AND ABUSE OF ANALGESICS IN WOMEN DURING THE MENSTRUAL CYCLE

(Oral presentation)

Author: IVICA VRANJIĆ, dr med.
Mentor: Dunja Degmečić, MD PhD

INTRODUCTION: While dysmenorrhea represents a very common helath problem across the entire world which is normaly taken care of by the use of analgesics, certain behavioral patterns have been discribed in women during the menstrual cycle.

AIM: The objectives of this research were to establish the frequency of analgesic use for relieving menstrual pain, study mood changes related to the use of analgesics and examine the possible occurrence of psychological addiction to analgesics.

MATERIALS AND METHODS: The research was conducted as a cross-sectional study.The participants were 130 female students of the University of Josip Juraj Strossmayer Osijek. The data were collected by using an anonymous questionnaire which included questions about demographic characteristics, habits related to the use of analgesics, mood changes during menstrual pain and mood changes related to the use of analgesics. The questionnaire also included 4 questions which represented an adjusted CAGE questionnaire to evaluate clinical signs of addiction to analgesics.

RESULTS: It was found that the prevalence of dysmenorrhea was 87.7% and that 90% of the participants used analgesics to relieve the menstrual pain. The use of analgesics depended on the intensity of the pain and that most of the participants used analgesics in case when the pain was severe and not subsiding. The pain subsided completely in 57.3% of the participants, whereas the rest claimed that the pain was still present but easier to bear. The results indicated mood changes during menstrual pain in 64.6% of the participants and the fact that most of the participants felt better after the use of analgesics. In case there was no access to analgesics, 60.8% of the participants felt worse.

CONCLUSION: It was found that most of the participants did not consult their doctor about dysmenorrhea and, at the same time, used analgesics that were not prescribed by a physician. The results of the CAGE questionnaire did not show any single case which could confirm clinical indications to analgesic addiction. Behavioral and emotional changes are most likely a result of the agony caused by the pain.

Keywords: abuse; addiction; analgesics; dysmenorrhea

HUNTINGTON'S DISEASE - CASE REPORT

(Oral presentation)

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Mentor: Research fellow Arben Taravari MD PhD[2]

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INTRODUCTION: Huntington disease (HD) is a progressive neurodegenerative condition, characterized by motor, cognitive and behavioral dysfunction, and has an autosomal dominant mode of inheritance. As the disease progresses, concentration on intellectual tasks becomes increasingly difficult. Affected individuals may have trouble walking, speaking, swallowing, changes in personality, a decline in thinking and reasoning abilities. It's probably defect problem with the short leg of 4th chromosome (CAG triplet proven as 4p 16.3).

AIM: This case was undertaken to examine patient's DNA in a plasma to determine if there are changes observed in HD brains are detectable in peripheral samples.

MATERIALS AND METHODS: A patient with typical clinical trial was examinated at University Clinic of Neurology. Anamnesis and status were analogue due this disease. Therefore is taken patient's blood sample for proven the mutation of the 4th gene. The necessary laboratory material was sent to MASA (Macedonian Academy of Sciences and Arts), at Research Centre for Genetic Engineering and Biotechnology of Skopje.

RESULTS: The adequate analysis approved the mutation of the 4th gene's leg. Expansion of a CAG (cytosine-adenine-guanine) triplet repeat stretch within the Huntington gene results in a different form of the protein, which gradually damages cells in the brain, through mechanisms that are not fully explained.

CONCLUSION: The analysis had proven that the final diagnose is Huntington disease. It is considered that the mutation of 4th gene is in his blood samples. The patient is given an appropriate treatment and advices for quality and healthy life.

Keywords: Huntington disease, neurodegeneration, autosomal, inheritance, mutation

THE EFFICACY OF ADELI SUIT TREATMENT IN REHABILITATION OF POST- STROKE PATIENTS

(Oral presentation)

Author: OLEKSANDRA SHVETS
Mentors: Nataliya Vasylieva, Bohdan Boiko

INTRODUCTION: Stroke occupies the second place between diseases with fatal results and also is the most prevailing reason of ability loss. Although the causes of stroke are well-known and it is possible to reduce these risks,there is still a need to improve rehabilitation techniques.

METHODS: The group that was chosen by us for investigation included 50 post-stroke patients (30 male, 20 female, age from 41 to 72 y.o.). 9 of them had hemorragic stroke and the others had ischemical stroke. In Adeli Medical Center (Piestany, Slovakia) the rehabilitation course of post-stroke patients were taken. For the purpose of rehabilitation we used Adeli suit treatment (AST) and traditional rehabilitation programs - massage, physiotherapy (TRP). Patients were matched by age and functional status and randomly assigned to the AST and TRP treatment groups. In the AST group (n=25, 15 males, 10 females, average age - 51,2 y.o.), 5 had hemorrhagic stroke, 20 had ischemical stroke). In the TRP group (n=25,15 males,10 females, average age - 50,3 y.o.), 4 had hemorrhagic stroke, 21 had ischemical stroke. Both groups were treated for 2 weeks (2 hours daily,5 days per week,10 sessions).

RESULTS: According to results of our investigation in group of patients, which took rehabilitation course by using Adeli suit treatment showed by 12% increase of volume active and passive movements and consequently decreasing severity of manifestations of paresis comparing with TRP group. Using the data evaluation on a Barthel scale was demonstrated on 10 points better result in AST group than in group that used TRP. Also during the study of somatosensory evoked potentials we have seen growth rates in AST group about 5% faster than in TRP.

CONCLUSION: Adeli suit treatment is more efficient than traditional rehabilitation program. Benefits of using AST were demonstrated objectively using Barthel scale, goniometry and studies of somatosensory evoked potentials.

Keywords: stroke,rehabilitation,Adeli suit treatment

EXPERIMENTAL FIBROSARCOMA IN THE SYRIAN GOLDEN HAMSTER AS A MODEL FOR TESTING THE ANTI-TUMOR EFFECT OF MEBENDAZOLE

(Oral presentation)

Authors: PAVLE BANOVIĆ[1], Ognjen Zurković[1], Matilda Djolai[2], Ivan Čapo[2], Dušan Lalošević[2,3]
Mentor: Dušan Lalošević, MD PhD[2,3]

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INTRODUCTION: Cell culture BHK-21/C13 today is used for production vaccines against rabies, because of characteristics like spontaneous tumorogenesis it may present reliable model for research in experimental oncology. Mebendazole has been recently proved to be effective against some types of tumors in vivo as in vitro.

AIM: The aim of this experiment is studying fibrosarcoma inducted by inoculation of cell culture BHK-21/C13 as a model of local tumor for testing antitumor drugs, and investigating potential antitumor effects of mebendazole on inducted fibrosarcoma.

MATERIALS AND METODS: Adult Syrian golden hamsters were inoculated with a suspension of tumorogenic baby hamster kidney (BHK) cells by subcutaneous injection. On day 5 after inoculation, 30% of LD50 doses for small rodents of mebendazole were given orally for 6 days, and the same dose of mebendazole suspended in 10% dimethyl sulfoxide were injected intraperitoneally into the one group of hamsters for 3 days. 19 days after inoculation of BHK cells animals were sacrificed and samples of tumor were excised, processed, described using and analyzed via Student`s t-test, histology and immunohistochemistry technics.

RESULTS: Induced fibrosarcoma has shown 100% expression and virulence. Experimental groups with oral application of mebendazole were shown regressive changes in tumor volume, tumor cell structure and organization, with high cytochrome C positivity, while named characteristic of experimental group with intraperitoneal application of mebendazole showed smallest differences from tumors in control group.

CONCLUSIONS: Model of inducted fibrosarcoma has been shown as highly reproducible, with local infiltration and high level of expression and virulence. Mebendazole has showed clear antitumor effect via oral application.

Keywords: Syrian golden hamster, mebendazole, BHK-21, fibrosarcoma, tumor

THE ASSESSMENT OF THE TAKEN MEDICATION AND SECONDARY DISEASES OF PATIENTS WITH ALZHEIMER'S DISEASE IN A 5 YEARS PERIOD IN THE 1ST PSYCHIATRIC CLINIC OF TIRGU MURES

(Oral presentation)

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Student at University of Medicine and Pharmacy Targu Mures

INTRODUCTION:Alzheimer's disease is a chronic neurodegenerative disorder that usually starts slowly at an advanced age.The first symptom is memory impairment, later it might lead to language problems and behavior disorder. The aim of the study was to evaluate the age,gender distribution, severity of the disease (QD,MMSE),therapeutical options and secondary diseases.

MATERIALS AND METHODS:a cross sectional study,involving1504 patients who came to "1st Psychiatric Clinic of Targu Mures" between January 2010 and November 2014.

RESULTS: Total amount of patients is1504among them 918 females (61.11%) and 586 males (39.01%). Average age of patients is 77.1years, divided by by gender: females-78.1 years, males-75.5 years. The most common drug for Alzheimer's per year-2010: Donepezil (38.5%); 2011: Galantamine(27.3%); 2012: Galantamine (34.5%); 2013: Donepezil and Memantine (equal proportion) (31.7%); 2014: Memantine (38.5%). The most given combinations per year – 2010: Donepezil & Memantine (0.2%); 2011: Galantamine & Memantine (9.3%); 2012: Donepezil & Rivastigmine (7%); 2013: Donepezil & Memantine: (13.2%); 2014: Donepezil & Memantine (16%). Secondary diseases: Hypertension: 36%(544 patients); Chronic ischemic cardiopathy: 17.5% (263patients); Acut psychotic disorder 18% (275patients); Diabetes: 1.9% (29patients); Epilepsy: 1.5% (24patients). The most common combination of secondary diseases is hypertension & chronic ischemic cardiopathy: 19% (292patients). The severity according to QD test by gender: average of females results:21.8 and males results:21.3.

CONCLUSION AND DISCUSSION:According to our results the occurrence of Alzheimer's disease and the severity of it is higher in female patients.The most common secondary diseases are hypertension and chronic ischemic cardiopathy. The most common antidemential drug given in the last 5 years was Donepezil and the least one was Rivastigmine.The most given combination of drugs was Donepezil & Memantine.

Keywords: Alzheimer's disease, therapeutical option, secondary diseases

THE CORRELATION BETWEEN GENDER IN ALZHEIMER'S PATIENTS AND SECONDARY DISEAESE

(Oral presentation)

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INTRODUCTION: Psychosis is an abnormal condition of the conciseness. It is a term for a mental state which described as "disconnection from the reality". People with psychosis are described as psychotic. Patients with psychosis may have some personality changes, depending on its severity. Alzheimer's disease in the other hand is a neurodegenerative disease, which is the main cause of dementia. The aim of the study was to find a correlation between ange, gender and the occurrence of acute psychotic disorder in patients with Alzheimer's disease.

MATERIALS AND METHODS: A cross sectional study, which involve 1504 patients who visited the "1st Psychiatric Clinic of Targu-Mures" who were diagnosed with Alzheimer's disease. The data was gathered from a 5 year period, between January 2010 and November 2014.

RESULT:1504 patients , which include 918 females(61.11%) and 586 males (39.01%). Regardless the gender the average age is77.1 . According to gender: females-78.1, males-75.5. Out of all the patients 275 patients suffer from -Acut psychotic disorder: 18%, among them 187 females(67.6%) and 89 males(32.4%).

CONCLUSION AND DISCUSSION: According to the results the appearance of acute psychotic disorder in patients with Alzheimer's disease is higher in female patients. We can see as well that the disease start in a more advance age in females. We might think that it is due to the males life expectance.

Keywords: Alzheimer's disease, acute psychotic disorder

CLOMIPHENE CITRATE AND LETROZOLE VERSUS TAMOXIFEN AND LETROZOLE AS AN INFERTILITY TREATMENT IN WOMEN WITH POLYCYSTIC OVARY SYNDROME

(Oral presentation)

Authors:HOSSEINPOOR MASOUMEH, MD[1], Parsafar Amin MA[2], Alipour Farzaneh MD[1]

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BACKGROUND: The aim of this clinical trial was to compare combination therapy of letrozole and clomiphene with letrozole and tamoxifen as an infertility treatment in women with the polycystic ovary syndrome.

METHOD: 90 infertile women between 18 to 40 years with the polycystic ovary syndrome who had no major medical disorders enrolled in this clinical trial. Patients were randomized in to 2 groups.one group was treated with Clomiphene citrate (CC) 50 mg twice daily and letrozole 2.5 mg twice daily for 5 days (from day 3 to 7 of menstrual cycle), and group 2 took Tamoxifen 10 mg twice daily and letrozole 2.5 mg twice daily for 5 days (from day 3 to 7 of menstrual cycle). Transvaginal ultrasonography (TVS) was performed at the Day 7 in order to determine number of follicles, size of follicles and endometrial thickness (ET).

