8th International Medical Students' Congress
In Novi Sad

IMSCNS

ABSTRACT BOOK 2013

July 18th - 21st 2013, Novi Sad
Republic of Serbia

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FOREWORD & PREFACE

IMSCNS 2013

FOREWORD

Dear participants of the 8th International Medical Students` Congress in Novi Sad,

It is a great privilege and honour to greet you on this significant occasion on behalf of the University of Novi Sad -- its leadership and academic community. As a comprehensive and internationally-oriented institution of higher education and research, the University of Novi Sad takes great pride in the quality of its educational and scientific results and potentials, but also in the fact that it fosters an active and creative role of its students, placing them in the center of the overall learning process. Incorporating research into the earliest phases of students' activities within modern study programs, encouraging innovative approaches to research, supporting student initiatives, projects and academic mobilities – these are all seen by the University of Novi Sad as the surest way of keeping and developing the leading role of our institution and successfully tackling all the challenges our region, Europe and the world are facing.

The process of internationalisation, which we often emphasize as one of our top priorities, is reflected in all aspects of IMSCNS 2013. As a multidisciplinary scientific event which gathers students of medicine, dentistry, pharmacy and molecular biology from the region and all over the world, which builds its reputation, quality and tradition from year to year, which brings people together to exchange ideas and experiences, which promotes friendship and cooperation, is exactly what demonstrates our commitment to the idea of the common European area of education and science, as well as our and your contribution to it.

Wishing you lots of success in your work during the Congress and many new wonderful memories of your stay in Novi Sad and the Faculty of Medicine.

Professor Miroslav Vesković MD,PhD
Rector of University of Novi Sad

FOREWORD

Respected students, teachers and colleagues,

On behalf of Medical Faculty I would like to welcome you to the 8th International Medical Students' Congress.

International Students' Congress is annual meeting, each year increasing the number of foreign students coming to Novi Sad, that provides an excellent forum for Serbian medical students to interact with their international counterparts and compare the level of scientific activities.

This congress will offer a presentation for approximately 180 selected papers in the areas of medicine, dentistry, pharmacy, nursing and genetics, while Novi Sad will become a gathering place for about 250 students from all over the world. We sincerely hope that the upcoming years will grant us with an even higher number of presented papers of quality superior than the year before and that the following congresses will be a good opportunity to converse with your foreign colleagues.

The scientific programme along with the social activities will with no doubt constitute a very productive meeting. It is very important that, as healthcare providers, we strive to learn from each other and give our contribution to ever evolving Medical science. This meeting is the perfect venue for doing so.

Dear students, your papers have showed that you posses all of these qualities and that you represent the future of our medical science and practice. I am thankful for your work and effort, for your mentors with their guidance, teaching and help. I wish you a good presentation of the results of your scientific research on this congress while having the opportunity to exchange your first scientific proficiencies and just have a nice time.

Sincerely,

Professor Biljana Drašković MD, PhD
Vice Dean for Research-Scientific Work
Medical Faculty Novi Sad

FOREWORD

Dear participants and friends

We are honored to welcome you at the 8h International Medical Students' Congress in Novi Sad. Founded in 2006 by students with the aim of creating a platform for young researchers from different fields, the IMSCNS became an institution for exchange of ideas, and experiences. Over the past five years, the IMSCNS established a way of bringing researchers and medical staff with different interests, but more importantly different countries together.

During the four days, the Congress will gather a great number of professionals from Serbia and our dear colleagues from abroad. The scientific program will seek to address the main areas of interest and current research within the field of fundamental and applied infective diseases, and also various issues in the spheres of theoretical, experimental and practical medicine.

We invite you to share experience and knowledge and make new acquaintances at this event in the next four days. You can meet old friends and develop new friendships and scientific collaborations. In addition to an intensive scientific program, the participants will also enjoy a social program and have the opportunity to visit beautiful Petrovaradin Fortress and several cultural and histo rical attractions in Novi Sad. We hope you will find time to enjoy the relaxing atmosphere and cultural heritage of our beautiful medieval city.

I would like to thank the Organizing Committee of the 8lh IMSCNS. I admire the work you have done and challenges you have overcome while organizing this meeting. Also, I would like to thank the organisations and institutions that have sponsored the Congress.

We hope that each and every one of us will benefit from this event. We trust, that the 8h IMSCNS will mean another step towards better understanding of something which is future of medicine. I sincerely believe that it will provide a useful forum for exchange of ideas and the latest results in wide range of areas, as well as an opportunity to meet experts from all over the world.

Ljiljana Nedić
Student Vice-Dean

PREFACE

Dear partipicants,colleagues and friends,

To those who are on our congress for the first time, and to those who have remained faithful to us during these years of our existence – we wish you welcome to the 8th in row International Medical Students' Congress in Novi Sad! The IMSCNS presents an idea of EMSA Novi Sad, who wanted to gather all the students of medical sciences in one place and in that way enable them to meet and make friends with their colleagues from all around the world. Of course, nothing of this would be possible without the support of the Faculty of Medicine in Novi Sad, Serbian Academy of Sciences and Arts, as well as the City of Novi Sad, who have generously helped us in organising such an important and big project like IMSCNS.

On the 8th IMSCNS, we are expecting a large number of students from our, as well as many foreign countries. Besides medicine, our congress also includes different fields of other medical sciences, such as dentistry, pharmacy, nursing, molecular biology, veterinary medicine and genetics. By gathering all these sciences in one congress, we make an opportunity for the participants to exchange fresh ideas from scientific world, to make connections and new friendships and, in that way, try to improve their medical scientific knowledge.

This year, we have 2 guest lecturers, Prof. Dr. Dr. Fritz Schick and Dr. Jürgen Machann, who will be presenting us the newest improvements in the world of medical imaging methods, especially MRI, and we hope you will be able to learn from them something new and interesting. Also, we have prepared for you workshops which will, as well, enable you to learn something of practical importance.

Moreover, besides the scientific part of the congress, there will be special social programme that we have arranged for you

We are delighted that you have decided to embellish this international event of students of medical sciences with your presence, and we wish you all the luck in presenting your scientific work. The Organising Committee of the 8th IMSCNS will do its best to host you in the best possible way, hoping for your return next year.

On behalf of the Organising Committee:

Dejan Miljković
President of IMSCNS OC

ORGANISING COMMITTEE

IMSCNS 2013

PROJECT COORDINATOR

Project coordinator is supervising and runing the entire project during the year . His work is to make this year's IMSCNS better and generally more visitor – friendly. With both creating new ideas and solving problems, he does a job of making this congress functioning as a whole, from the mere beginning to the very end.

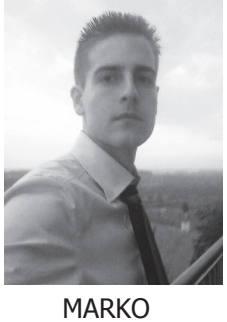
DEJAN MILJKOVIĆ

FINANCE TEAM

Finance team have a crucial task of collecting funds for this year's event. In these times, it is especially difficult to get sponsorships and donations need¬ed for running an ambitious project as IMSCNS is. They do their very best and keep this congress afloat.

MILICA ODAVIĆ

ĐURĐINA RADENKOVIĆ



MARKO KOVAČEVIĆ

SCIENCE TEAM

Science team is not only the one which decided whether your abstract was good enough or not. They do so much more. With more foreign visitors than ever, there was a need for an increase in number, diversity and novelty of both the workshops and lectures. Having everything under control, they have put together a remarkable plan of sessions, lectures and workshops enabling our visitors to have improved congress experience with as less trouble and more free time as possible

ALEKSANDRA VEJNOVIĆ

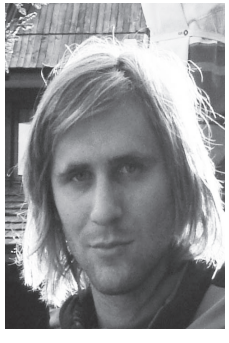
SANJA POPIN

BOJAN RADOVANOVIĆ

HOSTING TEAM COORDINATORS

Hosting team is doing the most important thing for our visitors. They provide them with accommodation and food, organize arrivals, free sightseeing tours of the city, dinners, parties and many, many more. They have made this congress a more pleasant place, and they are, presumably, the strongest reason people keep coming back.

MILENA OBADOVIĆ



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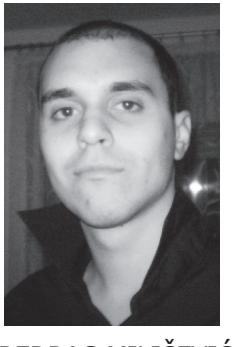

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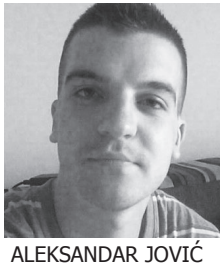
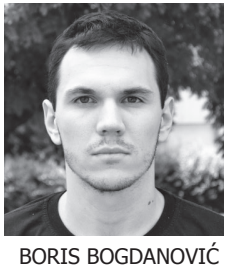


ALEKSANDAR JOVIĆ



BORIS BOGDANOVIĆ

MARKETING TEAM

Marketing team is important for promoting this year's event. They contact embassies on your behalf and as well communicate with our sponsors, donors and partners. It is them that tried to make our congress omnipresent in your digital life and all media

IGOR MEĐEDOVIĆ

ANJA RAŠIĆ

KRISTINA BJELICA

TECHNICAL SUPPORT

Boys from the team have kept everything vivid and up-to-date from the very beginning. Nikola Martić and Aleksandar Kobilarov have surpassed themselves this time. With more innovative and user-friendly features on our web page, surprises that you are yet to witness and entire and technical sup¬port throughout the year, they have proved themselves not only support, but also engine of this organisation..

ALEKSANDAR KOBILAROV

NIKOLA MARTIĆ

GUEST LECTURES

IMSCNS 2013

WHAT YOU CAN SEE USING MRI
HISTORY, SCANNERS AND APPLICATIONS

Prof. Dr. Dr. Fritz Schick

Location: Faculty of Medicine Amphitheatre

Time: Friday, July 19th 2013, 2:30 pm

Fritz Schick was born in 1963 in Reutlingen (Germany). He studied medicine and physics at the University of Tübingen from where he graduated in medicine in 1989 and in Physics in 1990. He was awarded an MD with a dissertation regarding an electronic model of the inner ear for the simulation of air and bone conducted hearing. He joined the Institute of Experimental Physics from 1990 to 1996 in the group headed by Prof. O. Lutz, where he worked in the field of MR sequence developments for experimental and clinical MRI and MRS studies. Bone marrow in normal subjects and patients with hematologic disorders, prostate tissue, and musculature were examined with new MR techniques allowing quantitative assessment of fat and water content, metabolites, relaxation, diffusion, and magnetization transfer properties. He received his PhD in 1994 for scientific work in susceptibility effects in tissue and their detection by NMR techniques on clinical scanners. The majority of the work was performed in close collaboration with the Department of Diagnostic Radiology (Chair Prof. C.D. Claussen) of the University Hospital in Tübingen, where he started his more clinically oriented career in 1996. Since 2001, he has a permanent professorship as the Head of the Section of Experimental Radiology at the University of Tübingen. His interdisciplinary group consists of physicians, physicists, specialists in material sciences, and technicians. Main present fields of research are studies in fat metabolism in humans using adapted MRI and 1H MRS techniques, MR compatibility of instruments and implants used for interventional radiology, and characterization of skeletal musculature. Studies in the field of clinical 3 Tesla whole body imaging are currently running together with several other clinical departments.

LECTURE DESCRIPTION

Professor Schick will give an introduction to the method and present various magnetic resonance techniques and its applications in medicine. The lecture will include developments and evaluation of new techniques in magnetic resonance imaging. It will be a story about the new MR techniques in various tissue examinations in healthy subjects and in patients with different disorders, which allows quantitative assessment of fat and water content, metabolites, relaxation, diffusion, and magnetization transfer properties. What can be seen using MRI is going to be illustrated throughout experimental and clinical studies in humans using adapted MRI and 1H MRS techniques, MR compatibility of instruments and implants used for interventional radiology, and characterization of skeletal musculature.

WHOLE-BODY MR-IMAGING AND MR-SPECTROSCOPY
QUANTIFICATION OF ADIPOSE TISSUE COMPARTMENTS, ECTOPIC LIPIDS AND MUSCLE VOLUME - A RAMBLE FROM OBESITY TO THE "HARDEST RACE OF THE WORLD"

Dr. Jürgen Machann

Location: Faculty of Medicine Amphitheatre

Time: Friday, July 19th 2013, 3:15 pm

Born 1967. in Tübingen, is Physicist in the Section on Experimental Radiology (Head: Prof. Dr. Dr. Fritz Schick) at the University Hospital Tübingen. He obtained his Doctorate Degree in Human Science at the Medical Faculty in Tübingen. Dr. Machann works in the field of Diabetes Research in close cooperation with the Department of Diabetology and Endocrinology. His specialties are MRI and MRS for quantitative assessment of whole body adipose tissue and ectopic fat in different organs. He supervises the MR examinations and post-processing of data in many cross-sectional and interventional studies on subjects at increased risk for Type 2 Diabetes and shows responsible for the MR-protocols not only in Tübingen but also in several national and international Research facilities.

LECTURE DESCRIPTION

Dr. Machann will introduce the basics of the whole-body imaging approach for assessment of adipose tissue distribution in the body, and quantification of ectopic lipids – which has not directly been performed in the athletes. So it will be a walkabout from obesity – motivation of why they are doing this kind of imaging and spectroscopy – to the athletes with a focus on „the Race". The TransEuropeFootRace 2009 (TEFR09) was one of the longest transcontinental ultramarathons with an extreme endurance physical load of running nearly 4,500 km in 64 days. The most important research tool was a 1.5 Tesla magnetic resonance imaging (MRI) scanner mounted on a mobile unit following the ultra runners from stage to stage each day. The aim was to explain the wide spectrum of adaptive responses in humans being exposed to such a chronic physical endurance load with negative energy balancing but without enough time for regeneration and to identify factors associated with inter-individual variation in these responses.