RESULT: pregnancy rate in the group of women who received tamoxifen and letrozole(Group B) was more than women who received CC and letrozole(Group A)(2.2% in group Avs. 17.8% in group B) that there is Significant difference between two groups (P value= 0.01). There is no significant association between two groups in incidence of OHSS, endometrial thicknessand follicular size.

CONCLUSION: it seems co-administration of letrozole and tamoxifen is more effective because it has low cost, low complication and greater access as an infertility treatment.

Keywords:letrozole, tamoxifen, clomiphene citrate, PCOS

CIRCADIAN RHYTHM DISORDER CAUSED BY BAD SLEEP HABITS OF UNIVERSITY OF TUZLA STUDENTS

(Oral presentation)

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INTRODUCTION: Sleep is a modified state of consciousness which changes with wakefulness throughout life. Despite being one of the biorhythms, people with their good or bad habits significantly affect the quality of sleep. Irregular sleep schedule, consumation of caffeine drinks, alcohol, cigarettes and drugs and physical inactivity are often the student habits that can lead to sleeping disorder which is a risk factor for the academic failure.

AIM: Point out the bad student habits related to sleep which significantly lead to the reducing of quality of sleep and represent one of the conditions for the development of sleep pathology and the need for the correction of those habits.

EXAMINEES AND METHODS: This descriptive-statistic work includes the sample of 528 students at the University of Tuzla, out of which 318 female and 210 male students aged between 18 and 30 (Mo=21). All of the data was collected through a student survey. The survey consisted of a variety of groups of questions: general questions, habits and quality of sleep.

RESULTS: Results of the survey show that 30.9% of students use caffeine drinks before going to sleep, 14.4% use cigarettes, 3% use drugs resulting in students declaring that they have difficulties with falling asleep, short sleep, lack of sleep, physical fatigue after sleeping and so on. Only 25.9% does sports, 56% of students go to sleep between 11 p.m. and 1 a.m. and 30% of examinees sleep 6 to 7 hours in average. Only 21.6% feel sleep-induced rest. Results also show that 81% has a concentration fall and 80% experience fatigue during the day, and 60% have difficulties trying to stay awake.

CONCLUSION: Students are a population that changes its sleep schedule during their academic education because of a discord between the university obligations and other activities. The exact social group that requires preserved mental and cognitive ability develops a deviant circadian sleep rhythm.

Keywords: student, sleep, habits

POSTER SESSION I

THE EFFECTS OF HOMOCYSTEINE AND HYDROGEN SULFIDE INHIBITOR (DL-PAG) ON ACETYLCHOLINESTERASE ACTIVITY IN THE RAT HEART TISSUE

(Poster presentation)

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Mentors: Dragan Djurić, Professor, MD, PhD [1,2], Danijela Krstić, Professor, BSc, PhD [1,3]

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INTRODUCTION: Acetylcholinesterase (AChE) is an enzyme that catalyzes the breakdown of acetylcholine. Hyperhomocysteinemia is in the pathogenesis of various pathological states such as cardiovascular and neurodegenerative disease. H2S belongs to the gasotransmitter family and it is produced in homocysteine metabolism. It is vasodilator and it has anti- inflammatory and antioxidant effects. Considering these facts, the research of the relationship between these factors should be relevant.

AIM: The objective of this study is to examine and compare, individually and simultaneously applied, the effects of homocysteine and H2S inhibitor on acetylcholinesterase activity in rat heart tissue.

MATERIALS AND METHODS: In the experiments, we used DL-propargylglycine (DL-PAG) as H2S inhibitor. AChE activity in the rat heart tissue homogenate was examined after homocysteine application in a dose of 8 mmol/kg b.m i.p., as well as DL-PAG application in a dose of 50mg/kg b.m. i.p. Investigated compounds were also applied simultaneously in the same doses. AChE activity was determined 60 minutes after application the Ellman method.

RESULTS: AChE activity was expressed as ΔA/min mg tissue, and it was (0.039±0.003) in the control group; (0.023±0.002) in the group where homocysteine was applied; (0.032±0.006) in the group where DL-PAG was applied; and (0.041±0.010) in the group where tested compounds applied simultaneously. Homocysteine caused a statistically significant reduction of AChE activity compared to the control group ($p=0.007$). DL-PAG did not cause a statistically significant reduction of AChE activity compared to the control group ($p=0.194$). There was statistically relevant difference between AChE activity caused by homocysteine and DL-PAG ($p=0.04$).

CONCLUSION: Homocysteine caused statistically significantly reduced AChE activity in rat heart tissue homogenate compared to the control group, but DL-PAG did not cause statistically significant reduction of AChE activity compared to the control group. Surprisingly, the combined application of homocysteine and DL-PAG increased AChE activity in comparison to AChE activity in the control group.

Keywords: homocysteine, H2S, AChE, rat heart

THE ROLE OF VISUOSPATIAL MEMORY OF MEDICAL STUDENTS IN LEARNING ANATOMY

(Poster presentation)

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Mentor: Muhammad Iqbal Basri, dr., M.Kes, Sp.S[2]

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INTRODUCTION: The visuospatial sketchpad allows for the temporary storage of visual and spatial information, such as color, form and movement. Anatomy, the study of the structures of human body, is one of the first, most basic and important subject studied by medical students when they begin their education. Allows one to remember shapes and location of objects, the visuospatial memory is assumed to play a significant role to achieve better understanding of anatomy.

AIM: The aim of this study was to explore the role of visuospatial memory of medical students in learning anatomy.

MATERIALS AND METHODS: A cross-sectional study was conducted among first year medical students (n=286) at Hasanuddin University in August 2015. All students were included and underwent four types of memory tests (sequential memory, eidetic memory, spatial ability and verbal memory test) before taking anatomy examinations (written and practical test with human cadaver and anatomical models). Correlations between visuospatial memory and anatomy examination performance were examined.

RESULTS: In this study, there were no statistically significant correlations (Spearman rank correlation coefficient, rs) between visuospatial memory tests and written examination (sequential, rs=0.099; eidetic, rs=0.000; spatial, rs=–0.125; and verbal, rs=0.078) nor between visuospatial memory tests and practical examination (sequential, rs=0.093; eidetic, rs=0.016; spatial, rs=–0.054; and verbal, rs=0.170). Although the p-values were <0.500 in spatial ability and written examination (p=0.034) with verbal memory and practical exam (p=0.004).

CONCLUSION: There was no correlation between visuospatial memory of medical students and performance in learning anatomy.

Keywords: visuospatial memory, learning anatomy, medical student

DEVELOPMENT AND FORMATION OF THE NASAL AREA IN THE PREFETAL PERIOD OF HUMAN ONTOGENESIS

(Poster presentation)

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INTRODUCTION: The necessity of embryological research for proper understanding and clarifying the causes and possible time of occurrence of congenital diseases of organs and structures of the body is universally recognized.

AIM: To study the anlage and formation of the nasal area in the prefetal period of human ontogenesis.

MATERIALS AND METHODS: 68 human histological sections; methods: making series of consequent histological sections, microscopy, graphical remodeling.

RESULTS: In prefetuses of 31,0-40,0 mm of CRL the nasal vestibule is filled with epithelial plug. Palatine processes are interconnected and form secondary nasal and oral cavities. The upper turbinate is evenly thick. The middle turbinate is arch-shaped. Cartilaginous plate of the inferior turbinate is directed downwards and inwards. Ethmoidal arteries penetrate through the ethmoidal openings into the nasal cavity and divide dichotomously into branches of the second order. The sphenopalatine artery gives out 3-4 posterior lateral nasal branches. Olfactory nerves are presented with numerous fibrils. In prefetuses which are 41,0-79,0 mm long the epithelial cells of the lower part of the nasal cavity have already some cilia. The cartilaginous plate of the upper turbinate is covered with high cylindrical epithelium. The cartilaginous plate of the inferior turbinate is irregularly S-shaped. Subepithelial vascular net is clearly seen. Olfactory nerves are presented with fibrils connected in bundles in the upper mucous membrane.

CONCLUSION: Thus, during the prefetal period of human ontogenesis the permanent palate is being formed. The nasal and oral cavities dissociate finally. Active bulging of epithelium into nearby mesenchyme leads to the formation of the turbinate. The following vessels develop: anterior and posterior ethmoidal arteries and the sphenopalatine artery, their walls are formed too. The olfactory nerves connect to the olfactory bulbs.

Keywords: embryogenesis, nasal area, human being

BIOPSY-PROVEN RENAL DISEASE IN THE ADULT POPULATION OF NORTH CROATIAN COASTAL REGION

(Poster presentation)

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INTRODUCTION: A renal biopsy could quickly identify the type of glomerular injury and suggests a course of treatment. Epidemiologic data of biopsy proven renal diseases in our population are insuffitient . Here we present pathohistological data and clinicopathological correlation in adult patients over a 25-year period in the North Croatian coastal region.

AIM: To contribute to the collection of histopathological and clinical data on nephropathies for Croatian register of kidney biopsy and to correlate our findings with other biopsy registries.

MATERIALS AND METHODS: Our center provided data on all biopsies of native kidneys performed in the Clinical Hospital center of Rijeka over the period of 1998-2015. Tissue is processed on three levels including light microscopy, direct immunofluorescence and occasionally electron microscopy.

RESULTS: Altogether biopsies in 514 patients were performed (adults 41.2%, children < or = 15 years 18.8%, patients with transplanted kidney 39,8%). The main indications for biopsy were nephrotic syndrome, hematuria with proteinuria, and isolated hematuria. Primary renal diseases were more often (53.8%) than secondary (22.2%) glomerulonephritis (GN). Tubulointerstitial nephritis (TIN) was observed in 7.5% and hypertensive nephroangiosclerosis in 7.1%. The samples were non-diagnostic in 4.7%. Among primary GNs, the most frequent diagnoses were: membranous GN (17,4%) and IgA nephropathy (16.9%). Among secondary GNs, systemic lupus erythematosus (SLE) was the most common (10.4.0%).

CONCLUSION: This retrospective study of biopsy proven renal diseases represent important endowment to the epidemiology of glomerulopathies in Croatia.

Keywords: renal biopsy, glomerulopathies, epidemiologic data

LIPOMA GLANDULAE PAROTIS – CASE REPORT

(Poster presentation)

Authors: DARKO KOTROMANOVIĆ, Tin Prpić, Željko Dumančić, Darjan Svetinović, Sonja Kotromanović
Mentor: Željko Kotromanović, MD

INTRODUCTION: Lipomas of salivary glands are rare. There were only about 140 cases known until 1991. They look like normal fat tissue, but the presence of the capsule makes it different from the normal accumulation of body fat. They are the most common tumors of mesenchymal tissue. The etiology is still unknown and men suffer more than women in a ratio of 5 to 1.

AIM: The aim of this study was to make difference betwen benign and malignant tumors of salivary glands,because they can be hard to identify.

MATERIALS AND METHODS: Ultrasound examination has shown hypoechoic node, which was about 4cm in diameter, in left parotid gland. Magnetic resonance imaging and computed tomography results also imaged a node of same localization and size. We also did the fine needle aspiration biopsy and saw benign tumor of adipose tissue(lipoma)delimited from normal tissue by capsule.

RESULTS: Treatment was consisted of en block resection of tumor (superficial or total parotidectomy, resection of lower lobule of parotid gland or extracapsular dissection)

CONCLUSION: Lipomas of the salivary glands are rare. In 2013 the biggest series of case reports was 35, however from 1959.-2004 the Mayo clinic published 70 cases. South Korea published only 2 case reports until 1992. Disease mostly appears around the age of 60. Differential diagnosis is very important so we can exclude other salivary gland diseases. We use radiological and citological methods in differential diagnosis.Surgery is the way for treating the tumor. Depending on the tumors localization we can preform superficial parotidectomy, complete parotidectomy, partial parotidectomy depending on the tumors localization and extracapsular dissection.

Keywords:lipoma, parotid gland, radiotherapy

SPATIAL AND TEMPORAL FACTORS HAVE A DIRECT CONTRIBUTION TO THE EPIDEMIOLOGY OF DENGUE'S DISEASE IN THE STATE OF JALISCO, MÉXICO

(Poster presentation)

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INTRODUCTION: Dengue virus has four serotypes which are known to cause Dengue's Disease. These serotypes actively circulate in endemic areas, particularly in tropical and subtropical weathers. Transmitted by mosquito bites, Dengue is characterized by fever, arthralgia, and generalized pain. Some patients recover without sequelae while others culminate in death. Dengue has been identified in 128 countries, predominately in America, Africa, and Asia; nonetheless, the number of cases is poorly documented.

AIM: The purpose of this study is to establish the relationship between spatial and temporal factors and the incidence of Dengue in Jalisco and its surroundings.

MATERIALS AND METHODS: We accessed articles and information provided by the Mexican Health Department, created a database gathering the information throughout 41 epidemiologic weeks (January-October 2015), and developed an algorithm. Using this approach, we were able to generate a correlation among the common risk factors in Jalisco and its neighbour States.

RESULTS: Reported cases in Jalisco accounted for 7490. Neighbour states (Nayarit and Colima) and the six towns with major incidence of Dengue in Jalisco, share warm weather (23-30°C), rainy seasons (June-October), and are located in coastal areas. These territories present a higher number of cases compared to the surrounding states that are located in Central México. Serotype 1 has predominated in this area for six years, until the arrival of serotypes 2 and 3 in the year 2015. Nevertheless, the lethality of the disease has decreased up to 0% compared to 5.88% recorded in 2009.

CONCLUSION: Even though the arrival of new serotypes in a region increases the lethality of the disease, Jalisco has not shown increase in the mortality because other factors also contribute to the development of the disease. Territory is a determinant factor in the prevalence of Dengue, since similar geographical and season patterns bring the optimal conditions for the vector's growth. This is essential to keep in mind for the clinical diagnosis of the disease.

Keywords: Dengue's disease, epidemiology, geographical factors, Jalisco México.

SATISFACTION OF USERS WITH MEDICAL PROTECTION IN GENERAL HOSPITAL BERANE

(Poster presentation)

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INTRODUCTION: The level of satisfaction of users with medical protection is useful as demonstration of subjective quality of medical care. The content of evaluation of medical protection should be, not only clinical and economical, but also socially accepted. That is the reason why measuring of patients satisfaction is so important.

AIM: Confirmation of patients satisfaction of given medical treatment by medical staff during they stay in General Hospital Berane.

MATERIALS AND METHODS: We examined 58 patients (both sexes together, because the patients are not chosen by sex or age) from the Cardiology (15 patients), Gynecology (15), Surgery (15) and Pediatric (13) wards, all of which were treated at the General Hospital Berane in October of 2015. They have completed a brief standardized questionnaire. The questionnaire was modulated from the WHO's original questionnaire, but standardized for Montenegrin population.

RESULTS: According to the total number of examined patients, 18 (31%) of them rate their health as very good, 16 (28%) as good, 13 (22%) as excellent and 11 (19%) as fair. The best evaluated information are those which refer to doctors (97%), than the time that nurses spend with patients and how fast they react on patients call (83%). Assessment results showed that 18 patients (31%) rated the hospital the best mark 10 and also 18 patients (31%) rated hospital mark 9.

CONCLUSION: The results of this study confirm that the hospitals should pay more attention on affective and emotional sides of patient and therefore, develop different methods of communication with patients in that way they will have a great influence on their thoughts, marks and recommendation given to local community, friends and relatives.

Keywords: satisfaction study, patient, medical workers, medical protection

SUBMICROSCOPIC CHANGES IN NEUROSECRETORY CELLS OF HYPOTHALAMUS SUPRAOPTIC NUCLEUS UNDER LIGHT STIMULATION

(Poster presentation)

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Mentor: Bulyk R.Y.[1,]MD PhD[2]

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INTRODUCTION: Supraoptic nuclei (SON) of the hypothalamus is a humoral effector element of intricately organized chronoperiodic system, but there is not any information on the submicroscopic organization of neurocytes in SON under the light stimulation.

AIM: That is why we aimed to establishing the state of cells in SON of the hypothalamus under light stimulation at different time of the day.

MATERIALS AND METHODS: The study was conducted on 20 male rats. For electron microscopic studies the areas where the hypothalamus SON were localized were immersed in 2.5% glutaraldehyde solution with pH to 7,3-7,4 on phosphate Millonig buffer. Further processing of the material was conducted by the conventional method.

RESULTS: Ultrastructural organization of SON at 02.00 pm under the light stimulation got reflected by light cells with swelling phenomena. There were destructive changes of the organelles in the neuroplasm of the hypothalamus SON neurons: fragmentation and dilation of the tubules in the granular ER and Golgi tanks almost complete absence of vesicles, vacuolization of mitochondria, hyaloplasm local enlightenments. Such cells do not contain significant number of hormonal granules which is indicative of the structural unit depletion. At night, there were dark cells in the SON and they had piknotically changed nuclei with uneven outlines, smaller nucleoli and badly expressed nuclear pores. The neuroplasm is of higher electron density. There was patchy dilation of the tubules of granular ER and Golgi tanks with formation of vacuole-like structures. Mitochondria have light matrix and reduced crista, hormone granules are rare. The above described ultrastructural condition is indicative of the reduction in the functional activity of structures with elements of swelling and destruction.

CONCLUSION: Thus, due to the reduction of producing melatonin hormone by the pineal gland, found ultramicroscopic changes in hypothalamic neurons of SON are most pronounced at 02.00 am and may be regarded as the development of desynchronosis.

Keywords: neurosecretory cells of the hypothalamic supraoptic nucleus, light stimulation, pineal gland, melatonin.

KNOWLEDGE AND ATTITUDES AMONG MEDICAL STUDENTS ABOUT INFLUENZA IN THE PANDEMIC AND POST PANDEMIC PERIOD

(Poster presentation)

Authors: MARIJA JEREMIĆ, Vuk Marušić
Mentor: Ljiljana Marković-Denić, MD PhD

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INTRODUCTION: Medical students play critical roles in controlling the spread of flu.

AIM: The aim of this study was to analyze knowledge, opinion about vaccination and perception of risk of pandemic flu A(H1N1) in pandemic and post pandemic period.

MATERIALS AND METHODS: Three successive cross-sectional studies were conducted among students of the first and second year of the Medical Faculty in Belgrade. The first one was in 2009, at the time of occurrence of a pandemic influenza A(H1N1), and then in 2011 and 2013, in post pandemic period. Data collected using self-administrated questionnaire within questions about demographic characteristics, knowledge and opinion about pandemic flu.

RESULTS: Four years after the pandemic of influenza A(H1N1), a much larger percentage of students knew that there are 3 types of virus in relation to the pandemic year or two years later (71%, 14,4% i 12%, respectively (p<0,001)). Students showed very good knowledge about droplet spread of virus (93,9; 90,6 i 95,1%), however, less knowlegde about contact transmision (8,5; 6,6 i 5,2%). There has been an increase in the percentage of students who think that medical students should be vaccinated as well as other health professionals (78.1% and 76.6% in post pandemic compared to 61.9% in the pandemic period). The main reasons for non-vaccination are: that the vaccine can provide complications (40.9% in the pandemic to 26.2 and 22.7% in post pandemic period (p <0.001)), and that the vaccine can give adverse reactions (26,7% in pandemic to 19.3 and 14.6% in post pandemic period (p <0.001)). The primary source of information in the pandemic period was the media (87.3%) as in the first study in post pandemic period (80.7%), while it was the lectures at the university (48.9%) in the study in 2013.

CONCLUSION: The participants showed a better knowledge of influenza in post pandemic than in pandemic period.

Keywords: influenza, pandemic flu, students

LONG TERM EFFECTS OF COMMONLY USED FLAVOUR ENHANCER MALTOL AND ITS RISKS

(Poster presentation)

Authors: MATJAŽ VRBINC MD, Jernej Vrtek MD
Mentor: Gorazd Drevenšek MD

BACKGROUND: Maltol is a well known flavor enhancer that has been used in everyday diet for decades. Despite its worldwide usage there is only a few studies that have examined its effects on different human tissues. They have shown promising antioxidant and anti-inflammable properties in neuronal, endocrine and gastrointestinal system. However there has not been a single research regarding its effect on cardiovascular system.

AIM: The aim of our research was to evaluate the effects of chronic exposure to maltol on acutely induced ischemic -reperfusion injury in rat myocardium. Results of the control group, which was treated without any biologically active substance, were compared with the group of rats that were feed with maltol.

HYPOTHESES: We speculated that maltol would have protective effects on acutely induced ischemic- reperfusion injury. Therefore we expected a decrease in heart rate, pressure in the left ventricle and enhancement of the the coronary flow. There would also be seen a reduction in length and incidence of the rhythm disorders.

METHODS: We performed our experiments on isolated rat hearts. We have mesured the rate of the release of lactate dehydrogenase, pressure in the left ventricle, heart frequency and coronary flow on isolated hearts. With ECG analysis we accesed the functional impairment of the heart. The results were statistically analyzed with two--way ANOVA with Bonferroni correction.

RESULTS: Long term exposure to maltol has statistically increased the rate of LDH release in the time of reperfusion ($p<0.0001$), decreased heart rate ($p<0,001$), increased length of rhythm disorders ($p‹0,00001$), especially asystole ($p‹0,01$) and ventricular tachycardia ($p‹0,00001$).

CONCLUSIONS: We showed that long term exposure to maltol statistically increases the extent of reperfusion injuries caused by acutely induced myocardial ischemia, and increases the duration and incidence of arrhythmias.

Keywords: maltol, chronic effects, ishemic-reperfusin, myocardial injury, flavour enhancer, cardiovascular system

IRANIAN PHYSICIANS' PRESCRIPTION ERRORS IN OUTPATIENTS- EVIDENCE FROM AHVAZ

(Poster presentation)

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INTRODUCTION: The observance of standard prescription principles by physicians increases the likelihood of proper treatment, its effectiveness and patients' recovery. This study aim was to explore the level of physicians' observance of prescription standards while visiting outpatients referring to teaching hospitals in Ahvaz.

MATERIALS AND METHODS: This cross-sectional study was conducted on 550 prescriptions written for outpatients referring to (Ahvaz University of Medical Sciences) affiliated hospitals in 2015. In each prescription, issues related to legibility, medication form and order and identity information were extracted and recorded on a checklist prepared based on the World Health Organization guidelines. Each prescription was scored with a score range from 0 to 21 and then analyzed using descriptive statistics.

RESULTS: The average score of observing prescription standards was 15.92 out of 21. About 1396 drugs (%72.78) were written legibly; 1032 drugs (%58. 81) were prescribed incorrect forms and 1281 drugs (%66.07) were prescribed in correct order. Doctor's identity was written in%98.08 of the examined prescriptions versus patient's identity was written in%80.36 of them. Moreover 1428 (74%) drugs were prescribed consistent with the standards of prescription.

CONCLUSION: Study results revealed that most of the examined doctors prescribed medications consistent with the standards of prescription. However, the two dimensions of medication form and order of use were not adequately noticed by doctors. Using electronic prescriptions could be useful to adhere the prescription standards.

Keywords: prescription error, outpatients, medications

EXPERIMENTAL STUDY OF THE EFFECT OF CARDIOPROTECTIVE AGENTS AT THE CIRCADIAN RHYTHMS OF RENAL FUNCTION

(Poster presentation)

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INTRODUCTION: A wide range of pharmacological properties metabolic preparations justify their use in various fields of medicine. Among the important correctors metabolism takes meldonium (mildronat).

AIM: The aim of this study was to investigate the effect of mildronate ("Grindex", Latvia) on thecircadian biorhythms of renal function.

MATERIALS AND METHODS: The chronorhythms of the functional state of the rats kidneys were studied round – the clock in every 2 hours after introducing mildronate (50mg/kg) at different times of the 24- hour period. The investigations were performed under the natural conditions of lighting against a background of water diuresis.

RESULTS: The introductions of mildronate did not influence essentially on the mesor of the circadian biorhythm of the rate of the glomerular filtration (GF) and diuresis, however, the amplitude of the biorhythm increased by 30-40% respectively. In the daytime (1200-1800) urine passage exceeded nocturnal diuresis by 30% with the GF rate at 1200. With the sinusoidal character of the chronogram of the concentration Na+ ions and its excretion their indices significantly exceeded the control and maximum values during the period from 0800 till 1400, irrespective of the time of introducing the agent. The mesor of Na+-uresis increased 1,6 times ($p<0,05$) with the acrophase of the biorhythm at 1200-1400 (the excretion of Na+ increased 1,6 times: during the bathyphase – 0400-0600. The mesor of K+- uresis increased 1,2 times. K+-uresis reached a maximum value upon injecting mildronate. The protein excretion was higher in the day-time of the 24 – hour period.

CONCLUSION: Thus, an elevation of the indies of the excretory function of the kidneys is observed upon introducing mildronate in the first half of the day with the acrophase of Na+-uresis at 1200-1400 hours, the latter may be taken into account upon obtaining a desired soluretic effect of the drug.

Keywords: meldonium, function of the kidneys, circadian rhythms.