CONGRESS PROGRAMME

IMSCNS 2013

July 18th 2013 - Thursday	
10:00 – 18:00	Registration (Faculty of Medicine, info desk)
20:00 – 20:30	Opening ceremony (Faculty of Medicine)
20:30 – 20:45	Group photo session in front of the Faculty
21:00	Dinner & Party

July 19th 2013 - Friday	
07:30 – 09:00	Breakfast (Faculty of Medicine)
08:30 – 10:30	Plenary sessions I - III ORAL PRESENTATIONS (Faculty of Medicine, amphitheatres)
10:00 - 11:00	Plenary sessions I - III POSTER PRESENTATIONS (Main Hall of Faculty of Medicine)
10:30 – 11:00	Coffee break
11:00 – 13:00	Workshops in Novi Sad:
	- EMERGENCY MEDICINE: "STAYIN' ALIVE" - ABOUT HYPERTENSION - DELIVERY, SURGICAL COMPLETION OF DELIVERY AND CESAREAN SECTION - THE AIRWAY AND INTRAVENOUS ACCESS WORKSHOP - PATIENT - FRIENDLY HEALTH CARE APPROACH - MEDICALLY COMPROMISED PATIENT IN DENTISTRY
11:30 - 13:00	Workshop on Faculty of Sciences :
	- INSIDE SCANNING ELECTRON MICROSCOPE (SEM)
12:30 - 15:00	Lunch (caffé ''Scenario'', just across the street)
14:30 - 16:00	Guest lecture: **1. Prof. Dr. Dr. Fritz Schick:** What you can see using MRI - History, scanners and applications **2. Dr. Jürgen Machann** : Whole-body MR-imaging and MR-spectroscopy for quantification of adipose tissue compartments, ectopic lipids and muscle volume - a ramble from obesity to 'the hardest race of the world'
16:30 – 19:30	Free time
19:30 – 20:00	Dinner (City Beach "Strand")
20:30	Graffiti beach party

July 20th 2013 - Saturday	
07:30 – 09:00	Breakfast (Faculty of Medicine)
08:30 – 10:30	Plenary sessions IV - VI ORAL PRESENTATIONS (Faculty of Medicine, amphitheatres)
10:00 - 11:00	Plenary sessions IV - VI POSTER PRESENTATIONS (Main Hall of Faculty of Medicine)
10:30 – 11:00	Coffee break
11:00 – 13:00	Workshops in Novi Sad:
	- MINIMALLY INVASIVE APPROACH TO BILIARY CALCULOSIS - PROTON MAGNETIC RESONANCE SPECTROSCOPY (1H-MRS):BASICS, SPECTRAL PATTERNS IN DIFFERENT ORGANS AND PRACTICAL APPLICATIONS - INVOLUNTARY MOVEMENTS - NON-STEROIDAL ANTI-INFLAMMATORY DRUGS : HOW TO CHOOSE THE PROPER ONE? - IMAGING OF COMMON NEUROLOGICAL DISORDERS - CALENDAR OF MY HEALTH
11:30 - 13:00	Workshops in Sremska Kamenica:
	- THE PRESENT AND THE FUTURE OF CARDIOVASCULAR SURGERY
12:30 - 15:00	Lunch (caffé ''Scenario'', just across the street)
15:30 – 19:30	Sightseeing Tour
20:00 - 20:45	Awards and Closing ceremony (Faculty of Medicine)
20:45 – 21:00	Group photo session in front of the Faculty
21:00 - 21:25	Certificate pickup (Faculty of Medicine)
21:30	Dinner & Party

July 21st 2013 - Sunday	
09:00	Post congress Tour

PLENARY SESSION I

ANATOMY, HISTOPATHOLOGY, IMMUNOLOGY,
PATHOPHYSIOLOGY, PHYSIOLOGY

Date: July 19th 2013

ORAL PRESENTATIONS
Start time: 8:30 AM
Amphitheatre 1 - Faculty of Medicine Novi Sad

POSTER PRESENTATIONS
Start time: 10:00 AM
Main Hall at Faculty of Medicine Novi Sad

SOMATOTYPE AND CARDIOMETABOLIC PROFILE IN NORMAL WEIGHT AND OBESE WOMEN

(Oral presentation)

Field of medicine: **Anatomy**
Author(s): **ZORKA DRVENDZIJA**
Co-author(s): **Dragan Adamovic**
Supervisor(s): **Doc. Dr Biljana Srdic-Galic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Obesity is well known as a risk factor for a development of cardiometabolic abnormalities. However, some obese persons are healthy and on the other side some normal weight persons have a metabolic profile as obese persons. It is assumed that there is a difference in physical characteristics among these persons. Somatotype is a method for quantification of shape and composition of human body.

Aim: Analysis of somatotype among normal weight and obese women in relation to cardiometabolic profile.

Material and methodology: Participants were 143 women, mean age 45.46 13.10y. We performed following anthropometric measurements: body height, mass, circumferences, skinfold thicknesses and diameters. Nutritional status was defined using body mass index and a somatotype was assessed by Heath&Carter; method. For evaluation of cardiometabolic profile we used values of blood pressure, parameters of lipid status, glycoregulation and inflammation.

Results: Comparing to normal weight women, obese women had higher values of endomorphy and ectomorphy and lower values of mesomorphy. Cardiometabolically healthy normal weight women had higher values of mesomorphy but lower values of endo- and ectomorphy comparing to cardiometabolically obese normal weight women (5,08-3,56-2,34 vs. 5,48-3,28-2,65). Cardiometabolically healthy obese women had lower values of endo- and mesomorphy but higher values of ectomorphy comparing to obese women with cardiometabolic risk (6,39-4,94-0,67 vs. 6,61-5,82-0,57).

Conclusion: Apart from fat mass, in determination of cardiometabolic profile important role could have structures of lean body mass which are contained in mesomorphic and ectomorphic components of somatotype.

Key words: Somatotype; Obesity; Cardiometabolic risk; Women

TOXICITY OF MONOSODIUM GLUTAMATE (MSG) IN NMRI MICE

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **DEJAN MILJKOVIC**
Supervisor(s): **Prof. Dr Dusan Lalosevic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Glutamate is thought to be one of the major neurotransmitters in the central nervous system of all mamals. It is very important because it represents a mediator for sensory information, motor coordination, emotion and cognition, including memory formation. On the other hand there is evidence that excess glutamate in the central nervous system can cause the damage of nervous system and many other tissues in body.

Aim: The aim of this study was to investigate toxicity of substance MSG in NMRI mouse.

Material and methodology: For experimental model we used neonatal white labaratory mice of NMRI type. They were divided in four groups - experimental groups A1, A2 and A3 (5 animals each) and control group (5 animals). Experimental groups got solution of 1g/kg of MSG while the control group got 0,9% solution of NaCl. Brain, liver and pancreas were taken and fixed in Buen fixative. After fixation and adequate dehydration, the tissue was histologically analised using hematoxylin & eosin stain.

Results: On histological sections of experimental animals we can observe toxic changes in the liver parenchyma in the form of focal necrosis, mononuclear cell infiltration and parenchymal-hydropic degeneration of hepatocytes. On brain tissue, main pathological changes that we can observe are fields of focal gliosis. Parenchyma of the pancreas in two experimental animals is filled with lymphocytic infiltrates that surrounds islets of Langerhans.

Conclusion: The potential toxicity of mono-sodium glutamate causes significant pathological changes of nervous, liver and pancreas tissue in mice and it's a potential hazard to man.

Key words: mice, MSG, neurotoxicity, hepatotoxicity, autoimmune pancreatitis

NEUROPATHOLOGICAL CHARACTERISTICS AND MORPHOMETRIC ANALYSIS OF THE CEREBELLAR CORTEX IN AGING IN HUMANS

(Poster presentation)

Field of medicine: **Histopathology**
Author(s): **MILAN POPOVIĆ**
Co-author(s): **Svetlana Petkov**
Supervisor(s): **ass. dr Ivan Capo, ass. dr Dušan Vapa**
Country: **Serbia**
Faculty: **Medical Faculty Novi Sad**

Introduction: The issue of changes in the brain tissue of people that are associated with aging for many years is a focus of the attention of many neurobiologists and intense histological studies. The fact is that there are very expressed changes happening both in gray and white matter, during normal aging and pathological conditions as well.

Aim: The aim of our study was morphometric analysis of the cerebellar cortex, in elderly people, as well as the description of the neuropathological changes that occur in the aging process.

Material and methodology: Samples of the cerebellar vermis were fixed in Buein's fixative. In addition to standard histological staining with hematoxylin and eosin (H & E), the slices were stained with silver impregnation method Hirano-Zimmerman. Morphometric analysis of slices determined linear density of Purkinje cells in ganglia layer, number of cells in granular layer and number of cells in molecular layer.

Results: Processing the data, with Student's T test, there was no significant difference in the number of cells of molecular, ganglia and granular layer between persons of different ages. Men have a higher linear density of Purkinje cells in relation to women, and this difference was statistically significant.

Conclusion: According to the results there is no significant difference in the average number of cells per unit of area, all three layers of the cerebellar cortex, between groups of people of different age. While between gender gropus there is a clear difference in the number of Purkinje cells.

Key words: aging, cerebellum,Purkinje cells, Corpora amylacea.

FIBROLIPOMA CAUSING FOOT DEFORMITY AT 6 YEARS OLD BOY : AN UNCOMMON CASE REPORT

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **DEJAN JAKIMOVSKI**
Co-author(s): **Ana Stefanovska**
Supervisor(s): **Ivanka Stefanovska Mr.S. M.D.**
Country: **Macedonia**
Faculty: **Faculty Of Medicine Skopje**

Introduction:

Lipomas are benign tumors of fat tissue and they are the most common soft-tissue tumors. They present at places where adipose tissue is abundant , however they rarely can be found on the foot.

Aim:

To report rare clinical case of fibrolipoma, presenting as big mass in the foot and to discuss the possible differential diagnosis.

Material and methodology:

Retrospective review of 6-years-old male case with huge deformity of the foot which was admitted and treated in Re-Medika General Hospital. Magnetic Resonance Imaging (MRI) was performed and possible diagnosis suspected. Fine-needle aspiration biopsy (FNAB) confirmed the diagnosis. Surgical extirpation of the solid mass concluded the case.

Results:

Histopathological results showed typical fibrolipomatous tumor. 70% of the tumor mass (6x3 cm) was removed resulting restored functionality and aesthetic appearance. The patient was discharged after one night of close monitoring.

Conclusion:

The location of the tumor is not only functional problem of the patient, but also causes technical problems considering the possible neuro-vascular complications. The literature shows very few cases which can be reviewed and compared.

Key words: lipoma, deformity, orthopedics, foot

ASSOCIATION BETWEEN PERICORONARY ADIPOCYTE SIZE AND ATHEROSCLEROTIC PLAQUE SIZE IN THE LEFT ANTERIOR DESCENDING CORONARY ARTERIES

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **ILIJA GOLUBOVIĆ**
Co-author(s): **Dr Ivan Rančić, Vladan Milošević**
Supervisor(s): **Prof. Dr Gorana Rančić**
Country: **Serbia**
Faculty: **Faculty of Medicine Nis**

Introduction: It is well known that pericoronary adipose tissue (PAT) may be involved in the pathogenesis of atherosclerotic plaque formation.

Aim: We aim to determinate the association between pericoronary adipocyte size (diameter) and atherosclerotic plaque size (plaque/media-ratio) in the left anterior descending coronary artery (LAD).

Material and methodology: Samples of upper segments of the LAD for study were obtained at autopsy. There were no age limits to inclusion in the study. A total of 37 cases were accepted for the study. All samples were routinely fixed and processed to paraffin for the preparation 5-micron sections, stained by Hemathoxylin-eosin, Spicer and modified Movat's pentachrome staining and mounted for subsequent analysis. Samples were divided in 6 histological types of atherosclerotic lesions classified according to Stary et al. Computer assisted image analysis used ImageJ software.

Results: Adipocyte size varies from type to type of atherosclerotic lesion. The highest values of adipocyte size were present in the third and fourth types, then values decrease with advanced types. The most of adipocytes are values of diameter from 40 to 50 μm. Plaque/media-ratio increase with advanced types of atherosclerotic lesions but not with adipocyte size (V and VI types).

Conclusion: There is the association between adipocyte size and plaque/media-ratio in the first four types of atherosclerotic lesion, but not in the last two. The PAT may influence in the initiation of atherosclerotic plaque formation.

Key words: pericoronary adipose tissue, adipocyte size, atherosclerosis

RELATIONSHIP BETWEEN CHROMATIN HOMOGENEITY AND NUCLEAR SHAPE IN MURINE SPLEEN MEGAKARYOCYTES

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **JOVANA PAUNOVIC**
Supervisor(s): **Dr Igor Pantic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: Mouse spleen is an active hematopoietic organ with significant role in erythropoiesis and thrombopoiesis. Normal function of megakaryocytes located in subcapsular spleen hematopoietic tissue may significantly impact overall platelet production in mouse organism. Today, however, many issues regarding megakaryocyte nuclear and chromatin structural organization remain unresolved.

Aim: To investigate potential correlation between chromatin structural homogeneity and nuclear circularity in murine spleen megakaryocytes.