HEPATOPROTECTIVITY OF BETA-GLUCANS IN IN-VIVO CARBON TETRACHLORIDE INTOXICATION IN MICE

(Poster presentation)

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INTRODUCTION: Beta-glucans are naturally occuring polysaccharides, found in plants and fungi. Their beneficial properties extend from stimulating the immune system, acting against oxidative stress, normalizing blood sugar, cholesterol and triglyceride levels. Over the last years, liver damage has become an important health issue and beta-glucans have proven their qualities here as well.

AIM: Our goal is to test the potential hepatoprotective activity of beta-glucans in in vivo carbon tetrachloride (CCl4) intoxication, by evaluating the following parametres: AST, ALT, bilirubin, hydroxyproline content, hepatic DNA content and total protein count.

MATERIAL AND METHODS: The beta-glucans used came from a commercially bought dietary supplement which was given to the animals per os. The animals were divided in 2 groups: positive control group received saline solution, the negative control group received saline solution and CCl4 and then both groups received beta-glucans doses ranging from 0,1 mL/kg of body weight, to 5,0 mL/kg of body weight.

RESULTS: The therapeutic dose of 1,0 mL/kg b.w., was enough to return the animal's weight, liver weight and the total protein count to that of the positive control group. We needed to double the therapeutic dose in order to normalize the hepatic DNA content, hydroxyproline content and ALT activity to that of the positive control group. And in the case where we measured AST activity and total bilirubin, the dose required to nullify the effect of CCl4, proved to be five times the recommended dose, meaning 5,0 mL/kg b.w.

CONCLUSION: The results obtained, showed a statistical significance in all parametres, relating to animals exposed to CCl4. Also no adverse effects were found when taking high doses.

Keywords: beta-glucans, hepatotoxicity, CCl4, hepatoprotectivity.

A NEW METHOD FOR DETERMINING SENESCENCE OF DECIDUOUS TEETH STEM CELLS BY USING GRAY LEVEL CO-OCCURRENCE MATRIX TEXTURE ANALYSIS

(Poster presentation)

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INTRODUCTION: Stem cells, have a limited lifespan and cease to divide after a certain number of divisions. The process of cellular senescence refers to inability to progress through the cell cycle, thus leading the cell to an irreversible growth arrest. One of the most common biomarkers of cell senescence is senescence-associated β-galactosidase (SA-β-Gal/SABG). However, the proper identification of senescent cells is still insufficient and lacks adequate quantification parameters.

AIM: In this study we wanted to determine whether gray level co-occurrence matrix texture analysis (GLCM) of deciduous teeth stem cells (DTSCs) nuclei could prove as a useful method in the detection and quantification of stem cell senescence in vitro.

MATERIALS AND METHODS: A total of 105, grayscale 8-bit images of DTSCs nuclei, both SA-β-Gal+ and SA-β-Gal- cells were used in this study. In order to calculate GLCM parameters of DTSCs nuclei we used an ImageJ plugin called "Texture Analyzer". The following five parameters were calculated: angular second moment (ASM), inverse difference moment (IDM), contrast (CON), entropy (ENT) and correlation (COR).

RESULTS: All of the calculated parameters (ASM, IDM, CON, ENT and COR) showed highly significant statistical difference between the nuclei of senescent and non-senescent DTSCs ($p<0.001$).

CONCLUSION: Our results show the possible significant and practical value of GLCM texture analysis as a new marker for determination and quantification of stem cells senescence.

Keywords: nucleus, chromatin, senescence, texture, aging.

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THE IMPORTANCE OF MAMMOGRAMS FOR EARLY DETECTION OF BREAST CANCER

(Poster presentation)

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INTRODUCTION: Mammography is the most effective, non-invasive, radiological method of breast examination. There are native and digital mammography. Malignant tumors are one of the largest medical and social problems in the world and in our country. Breast cancer is the most common cancer in women with a prevalence of 25%. One in eight women during their lives will, in countries with high economic standard, get breast cancer, and one of 33 will die.

AIM: The aim of this research is to describe the importance of mammography as a diagnostic method for early detection of breast cancer.

MATERIALS AND METHODS: The survey was conducted in the period from 15.07.2015. until 31.10.2015. A total of 477 patients with an average age of 50 years, the residents of Tuzla Canton. The survey was conducted by the method of content analysis (medical records) and the findings. The questionnaire containing questions related to general information, risk factors and mammography as the most important research method.

RESULTS: The average age of patients is 50 years. The youngest patient is 32 years old and the oldest 79 years. The largest number of patients with malignant changes belonged to the age group of 40-59 years of age, and that of 370 patients, 15 had malignant changes. Also, benign changes are most evident in the age group of 40-59 years.

CONCLUSION: The most suitable method for the prevention and early detection of breast cancer shows the mammography. This study showed a large proportion of diagnostic mammograms than mammography as a screening examination method. This study demonstrated that the mammogram has a purpose and benefit in women at the age of forty years of life as the only sure way of early detection of breast cancer.

Keywords: breast, carcinoma, diagnostics, mammography, screening

EPIDEMIOLOGICAL FEATURES OF BREAST CANCER IN TUZLA CANTON REGION (2005-2010)

(Poster presentation)

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Breast cancer is the most frequent malignant tumor in female population in the developed countries, but is also the biggest cause of death in women between the age of 45 and 55 in our country. Around a million of new cases are reported yearly, and the number keeps growing. The aim of the work is to showcase the epidemiological features of breast cancer in Tuzla Canton in the period from 2005 to 2010. Public healthcare institute data was based on monthly and yearly reports of the incidence of breast cancer, and yearly reports are taken from the Public Healthcare Institute of Federation of Bosnia and Herzegovina internet site. A retrospective analysis of data from between 2005 and 2010 was done, after which the results were shown in diagrams and charts. The total number of breast cancer patients in the observed period from 2005 to 2010 in Tuzla Canton is 653. The largest number of breast cancer patients was in Tuzla municipality – 262, while the smallest number of patients was in Teočak municipality – 5. In 2005 and 2006 the incidence was the same, after which the number started increasing. A sharp growth of patients appeared in 2009 when the number was 53 more patients than in 2008. The biggest mortality occurred in 2009 as well and the smallest was in 2004. The number of breast cancer patients in Bosnia and Herzegovina is one of the lowest in the region, in opposition to Croatia where between 2000 and 2500 women contract the disease and 4000 women in Serbia, yearly. In Tuzla Canton, breast cancer is the fourth most frequent cancer in female population, while it is eleventh in the male population along with other neoplasms. The work emphasizes the need for a more efficient prevention of this disease in order to decrease morbidity and mortality of women in Tuzla Canton.

Keywords: breast cancer, Tuzla canton, prevention

MEDICAL STUDENTS' VIEWS ON EUTHANASIA

(Poster presentation)

Author: MEDINE GÜMÜŞTAŞ

AIM: The study is aimed to find whether enough information about euthanasia is given or not and evualate medical students' views on euthanasia. The research is meant to evaluate euthanasia in terms of law, religion and medical.

MATHERIALS AND METHODS: 113 medical students are included in this research. The questionnare is introduced to participants and their approval is received. SPSS 10.00 is implemented for statical analysis. Ki-kare, Mann Whitney U and T test is applied to find statical finding.

RESULTS:

- 61.9% participants level of euthanasia knowledge is sufficient.
- 46,9% participants claim that euthanisa should be discussed in the fields of law and medicine.
- 3.5% particpants think that the given information about euthanasia is adequate.
- 38,1% participants think that euthanasia should be legal.
- 78,8% participants state that euthanasia is not accepted according to religious rules.
- The people who think euthanasia is not accepted according to religious rules, 72,1% of them support the idea that euthanasia should be legal.
- The relatives of patients confined to bed and cronic diseases think positively about euthanasia.

Termanally ill Patients' right of choosing death:

- Patients'relatives has the right: 11,5%
- The Patient has the right: 43,4%
- The Doctor has the rigth: 34,5%

DISCUSSION: In this research, Medical students' views on euthanasia are analysed and it is seen that they have sufficient information, but only 3,5% of participants think that sufficient information is given about euthanasia. It is thought that social values are an obstacle for euthanasia.

Keywords: euthanasia, medical students

DISTRIBUTION OF ALLELIC FREQUENCIES OF CYP2C9 GENE IN POPULATION OF PATIENTS WITH THROMBOPHILIA

(Poster presentation)

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INTRODUCTION: Cytochrome P450 (CYP2C9) is an important enzyme responsible for metabolism of numerous supstances including oral anticoagulants warfarine used to prevent and cure thrombophilia. Gene CYP2C9 shows large population polymorphism. Because of that those one who are carrying mutant allele's CYP2C9*2 (C430T) or CYP2C9*3 (A1075C) have lower activity of enzyme and may have complications like haemorraghia. Before giving warfarine as a therapy, patients are genotyped for CYP2C9 gene.

AIM: The aim of this study was to detect and compare distribution of allele frequencies of CYP2C9 gene in population of patients with pulmonary thromboembolism (PTE) and patients with spontaneous abortion.

MATERIAL AND METHODS: We examined blood samples of 32 patients (16 with pulmonary thromboembolism and 16 with spontaneous abortion). We used T-ARMS PCR procedure for allele-specific amplification. PCR products were visualised by agarose gel electrophoresis. Fisher-exact test was used to compare allelic frequencies.

RESULTS: It was determined statistically significant differences in distribution of allele frequencies of CYP2C9*2 in the group with spontaneous abortion compare to group with PTE (p=0,0054) and compare to general population (p=6,07 x 10-9). There were no statistically significant differences in the distribution of allele CYP2C9*3.

CONCLUSION: This study demonstrate that the method of T-ARMS PCR is powerful in analysing both alleles independently. Patients with spontaneous abortion are not on wafarine therapy so the difference in distribution doesn't have any significance in that, but it is necessity to investigate importance of larger distribution of CYP2C9*2 allele inside population with spontaneous abortion.

Keywords: CYP2C9 gene, warfarine, thrombophilia, T-ARMS PCR

STATISTICAL AND MATHEMATICAL PREDICTION OF FOOD ALLERGY DEVELOPMENT IN INFANTS

(Poster presentation)

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INTRODUCTION: Food allergy (FA) is a multifactorial disease which is influenced by pathological factors that occur during pregnancy or in childbirth and the way of infant feeding. Therefore, studying FA predictors is necessary if determinate the most important risk-factors of this pathology which can be predicted beforehand in order to prevent them in time.

AIM: To study the predictors of FA to determine the prognostic significance of the risk factors of this disease for its timely prevention

MATERIALS AND METHODS: We examined 448 infants and their mothers and used statistical and mathematical techniques to assess risk factors. Perform calculations of frequency of occurrence of possible FA for the effects of additional 22 of the most significant risk factor according to the family history, pregnancy and childbirth, early neonatal and postnatal periods. Analysis of the risk factors in the early neonatal and post-natal periods was performed by absolute risk (AR), relative risk (RR), attributable risk (AR), population attribute risk (PAR), odds ratio (OR), index of potential harm (IPH), confidence interval (CI), standard error (S).

RESULTS: FA was observed at infants with bad hereditary and without it, with pathological duration of pregnancy and the process of childbirth, with weight at birth more than 4 kg and less than 3 kg, with early feeding up, with problems of central nervous system caused by hypoxia and ischemia at the perinatal period, with artificial feeding, or taking medicine by women in the gestation period.

CONCLUSION: Drug therapy, especially hormonal drugs during gestation, fetoplacental insufficiency were the highest rates of risk of FA in children with both allergic history, and no family history of allergies.

Keywords: food allergy, mothers, infants, risk factors

INITIAL MEASURES TO PREVENT CHILDREN'S OF EARLY AGE ALLERGY TO PROTEINS OF COW'S MILK

(Poster presentation)

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INTRODUCTION: In Russia, the incidence of allergic diseases in children rose to 34%. The most frequent allergy to cow's milk proteins (PCM) is noted at children of early age. There are many researches on positive effects of probiotics on intestinal microbiocenosis and children's immune system.

AIM: Evaluate the effectiveness of receiving Lactobacillus GG (LGG) in combination with a hypoallergenic (HA) diet of pregnant women in the frequency of latent sensitization to cow's (PCM) and goat's milk (GM) proteins of the children born to them.

MATERIALS AND METHODS: The study included 248 mother-child pairs. The main group - 148 women treated in the last 4 weeks of gestation Lactobacillus GG (LGG) and GA diet. The control group - 100 pregnant women in the normal diet without LGG. Children, like their mother, were divided into the main and control group. All of the observed children being identified allergen-specific IgE and IgG antibodies to the PCM and GM coprofiltrates. IgE and IgG were identified by IFA.

RESULTS: On the 20th day of life on breast-fed infants of the main group of latent sensitization rate in terms of allergen specific IgE antibodies to PCM and the GM were less likely than children in the comparison group (12.8% and 16%, respectively, 10.1% and 13%, respectively), and the frequency according IgG antibodies (14.86% and 28%, respectively, 20.27% and 30% respectively).

CONCLUSION: The use of hypoallergenic diet with LGG for mothers during the last period of gestation reduces the frequency and the degree of a sensitization to PCM and GM at their children.

Keywords: hypoallergenic diet, Lactobacillus GG, pregnancy, sensitization, infants

"DIRTY" MONEY: MYTH OR REALITY

(Poster presentation)

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INTRODUCTION: The conventional wisdom is that money is dirty and contaminated with microorganisms that cause diseases. The microorganisms present on money are part of the normal human flora or pathogens such as bacteria, viruses and fungi. Is fear of money transferring infectious diseases reasonable?

AIM: To determine the number of colony forming units (CFU) and species of bacteria on Croatian Kuna (HRK) banknotes and coins.

METHODS: 120 pieces of banknotes and coins were collected for the experiment, 10 bills of 10, 20, 50, 100, 200 and 500 HRK and 10 coins of 10, 20 and 50 Croatian Lipa and 1, 2 and 5 HRK. At the Department of Microbiology and Parasitology, Faculty of Medicine, University of Osijek, swabs were taken for complete notes and coins (on both sides). Swabs were moistened in saline, plated on blood agar and incubated for 24 hours under ambient conditions at 37 °C. After growing the bacteria, CFU were counted and replanted to a new solid growth medium for further identification, which was performed in accordance with the professional standards.

RESULTS: In total, 739 bacterial CFU were grown with the mean value of 6,16 colonies, median 1 colony and the interquartile range (0,5) in 6 types of bacteria: *Staphylococcus epidermidis, Staphylococcus saphrophyticus, Streptococcus viridans, Bacillus spp., Klebsiella spp., Neisseria spp.* All together, 36 samples (30%), 14 coins and 22 bank notes were without the growth of bacteria. The most common bacteria isolated was *S.epidermidis* detected in 86.33%, or 638 colonies, and the least isolated *Klebsiella spp.* (0.14%, 1 colony).

CONCLUSION: Almost 30% of the money was bacteriologicaly clean. There is no statistical significance between the prevalence of bacterial contamination of banknotes and coins. The identified bacterial species are mostly part of the normal human flora.

Keywords: bacteria, money, HRK, dirty

SOCIAL MEDIA – ADDICTION OR ADVANTAGE?

(Poster presentation)

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INTRODUCTION: For the majority students of University of Tuzla, BiH, digital social interactions are part of their daily routine. Some students consider social media a big help for ther everyday life, while others consider it a „necessary evil “.

AIM: To show what social media represent for students, is it addiction or advantage.

MATERIALS AND METHODS: We used a questionnaire for 600+students and tested 70+ students using an Android application “ Quality Time” to measure their time spent on social media. Methods used for this research are: deductive and inductive, analysis and synthesis and comparative.

RESULTS: 99% of students in our sample use social media. Their opinion on rather social media helps them or interfear with their daily life is divided.

CONCLUSION: From the results that we have about the current Student generation of University of Tuzla, social media is considered “ a blessing and a curse”. It’s all about point of view.

Keywords: social media, students, daily routine

POSTER SESSION
II

MOST COMMON COMPLICATIONS OF AUTOLOGOUS LATISSIMUS DORSI FLAP BREAST RECONSTRUCTION

(Poster presentation)

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INTRADUCTION: Breast reconstruction after mastectomy is often requested by women with breast cancer who are not suitable for breast-conserving therapy. Current breast reconstruction techniques are diverse and may involve the use of an autologous tissue flap, a prosthetic implant, or both. The latissimus dorsi flap remains a widely used technique for postmastectomy autologous tissue breast reconstruction. The flap provides a source of soft tissue that can help create a more natural looking breast shape as compared to an implant alone. Occasionally, for a thin patient with a small breast volume, the latissimus dorsi flap can be used alone as the primary reconstruction without the need for an implant.

AIM: The aim of this study was to present the most common complications faced by women after the latissimus dorsi musculocutaneous flap operative procedure.

MATERIALS AND METHODS: In our research we used articles published during period 1996-2013. Evidence-based practice, clinical guidelines, and systematic reviews were the quality filters applied.

RESULTS: In our research we used articles from France, Serbia, Australia and Saudi Arabia (Egypt). Our results showed that the most common donor site complication in all was seroma. In Serbian research other complications were partial flap necrosis but complications such as total flap necrosis, infection and implant extrusion were not observed. In France most common complication was seroma in 20 patients (95%), haematoma in 3 patients (15%), and 2 patients (10%) presented postoperative chronic back pain. Evidence of postoperative infection as well as flap and donor site necrosis were not found. In Egypt neither total nor partial flap loss was recorded. Another two patients suffered from wound breakdown and distal necrosis of the back flaps. Mild contour deformity was also noted on the back of all patients but caused no major concern. Australian surgeons also described seroma as major complication, followed by cellulitis, flap and back wound necrosis and infection.

CONCLUSION: Breast reconstruction and conservation have become an integral part of breast cancer treatment, and more and more patients are benefiting from reconstruction after mastectomy. The extended latissimus dorsi flap is a reliable method for totally autologous breast reconstruction and can be considered a primary choice for breast reconstruction. Complications are few and results are predictable, especially in appropriately selected patients.

Keywords: latissimus dorsi flap, breast reconstruction, complications, seroma, hematoma, flap necrosis

JUVENILE IDIOPATHIC ARTHRITIS- CASE REPORT

(Poster presentation)

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INTRODUCTION: Juvenile idiopathic arthritis (JIA) is the most common rheumatic disease in children.To be diagnosed with JIA, arthritis should last at least 6 weeks and exclusion of all other causes of arthritis is needed.

AIM: Our aim is to present a case of a girl with severe polyarticulare JIA. We would like to emphasize that rheumatic diseases are also present in children.

MATERIALS AND METHODS: Review of the literature and medical documentation of our patient.

CASE REPORT: The child was referred to our hospital at the age of 5 years because of pain and limited range of motion in several joints present already for a year. The pain was the worst in the morning.On first examination she was found to have arthritis in 7 joints. She started treatment with nonsteroidal antirheumatic drugs. Exclusion of infections, especially tuberculosis which would prevent to introduce immunomodulatory drugs and exclusion of other causes of arthritis was necessary. After diagnostic procedure treatment with methotrexate was started and also corticosteroid therapy, as a bridging therapy for a month, to bridge the time in which methotrexate would start to show the effect. Because inactive disease was not achieved, biologic therapy was introduced. She was first treated with anti-TNF agent etanercept which was not successful. Another anti-TNF agent, infliximab, was introduced. Treatment was successful but because of side effects of a therapy she stopped the drug and arthritis reappeared. At present time she is treated with the 3th anti-TNF agent adalimumab. Currently she has a remission of a disease.

CONCLUSION: JIA can have a severe disease course especially when the time to diagnosis is long. With proper treatment disease remission can be achieved and a child with JIA can have a normal childhood withoutlimitation in physical activities.

Keywords: Juvenile idiopathic arthirits, anti-TNF therapy

MODERN TREATMENT OF TRAUMA PATIENTS USING IMPLANTS BASED ON POROUS NIKELID TITANIUM WITH NATURAL CALCIUM- PHOSPHATE COATING

(Poster presentation)

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INTRODUCTION: Osteoporosis (OP) is one of the most prevalent diseases of the human musculoskeletal system in the world. The most serious complication of osteoporosis is fracture of the proximal femur. Most surgical interventions do not provide 100 % of the desired result. 1/5 operated patients have repeatedly complications.

AIM: To evaluate the results of surgical treatment of hip joint pathology using natural calcium - phosphate coating (NCPhC). The research is based on observation of 20 patients with closed fractures of the femoral neck. (Middle age 71 ± 0.7)The coverage of improved prosthesis allows for enhanced osteoinductive and osteoconductive properties of the implant as a whole (the acetabular component of the hip endoprosthesis has porous nikelid titanium insert pins and a screw cap; the femoral stem of prosthesis is made of titanium alloy VT-6 and has porous nikelid titanium (PNiTi) inserts. The clinical and radiologica research methods were used during this work.

RESULTS: All patients was made the total hip arthroplasty (THA) using author's elaboration. On control X-rays in 4 and 7 weeks the positive results of treatment were revealed in 100 % of the cases. There is strongly marked osteogenesis in the implat area revealed by moderate hyperplastic reaction of the bone tissue. There was no area of the resorption and no cancellous bone tissue regions with low x-ray opacity (P = 95.5%, in case of t = 2) During late postoperative X-ray diagnostics of "implant - bone" area (in a 1-1.5 year) it was revealed lasting stability of the implant and no areas of resorption.

CONCLUSION: These implants with natural calcium- phosphate coating are effective for pointed nosologies treatment, to improve the outcome of treatment and greatly improve patient`s quality of life.

Keywords: calcium- phosphate coating, arthroplasty, implants

ASSESSMENT OF BLOOD PRESSURE IN CHILDREN USING DAILY MONITORING OF BLOOD PRESSURE

(Poster presentation)

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INTRODUCTION: Hypertension – one of the most common problems of today, including modern pediatrics. At present, the share of essential hypertension in children and adolescents account for 10 - 35%, while the share of second – 65-90%. High blood pressure in children is ≥90-percentile distribution curve of blood pressure in the population for that age, gender and height. Blood pressure ≥90-th percentile but <95th percentile (or ≥120/80 mm Hg. In.) is high and is interpreted as normal. For better diagnosis of hypertension in children is using daily monitoring of blood pressure (DMBP).

AIM: To assess blood pressure in children by daily monitoring of blood pressure.

MATERIALS AND METHODS: Were examined 30 children who were hospita lized in the pediatric department of Children's C linical Hospital, Chernivtsi. Their average age amounted 14, 2±0,21 years. We used the following methods: clinical, anthropometric, laboratory, and statistical tools. Children conducted daily monitoring of blood pressure. The interval between blood pressure during the day was 30 minutes, during the night rest – 2 hours.

RESULTS: In surveyedchildren the average systolic blood pressure (SBP) level was 115,5±3,7 mm Hg, average night level of S BP – 105,9±4,3mm Hg. The average daily level of diastolic blood pressure DBP was 63,4±2,7 mm Hg, average night DBP level – 54,8±2,7 mm Hg. The average daily index of SBP was1.1, of DBP – 1.2. Among the surveyedchildren normal daily index had only nine patients. Changes in daily index remaining patients indicate that they have vegetative pathology in violation of both afferent and effere nt chains of vasosympaticregulation of heart rhythm.

CONCLUSION: Thus, in children with elevated blood pressure variability indices DMAT can connectedwith the autonomic nervous system, the violation of which leads to changes in daily blood pressure.

Keywords: children, school age, blood pressure, daily monitoring of blood pressure

DEPRESSION AND ASSOCIATED FACTORS IN PATIENTS WITH IMPLANTABLE CARDIOVERTER DEFIBRILLATORS

(Poster presentation)

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BACKGROUND: The implantable cardioverter defibrillator (ICD) is applied to treat ventricular arrhythmia which is life-threatening and is used in the prevention of sudden cardiac death. A great number of ICD patients face with psychological problems such as: anxiety and depression , which can impact the quality of life of patients.

AIM: The purpose of this study was to evaluate the prevalence of depression among adults withICDs and the relationship between depression and associated factors.

METHODS: A cross-sectional study conducted in Tehran-Iran in patients with ICD and the depression and other related risk factors were evaluated. Two questionnaires, one for demographic characteristics and Beck inventory depression were applied for data acquisition. Data were analyzed with SPSS version 18.0 software using descriptive statistics and bi-variate analyses (chi-square and Mann–Whitney U test) and also ordinal regression analysis in order to assess the factors associated with depression and finding the confounding factors.

RESULTS: By using multivariate analysis on 115 patients, it is indicated that shock frequency(odds ratio [OR] 1.08, 95% confidence interval [CI] 1.02–1.10), male sex (OR=2.28, 95% CI 1.027–5.07), admission time (OR=1.19,95% CI 1.11–1.25), smoking (OR=9.8, 95% CI 4.48–20.07), presence of ICD shock (OR=4.5, 95% CI 2.45-7.38), DLP (OR=2.8, 95% CI 1.22-4.95), and FH of depression (OR=6.4, 95% CI 3.0-13.46), were significantly and independently associated with the Beck score classifications.

CONCLUSION: These findings suggest that poor psychosocial outcome in ICD patients may occur as a result of variety of associated factors which most of them are predictable and preventable.