Material and methodology: Subcapsular spleen hematopoietic tissue obtained from 10 male albino mice was stained using hematoxylin/eosin technique. A total of 50 megakaryocyte nuclei were analyzed. Chromatin homogeneity was calculated using Grey level co-occurrence matrix (GLCM) texture analysis method based on nuclear regions of interest (ROIs) in ImageJ (NIH, USA) software. Nuclear circularity was determined based on the values nuclear perimeter and area.

Results: Negative correlation ($p<0.05$) was detected between chromatin homogeneity and nuclear envelope circularity. This result implies that in normal, physiological conditions, chromatin structure tends to become more homogenous as the megakaryocyte nucleus becomes less circle-like and/or more lobulated.

Conclusion: In murine spleen megakaryocytes, physiological changes that occur in chromatin structure, impact overall shape of the nucleus. Changes in chromatin structural homogeneity may be related to the events that take place in nuclear lamina.

Key words: Hematopoietic, Nucleus, Envelope, Texture

CHANGES IN KIDNEY TISSUE ARCHITECTURE DURING MOUSE POSTNATAL DEVELOPMENT AND AGEING

(Poster presentation)

Field of medicine: **Histopathology**
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Supervisor(s): **Dr Igor Pantic**
Country: **Serbia**
Faculty: **School Of Medicine Belgrade**

Introduction:

Although it is known that ageing in kidney is followed with the loss of functional units-nephrons, overall age-related changes in complexity of kidney tissue architecture are unclear.

Aim:

To determine potential structural changes quantified by fractal analysis (FA) parameters in mouse kidney tissue during postnatal development and ageing.

Material and methodology:

Kidney tissue was obtained from a total of 16 male Swiss albino mice aged from 0 to 16 months. Each animal was 1 month older than the previous. For each animal, average value of tissue fractal dimension was calculated using digital micrographs of hematoxylin/eosin and toluidine blue - stained kidney cortex and medulla. Fractal analysis was performed using National Institutes of Health (NIH, USA) ImageJ software and its FA plugins.

Results:

There were statistically significant negative correlations ($p<0.01$) between the tissue fractal dimension and animal age in both kidney cortex and medulla. The negative relationship was detected in both hematoxylin/eosin and toluidine blue – stained tissue.

Conclusion:

The detected reduction of structural complexity in kidney cortex and medulla suggests that fractal analysis may be a good indicator of age-related decrease in number of nephrons in mice.

Key words: Fractal, Cortex, Medulla, Age

STUDYING THE INTERACTIONS BETWEEN MESENCHYMAL STEM CELLS AND LYMPHOCYTES

(Oral presentation)

Field of medicine: **Immunology**
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Co-author(s): **András Balajthy, Beáta Mészáros**
Supervisor(s): **György Panyi MD**
Country: **Hungary**
Faculty: **Faculty Of Medicine Debrecen**

Introduction: The mesenchymal stem cells (MSC) are well known for their anti-inflammatory and immunosuppressive effects. In the presence of MSCs, the proliferation of the activated lymphocytes is reduced, whilst survivability and some of the specific effector functions are maintained. The exact mechanisms of the observed effects listed above are still unclear.

Aim: Therefore, our aim was to design model systems for monitoring the effects of MSCs on lymphocytes. In addition, we planned to study the different mechanisms of the immunosuppressive effects of MSCs.

Material and methodology: Peripheral blood mononuclear cells and T lymphocytes were activated by anti-CD3- and anti-CD28-conjugated paramagnetic beads. We used three different methods to measure the effect of MSCs on the proliferation of activated lymphocytes. The lymphocytes were either treated with the supernatant obtained from the MSCs, or were co-cultured with the MSCs with or without being separated from them by a semipermeable membrane. Lymphocyte proliferation and survivability were measured with carboxyfluorescein succinimidyl ester (CFSE) dilution assay and propidium iodide staining using flow cytometry.

Results: We observed an inhibition of proliferation using both the supernatant or the co-culturing methods, where the rate of inhibition is closely correlated with the amount of activator beads. This inhibition was most prominent in the late division cycles.

Conclusion: In conclusion we can point out that the MSCs have a versatile effect on the proliferation of lymphocytes, which is not only manifested in the inhibition of proliferation of the total population, but also in the different cell division cycles.

Key words: mesenchymal, stem cell, lymphyocyte, immunosuppression

ACTIVITY OF DIPEPTIDYL PEPTIDASE IV IN CULTURED LYMPHOCYTES OF OBESE PATIENTS WITH TYPE 2 DIABETES

(Poster presentation)

Field of medicine: **Pathophysiology**
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Supervisor(s): **Prof. Maja Milojkovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction: Dipeptidyl peptidase IV (DPP IV) is an immunomodulatory ectoenzyme localized on a lymphocyte surface, and in other tissues, which breaks down glucagon-like peptid 1 (GLP-1). GLP-1 is a gastrointestinal hormone, mainly secreted in nutrient-dependent manner, which enhances glucose induced insulin secretion and induces satiety. The reduction of oral glucose-stimulated active GLP-1 levels in T2DM could contribute to the pathogenesis of hyperglycaemia in T2DM.

Aim: The aim of this study was to determine the enzymatic activity of the DPP IV in cultured lymphocytes of obese patients with type 2 diabetes and in the control subjects, in order to get better insight into pathogenetic importance of DPPIV in T2DM.

Material and methodology: This investigation included 16 obese patients with type 2 diabetes mellitus (clinical group) and 12 healthy persons (control group). Basic laboratory and clinical parametars were determined in both groups. The activity of DPP IV was measured in non-stimulated, ConA-stimulated and PMA-stimulated cultured lymphocytes of healthy subjects and type 2 diabetics.

Results: The activity of DPP IV in non-stimulated and in Con A-stimulated lymphocytes of T2DM patients was not statistically different between patients with T2DM and control group persons. In PMA-stimulated lymphocytes, the activity of DPP IV was significantly higher in T2DM in comparison to the control group ($p<0.005$).

Conclusion: Based on the results of this study, we can conclude that the increased activity of DPP IV found in stimulated lymphocytes of type 2 diabetics could be important for selection of appropriate oral treatment of T2DM.

Key words: type 2 diabetes mellitus, DPP-IV, GLP-1, insulin resistance

CHARACTERISTICS OF HEMOSTASIS PARAMETERS IN PATIENTS WITH HYPOCOAGULANT STATUS

(Poster presentation)

Field of medicine: **Pathophysiology**
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Country: **Romania**
Faculty: **Facultatea De Asistenta Generala Carol Davila**

Introduction: In Diabetes mellitus there are abnormalities in the microvascular and macrovascular circulations.

Aim: To investigate the modifications wich appear in hemostasis process at patients with diabet type 1 and 2, using the thromboelastograpy method (TEG), the relationships between hemostatic parameters and diabetic vascular complications

Material and methodology: Hemostasis is a dynamic extremely complicated process. As a result, during activation no factor remains static or works in isolation. To measured the hemostasis process at diabetic patients it used the thrombelatography method (TEG). Were measured in 20 type 1 diabetic patients (in treatment with insulin, with blood glucose level normal) and in 20 type 2 diabetic patients (in treatement with oral products, with vascular complications, blood level of glucose incrased).We measured the tromboelastpgrapy parameters: r, k, MA, angle α, and coagulation index.

Results: Levels of r and k parameters were increased at diabetic type 2 patients compared with diabetic type 1. On the other side MA, angle α and coagulation this values have't statistically semnifications

Conclusion: Patients with diabetes 2 melitius had a hipocoagulable state and hypofibrinolisys, thereby indicating that activation of coagulation with reduced fibrinolytic activity may contribute to the incrased risk of vascular disease in diabetic 2 patients. Vascular events are presents in both of cases but in diabetes 1 is supposed to be lower then diabet 2 beacause of insulinic treatement

Key words: diabetes mellitus, hemostasis, thromboelastograpy, endothelial disfunction.

INHERITED DISORDER OF CHOLESTEROL BIOSYNTHESIS (SLO SYNDROME) MODIFIES THE FUNCTION OF KV1.3 CHANNELS AND PROLIFERATION OF LYMPHOCYTES

(Poster presentation)

Field of medicine: **Pathophysiology**
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Supervisor(s): **Hajdú Péter**
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Faculty: **Medical And Health Science Center Debrecen**

Introduction: The Smith-Lemli-Opitz syndrome (SLO) is a multiple congenital anomaly, featured by reduced or complete lack of activity of 7-dehydrocholesterol (7DHC) reductase. Since 7DHC reductase catalyses the last step of the cholesterol biosynthesis people with SLO have lower serum cholesterol and higher 7DHC levels. The alteration of cholesterol/7DHC ratio also affects the biophysical properties of the cell membrane such as fluidity and raft organization. The change of these characteristics of the cell membrane may influence the function of the ion channels

Aim: In our present study we aimed to determine the effect of SLO on the gating of Kv1.3 channels and proliferation of T cells.

Material and methodology: T-lymphocytes were isolated from the peripheral blood of healthy age-matched control persons and patients with SLO. The biophysical properties of Kv1.3 were studied by means of the patch-clamp technique. We determined the kinetic and equilibrium parameters of Kv1.3 gating. Lymphocyte proliferation was monitored by use of CFSE-assayupon anti-CD3/anti-CD28 stimulation

Results: Our results showed that the activation and inactivation time constants were significantly higher in the patients with SLO than in the control group. Furtherrmore, the midpoint of the steady-state activation was shifted toward positive voltages in SLO T cells. The CFSE-based assay demonstrated that T cells of SLO patients challenged by anti-CD3 and anti-CD28 exhibited lower proliferation rate than control cells

Conclusion: We suppose that the modification in the biophysical properties of Kv1.3 and proliferation of T-cells may affect the physiological function of the lymphocytes

Key words: T-cells, Kv1.3, Smith-Lemli-Opitz

MORPHOMETRIC ANALYSIS OF THE CONNECTIVE TISSUE IN HUMAN GLOMERULUS DURING THE AGING PROCESS

(Oral presentation)

Field of medicine: **Anatomy**
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Faculty: **Faculty Of Medicine Nis**

Introduction: During the aging process in human glomerulus there are changes accompanied by increased amounts of connective tissue, the accumulation of material glomerular basement membrane and mesangial matrix.This can lead to the emergence of global glomerulosclerosis as one of the leading age changes in the glomerulus.

Aim: The aim of study was to make a quantification of the connective tissue in the glomerular mesangium, which do not show morphological signs of sclerosis and finds his share in their structure.

Material and methodology: The study was performed on 30 cadaveric kidney tissue samples of both sexes aged between 20 and 85 years. After routine histological processing of tissue,samples were stained histochemically and analyzed using a light microscope. Digital image human glomeruli were further processed and analyzed in ImageJ software. Classification analysis of the cases were obtained three age groups, the average age of first is 29, second 44 and third 71 years.

Results: Histochemical studies indicate an increase in connective tissue with age in mesangium of human glomerulus.In the first group, the mean aree binder is 17.33% of binder in the glomerulus. In the second group, a binder showed a statistically significant increase, percentage is 32.11%. In the third group, there is a major increase.Aree average value in this group is 40.66% of binder in the glomerulus.

Conclusion: The results of morphometric and statistical analyzes indicate that the aging process leads to a significant increase in the percentage share aree and binders in the glomerulus followed by reduction of the number of cells.

Key words: human glomerulus,mesangium,morphometry.

RHO-KINASE ACTIVATION CONTRIBUTES TO HYPERTENSION IN RAT MODEL

(Oral presentation)

Field of medicine: **Pathophisiology**
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Tamás Csípő, Ibolya Rutkai, Ágnes Czikora, Andrea Szalai, Róbert Pórszász, István Édes, Zoltán Papp,
Co-author(s): **Attila Tóth**
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Country: **Hungary**
Faculty: **Medical Faculty Debrecen**

Introduction: According to recent studies, approximately 20% of the world's adults are estimated to have hypertension. In contrast the proper treatment is still not found.

Aim: Our aim was to charaterize the spontaneuosly hypertensive stroke prone (SHRSP), and the normotensive wistar kyoto (WKY) rat strains, to find the possible difference in their blood pressure and cardiac system.

Material and methodology: In our experiments, we detected the diameter changes of canulated muslce arterioles, and the contractile force of the femoral artery. We also mesaured the body and the heart weight, and also the blood pressure

Results: The heart/body ratio (0,0047), the systolic (210±12 Hgmm) and diastolic (161± 8 Hgmm) blood pressure of the SHRSP was signficatnly higher than in WKY rats (0,0027, 147±9Hgmm, 115±7 Hgmm). Myogenic tone was similar in the two groups. After using Rho-kinase inhibitor fasudil (10 uM) the myogenic tone decreased more in the SHRSP group (82,5±6,2%) than in the WKY group (34,4± 9,8 %).In the case of the femoral artery, treatment with 10-60 mM KCL resulted in higher contractile force in SHRSP (10,33±1,7mN) than in WKY (6,53±1,3mN).Pretreatment with fasudil resulted in the normalisation of the higher contractile force in the SHRSP group (decreased to 6,3 ±1,8mN), but had no effect onthe contractile force of the WKY group (6,3±1,6mN). In case of using serotonine we detected similar reaction.

Conclusion: According to our results, the Rho-kinase system probably plays an important role in the pathogenesis of high blood pressure, and better understanding of the pathogenesis may lead to hopefully more effective drug development.

Key words: Hypertension, Rho-kinase system

ANALYSIS OF STRESS RESPONSES TO LABOR AND PUBLIC PERFORMANCE THROUGH CHANGES IN SALIVARY CORTISOL CONCENTRATIONS

(Oral presentation)

Field of medicine: **Pathophysiology**
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Supervisor(s): **Doc. Dr. Nikola Ćurić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Stress response is complex reaction of the organism to the threat of homeostasis disruption. Numerous physical and psychosocial factors can activate this reaction. Hypothalamic-pituitary-adrenal axis and cortisol have important role in stress response. Measurement of cortisol concentration provides assessment of intensity and adequacy of stress response. Salivary cortisol measurement method has many advantages.