Keywords: depression, implantable cardioverter-defibrillators, risk factor

ONCOMARKERS FOR DIAGNOSING OVARIAN CANCER

(Poster presentation)

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INTRODUCTION: Ovarian cancer (OC) is a leading cause of cancer death in women in industrialized countries and the primary cause of death due to gynecologic cancer. As the disease lacks distinctive symptoms in its early stages, most women present with advanced disease. Much effort is being expended in the search for novel molecular markers that may provide new clues as to the etiology of ovarian carcinoma, as well as novel diagnostic and prognostic markers.

AIM: The aim of our study was to find out which markers have the highest potential to be the main ones for diagnosing ovarian cancer.

MATERIALS AND METHODS: We searched PubMed database for relevant articles published from 2010/01/01 to 2015/12/31. The following studies were excluded: article types that weren't review, articles about cell lines or animals; languages other than English. Titles and abstracts of all identified studies were reviewed to exclude those that were clearly irrelevant. The potentially relevant articles, that were fully reviewed with the full text, consisted of 6 original articles, 2 review articles and 2 meta-analysis.

RESULTS: Overall the analysis revealed a high reliability for both Cancer antigen 125 (CA125) (sensitivity 60%, specificity 83.33%) and Human epididymis protein 4 (HE4) (sensitivity 95%, specificity 97.5%) ($p>0.05$). Other possible choices: Midkine (71.4% positive in epithelial OC samples, $P = 0.038$), Tumor protein D52 (TPD52) (varies between different histological OC, 61% positive for serous carcinomas), Inhibin (34.2% positive high levels), C-X-C chemokine receptor 4 (CXCR4) (expression correlates with poor overall survival, $p= 0.022$), Aldehyde dehydrogenase (ALDH) (associated with poor prognosis in terms of overall survival, $P = 0.005$).

CONCLUSION: The analysis confirmed higher sensitivity and specificity of HE4 tumor marker compared with CA125. We concluded that HE4 was better than CA125 as a single tumor marker with that leaving CA125 as the second best option. Other markers have less diagnostic value.

Keywords: ovarian cancer, ovarian tumor, markers, oncology, gynecology

BODY IMAGE IN OPERATED BREAST CANCER PATIENTS: THE EFFECT OF SURGERY TYPE AND SOCIAL SUPPORT

(Poster presentation)

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INTRODUCTION: Breasts are considered to be a symbol of feminine identity and sexuality. Women perceive breast cancer, as well as the required surgical treatment, as a traumatic experience which affects their body image. Body image is defined as the persons sense of their own physical appearance. Social support is the persons feeling of being taken care of and the perception of belonging to a social network.

AIM: To compare Body Image Scale (BIS) results regarding treatment type, age and social support.

MATHERIAL AND METHODS: After signing an informed consent, women treated in the Department of Thoracic surgery of the Clinical Hospital Centre Osijek, filled in an anonymous questionnaire. The questionnaire contained BIS, Social Support Scale and questions about the type of surgical treatment, age, time passed since diagnosis and marital status.

RESULTS: From a total of 58 female patients (median age 48, IQR 13), 36 underwent mastectomy and 22 had a breast conserving operation. Those women who underwent mastectomy had a significantly higher BIS score (lower body image) than women who had breast conserving surgical treatment (p= 0,002, t-test). No correlation was found between BIS results and age, or the time passed since the diagnosis of breast cancer. A significant negative correlation was found between BIS results and the feeling of social support (p=0,002; Spearman's rho=-0,406). No differences were found in BIS or support in groups of different marital status.

CONCLUSION: Conserving breast surgery and better social support positively affected the body image of the questioned women.

Keywords: breast cancer, body image, social support

INFLUENCE OF DIFFERENT KINDS OF BOTTLE-FEEDING ON THE FORMATION SENSITISATION TO MILK PROTEINS IN INFANTS

(Poster presentation)

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INTRODUCTION: Foremost among food frequency sensitization takes cow's milk protein (CMP), as in the case of bottle-feeding it is one of the first to allergens, which faces the infant.

AIM: To study the effect of bottle-feeding on the formation of a latent sensitization in healthy infants.

MATERIALS AND METHODS: The study included 100 healthy infants of both sexes aged from 2 months to 1 year of age. All infants received breast feeding before bottle-feeding. The first group - 51 infants received infant formula based on New Zealand goat milk, the second group - 49 infants received infant formula on whey protein of cow's milk. Infants are being identified allergen specific IgE antibodies to CMP, casein (C), β-lactoglobulin (β-LG), α-lactalbumin (α-LA) and GM in coprofil trateswere identified by IFA.

RESULTS: In first group of infants when receiving bottle-feeding the frequency of latent sensitization to CMP decreased from 35.2% to 13.7% of children in C - from 19.6% to 11.8%, a β-LG - with 21.5% to 11.8% for α-LA - from 17.6% to 9.8%, a GM from 19.6% to 9.8% of infants. These infants have dominated the low degree of sensitization (+1) - 71.4%; a moderate degree (+2) - 28.6%.In the second group latent sensitization to CMP decreased from 59.1% to 20.4%, a C - from 28.5% to 16.3%, a β-LG - from 26.5% to 14.2% α-LA - from 26.5% to 20.4%, to GM 28.5% to 12.2%.In this group, the degree of sensitization (+2) was - 60%, and (+1) - 40% of infants.

CONCLUSION: The children of the first group on the background of mixtures based on New Zealand goat milk had greater dynamics of reducing the incidence of latent sensitization to CMP and GM compared to the second group.

Keywords: artificial feeding, sensitization to cow's milk protein

REPRESENTATION OF SMOKING BETWEEN PATIENTS OF CLINICAL CENTRE OF MONTENEGRO

(Poster presentation)

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INTRODUCTION: Smoking is the biggest individual preventable factor of disease for disability and premature death. Patients who smoke have affected multi-vital organs, especially cardio-vascular, and in general have lost 20 to 25 years of life.

AIM: The aim of this research was to explore the presence of smoking among patients and to find correlation between their smoking years and their medical condition.

MATERIALS AND METHODS: We examined 92 (42% women, 58% men) patients from wards of Cardiology (34 patients), Vascular surgery (27) and Nephrology (31), all who were treated at the Clinical Centre of Montenegro in October of 2015. They have completed a brief standardized questionnaire. The questionnaire was modulated from original of WHO, but standardized for Montenegrin population.

RESULTS: The age of the examinees was between 19 and 85 (average 55). The 41% of people where smoking on daily bases, on the average of 22 cigars. The average is 8.29 years of smoking. The most smokers were on the cardiology ward (41%) while the vascular surgery (32%) and the nephrology (27%). 41% of all patients had a chest pain symptoms, 37% had stifling and 42% headaches. Among the patients who smoke, 61% had a chest pain, 47% had stifling and 39% headaches.

CONCLUSION: For many patients in this study, smoking is chronicle factor of risks. Using tobacco product during long period of time, can damage cardio-vascular system, and many vital organs. That's why is important to work on prevention of smoking habits.

Keywords: cardiovascular disease, risk factor, smoking, nephrology patients

ANEMIA AND SECONDARY HYPERPARATHIROIDISM IN CHRONIC KIDNEY DISEASE – EFFECTS AND TREATMENT OUTCOME

(Poster presentation)

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INTRODUCTION: Anemia and secondary hyperparathyrodism (SHPT) are consequences of reduced renal function in chronic kidney disease (CKD). One of the reported reasons that have a negative influence on anemia of CKD and its treatment with erythropoiesis stimulating agents (ESA) is SHPT. Both of these 2 consequences are important predictive signs in the development of increased morbidity and mortality in patients with CKD.

AIM: Our goal was to find a correlation between parathyroid hormone (PTH) level, hemoglobin variability and anemia therapy in our group of patients. Importance of the effective regulation of SHPT is reflected in easier control of anemia that is in a better response to EPO treatment.

MATERIALS AND METHODS: Hemoglobin values, ESA doses and PTH levels conducted from May 2014 to May 2015 on a sample of 134 hemodialysis patients were used for this retrospective study. Included patients were on HD for › 1 year, at age › 18, on the same ESA for ≥ 1 year, with higher PTH levels, stable feritine levels and without blood transfusion needs. Patients were classified into 2 groups based on the limit values of PTH for which we have set 25 pg/ml.

RESULTS: Of the 134 CKD patients ongoing HD, 54 of them satisfied the including criteria. Mean age 69,6±14,29, and 55% were woman. 34 patients (63%) have PTH level higher than 25 pg/ml and 20 of them (37%) have lower level of PTH. Correlation between Hb variability and PTH was not statistically significant, $p < 0.05$. Epoetin doses depending on the PTH level also did not show a statistically significant difference, $p<0,05$.

CONCLUSION: All ESAs are effective in correcting renal anemia and increasing hemoglobin levels. Regulated levels of PTH leads to an easier control of anemia in a manner that the required dose of ESA is lower.

Keywords: chronic kidney disease, anemia, secondary hyperparathyroidism, ESA

QUALITY OF LIFE IN SCHOOL AGE CHILDREN WITH HEADACHE.

(Poster presentation)

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INTRODUCTION: The quality of life (QOL) is an important complex index of self-estimating which reflect condition of a children's health. We study of headache influence on health-related of life in school age children. Pain syndrome formed significant medical and social problem. Near 88% school age children which live in the urban region suffer from headache.

AIM: The aim was to establish influence of headache on children`s health-related QoL.

MATERIALS AND METHODS: We examined 78 children (age 9-15 years). 40 children live at urban zone, accordingly 38 live at city. We were carried out the medical examination, questionnaire with refinement social, anamnesis, and other features. Questionnaires was conducted: QoL (child and its parents fills), state of microsocial, environment et all. We paid attention to way of living of children, use of free time, sport activity, employment of parents. We were looking on a direction, force and significance of correlation.

RESULTS: Study concerning of type headache shows, that at 11% were acute headache cases, 35% - persistent, 27% - chronic type. We observed the distinction between rural and urban children. Cephalgia influences on the psychology of the child's behavior and emotions and often determine his place and role in a social life. The characteristic features of children with headache are as follows: restless, uncertainly, irritability and difficulty in communication. These traits increase with the progression of the diseases and reflect its impact on the child's mentality. The best correlation is observed between acute pain and quality of microecological of housing, mother's education and sleep disturbances. Environmental pollution of air in the place of living, has significant correlation with QoL.

CONCLUSION: Headache in children is a common problem which influenced health-related QoL. Physicians need more knowledge about QoL indexes and their associated factors in children.

Keywords: headache, quality of life, children

STATE OF PEROXIDATION PROTEINS AND THEIR DIAGNOSTIC SIGNIFICANCE IN DIAGNOSTIC OF PARENCHYMATOUS RESPIRATORY FAILURE IN NEWBORNS

(Poster presentation)

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INTRODUCTION: It is known that the formation of oxidants, antioxidant protection, lipid peroxidation proteins are natural processes. However, these mechanisms imbalance initiates peroxidation of proteins, leading to cell dysfunction, in particular the ability of cells to generate and conduct impulses and energy of regulatory functions.

AIM: The aim of the study was to examine the state of the intensity of peroxidation of proteins and to determine the diagnostic significance of these parameters in pulmonary parenchymal expirats in the diagnosis of respiratory failure in newborns in critical condition.

MATERIALS AND METHODS: The main observation group were 84 newborns with severe respiratory failure against the background of various diseases. To control group included 15 healthy children. The study of protein carbonyls were performed in the pulmonary expirats.

RESULTS: In infants with respiratory failure level of protein carbonyls of neutral character observed almost doubled compared with the group of healthy children (2,12±0,08 mmol/g protein and 1,15±0,08 mmol/g protein, p<0,001, respectively). Among children of the basic group registered the increasing of protein carbonyl content of main character in comparison with the control group (45,04±1,69 mmol/g protein versus 18,0±1,1 mmol/g protein, p<0,001, respectively). Sensitivity and specificity of the diagnostic test of determination of the level of carbonyl groups in pulmonary expirats (level of protein carbonyls main character in lung expirats > 46,0 mmol/g protein) under conditions of respiratory support FiO2 above 0,4 in the diagnosis of parenchymatous respiratory failure in newborns is 77,4%. The relative risk – 4,6, and the odds ratio – 11,7.

CONCLUSION: Increased levels of protein carbonyls main character more than 46,0 mmol/g protein during neonatal respiratory support with the use of higher concentrations of oxygen can be regarded as a diagnostic marker of lung injury.

Keywords: newborns, protein lipid peroxidation, respiratory failure, noninvasive diagnosis

HYPOTHALAMIC SUPRACHIASMATIC NUCLEI – THE LEADING ENDOGENIC OSCILLATORS

(Poster presentation)

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Light condition violation causes disbalance in melatonin synthesis and development of desynchronosis. Contradictory data, concerning the effect of different photoperiod length on the chronomorphologic and ultrastructural condition of hypothalamus suprachismatic nuclei (HSN), closly related to organisation and realization of circadian rhythms, have been found in the available resources. The aim of our research was to study transformations in neurosecretory cells of HSN of rats under different photoperiod length.