Aim: Analysis and comparison of intensity and dynamics of salivary cortisol concentration (SCC) changes as indicator of stress response to labor and public performance.

Material and methodology: Two groups were included in study. Participants underwent psychophysical stress, labor and public performance, respectively. From each participant five saliva samples were collected using Salivette, at different times in relation to stressful event. SCCs were determined by electrohemiluminescent method. Obtained values were statistically analyzed.

Results: SCCs in all samples were significantly higher in group of women in labor than in group of musicians ($p<0,05$). In both groups, the highest SCC was recorded one hour after stressful event (131,92 nmol/l- women in labor, 30,28 nmol/l- musicians). Increase in SCC in women was bigger, on average 8,51 times, whereas in musicians 4,38 times. Significant correlation was found between areas under SCC-curve in period during stressful event and in period after it, in group of musicians. However, such a correlation was not found in group of women in labor.

Conclusion: Stress response patterns of two groups are very similar in period during stressful event, while there is difference in stress response in period after stress due to influence of other factors.

Key words: Stress, salivary cortisol, woman in labor, musician

HABITS AND CONSCIOUSNESS IN CONSUMPTION OF FAST FOOD IN ASSOTIATION WITH BODY MASS INDEX VLAUES AMONG ADOLESCENTS

(Poster presentation)

Field of medicine: **Physiology**
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Supervisor(s): **Prof. Lidija Todorovska, MD, PhD**
Country: **Macedonia**
Faculty: **Faculty of Medicine Skopje**

Introduction: The question about the association between fast food and prevalence of obesity in adolescents is still open, and lack of nutritional education together with busy life style may lead to weight gain among young people.

Aim: As a part of more comprehensive study, our aim was to evaluate the influence of habits in consumption of fast food-(FFC) on values of body mass index-(BMI) in 150 adolescents in central city area.

Material and methodology: The dietary data were collected according to a specially designed questionnaire. With standard methodology-(IBP) were taken elementary measurements for calculation of BMI-(kg/m2), body weight-(kg) and body height-(cm).

Results: Analysis of Variance and Scheffe test were shown highly significant difference in BMI and gender ($F=20.9, p<0.001$), and so one the awareness of physical changes of their bodies, and its affection in further consumption of fast food ($F4.38$, $p<0.01$); and non significant difference between respondents who are conscious of health consequences from FFC and those who are absolutely not ($F=1.83$, $p<0.17$). Multiple regression analysis has shown that those students who do not notice any physical changes on their body have BMI significantly lower for 1.50 kg/m2 than those who do notice, and it affects their further FFC ($R=0.24, p<0.01$).

Conclusion: The lack nutritional education is evident, and the inertia of youth to prevent the risks of FFC is reduced to a low level. So, different strategies and crucial changes are needed to decrease FFC among adolescents, and prevent the possible health consequences.

Key words: fast food, adolescents, obesity, body mass index.

OXYTOCINE IN ANIMAL MODEL OF DEPRESSION

(Oral presentation)

Field of medicine: **Physiology**
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Country: **Serbia**
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Introduction: Commonly used experimental model of depression in rodents is 21-day-long corticosterone application. It is assumed that oxytocin regulates certain types of behavior and scarce data suggest its role in regulation of social interaction and anxiety, while recently, an antidepressant role of oxytocin has been proposed.

Aim: The aim of this study was to establish whether chronic application of oxytocin might influence behavior in experimental model of corticosterone-induced depression.

Material and methodology: In this experiment 28 adult male Wistar rats were divided into 4 groups: CORT – corticosterone in drinking water, (100mg/L) for 3 weeks, OXY - oxytocin for 2 weeks (10 IU/1ml s.c.), CORT/OXY group and control group (2 weeks 100µl saline s.c.). Screening tool for rat behavior was the "Forced Swimming Test" for rats: training for 15 minutes and 24 hours later, testing for 5 minutes. Duration of immobility and latency time to immobility as indices of depressive behavior were statistically analyzed by the One-Way ANOVA.

Results: CORT group animals showed significantly increased immobility time, while this parameter was not significantly changed in CORT/OXY group, compared to control group. Latency was decreased in CORT group ($p=0.079$), while animals in CORT/OXY group did not show significantly changed latency, compared to control animals. However, latency was as well decreased in OXY group of Wistar rats, compared to control group.

Conclusion: Results suggest that chronic application of oxytocin in male Wistar rats induces antidepresive-like effects in corticosterone-induced depression, while in healthy animals it might show depressive effect.

Key words: depression, corticosterone, oxytocine

EFFECTS OF D,L-HOMOCYSTEINE THIOLACTONE IN THE PRESENCE OF TETRAETHYLAMMONIUM CHLORIDE ON ISOLATED RAT DUODENUM

(Oral presentation)

Field of medicine: **Physiology**
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Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: The sulfur-containing amino acid homocysteine acts as a specific blocker of the potassium channels and enhanced spontaneous contractions in the gastrointestinal smooth muscles. Surplus accumulation of homocysteine in the human body induces atherosclerosis, and increases the risk of Alzheimer's disease and coronary artery disease.

Aim: To examine effects of D,L-homocysteine thiolactone in the presence of tetraethylammonium chloride (TEA) on isolated rat duodenum.

Material and methodology: Experiments were performed on isolated duodenum male albino Wistar rat (n=3). The mechanical activity of duodenal segments was measured using isometric transducers connected to the Sensor Medics Dynograph Recorder R511A printer. After a one-hour adaptation, spontaneous activity of duodenal segment was registered for 30 min. Then, frequency, amplitude and tone of duodenal segment in the presence of TEA and D, L-homocysteine thiolactone were examined.

Results: Application of D,L-homocysteine (10-5 mmol/L) significantly enhanced ($p<0.05$) amplitude, frequency and tone of spontaneous contractions of isolated rat duodenum. TEA (10 mmol/L), a non-selective K+ channel blocker, also significantly increased amplitude, frequency and tone of spontaneous contraction. After incubation for 30 min, TEA was added to D,L-homocysteine. Results show that there was no significant change ($p>0.05$) in tone, amplitude and frequency regarding to the group with TEA.

Conclusion: D, L-homocysteine thiolactone enhanced amplitude, frequency and tone of spontaneous movements. In the presence of TEA, there was no significant change in value of these parameters. So, we have found that D,L-homocysteine thiolactone is capable of blocking K+ channels in the gastrointestinal smooth muscles.

Key words: Homocysteine, potassium channel, TEA, duodenum, rat.

GHRELIN AFFECTS THYMIC STRUCTURE IN MALE RATS OF DIFFERENT AGE

(Oral presentation)

Field of medicine: **Physiology**
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Co-author(s): **Vedrana Djuric**
Supervisor(s): **Vesna Pesic, Assistant Professor And Dejan Nesic, Assistant Professor**
Country: **Serbia**
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Introduction: Thymus is the primary lymphoid organ that provides microenvironment for development of T-lymphocytes required for establishing efficient immune response. Ageing induces significant thymic atrophy accompanied by reduction of volume of true lymphoid tissue and increase in volume of adipose tissue. Orexigenic hormone ghrelin is expressed by immune cells and scarce data indicate that it might regulate T cell activation.

Aim: The aim of this study was to establish if intracerebroventricular application of ghrelin might influence thymic volume and structure in rats of different age.

Material and methodology: Male Wistar rats, 5 weeks and 2 months old were used in this experiment. Experimental groups were treated intracerebroventriculary with 1μg of ghrelin during 5 days, while the control groups received 5μl of saline in the same way. Rats were sacrificed and their thymi were isolated and processed for stereological analysis to determine relative and absolute volumes of thymic compartments (cortex, medulla and interlobular connective/adipose tissue).

Results: In control two-month-old animals significant thymic atrophy was showed (reduced absolute thymic weight and reduced volume of thymic cortex) compared to five-week-old controls. Ghrelin treatment increased absolute thymic weight and volume of thymic cortex compared to non-treated rats of both ages.

Conclusion: Intracerebroventricular application of ghrelin postpones thymic atrophy in two-month-old Wistar rats, and there was no statistically significant difference in thymic weight and volume of thymic cortex in treated animals of this age compared to five-weeks-old control animals. These results point to a stimulatory influence of ghrelin on thymic size, and probably the function.

Key words: thymic structure, ghrelin

EFFECTS OF D-L-HOMOCYSTEINE THIOLACTONE ON ELECTRICAL FIELD STIMULATED DUODENUM IN RATS

(Oral presentation)

Field of medicine: **Physiology**
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Country: **Serbia**
Faculty: **School Of Medicine Belgrade**

Introduction: Numerous studies have shown that electrical field stimulation with specifically chosen parameters induces production of NO in gastrointestinal smooth muscle cells. Nitric oxide represents a powerful inhibitory neurotransmitter, and is an important modulator of vascular tone. Trough latest studies it has been shown that homocysteine reduces its creation and modulates its effects.

Aim: To examine the effects of D-L-homocysteine thiolactone on rat's duodenum treated by electrical field stimulation.

Material and methodology: Experiments were performed on isolated rat duodenum male albino Wistar, body weight 250-300g. Contractions were registrated using isometric transducer on Backmann printer. After 1 hour adaptation period was recorded spontaneous activity segment of the duodenum during the period of 30 min, after that effects of D, L-homocysteine thiolacton were examined.

Results: D, L-homocysteine thiolactone concentration 1mmol/L leads to immediate increase in tone, amplitude and frequency of spontaneous movements of isolated rat duodenum. Shortly after the addition of homocysteine concentration of 10 μmol / L in the water bath, electrical field stimulation was performed. After 5 minutes, it was administered 30 μmol/L L-NAME, and there was an increase in amplitude to a greater extent compared to the administration of L-NAME without homocysteine.

Conclusion: Duodenum treated with L-NAME and D-L-homocysteine thiolactone after electrical field stimulation, shows a higher increase in tone, amplitude and frequency compared to the treatment of only L-NAME after electrical field stimulation.

Key words: electrical field stimulation, homocysteine, duodenum

SEVERITY OF RAT SEIZURES INDUCED BY GAMMA-HEXACHLOROCYCLOHEXANE IS INCREASED BY AMINOOXYACETATE

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **NIKOLA SUTULOVIC**
Co-author(s): **Zeljko Grubac**
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Faculty: **Faculty Of Medicine Belgrade**

Introduction: Seizures induced in rats by gamma-hexachlorocyclohexane (γ-HCH), widely used pesticide and scabicide, represent a model of generalized epilepsies. The family of gaseous neurotransmitters is composed of tree members: H2S, NO and CO. In the brain, H2S is produced by enzyme cisthationine β-synthase (CBS) and its role in seizure development is not completely clear. CBS can be blocked by aminooxyacetate, its selective inhibitor.

Aim: The current study was undertaken to assess the influence of aminooxyacetate on the severity of γ-HCH-induced seizures in adult rats using behavioral approach.

Material and methodology: Adult males of Wistar albino rats were used in the study. Aminooxyacetate (25 mg/kg) had been injected to rats 30 min prior to intraperitoneal administration of γ-HCH (4 mg/kg). Observational period lasted 30 min upon γ-HCH administration. Following parameters of convulsive behavior were assessed: incidence, latency time and seizure severity. A descriptive scale with grades from 0 to 4 was used to estimate the severity of the seizures.

Results: Pretreatment with aminooxyacetate, 30 minutes before i.p. administration of γ-HCH affected all investigated parameters of convulsive behavior. Seizure incidence and its severity were increased, while latency time to development of seizure was decreased.

Conclusion:These results indicate that aminooxyacetate, a selective CBS inhibitor and H2S modulator, increases the severity of seizures induced by γ-HCH in rats.

Key words: seizures, severity, amino-oxyacetate, γ-HCH, CBS, rats

DYNAMOMETRIC PARAMETERS OF ELBOW FLEXORS AND EXTENSORS IN RELATION TO PREVIOUS PHYSICAL ACTIVITY

(Oral presentation)

Field of medicine: **Physiology**
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Supervisor(s): **Doc. Dr Jelena Popadić Gaćeša**
Country: **Serbia**
Faculty: **Medical Faculty Novi Sad**

Introduction: Strength training is one of the most popular forms of training for improving the biometabolic capacity of an individual, and for athletes' conditioning. The aim of the training is to cause adaptation, which leads to increased physical fitness and improved motor skills.

Aim: The aim of this study was to evaluate differences in dynamometric parameters of elbow flexors and extensors between athletes and non-athletes.

Material and methodology: This study included 35 participants, devided into two groups: 18 non-athletes, medical students, and 17 judo/savate athletes with average sports activity of 7 years. All participants were involved in dynamometric measurements of upper arm muscles functional properties – five series of 10 contractions, with one minute rest between series.

Results: Athletes showed significantly higher values of all dynamometric parameters. Significantly higher decrease in muscle strength – fatigue rate was observed in non-athletes: for elbow flexors in non-athletes 31% while in athletes it was 15%; for elbow extensors in non-athletes 36% while in athletes it was 17%. The correlation between some dynamometric parameters was significant between muscle power and contraction velocity while no significant correlation has been observed between fatigue rate and velocity.

Conclusion: The group of athletes showed significantly higher values of all dynamometric parameters, as a result of chronic adaptation to physical activity – training

Key words: Strength training, Adaptation, M. biceps Bracha, M. Triceps Brach, Dynamometry.

MONITORING OF STRENGTH AND ANAEROBIC CAPACITY IN VARIOUS STAGES OF TRAINING CYCLE IN FEMALE AMERICAN FOOTBALL PLAYERS

(Oral presentation)

Field of medicine: **Physiology**
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Supervisor(s): **Doc. Dr Otto Barak**
Country: **Serbia**
Faculty: **Medical Faculty Novi Sad**

Introduction: Flag football is a type of American football suitable for all ages and gender . Training is done in stages of training cycle. Two groups of girls started training at different times.

Aim: The aim was to evaluate muscle strength and anaerobic capacity in phases of training cycle, in girls who train American football.

Material and methodology:

The studied group consisted of 25 girls. In the first group there were 14 athletes, and the second group included 11 of them. All were healthy. The tests that were used in this study are the Wingate anaerobic test (WAnT) and dynamometric determination of muscle strength. They were tested on several occasions.

Results: In the first group of female athletes we didn't observe a statistically significant change in values of the flexors and extensors of the upper extremities. Legs significantly increased in speed and power.This group had significantly higher values of maximum and average power in the second test. In the second group of athletes, only the average power increased. Other parameters of WAnT, did not change significantly. In addition, we observed a statistically significant increase in the maximum and average loads in extension and flexion of the arms as well as the extension of the legs in second group.

Conclusion: Fitness training led to an increase in anaerobic capacity in female athletes during the first three stages of training cycle. Strength training, which took place during the third phase of the training cycle has led to an increase in muscle strength.

Key words: flag football, Wingate anaerobic test, dynamometry

INVESTIGATION OF THE PALMARIS LONGUS ABSENCE AND FUNCTIONAL ABSENCE OF FLEXOR DIGITORUM SUPERFICIALIS TO THE LITTLE FINGER

(Oral presentation)

Field of medicine: **Anatomy**
Author(s): **MARKO KOVAČEVIC**
Supervisor(s): **Doc. Dr Mirela Erić, Dr Nikola Vučinić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Palmaris longus and flexor digitorum superficialis are variable muscles. Absence of these muscles is different in general population, as well as in relation to the gender.

Aim: The aim was to determine the absence of these muscles, connection of their absence in the general population, and differences in relation to the gender.

Material and methodology: The research was done on 60 subjects, average age of 20.35. In all subjects, standard and additional tests.were used for assessment

Results: Palmaris longus was absent in 40% of examined subjects (9 (30%) men and 15 (50%) women). Deficiency of the flexor digitorum superficialis to the fifth finger was noted in 56.66 % subjects (22 (73.34%) men and 12 (40%) women). Bilateral absence of the palmaris longus and flexor digitorum superficialis to the fifth finger was noted in 3.3% subjects (both men). We`ve noticed bilateral absence of one muscle and unilateral absence (or deficiency of its tendon) of the other muscle in 8.33 % subjects

Conclusion: Statistical analysis of data showed that palmaris longus was bilaterally often absent in women (50%: 30%), unilateral equally on both forearms (13.33%), while in men often absent on right hand (6.66%). It was found that the superficial flexor to the fifth finger often has bilateral function deficiency in men (73.34%) than in women (40%). We noted that its deficiency is more often on the right hand in both genders. There is no connection between the absence of the palmaris longus and superficial flexor of the fifth finger.

Key words: Forearm; Palmaris longus ; Flexor digitorum superficialis; Absence

DOES DSIP AFFECT GAMMA-HEXACHLORCYCLOHEXANE-INDUCED SEIZURES?

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **ZELJKO GRUBAC**
Co-author(s): **Nikola Sutulovic**
Supervisor(s): **Asist. Dr. Dragan Hrncic, Prof. Dr. Olivera Stanojlovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: There is an intimate relationship between sleep and epilepsy, showing seizure frequency dependence on sleep phase and duration. Delta sleep peptide (DSIP), an endogenous nonapeptide, increases delta activity in EEG, promote sleep and has potential neuroprotective effects. Seizures induced by γ-hexachlorcyclohexane (γ-HCH), widely-used scabicide and pesticide, represent valuable experimental model of generalized epilepsy, refractory to numerous classical antiepileptic drugs.

Aim: Therefore, we investigated the effects of DSIP on development of γ-HCH-induced seizures in rats.

Material and methodology: Experiments were performed on adult males of Wistar albino rats, divided into following groups according to treatment received intraperitoneally: 1) control (DMSO, 0.5 ml/kg), 2) DSIP 1 mg/kg, 3) γ-HCH in convulsive dose of 8 mg/kg (γ-HCH), 4) DSIP 30 min prior to γ-HCH (DSIP+ γ-HCH). During 30 min upon last injection, behavioral manifestations of seizure behavior were assessed by seizure latency, incidence (number of seizuring rats in group) and its severity. Severity was graded according to 4-degree descriptive scale. Lethality was registered at the end of observational period.

Results: No signs of seizure behavior was observed in control and DSIP alone - treated groups. DSIP significantly increased seizure latency time, and alleviate severity of γ-HCH induced seizures (DSIP vs. DSIP+ γ-HCH group, $p<0.05$). However, DSIP did not produce statistically significant effect neither on the incidence of these seizures, nor on rate of lethality ($p>0.05$).

Conclusion: These results indicate that DSIP has beneficial effects on γ-HCH-induced seizures, suggesting its potential usage as add-on drug in polyvalent antiepileptic therapy.

Key words: DSIP, γ- hexachlorcyclohexane, seizures, rats

ALTERATION OF OPEN-FIELD BEHAVIOR IN RATS BY HYPERMETHIONINE NUTRITION

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **JELENA MIKIC**
Supervisor(s): **Assist. Dr Dragan Hrnčić, Prof. Dr Olivera Stanojlović**
Country: **Serbia**
Faculty: **School Of Medicine Belgrade**

Introduction:

Hyperhomocysteinemia is recognized as a risk factor for numerous cardiovascular, oncological, neurological and psychiatric disorders. It can be caused by diet enriched with methionine, amino acid precursor in homocysteine synthesis.

Aim:

The aim of this study was to examine the effects of methionine nutritional overload on explorative rat behavior in open filed.

Material and methodology:

Experiments were performed using male Wistar rats. During 30 days animals received ad libitum standard rat food (control group) or food enriched with methionine (double content comparing to control, experimental group). Open field test was performed at the end of this period. Parameters of horizontal and vertical activity were assessed by using automated open-filed system.

Results:

The effects of methionine - enriched nutrition was recorded in all parameters of horizontal and vertical activity of rats. Distance and time of ambulatory movement were significantly reduced in experimental comparing to control rats. Also, rats from experimental group showed lower number of rearings in open field test comparing with those from control group.

Conclusion:

Results of this study indicates significant alterations of exploratory behavior in rats on hypermethionione nutrition.

Key words: methionine, homocysteine, open field test, anxiety behavior, rats

EFFECT OF TERNANTHRANIN ON GASTRIC ULCERATIONS INDUCED BY DICLOFENAC

(Oral presentation)

Field of medicine: **Anatomy**
Author(s): **NIKOLA M. STOJANOVIC**
Co-author(s): **Milica Todorovska**
Supervisor(s): **Asst. Prof. Dr Ivan Jovanovic, TA Pavle Randjelovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction: Peptic ulcer is one of the most widespread multifactorial gastrointestinal disorders. There is a constant scientific pursuit for more effective, herbal and/or synthetic, antiulcer drugs that simultaneously reduce harmful effects arising from pathogenic mechanisms and support defence factors of the mucosal membrane.

Aim: To evaluate ternanthranin, a plant alkaloid, for gastroprotective activity.

Material and methodology: The activity of ternanthranin was studied using a diclofenac-induced ulcerations model in male Wistar rats. One control group received ranitidine (100 mg/kg), whereas another only diclofenac. Three groups of animals were pretreated with ternanthranin, in doses of 50, 100 and 200 mg/kg, one hour before the application of diclofenac. After four hours the animals were scarified, stomachs removed and lesion parameters evaluated on captured images using ImageJ software. The following morphometric parameters were measured: total stomach area, total area of lesions (TAL), area fraction of lesions (AFL), mean lesions' area (MLA), mean lesions' perimeter (MLB), mean lesions' circularity (Cir) and mean Feret's diameter of lesions. Significance of observed differences was evaluated by One Way ANOVA followed by Newman-Keuls post hoc test.

Results: Ternanthranin, in a dose dependent manner, reduced the number of lesions caused by diclofenac. Statistically significant differences between experimental groups in all doses and the group treated with diclofenac were found for measured TAL and AFL ($p=0.002$). Other measured parameters, MLA, B, Circ, Feret's diameter, did not differ between the evaluated groups ($p>0.05$).

Conclusion: These findings suggest that ternanthranin, as a new natural compound, can be used in the treatment of peptic ulcers.

Key words: ternanthranin; diclofenac; mucosa; lesions

MEMBERS OF ENDOCANNABIOID SYSTEM (ECS) IN CHONDRIFYING CHICKEN AND MOUSE MICROMASS CELL CULTURES

(Oral presentation)

Field of medicine **Histopathology**
Author(s): **ZSOFIA FOLDVARI**
Co-author(s): **Csilla Somogyi, Csaba Matta, Éva Katona, Roland Ádám Takács, Tamás Juhász, Róza Zákány**
Supervisor(s): **Dr Róza Zákány, Csilla Somogyi**
Country: **Hungary**
Faculty: **Faculty Of Medicine Debrecen**

Introduction: The analgesic and anti-inflammatory effect of cannabis-based products in various pathological conditions of joints (e.g. osteoarthritis, rheumatoid arthritis) are well known. Cannabinoid 1 and 2 Receptors (CB1, CB2) are expressed in synoviocytes and adult articular chondrocytes, however their role has not been clarified in joint tissues yet.

Aim: We aimed to observe the mRNA expression of the EndoCannabinoid System (ECS) members in different cartilaginous tissue samples and chondrifying cell cultures, and to monitor the effect of CB receptor agonists and antagonists on the process of chondrogenesis.

Material and methodology: Chondrifying micromass cultures (CMC) were established from the distal limb buds of four-day-old chicken and 11.5 day-old mouse embryos. Chondrogenesis spontaneously occurs within these cultures during 6-7 days of culturing. The expression of ECS receptors and enzymes were monitored by reverse-transcription PCR technique through the 6 days of culturing. CMC were treated with CB agonist, anandamide (AEA) and antagonists AM-251 and AM-630 in different concentrations for different time intervals.

Results: CB1, CB2 and G-protein coupled receptor 55 (GPCR55) membrane receptors are expressed in differentiating mouse and chicken micromass cultures at mRNA level, however we were unable to detect fatty-acid-amino-hydrolase (FAAH), the enzyme for AEA elimination, in the chicken system. According to our preliminary results AEA positively influences chondrogenesis in chicken and mouse cultures.

Conclusion: Mature and differentiating chondrocytes express ECS receptors and endocannabinoids may have influence on embryonic cartilage formation. Supported by the TÁMOP 4.2.4.A/2-11-1-2012-0001 project co-financed by the European Union and the European Social Fund.

Key words: Endocannabinoid System, CB1, CB2, GPCR55, chondrogenesis

HMSH2 AND HMLH1GENE EXPRESSION PATTERNS DIFFER BETWEEN LUNG ADENOCARCINOMA AND SQUAMOUS CELL CARCINOMA: CORRELATION WITH PATIENT SURVIVAL AND RESPONSE TO ADJUVANT CHEMOTHERAPY TREATMENT

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **SOTIRIOS G. DOUKAS**
Supervisor(s): **Dimitra P. Vageli, Zoe Daniil, Konstantinos I. Gourgoulianis**
Country: **Greece**
Faculty: **Faculty Of Medecine Thessaly**

Introduction: We previously showed that mRNA levels of mismatch repair (MMR) genes in NSCLCs reflect the functional status of MMR system with consequent clinical assessment of lung cancer patients.

Aim: To correlate hMSH2 and hMLH1 mRNA levels in NSCLCs with patients' survival and response to adjuvant chemotherapy.

Material and methodology: We evaluated the mRNA expression of hMSH2, hMLH1 and control hPBGD genes, by Q-RT-PCR, in 29 NSCLCs tissue specimens. [13 squamous cell carcinomas (SQCs) and 16 adenocarcinomas (ADCs)). The MMR/control mRNA levels converted to MMR mRNA phenotypic entities (MMR/control mRNA ratios ≥1, considered as normal or elevated phenotypes, while ratios<1, as reduced phenotypes). The MMR mRNA phenotypes were correlated with patient survival and their response to adjuvant chemotherapy.

Results: The hMSH2 and hMLH1 genes showed different phenotypic distribution in different histological stages of lung SQs and ADs. Additionally high or low mRNA levels of hMHS2 showed different survival and response to chemotherapy in SQC and ADC. Specifically, SQC patients with high hMSH2 mRNA levels showed a better outcome than patients with low hMSH2 mRNA levels. However, ADC patients with high hMSH2 mRNAs had a poor outcome compared to those with low hMSH2 mRNA levels. Additionally, SQC patients with high hMSH2 mRNAs exhibited a better response to adjuvant chemotherapy, relative to ADC patients. Significantly, ADC patients with low hMSH2 mRNA levels showed better response to adjuvant chemotherapy compared to SQC patients.

Conclusion: MMR phenotyping could be a valuable prognostic survival marker of lung cancer patients with potential applicability in chemotherapy selection.