Experiments were conducted on sexually mature white male rats. The animals had been divided into 5 groups which were exposed to different photoperiod length. The areas of HSN were studied lightoptically and by means of electron microscopy.

According to the study, the structural organization of neurosecretory cells in HSN in white rats under standard light conditions shows increase in neuron functional activity at 2PM ant its decrease at 2AM. Light deprivation lowers the activity of circadian pacemaker during

24 hours which is evidenced by light optical and ultrastructural changes in the neuroplasm and organelles of the structures under the study. At 2PM, under light deprivation, there were dark neurosecretory cells which are characterized by pyknotically modified nuclei containing osmiophilic karyoplasm, invaginations of karyolemma. Their electronically dense neuroplasm contains destructively changed organelles.

Light stress causes significant desynchronosis of the circadian pacemaker and its activity depression. Under continuous light exposure the destructive changes in the components of the structures which are studied will be more pronounced at 2AM. The karyolemma contains very few ribosomal granules and few nucleoli. Neuroplasm has heightened electron density; the membrane organelles have fuzzy contours. This condition indicates the decrease in functional activity of the structures with some destructive elements.

Further research will allow to learn deeper mechanisms of circadian rhythms in mammalians' brains as well as the role of hypothalamus suprachismatic nuclei in providing circadian periodicity.

Keywords: suprachismatic nuclei, hypothalamus, photoperiod

PERCUTANEOUS METHODS OF SPINAL DISC HERNIATION THERAPY AND EFFICACY OF PERCUTANEOUS NUCLEOLYSIS AND NUCLEOPLASTY: A SYSTEMATIC REVIEW

(Poster presentation)

Authors: SANDRO IBRULJ, Marjan Koršič

INTRODUCTION: Percutaneous treatment of spinal disc herniation is a minimally invasive technique performed either by percutaneous nucleolysis via injection of chimopapain, pure ethanol and gellified ethanol, or by nucleoplasty using radio frequent energy a.k.a coblation technology.Below is a review of techniques used in nucleolysis and nucleoplasty using radiofrequency, as well as a systematic review of studies on the effectiveness of these procedures in patients treated for disc herniation and focal protrusion.

METHODS: Review of accessible literature published on PubMed and Ovid databases.

RESULTS: Even though studies have shown that percutaneous techniques are a safe and effective alternative to surgery, its application in treatment is still limited and a subject of debate.

CONCLUSIONS: All of the reviewed reports of studies on the effectiveness of newer methods of nucleolysis and nucleoplasty in the treatment of spinal disc herniation (gellified ethanol and coblation technique) found them to be safe and effective in the short- as well as long-term. The quality of data is low however, as the studies are either non-randomised or those of low methodological quality. Nonetheless, all of the studies propose high expectations for future use of these methods in the treatment of spinal herniation. We conclude that higher quality randomised studies need to be performed in order to reliably asses percutaneous nucleoplasty as a superior method to the currently performed invasive procedures.

Keywords: herniated disk, percutaneous nucleoplasty, nucleoplasty, nucleolysis, chemonucleolysis, percutaneous treatment of herniated disc

RECONSTRUCTION OF NASAL DEFECTS WITH LOCAL AND REGIONAL FLAPS AFTER EXCISION OF SKIN TUMORS

(Poster presentation)

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INTRODUCTION: The most common site of facial skin tumors is the nose. Reconstruction of nasal defects must preserve the integrity of complex facial functions and expressions, as well as facial symmetry and a pleasing aesthetic outcome.

AIM: In this study we describe our experience in the aesthetic reconstruction of nasal skin defects following oncological surgery.

MATERIAL AND METHODS: Seventy two patients (41 males, 31 females; mean age 64,5 years; range 38 to 82 years) who underwent nasal reconstruction with local nasal or regional flaps due to excision of skin tumors on the nose, between January 2008 and December 2013 were included in this study. The demographic data (age, sex and occupation), the location, histopathologic type, subtype and size of the tumor, the size and thickness of the defect area, the reconstruction technique and complications were recorded.

RESULTS: Basal cell carcinoma was detected in 55 patients, cylindroma was detected in 12 patients and squamous cell carcinoma was detected in 5 patients. The tumors were most frequently located on the nasal dorsum and the allar subunit. The following local and regional flaps were used: Rintala flap, bilobed flap, nasolabial flap, glabelar flap, forehead flap and supratrochlear flap. These flaps were accepted without complications in 67 patients. Complete flap necrosis appeared in two patients while in three patients there was marginal flap necrosis.

CONCLUSIONS: The flaps for nasal reconstruction should be selected individually. The ideal technique of nasal reconstruction should be determined based on the location, size, and thickness of the nasal defects, the preferences of the patients and the surgeon's experience.

Keywords: defects, nose, flaps

RISK FACTORS FOR DEVELOPING CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTION IN CRITICALLY ILL NEONATES

(Poster presentation)

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INTRODUCTION: The central vascular catheters (CVC) are vital for care of critically ill neonates, as they provide reliable vascular access. CVC use significantly increases the risk of developing central line-associated bloodstream infection (CLABSI), which is the most common hospital acquired infection in critically ill neonates. The risk factors for development of CLABSI can be divided into factors associated with the neonate and the treatment, CVC factors and factors associated with the hospital environment.

AIM: The aim was to define risk factors for development of CLABSI in surgical and medical neonates.

MATERIALS AND METHODS: We conducted a retrospective cohort study that included all 291 neonates admitted to intensive care unit (ICU) because of gastrointestinal surgical diseases (surgical patients) and nonsurgical diseases (medical patients) between January 1st 2010 and March 30th 2013. We collected data of central line days and CLABSI according to Centers for Disease Control (CDC) methodology. We calculated the incidence of CLABSI per 1000 CVC-days. With multivariate logistic regression model we predicted the risk for development of CLABSI.

RESULTS: In the study we included 81 surgical and 210 medical neonates. Total incidence of CLABSI was 9,52 per 1000 CVC-days. The incidence of CLABSI was highest for CVC for temporary renal replacement therapy (43,48 per 1000 CVC-days). Low birth weight was an independent risk factor for development of CLABSI, with the highest incidence rate with the birth weight 751-1000 g. The multivariate logistic regression model showed that CVC dwell time had the highest predictive value for development of CLABSI ($p<0,001$). For every additional day with CVC the risk increases by 22%.

CONCLUSION: The risk factors that we identified in our study are the basis for introduction of specific intervention care bundles for prevention of these hospital acquired infections in critically ill neonates.

Keywords: central line-associated bloodstream infection (CLABSI), neonates, risk factors

RECONSTRUCTIVE PROCEDURES AFTER SURGICAL TREATMENT FOR BREAST CANCER

(Poster presentation)

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INTRODUCTION: Breast cancer is the most common cancer in women, with incidence rate of 80/100000 women. In Slovenia, due to a very successful screening program DORA, we are detecting breast cancer at an earlier stage, which gives us a chance of performing a breast conservation surgery. Patients who have undergone surgical treatment of breast cancer, are commonly not satisfied with their look and have a low self-esteem. That is exactly why reconstructive procedures are of utmost importance in restoring women's self –esteem and quality of life.

AIM: The aim was to study the oncoplastic techniques and reconstructive procedures on breasts to compare which procedure gives better aesthetic results, has a lower complication rate and is oncologically safe for women after surgical treatment for breast cancer.

MATERIALS AND METHODS: Literature review

RESULTS: When performing a breast conservation surgery the most important is the ratio between the tumor size and the breast size, which is why preoperative systemic therapy is sometimes needed. The studies have shown that the immediate reconstruction results in a lower complication rate and a better aesthetic outcome. Group of patients especially at risk are the ones who need an adjuvant radiotherapy, because the complication rate amongst this group is higher and aesthetic outcome is usually poorer.

CONCLUSION: All reconstruction techniques have possible complications and the aesthetic outcome depends on many factors. Careful preoperative planning and evaluation of clinical and biological features of tumor as well as of the morphological aspects of the breast are the key components. With all reconstructions it is crucial that they are oncologically safe.

Keywords: breast cancer, reconstructive procedures, oncoplastic techniques

ASSESSMENT OF MICROCIRCULATION IN CHILDREN WITH CHRONIC GASTRODUODENAL PATHOLOGY

(Poster presentation)

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INTRODUCTION: Among digestive diseases in children in gastrod uodenal lesions dominated gastroduodenitits. Today we know that chronic diseases pathogenesis of gastroduodenal complex and multifaceted. O f particular importance in the development of this disease belongs to a group of disorders of microcirculation. Microcirculation responsive to the action of various pathological factors , so it is a violation can be an early sign , and prolonged action – persistent and often the only sign of the disease. Proved that microcirculatory changes determined gastroduodenitis option and is quite early marker of the degree of target organ damage.

AIM: Examine the state of microcirculation in school age children with gastroduodenal pathology.

MATERIALS AND METHODS: Was examined 60 children who were hospitalized in the gastroenterology department of Children' s Clinical Hospital, Chernivtsi. Their average age amounted 13,6±0,12 years. We used the following methods: clinical, anthropometric, laboratory, and statistical tools. To assess microcirculation children spent capillary microscopy nail bed with a digital microscope with 400-fold magnification. Saved photos were evaluated on a portable computer with a special program.

RESULTS: In surveyed children the distribution of chronic gastroduodenal pathology was: 15 (25%) children diagnosed c hronic erosive gastritis, 10 (17%) children – chronic hyperplastic gastritis, 25 (41%) children – chronic superficial gastritis, 10 (17%) children – focal chronic gastritis. In all children was evaluated the microcirculation conducted by biomicroscopyof capillary nail bed and found the following changes: pathological tortuosity of capillaries, spazmovanist capillaries, slowing blood flow, the phenomenon of „sladzhuvannya“ abnormal form capillaries changes arteriovenous ratio changes caliber, reducing the total number of capillaries per unit area, the availability of additional anastomoses.

CONCLUSION: Thus, the above changes in the nail bed capillaries in school age children with chronic gastroduodenal pathology may be early signs of diseases of the stomach and duodenum.

Keywords: school-age children, chronic gastroduodenitis, microcirculation, microscopy of capillary of nail folder

EVALUATION OF SENSITIVITY AND SPECIFICITY OF DIFFERENT SCALES USING FOR DIAGNOSIS OF BURN SEPSIS

(Poster presentation)

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INTRODUCTION: Difficulties in diagnosis of burn sepsis are associated with early and persistent SIRS (systemic inflammatory response syndrome) formation. Thus, different scales for diagnosis of sepsis in burn patient have been developed.

AIM: Assessment of sensitivity and specificity of scales and criteria using for diagnosis of burn sepsis.

MATERIALS AND METHODS: 30 patients who died in burn intensive care unit were recruited in this study. Criteria of including: clinical signs of sepsis, age 18-65, burns > 10% of total body surface area, death after 72 hours in ICU. Evaluation of the organ dysfunction by SOFA (Sequential Organ Failure Assessment) score, SIRS criteria, American Burn Association (ABA) sepsis criteria, French Burn Association (FBA) sepsis criteria and Chinese definitions (CD) of burn sepsis were performed. Patients were divided into two groups: with pathomorphological signs of sepsis (abscesses, microabscesses and/or bacterial emboli; group №1, n=14) and without these (group №2, n=16). We examined sensitivity and specificity with area under the Receiver Operating Characteristic Curve (ROC AUC).

RESULTS: There were no significant differences between two groups for demographics, burn size. Fatal outcome came early in the group №2 (mean ICU length of stay 7,5 days vs 10 days, $p < 0,05$). Organ dysfunction at day 6 was significantly higher in the group №2 (mean SOFA 3,4 vs 2,0; $p < 0,05$). There were no significant differences in ABA, FBA and CD between two groups, and the highest AUC were for CD by the day 6 (AUC 0,687 95% CI 0,517-0,796 vs 0,567 95% CI 0,469-0,719 and 0,504 95% CI 0,315-0,702 for CD, ABA and FBA, respectively). SIRS criteria were significantly higher in the group №2; 3 and more SIRS criteria by the day 3 predicted early death with sensitivity 80,7% and specificity 40,9%.

CONCLUSION: Clinical scales for diagnostic of burn sepsis has not enough sensitivity and specificity for early prediction of sepsis outcome.

Keywords: sepsis, burns, SIRS.

RELATIONSHIP BETWEEN THE PSYCHO-EMOTIONAL STATE OF MOTHERS AND DISORDERS IN ADAPTATION OF THEIR NEWBORNS

(Poster presentation)

Author: ZHMURKO V.I., Vlasova O.V.
Mentor: Koloskova O.K., MD

INTRODUCTION: The most important factor that affects the newborn is mother because mother is the author of child's life scenario, which is played by child in life.