Key words: hMSH2, hMLH1, NSCLCs, Q-RT-PCR, chemotherapy

CHROMATIN TEXTURE AND NUCLEAR ENVELOPE CIRCULARITY IN KIDNEY JUXTAGLOMERULAR CELLS

(Poster presentation)

Field of medicine: **Histopathology**
Author(s): **MILOS BASAILOVIC**
Co-author(s): **Dr Igor Pantic**
Supervisor(s): **Dr Igor Pantic**
Country: **Serbia**
Faculty: **Faculty of Medicine Belgrade**

Introduction: Kidney juxtaglomerular cells (JC) have an important role in regulation of glomerular filtration rate and blood pressure. In response to various stimuli, they produce and secrete renin, an enzyme that is a part of renin-angiotensin-aldosterone axis. Despite numerous research efforts during the past decade, the events that take place in juxtaglomerular cell nuclei in physiological conditions are largely unknown.

Aim: To investigate potential relationship between parameters of JC nuclear shape and JC chromatin structural properties in physiological conditions.

Material and methodology: Kidney tissue was obtained from 10 male Swiss albino mice and stained using conventional techniques. Digital micrographs of the total of 100 JC nuclei were analyzed using the National Institutes of Health (NIH, USA) ImageJ software. For each JC nucleus, circularity of nuclear envelope was calculated based on the values of nuclear area and perimeter. Chromatin structure was quantified using Grey level co-occurrence matrix (GLCM) texture analysis method.

Results: Average JC nuclear circularity was 0.82± 0.08. Average chromatin textural homogeneity measured as the value of GLCM inverse difference moment was 0.42±0.08. There was a statistically highly significant negative correlation between JC nuclear circularity and chromatin homogeneity ($r= -0.72$, $p<0.01$).

Conclusion: The results suggest that physiological changes that take place in JC nuclear chromatin significantly influence parameters of JC nuclear envelope shape, possibly by through induction of a signaling pathway in nuclear lamina.

Key words: Nucleus, DNA, Homogeneity, Shape

INFECTIOUS DISEASES OF CENTRAL NERVOUS SYSTEM IN AUTOPSY MATERIAL: CLINICAL – PATHOLOGICAL CORRELATION

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **NATALIJA NIKOLIC**
Supervisor(s): **Emilija Manojlovic Gacic, MD**
Country: **Serbia**
Faculty: **Medical Faculty Belgrade**

Introduction: Infections of the central nervous system (CNS) are a common clinical problem, especially in the last decades with the emergence of new causal agents, most importantly bacteria and viruses. Many etiological elements such as intracranial tumors and cysts, medication, vascular and systemic deseases may induce the same symptoms.

Aim: To examine compliance between clinical and autopsy histopathological diagnoses of CNS infectious diseases.

Material and methodology: Autopsy protocols from 2006 to 2010 on the Institute of Pathology, Medical Faculty, University of Belgrade were analysed. Cases with clinical and/or histopathological diagnosis of CNS infective desease were selected.

Results: Of 58 cases, 30 were females and 28 males. Average lifetime was 54.26 years, ranging from 5 to 85 years. In 18 cases (31.04%), clinical and histopathological diagnosis of CNS infectious desease were concordant. Clinical diagnosis of noninfectious CNS desease was recognised histopathologicaly as infectious desease in 19 cases (32.76%). Histopathological diagnosis of CNS infectious desease was not made in 4 cases (6.9%) where clinically was made. In 4 cases there were no significant histopathological changes on CNS, while clinical diagnosis was infectious disease of CNS.

Conclusion: Clinical diagnoses of CNS were not consistent with pathological findings in majority of cases. Post-mortem analysis followed by clinical-pathological confrontation is recommended in cases with atypical neurological presentation suspicious on CNS infectious disease. Such findings allow better understanding of signs and symptoms that could obscure accurate diagnosis.

Key words: Central nervous system infections, autopsy, clinical-pathological correlation, diferential diagnosis

EFFECTS OF BUCKWHEAT (FAGOPYRUM ESCULENTUM - MOENCH) ON HYPERLIPIDEMIC RAT MODEL

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **RADOVANOVIĆ BOJAN**
Supervisor(s): **Asst. Prof. Vladimir Pilija, M.D. - Ph.D.**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

As a source of biologically active compounds buckwheat has beneficial effects in nutrition due to its high content of flavonoids, particularly rutin.

Aim:

To examine effects of buckwheat on pathohistological characteristics of organs and its effect on the body weight of rats on high-fat diet.

Material and methodology:

The experiment included 40 male Wisttar rats that were divided in five groups. Food consumption and weight gain were measured daily. After 2, 7 and 13 weeks of experiment, the animals were sacrificed under ether anesthesia. After autopsies, removed organs were prepared for histological processing. Tissue samples were stained using standard hematoxylin-eosin stain.

Results:

After 13 weeks of the experiment, the body weight gain was significantly higher ($p<0.05$) in the group III. The relative weight of heart was significantly higher in the II group than in other groups ($p<0.05$). The relative weights of liver were significantly higher in groups III and IV than in the I and II group ($p<0.05$). Adipocytes of periaortic adipose tissue were somewhat enlarged and containing more fat in group III, compared to animals in group I. Significant changes were found in livers of animals in groups III, IV and V.

Conclusion:

Buckwheat leaf and flower mixture significantly reduced body weight gain in rats fed a high-fat diet. Fat rich diet induced gross and histological changes of liver typical of steatosis and steatohepatitis, without significant resolution following supplementation of the buckwheat leaf and flower mixture.

Key words: buckwheat, hypolipidemic effect, steatosis

VARIATIONS OF RENAL ARTERIES IN HUMAN

(Poster presentation)

Field of medicine: **Anatomy**
Author(s): **SVETLANA JOVEVSKA M. Jovevska, G. Sumanov, B. Panova, N. Panov, G. Panova, L. Nikolovska, A. Stojanovski**
Supervisor(s): **Prof. d-r Gordana Panova,**
Country: **Macedonia**
Faculty: **Faculty of Medicine Shtip**

Deformities of the spine can be caused by congenital defects, paralysis on one side of the body, improper posture or because different posture of the legs. Scoliosis is a sideways curvature of the spine that can develop in various areas. Spine can be bent to the right (most of the chest), left (usually the lumbar part), or to fold around a vertical axis. Kyphosis is curvature of the spine with convexity saginalnata plane backwards.

The purpose of this paper is to determine the frequency of appearance of scoliosis and kyphosis, the period of their occurrence in children and their gender distribution.

Keywords: kidney, renal artery, anatomy, surgery

PLENARY SESSION II

BIOCHEMISTRY, GENETICS,
PHARMACOLOGY, PHARMACY

Date: July 19th 2013

ORAL PRESENTATIONS
Start time: 8:30 AM
Amphitheatre Pharmacy - Faculty of Medicine Novi Sad

POSTER PRESENTATIONS
Start time: 10:00 AM
Main Hall at Faculty of Medicine Novi Sad

POSSIBLE PROTECTIVE EFFECT OF GLUTATHIONE AND LIPOIC ACID ON THE LEVEL OF LIPID PEROXIDES AND CATALASE ACTIVITY IN LIVER OF RATS IN CONDITIONS OF 7-DAY CADMIUM POISONING

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **STEFAN DJURIC**
Co-author(s): **Ilija Golubović, Katarina Mićić**
Supervisor(s): **Asst.dr Andrej Veljković**
Country: **Serbia**
Faculty: **Medical Faculty Nis**

Introduction: Cadmium is a trace element that is present as a contaminant in our natural environment.. TBA reactive substances (TBARS) are an indicator of the level of lipid peroxidation. Catalase is oxidoreductase, catalyzes the reaction of decomposition of hydrogen peroxide to water and molecular oxygen Glutathione is a tripeptidwhich accounts for 90% of total non-protein sulfur compounds of cells and is an essential cofactor of some enzymes. Lipoic acid is a cyclic disulfide, natural antioxidant.

Aim: Was to investigate the effect of cadmium on the concentration of TBARS and the activity of catalase in the liver of rats, and to determine the possible protective effect of glutathione and lipoic acid.

Material and methodology: In the experiment female adult rats were used, Wistar strain, divided into 6 groups depending on the application. The concentration of TBARS in the homogenate was determined by spectrophotometric method by Andreeva et al. Catalase activity in tissues was determined by spectrophotometric method by Goth.

Results: Cadmium significantly increases the TBARS levels and activity of catalase compared to control($p < 0.001$). On the other hand activity of catalase and TBARS level is decreased in the group that received Cd and glutathione and lipoic acid($p < 0.001$).

Conclusion: Cadmium intoxication leads to increased level of TBARS and catalase, activitywhile antioxidants provided with the cadmium lead to a reduction in enzyme activity and TBARS level.

Key words: cadmium,TBARS, catalase, glutathione, lipoic acid

GLUTATHIONE S-TRANSFERASE M1 AND T1 POLYMORPHISM AND MARKERS OF LIPID OXIDATIVE DAMAGE IN HAEMODIALYSIS PATIENTS

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **STEFAN BARISIC**
Co-author(s): **Brankica Dimitrijevic, Milica Bulajic**
Supervisor(s): **Prof. Dr Tatjana Simic**
Country: **Serbia**
Faculty: **School Of Medicine Belgrade**

Introduction: Increased oxidative stress is a hallmark of end-stage renal disease (ESRD). Glutathione S-transferases (GST) are involved in detoxification of xenobiotics and protection of important biomacromolecules from oxidative damage. Genetic polymorphism is found in several genes coding for GSTs, the most significant of which clinically are deletion polymorphisms of GSTM1 and GSTT1 gene.

Aim: To determine whether the deletion polymorphisms of genes coding for antioxidant enzymes GSTM1 and GSTT1 modulate the degree of oxidative lipid damage in ESRD patients.

Material and methodology: GSTM1 and GSTT1 genotypes were determined in 100 ESRD patients by multiplex PCR (polymerase chain reaction). Markers of lipid oxidative damage, malondialdehyde (MDA) adducts, were measured by ELISA (enzyme linked immunosorbent assay).

Results: The presence of GSTM1 null or GSTT1 null genotypes influence the degree of lipid oxidation, resulting in significant increase of plasma MDA adducts concentration in those carrying these genotypes. A strong combined effect of the deletion of both genes in terms of susceptibility towards the oxidative damage of lipids was found in ESRD patients. Namely, when patients were stratified according to GSTM1 and GSTT1 genotype, the highest concentration of plasma MDA adducts was noted in those with GSTM1 null/ GSTT1 null genotype.

Conclusion: GSTM1 null and GSTT1 null genotypes are, independently or in combination with one another, associated with enhanced susceptibility to oxidative lipid damage in haemodialysis patients. Our results suggest a possibility for GST genotype-based stratification of ESRD patients which could improve the attempts towards individualization of antioxidant treatment.

Key words: Glutathione S-transferase, polymorphism, oxidative stress, MDA adducts, haemodialysis.

CHARACTERIZATION AND IMPROVEMENT OF PHENOL-SULFURIC ACID MICROASSAY FOR GLUCOSE-BASED GLYCOGEN

(Poster presentation)

Field of medicine: **Biochemistry**
Author(s): **HAJAR SHOKRI**
Co-author(s): **Mehdi Rasouli-Ali Ostovar**
Supervisor(s): **Mehdi Rasouli**
Country: **Iran**
Faculty: **Faculty of Medicine Mazandaran**

Introduction: The phenol– sulfuric acid reagent is widely used as a chemical method for the measurement of the sugars of polysaccharides, glycoproteins, proteoglycans and glycolipids The method is straightforward and sensitive for determining small quantity of sugars and their derivatives that have been separated by chromatograph.

Aim: To improve phenol-sulfuric reagent for microassay of glucose based-glycogen in small tube or microplate.

Material and methodology: Perchloric acid (70%), sulfuric acid 85% (ρ), ethanol, phenol and glucose were purchased , glycogen ,The liver was isolated from male Spargue-Dawley rats, minced , and ground in perchloric acid. centrifuged, supernatantextracted withethanol. The pellet suspended in water and analyzed

Results: The color intensity was found to be a function of all components of the assay mixture, that is, the amount of sugar and phenol together with the volume of total water and acid. The absorbance increased in the range of 4 – 10 mg of phenol and reached the plateau between 10 – 16 mg per 1 mL of acid. The color intensity was a linear function of total watervolume. The sensitivity increaseds as total water volume was changed. The curve for acid volume peaked at about 1 mL. The optimal assay condition was determine the reaction to proceed. The values were scaled downon and reading in cuvet or microplate.

Conclusion: The results indicated that phenol-sulfuric acid reagent could be scaled down to 1.0, 0.5 and 0.20, 0.15 mL of sulfuric acid for microassay of glucose based-glycogen

Key words: Glucose, Glycogen, phenol-sulfuric, microassay, microplate

IMPROVEMENT OF RAT LIVER MACRO- AND PRO-GLYCOGEN ASSAY: TISSUE PRESERVATION, DIGESTION, EXTRACTION AND MEASUREMENT

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **ALI OSTOVAR**
Co-author(s): **Hajar Shokri ,Mehdi Rasouli**
Supervisor(s): **Mehdi Rasouli**
Country: **Iran**
Faculty: **Faculty of Medicine Mazandaran**

Introduction: Glycogen, the polymer of glucose residues, is the major storage of energy in animal tissues. It is unstable and hydrolysis enzymatic in rat liver extract and also non-enzymatic in the assay medium.

Aim: The current study performed to improve tissue preservation, digestion, extraction and measurement of macro- and pro-glycogen

Material and methodology: The liver is isolated from the rat, and the content of macro- and pro-glycogen were measured in fed and starved states

Results: In postmortem liver tissue, the glycogen was decreased slowly at 4°C and rapidly at 25°C but was well stabilized at −20°C. At room temperature, MG undergoes autolysis at the rate of 1.3% and decreased by half at 35 min, while PG increased slightly but not significantly. The increase in the time and extent of homogenization of the tissue with PCA and using ultrasonication had not any significant effect on the amount of ASG and the ratio of ASG/AIS. The time of centrifugation could be reduced from 15 to 5 minutes with no any significant change in ASG. The concentrations of serum total calcium, albumin corrected calcium (9.29 ± 1.04 vs. 8.94 ± 1.02, p□ 0.01), phosphorus (4.08 ± 0.66 vs. 3.87 ± 0.54, p□ 0.01) and ion product of calcium and phosphorus (39.28 ± 7.48 vs. 36.49 ± 7.20, p□ 0.005) were significantly higher in CHD+ relative to CHD– group

Conclusion:

Serum calcium and phosphorus are associated with the prevalence and severity of CHD and were also independent risk factors for CHD

Key words: Glycogen, Iodine, Liver, Rat

STUDY OF ASSOCIATION OF ENOS T786C AND 4A4B GENE POLYMORPHISMS WITH HYPERTENSION

(*Oral presentation)*

Field of medicine: **Genetics**
Author(s): **DUSAN KEKIC**
Supervisor(s): **Prof.dr Ivana Novaković, Dr Branislav Rovčanin**
Country: **Serbia**
Faculty: **Medical Faculty Belgrade**

Introduction: Hypertension is one of the most common worldwide diseases afflicting humans. Its pathogenesis includes events on molecular level, among which nitric oxide (NO) synthesized by endothelial nitric oxide synthase (eNOS) plays an important role in regulation of endothelial function and in the control of blood pressure.

Aim: In this study, we determined whether T786C and 4a4b eNOS genetic variants may have a role in developing hypertension.

Material and methodology: Hypertensive patients and healthy persons were subjected to genotyping for eNOS T786C and 4a4b polymorphisms by PCR-RFLP-PAGE and PCR-PAGE respectively.

Results: Considering eNOS T786C genotypes, there was a lack of significant difference between patients and controls, as well as in 4a4b polymorphism. The allele frequencies of eNOS 4a4b were significantly different ($p<0.001$), demonstrating the increase of 4b-allele frequency in hypertensive patients group. Also, 4b-allele (4a4b) was shown to be the risk factor (OR=3.84; CI=1.99-7.4), while the C-allele (T786C) was not identified as a risk nor as a protective factor (OR=1.05; CI=0.55-2.06) for hypertension development in this population group.

Conclusion: Our results indicate a lack of association between different genotypes of both examined eNOS gene polymorphisms with hypertension. The 4b allele may have a predisposing role in this pathology.

Key words: eNOS, T786C polymorphism, 4a4b polymorphism, hypertension

MTHFR GENE POLYMORPHISMS ANALYSIS IN POLYCYTHEMIA VERA AND ESSENTIAL THROMBOCYTHEMIA

(Oral presentation)

Field of medicine: **Genetics**
Author(s): **CAMELIA A. COADA**
Co-author(s): **Roxana M. Costache**
Supervisor(s): **Asist. Univ. Dr. Adrian Trifa**
Country: **Romania**
Faculty: **General Medicine**

Introduction: Polycythemia vera (PV) and essential thrombocythemia (ET) are two frequent BCR-ABL negative myeloproliferative neoplasms (MPNs). They are characterized by a unique somatic point mutation, JAK2V617F, which is found in the majority of cases. The methylene tetrahydrofolate reductase (MTHFR) enzyme plays an important role in the folate-homocysteine metabolic pathway, which is crucial for cell growth and division. The polymorphisms of the MTHFR gene were shown to modulate the risk of cancers, including some hematological malignancies. The 677 C>T and 1298 A>C polymorphisms render the enzyme less active, therefore influencing DNA synthesis, methylation and repair.

Aim: The purpose of this study was to analyze the MTHFR polymorphisms in polycythemia vera and essential thrombocythemia.

Material and methodology: The MTHFR polymorphisms were genotyped in 191 patients with BCR-ABL negative MPNs and a known JAK2V617F mutation status. There were 90 patients with PV (38(42%) women and 52(58%) men; median age 62 years) and 101 patients with ET (66(65%) women and 35(35%) men; median age 58 years). The control group comprised 245 healthy individuals among which 136(55%) were women and 109(45%) were men (median age 57 years). The MTHFR polymorphisms were genotyped by PCR-RFLP(C677T polymorphism) and AS-PCR (A1298C polymorphism) assays.

Results: Both MTHFR polymorphisms shared similar frequencies between the patients and controls. However, the 677CT/1298AC compound heterozygous genotype was found significantly more frequent in patients (55 (26.4%)) than in controls (42 (17.1%)) (OR=1.7; 95%CI=1.2-2.7; p=0.03). Both MTHFR polymorphisms were similarly distributed between JAK2V617F-positive and negative patients.

Conclusion: Our findings suggest a possible role of the 677CT/1298AC compound heterozygous genotype in the occurrence of BCR-ABL negative myeloproliferative neoplasms.

Key words: myeloproliferative neoplasms; methylene-tetrahydrofolate reductase; polymorphisms

THE EFFECT OF UNRIPE MAKOPA (SYZYGIUM SAMARANGENSE) FRUIT EXTRACT ON BLEEDING AND CLOTTING TIME

(Oral presentation)

Field of medicine: **Pharmacology**
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Country: **Philippines**
Faculty: **Faculty of Dentistry Centro Escolar University**

Introduction: Makopa fruit also known as Malay apple, is traditionally used for medicine in other countries however, its exact component and medicinal value is not yet known here in the Philippines. It is also said to be effective for treating different infections, such as sore throats, coughs, stomach pains and alleviating of swelling.

Aim: The aim of this study was to determine the effect of unripe Makopa fruit extract on bleeding time and clotting time.

Material and methodology: Sixty albino BALB/c male mice were chosen for conducting the experiment in which they received different concentration of the prepared extract orally. The result concluded from the experiment showed that all concentrations given to the subjects reduced the bleeding time and clotting time. However statistical test noted that there were no difference found between the pre-test and post-test intervention.

Results: The pre-treatment mean on bleeding time among 25% unripe Makopa fruit extract concentration was the highest and 75% extract was the lowest. Almost all of the mice treated with different unripe Makopa fruit extract had a relative reduction in bleeding time. However, there were no statistical difference between pre-and-post treatment of 100% (P=0.3221), 75% (P=0.2824), 50% (P=0.4172) and 25% (P=0.2347). All of the concentrations had reduced the clotting time on mice.

Conclusion: From the analysis and results we can conclude that the unripe Makopa fruit extract has a very little potential in reducing bleeding and clotting time

Key words: Makopa fruit, Bleeding time, Clotting Time

POSSIBLE INTERACTIONS OF METHADONE AND OTHER CONCOMITANTLY USED DRUGS IN OPIATE ADDICTS ON METHADONE MAINTENANCE TREATMENT

(Oral presentation)

Field of medicine: **Pharmacology**
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Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Methadone is a synthetic, long-acting opioid used for methadone maintenance treatment (MMT) in patients with heroin addiction. However, several factors, including methadone dosage, side effects, and methadone-drug interactions, can affect treatment compliance.

Aim: To identify side effects and potential interactions of methadone and other concomitantly used drugs in opiate addicts after one month of MMT.

Material and methodology: The study included opiate addicts who were reffered to MMT at the Department of Psychiatry, Clinical Center of Vojvodina, in 2012. They were interviewed about their socio-demographic status, characteristics of heroin misuse time, previous experiences with MMT and their health history. One month after the beginning of MMT patients were also asked about drugs used in combination with methadone, the current methadone dose and side effects they have experienced.

Results: The survey included 19, predominantly male (73.68%), opiate addicts with average age of 32.2 years. The average heroin misuse time was 12.11 years. Previous experiences with MMT had 21.05% of patients while 73.68% of them were hepatitis C positive. The average methadone dose was 45.26 mg. Most of the patients used 2 additional drugs in combination with methadone, where diazepam was the most frequent drug (in 84.21% of patients). The most commonly reported side effects were: increased sweating (68.42%), constipation (63.16%) and itching (57.89%).

Conclusion: Although none of the patients reported serious side effects during the first month of MMT, practitioners should be aware of possible interactions between methadone and other concomitantly used drugs.

Key words: methadone maintenance treatment (MMT), benzodiazepines, interactions, side effects

THE INFLUENCE OF LOW THERAPEUTIC DOSES OF METHADONE ON DURATION OF CORRECTED QT INTERVAL IN OPIATE ADDICTS DURING THE FIRST MONTH OF METHADONE MAINTENANCE TREATMENT - PILOT STUDY

(Oral presentation)

Field of medicine: **Pharmacology**
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Co-author(s): **Kristina Bjelica**
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Faculty: **Faculty of Medicine Novi Sad**

Introduction: Methadone is a synthetic opioid used for methadone maintenance treatment (MMT) in patients with heroin addiction. However, at therapeutic levels methadone may be related to QT prolongation on the electrocardiogram (ECG), which might trigger *torsades de pointes.*

Aim: To investigate the influence of low doses of methadone on the duration of corrected QT interval (QTc) and to detect risk factors which can contribute to QTc prolongation in opiate addicts during the first month of MMT.

Material and methodology: The study included opiate addicts who were reffered to the MMT at the Department of Psychiatry, Clinical Center of Vojvodina, in 2012. Before the beginning of investigation, data about risk factors for the development of QTc prolongation were collected from each patient. Before the methadone intake for the first time and one month after the beginning of MMT, all the patients underwent ECG. Data about applied methadone dose and the use of other drugs were collected from the medical history of each patient.

Results: A total of 19 patients were enrolled in our study. Data about risk factors were negative. In 73.68% of patients QTc prolongation after one month of MMT was observed in comparison to QTc values before the beginning of investigation. Mean dose of methadone was 45.26 (±15,41) mg. Dose-dependent correlation between methadone doses and QTc prolongation was not statisticaly significant. A vast number of patients (57.89%) used other drugs which can interact with methadone.

Conclusion: Low doses of methadone, especially in combination with other drugs which influence on QTc and/or methadone metabolism, can provoke QTc prolongation.

Key words: methadone maintenance treatment; corrected QT interval; torsades de pointes; risk factors; interactions

INFLUENCE OF PHARMACOLOGICAL EDUCATION ON AWARENESS OF THE RISK OF USE OF ANTIBIOTICS

(Poster presentation

Field of medicine: **Pharmacology**
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Faculty: **Faculty of Pharmacy Podgorica**

Introduction: The assessment of the risk of use of antibiotics is important factor in pharmacoepidemiology and drug safety monitoring system.

Aim: The aim was to evaluate awareness and attitude of medical students (Medicine and Pharmacy School) and non-medical students (students from other non – medical faculties at the University of Montenegro) about the use of antibiotics, corresponding adverse drug reactions and risks, so that health care workers can influence their awareness.

Material and methodology: Anonymous questionnaire of closed type was delivered to non-medical and medical students (before and after passed pharmacology course).

Results: Testing was carried out on 100 subjects from medical and non-medical faculties (50:50). Average annual use of antibiotics significantly varies among students. Those who passed pharmacology exam use it less than twice a year (100%), while among those who did not pass it, this percentage is lower and equals 76.19%. As much as 23.8% use it 3-6 times a year, comparing to 41.6% of non-medical students. 10% of non-medical students use it more than 7 times per year. Students that passed pharmacology exam do not use antibiotics preventively at all (100%), unlike other students (57.6%). Understanding of adverse drug reactions among students who passed pharmacology exam is extremely high (92.29%), unlike others (9.89%). As source of information about antibiotics, medical students use lectures, textbooks, exercises, while non-medical students use media, advices of relatives etc.

Conclusion: Additional educational efforts are necessary to build awareness among general population of risks of usage of antibiotics.

Key words: antibiotics, drug monitoring.

DELAYED ANTIARRHYTHMIC EFFECT OF SODIUM NITRITE ON ISCHAEMIA/REPERFUSION INDUCED VENTRICULAR ARRHYTHMIAS IN ANAESTHETIZED DOGS

(Poster presentation)

Field of medicine: **Pharmacology**
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Faculty: **Faculty Of Medicine Szeged**

Introduction: We have evidence that administration of sodium nitrite (NaNO2) markedly reduces ventricular arrhythmias resulting from coronary artery occlusion and reperfusion in anaesthetized dogs. However, it is unknown, whether NaNO2 would also result in delayed protection.

Aim: Thus the present study examined the effects of NaNO2 infusion on occlusion and reperfusion-induced ventricular arrhythmias 24h later. We also examined whether induction of iNOS plays a role in this effect.

Material and methodology: Three groups of chloralose-urethane anaesthetized dogs were used. Dogs were treated with either saline (control; n=9) or NaNO2 (n=18; 0.2 μmol/kg/min, iv. over 20 min). Nine out of the NaNO2 treated dogs, aminoethyl-isothiourea (AEST; 2 mg/kg) was given in bolus injection 5 min before the administration of NaNO2. 24h later, myocardial ischemia was induced by a 25 min occlusion of the left anterior descending coronary artery, followed by reperfusion. Severities of ischaemia and arrhythmias (ES, VT, VF) were determined during the experiments.

Results: Compared with the controls, NaNO2 significantly reduced the severity of arrhythmias (ES: 472±105 vs 47±15; VT: 17.1±6.1 vs 0.2±0.1; VT%: 93% vs 22%; VF%: 27% vs 0%) during occlusion and increased survival (S: 0% vs 33%) on reperfusion. This effect was attenuated by the administration of AEST (ES: 170 ± 43; VT: 3.7 ± 1.1; VT%: 67%; VF% occlusion: 11%; S%: 11%).

Conclusion: These results indicate that NaNO2 given 24h prior to occlusion induces marked protection against arrhythmias. This effect is, partially, mediated through the induction of iNOS enzyme.