AIM: To study the empirical interconnection between emotional and personal state of mothers and the severity of disorders in general condition of the newborn with intense adaptation under the conditions of in-patient treatment.

MATERIALS AND METHODS: We conducted a survey of 39 mothers of newborns which were treated at neonatal unit of the regional hospital for pathology of early neonatal period.

RESULTS: In order to identify the relationship between the studied characteristics of mothers and clinical findings of hospitalized children, we conducted a correlation analysis, which revealed a positive relationship between the mother's level of education with a sense of loneliness and indifference to herself ($r = 0,4$, $p < 0, 05$) in this situation. Parents who were married were more energetic ($r = 0,37$, $p < 0.05$), less irritable and hot-tempered ($r = 0,34$, $p<0.05$), they were rarely bothered with nightmares ($r = -0.38$, $p < 0.05$). The need for continued support of vital functions of newborns correlated with sleep disturbance in mothers ($r = 0,34$, $p<0.05$), and, at the same time, determined a negative correlation between the severity of general condition of the newborn in hospital and mother's depression in the form of fatigue and irritability ($r = -0,31$, $p < 0.05$), which may indicate their confidence in a successful outcome of the course of the child's disease. A statistically significant positive correlation between gestational age of newborns and a sense of fear in the mother as to the uncertain future prospects ($r = -0,35$, $p < 0.05$).

CONCLUSION: The conducted survey showed that the birth of a child with impaired adaptation changes the psycho-emotional state of mother, which in turn affects further wellbeing in psychological and physical development of children.

Keywords: newborn, psycho-emotional state of the mother, tense adaptation.

THE CORRELATION BETWEEN NON-ALCOHOLIC FATTY LIVER DISEASE AND CORONARY ARTERY DISEASE IN PATIENTS UNDERGONE CORONARY ANGIOGRAPHY IN IRAN

(Poster presentation)

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Mentor: Reza Karbasi-Afshar

INTRODUCTION: Non-alcoholic fatty liver disease (NAFLD) is a growing concern with prevalence of 15-30% in different populations. NAFLD increases incidence of coronary artery disease (CAD).

AIM: This study aimed to determine the prevalence and predicting factors of NAFLD in Iranian patients undergone coronary angiography.

MATERIALS AND METHODS: In this cross-sectional study, patients undergone coronary angiography in Baqiyatallah Hospital, Tehran, Iran, during November 2014 to March 2015 were enrolled. The abdominal ultrasonography was performed by a well-expert radiologist for all patients. The echocardiography and tissue Doppler imaging study were also performed for all patients.

RESULTS: Among 300 patients with the mean age of 62.72 year, 10.3% of patients had normal angiography findings, 17.7% had minimal changes, 27% had single vessel disease, 20.7% had two vessels disease, and 24.3% had three vessels disease. Fatty liver was reported in 155 patients (60 patients grade-I, 73 patients grade-II, and 23 patients grade-III). The prevalence of fatty liver was significantly more in patients with coronary atherosclerosis compared to individuals with normal or minimal changes. (28.6% vs. 60.6%, P<0.001, OR=0.260) There was a significant correlation between the severity of fatty liver and severity of coronary atherosclerosis in the age and sex adjusted partial correlation. (r=0.326, P<0.001) Diastolic dysfunction was significantly more in NAFLD patients (93.5% vs. 80%, P=0.001, OR=2.167). Three variables (age, coronary angiography, and diastolic dysfunction) were remained in the logistic regression model of predicting the existence of NAFLD in these patients (R2=0.290, P<0.001).

CONCLUSION: There was a significant correlation between CAD and its severity with NAFLD in our papulation. Liver ultrasonography and further follow-up is recommended in Iranian patients candidate for coronary angiography, especially in patients with lower age, more severe CAD and having diastolic dysfunction.

Keywords: non-alcoholic fatty liver disease, coronary artery disease

EYELID TWITCH

(Poster presentation)

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INTRODUCTION: An eyelid twitch is a repetitive, involuntary spasm of the eyelid muscles. It usually occurs in the upper lid, but it can appear on both. The twitches are painless and harmless. In most cases spasms resolve on their own without the need for treatment. In rare cases, eyelid spasms may be an early warning sign of a brain and nerve disorders as dystonia, multiple sclerosis or Parkinson's disease.

AIM: The aim of this study was to show the rate of eyelid twitch in students of the Medical Faculty in Tuzla, before and after exams.

MATERIALS AND METHODS: We did random anonymus poll on 100 medical students. Seventy two percent of our examinees were women and 28% were men.

RESULTS: The age of examinees was between 20 and 30 years (mean 25). Forty four percent of them had eyelid twitch before exam and 22% after the exam, with reduced intensity and frequency. The rate of twitching in women was 51.39% (37), while in men the rate was 25% (7). We found, that during studying most of our examinees (98%) were using coffee, cigarettes or energy drinks, 74% of them had reduced sleep and most of them are finding studying stressful. Five percent of examinees had some eye injuries.

CONCLUSION: This study shows that the rate of eyelid twitch was higher before exams. Women generally had higher rate and main cause was stress, energy boosters and sleep deprivation. Small part of our examinees had eye injuries earlier in life, so we can take that as a potential cause of eyelid twitch. Also, we came to conclusion that after exams, in period of standard daily activity, eyelid twitch was reduced or completely absent.

Keywords: eyelid twitch, blepharospasm, exams, stress, sleep deprivation

ABOUT ASMF

Association of Students of the Medical Faculty (ASMF) in Sarajevo was founded in 2000th year, as a single representative body of all students of the Medical Faculty. Over the past years, ASMF proved to be a very important factor in the preservation and protection of students' rights and interests at the Faculty. Of course, ASMF is unprofitable, non-political and non-governmental association which is a full member of the Student Parliament of the University of Sarajevo, where students of our faculty have traditionally governed the Department of Health. Association is headed by President of the Association, and the management structure consists of the President of the Assembly, Board of Directors, the General Secretary of the Association, and the Supervisory Board, which aims to control the finances and Association in general. Over the past years we have managed to achieve an outstanding level of democracy, so that today the Assembly is made of an equal number of delegates from each academic year, and the Assembly itself makes all decisions concerning the association. An important part of the Association consists of departments, in our case Department of International Cooperation, Department of Sport and Department of scientific research. Each of these sectors has achieved remarkable results since the founding of the Association to date. Our students, in collaboration with the faculty are part of LIONS exchange program with Austria. Also, the plan is to achieve full membership in some of the international student associations and it should be resolved in the next academic year. Also, our students participate in many sports competitions of medical faculties in the region, and the culmination of that was the organization "Humanijada 2013th".

Department for scientific research, since it was founded, worked to help our students with writing scientific papers and going to international conferences. Thanks to these activities, our students have won several prestigious awards at regional conferences. The most important project in the history of Association is planned precisely in the area of scientific research. At the beginning of 2015, international congress of medical students is scheduled and it will take place in Sarajevo, and we hope it will eventually grow into one of the largest student conferences in this part of Europe. Also, Association has in recent years taken part in number of projects that are aimed at marking important days in health care and health promotion in general.Perhaps the most important part of the Association consists of representatives of years. Each academic year has two representatives who make the representative body. The specificity of our faculty is that one representative from each year is a full-fledged member of the Teachers' Council with voting rights, which has the right to participate in all decisions at the University. This is why, Faculty of Medicine at the University is special because it is the only faculty where every year is entitled to vote at the Council of Teachers. In addition to membership in the Council, the medical students are full members of all of the governing bodies of the Faculty, as well as the Ethics Committee, Disciplinary Committee, the Committee for Quality Assurance.

We hope that during the next years we will keep on going on the path of protecion of students's rights, and that we will further improve our Association for future generations.

CITY OF SARAJEVO

Sarajevo is the capital and largest city of Bosnia and Herzegovina and serves as its administrative, economic, university and cultural center.Many archaeological findings testify to the fact that the area of Sarajevo was inhabited even during the Neolithic period.

Nonetheless, the name Sarajevo comes from the Turkish words, saray = palace and ovasi = field, and this certainly points to the fact that it was founded by the Ottomans, when the Turkish governor, Isa Bey Ishaković, founded Sarajevo in the 15th century as the seat of Ottoman power for this region.

Those who take a stroll through Sarajevo will notice four distinct types of architecture, which reflect the city's different historical periods.

The foundations of Sarajevo were laid during the first 150 years of Turkish rule and it was during this time that many architectural jewels were constructed, such as Gazi Husrev Bey's Mosque, the Emperor's Mosque, the Old Orthodox Church and Baščaršija, which was once a grand marketplace.

At the beginning of the 17th century, Sarajevo grew into a vibrant community of craftsmen which served as a major trading center and later became one of the most important cities in the European part of the Ottoman Empire. Another period that saw architecture flourish began with Austro-Hungarian occupation at the end of the 19th century and lasted until the First World War started in 1914. The modernization of Sarajevo included the installation of a public transport system and the first telephone line. Also, many cultural and educational institutions were founded in that period. Sarajevo's development came to a halt on June 28, 1914, with the assasination of Franz Ferdinand, the Austro-Hungarian heir to the throne, and his wife Sophie. This set of series of unfortunate events eventually led to the outbreak of World War I. At the end of the First World War, Sarajevo became part of the newly-formed Kingdom of Serbs, Croats and Slovenes and it remained part of this state, which was later re-named the Kingdom of Yugoslavia, until the beginning of the Second World War, when it became part of the new Socialist Federal Republic of Yugoslavia.

Sarajevo experienced massive damage during the Second World War so it didn't simply undergo major reconstruction during the post-war years, but also enjoyed tremendous growth.

By 1984, when it hosted the 14th Winter Olympic Games, Sarajevo had become a modern city with a population of more than 500,000. Sadly, the Olympic flame burned only too briefly. Only eight years after hosting the Olympics, Sarajevo found itself caught in another flame, when the fire of war broke out in BiH in 1992, leaving destruction in its wake until 1995.

The fourth architectural period is represented by the modern, post-war era. In recent years, the metropolitan area of Sarajevo has experienced rapid development. For its inhabitants, this makes it a better place to live, and for its growing numbers of visitors, it's a better place to visit, the meeting place of East and West.

SCIENTIFIC PARTNERS

MAIN PARTNER: BoHeMSA - Sarajevo, Bosnia and Herzegovina

BoHeMSA short for Bosnia and Herzegovina Medical Students Association was founded in 1993 as a joint organization for medical students in the whole country. BoHeMSA received full membership to the International Federation of Medical Students Associations IFMSA in 1995. BoHeMSA is non-governmental, non-profit organization that gathers medical students from three universities in Bosnia and Herzegovina. It currently has over 35 active members.

The main functions of BoHeMSA are cooperation, association, representation and exchange of medical students both nationally and internationally. It is organized through three local committees, i.e. LC Sarajevo, LC Mostar and LC Tuzla.

Each year, 40 students from Bosnia and Herzegovina leave for professional and research exchange programs in over 20 countries worldwide, thanks to our organization. Some of the destinations are: Spain, Catalonia, Turkey, Germany, Brazil, Bahrain, Czech Republic, Russia, Poland, etc.

Apart from exchanges, we organize over 10 educational and humanitarian projects annually. Village Concept Project is our most important humanitarian project. We choose the village deprived of primary health care institution within 20 kilometer radius. Donations are collected and medication and other medical material are bought. Then, the team of students and internal medicine specialists visit the village and conduct a pro bono examination of patients and donate medication and other medical aids. Teddy Bear Hospital, educational project is held annually at the Kids festival in Sarajevo. The goal is reduce children's' aversion towards doctors through simulation of medical examination of a teddy bear. Candle light memorial is an international project organized during third week of May as a way of honoring a memory of people deceased of AIDS. We set up red ribbon encircled with candles. Candles are lit by pedestrians during sunset.

International Federation of Medical Students Associations exists since 1953, and we are proud to be full members of IFMSA, the world's largest organization of medical students for 20 years. Expanding the horizons and educating our students is our primary focus, hence organizing this congress is a great honor for us.

Website: www.bohemsa.org


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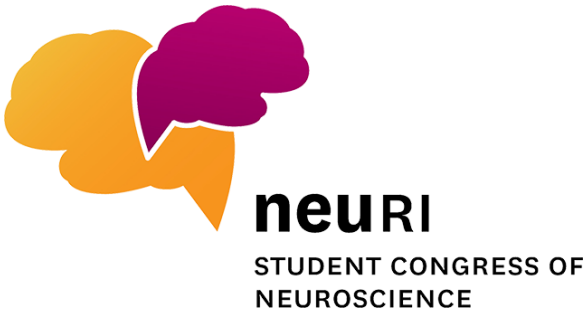
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