Key words: arrhythmias, ischaemia/reperfusion, sodium nitrite

USE OF DIETARY SUPPLEMENTS AND STEROIDS IN FITNESS CENTERS IN BANJA LUKA

(Oral presentation)

Field of medicine: **Pharmacology**
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Faculty: **Faculty Of Medicine Banja Luka**

Introduction: According to some studies, a high number of athletes and amateurs use dietary supplements.

Aim: The aim of this study is to determine what is the frequency of use of dietary supplements and illegal substances in fitness centers.

Material and methodology: We surveyed 100 customers in 11 fitness centers in Banja Luka, Bosnia and Herzegovina.

Results: 80% of the respondents were male and 20% female. 43% percent of the respondents are active athletes, and 57% are amateurs. The majority of respondents visited a fitness center three times a week (40%). For the majority of respondents aim of visiting the gym is gaining fitness (44%). 27% of respondents use proteins, then vitamins (25%) and amino acids (11%). Dietary supplements were used by 24% of respondents on own initiative, at the recommendation of doctors 2%, and 21% at recommendation of trainers. 32% of respondents used dietary supplements before and after each workout. 17% of respondents use anabolics, other steroids 7% and 5% use medications. Dietary supplements and drugs used by respondents are bought in pharmacies (18%), in markets (9%), the gym (8%) and from abroad through unauthorized persons (12%).

Conclusion: A large number of athletes and amateurs use dietary supplements and drugs with no clear indications and recommendations of health professionals. It is necessary to educate athletes and users of fitness centers about the health risks, side effects and contraindications of dietary supplements, especially steroids.

Key words: dietary supplements, drugs, illegal substances, fitness centers, sport

ANTIMELANOMA ACTION OF CYCLOHEXYL-FUNCTIONALIZED ETHYLENDIAMINE DIPROPANOIC ACID ETHYL-ESTER, IN VITRO AND IN VIVO

(Oral presentation)

Field of medicine: **Biochemistry**
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Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: Melanoma skin cancer incidence is one of the fastest growing among Caucasians in Europe. Although diagnosis and treatment of the diseased have been improved in last decades, high metastatic potential, resistance and toxicity of conventional drugs, has increased interest for discovering of novel compounds with antimelanoma effect.

Aim: To investigate in vitro and in vivo antimelanoma action of recently synthesized cyclohexyl-functionalized ethylendiamine dipropanoic acid ethyl-ester (Comp.3).

Material and methodology: B16 (mouse melanoma) cell viability was determined using sulphorhodamine B assay. Flow cytometric analysis was used for cell cycle (PI), oxidative stress (DHR), and caspase activity (ApoStat) examination. In vivo experiments were performed on C57 black mice administrated with B16 cells subcutaneously. One week after cell inoculation tumors were observed in both groups: experimental (than treated with Comp.3) and control (then treated with Comp.3 solvent-DMSO). On the 21. day of experiment animals were anesthetized and sacrificed by cervical dislocation, followed by isolation and measurement of tumors.

Results: Cell viability testing showed significant cytotoxic action of Comp.3 (24h IC50=20.15±2.48 μM). Flow cytometric analyses revealed presence of oxidative stress accompanied by the increase in cells (%) with hypoploid content and caspase activation, which further suggested involvement of apoptosis in in vitro antimelanoma action of Comp.3. Animals treated with Comp.3 had smaller tumors ($p<0.05$), in comparison to the control ones confirming good in vivo antimelanoma potential of Comp.3.

Conclusion: Our results indicate good in vitro and in vivo antimelanoma effect of Comp.3.

Key words: antimelanoma action, ethyl-ester , in vitro, in vivo

POTENTIAL OF VOJVODINA IN MEDICAL PLANTS

(Oral presentation)

Field of medicine: **Pharmacy**
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Country: **Serbia**
Faculty: **Faculty of Medicine Novi Sad**

Introduction: Vojvodina, as a region with notable diversity in medical plants, still doesn't have the tradition of collecting them, like other parts of Serbia, but only cultivation. Changes in demographical structure, public health care and positive attitude towards healthy living are starting to attract bigger number of people to use natural products, therefore they should increase awareness of the unused natural resources that Vojvodina has.

Aim: The aim was to provide insight to the medicinal flora, based on literature and herbarium data on the territory of Vojvodina, which could be an important resource for the pharmaceutical industry, and to show their importance and wide range of potential use in modern phytotherapy.

Material and methodology: From the basic list of medicinal flora that includes medicinal plants described in individual monographs (Kovačević, 2002), the plants described for use in traditional medicines (Sarić, 1989; Tucakov, 1996) and plants accepted by conventional medicine (Eu. Ph. 6, 2007) were selected plants present in a territory of Vojvodina Province and thus for the first time created a complete list of medicinal flora.

Results: Analyses of the medicinal flora of Vojvodina recorded 404 plant species classified in 82 families. Among the most represented families are Asteraceae, Lamiaceae, Rosaceae, Apiaceae, Brassicaceae i Fabaceae.

Conclusion: From the data obtained, it is easy to conclude that Vojvodina is one of the regions which has all the necessary characteristics to be a leader in terms of amount of the collection, and that potential should be used.

Key words: Medicinal flora of Vojvodina, collecting plants, cultivation, phytotherapy

ASPARTAME AND NA- GLUTAMATE

(Oral presentation)

Field of medicine: **Pharmacy**
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Faculty: **Medical Faculty Banja Luka**

Introduction: Aspartame is artifical sweetener, which is used as additive to different types of foods and drink. Function: This artifical sweetener provides sense of sweetnes of food and drinks to individuals which for different reasons can not use shugar (diabetis sicknes etc.). Natrium glutamate or MSG is food additive, recognized of American FDA and EU as good taste amlifier. Role – taste amplifier.

Aim: 1. Estimate of intake of asparthame and MSG by consuming of food and diet products, risk analisys 2. Analisys of validity of declarations on food products with accent on presence of aspartame and natrium glutamate.

Material and methodology: Research is conducted by taking weekly log of food intake for 10 persons. Also health risk analysis has being made according to subject weight, ADI and MAC. 158 declaratons of diffrenet products has being examined.

Results: None of participants has overintake of aspartame and, so no health risk has being detected.

Conclusion: 1) By monitoring of intake of aspartame and MSG through intake of food and drinks for individuals research showed that maximum daily and weekly allowances for intake of these additives are not exceeded, and that there is no health risk, even under assumption of maximum dailly inteake of additives. 2) Regarding product declarations, manufacturers are mainly stateing name of these substances or numerical denomination, but never concentration of additives, which is allowd by law.

Key words: aspartame , MSG, ADI, MAC

BIOCHEMICAL CHARACTERIZATION OF EXTRACTS OF ACHILLEA CLYPEOLATA (ASTERACEAE)

(Oral presentation)

Field of medicine: **Pharmacy**
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Faculty: **Medical Faculty Novi Sad**

Introduction: Yarrow (Achillea millefolium s.l. Asteraceae) is widely used in traditional and official medicine as antiphlogistic, spasmolytic, stomachic, carminative and holagog, and shows antimicrobial and antioxidant activity. However, some other outlaw herbs, especially the ones with yellow colored blossoms as Achillea clypeolata (sect. Filipendulinae, Asteraceae), an endemic species of the Balkan Peninsula are used in the traditional medicine.

Aim: The aim of this study was to determine whether extracts of herb of Achillea clypeolata originating from two different localities have the same, or at least approximately the same content of active constituents and exhibit similar antioxidant potential determined in different test systems.

Material and methodology: Two extracts of A. clypeolata collected at the flowering stage are prepared from plant material originating from Mt Bistra and Mt Nidze in the FYR of Macedonia in July 2012 at a starting concentration of 10%. The extracts were preliminarily characterized by the determination of total phenolics and flavonoids. Antioxidant activity in vitro was determined by neutralization of the stable 2, 2-diphenyl-1-picrylhydrazyl (DPPH), as well as NO and OH radicals.

Results: Total content of phenolics and flavonoids is higher in the tested extract prepared from plant material originating from Mt Bistra. Also, the percentage of neutralization of free radicals examined in all three test systems is higher in the extract from Mt Bistra.

Conclusion: The extract obtained by A. clypeolata originating from Mt Bistra exhibited greater extent of neutralization of free radicals, which is in direct correlation with the content of total phenolics and flavonoids.

Key words: yarrow, phenolics, flavonoids, free radical scavenging activity.

QSAR STUDIES AND 3D-STRUCTURE DEVELOPMENT OF PI3K/MTOR KINASE INHIBITOR PHARMACOPHORES IN ANTINEOPLASTIC DRUG DEVELOPMENT

(Oral presentation)

Field of medicine: **Pharmacy**
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Introduction: PI3K/mTOR kinases belong to the PIKK (phosphatidylinositol-3-kinase-related kinase) family of kinases. PI3K/mTOR kinase signaling pathway plays an important role in cell growth, survival and proliferation regulation. A considerable homology in the structure of their active sites has been noticed as well as certain possibility for them to become potential target places for new antineoplastics.

Aim: Forming 3D-structures of the inhibitors of PI3K/mTOR kinases and starting with the development of new antineoplastics and improving the pharmacotherapy of malignant diseases.

Material and methodology: 120 structures of the inhibitors have been taken from the Chembl data base; MarvinSketch, ChemOffice package components and Gausian98W have been used for molecule preparation and Pentacle for model formation and analysis of the results.

Results: Calculated statistical parameters of the formed QSAR models indicated an accuracy that is found to be satisfactory in prediction of the PI3K/mTOR activity, using the formed QSAR(PI3K) and QSAR(mTOR) models. The structures have been divided into 3 subgroups due to their structural analogy and for the sake of more precise statistical processing of the formed models. Based on the 3D-pharmacophores of the PI3K/mTOR inhibitors, some structures in certain molecules have shown positive interactions: donor-acceptor of the hydrogen bond and electrostatic attraction interactions; while some structures in certain molecules have shown negative, mostly hydrophobic, interactions.

Conclusion: The examined molecules and the formed QSAR(PI3K) and QSAR(mTOR) models turned out to be a good foundation for the design of new molecules with a potentially stronger dual inhibitory effect on PI3K and mTOR enzymes.

Key words: antineoplastics, 3D-QSAR, PI3K/mTOR kinases, dual inhibitors

COSMETICS VS. DERMOCOSMETICS VS. COSMECEUTICS

(Poster presentation)

Field of medicine: **Pharmacy**
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Introduction: Cosmetics, dermocosmetics, cosmeceutics – what is the difference? Until 1984, there were two categories - cosmetics and dermocosmetics, when Dr. Albert Kligman introduced the new term - cosmeceutics.

Aim: To point out the differences between three categories.

Material and methodology: Data review presentation obtained from the professional literature.

Results: According to FDA cosmetics is intended to be applied to the human body without affecting the body's structure or function while dermocosmetic products prevent or treat skin diseases. Cosmeceutic products affect the structure and function of the skin, making them closer to dermocosmetic products. Cosmeceutic products contain more percentage of bioactive ingredients. Corneotherapy is the area where cosmeceuticals and dermocosmetics have maximum overlap. Emollients applied in corneotherapy are not classified as medicines and do not contain pharmacologically active substances, but may have the effect of medicines and then we classify them as dermocosmetics / cosmeceutics. Cosmetic and dermocosmetic products are equally defined in various countries while when it comes to the regulations of cosmeceuticals, there are different approaches in some of the largest commercial blocks. In the EU the cosmeceuticals are officially not the separate category, but are considered a subclass of cosmetics. In the USA, FDA has not officially accepted this category of products, but they are considered a subclass of medicines, and should be registered as OTC products, while in Japan there is a special category of "quasi-medicines".

Conclusion: Due to globalization, it is necessary to harmonize the regulations for cosmetic products in order to equally classify one product in different countries.

Key words: Cosmetics, cosmeceutics, dermocosmetics, regulations

THE CONTENT OF HEAVY METALS IN FOUR MEDICINAL PLANTS FROM THE GREEN MARKET

(Poster presentation)

Field of medicine: **Pharmacy**
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Supervisor(s): **Assist. Prof. Zorica Bulat; Prof. Vesna Matović; M.sc. Dijana Đurović**
Country: **Montenegro**
Faculty: **Faculty of Pharmacy Podgorica**

Introduction: Medicinal plants are widely used for the treatment of different diseases. The public opinion is that being natural products, medicinal plants are harmless and their use is not dangerous.

Aim: The aim of this study was to determine heavy metal concentrations (Cd, Pb, Zn, Cu, Mn and Ni) in 17 medicinal plants samples collected from three different green markets.

Material and methodology: Seven samples of Hypericum perforatum, three of Salvia officinalis, four of Achillea millefolium and three of Thymus serpyllum were collected from green markets in Berane, Bar and Podgorica. The samples were prepared by dry digestion and concentration of heavy metals was determined by ICP-OES.

Results: The highest Cd levels were observed in the samples of Hypericum perforatum collected in the fields of Mrkojević village (18,57 mg/kg) and Durmitor mountain (2,53 mg/kg) while in other samples concentration was in the range of 0,24-0,51 mg/kg. Only Achillea millefolium sample from Bobovo had Cd concentration higher than the one proposed by WHO (0,3 mg/kg). In all samples of Salvia officinalis (0,09-0,18 mg/kg) as well as of Thymus sepyllum (0,15-0,27 mg/kg) cadmium levels did not exceed 0,3 mg/kg. In all investigated samples values of lead varied from 0,41-3,48 mg/kg. Concentrations of Cu, Mn, Zn and Ni in all samples were below their maximum permissible concentration.

Conclusion: Prolonged intake of medical plant Hypericum perforatum, containing high levels of Cd, could increase risk for adverse health effects. Due to widely use of medicinal plants and their preparations further investigations are needed.

Key words: Cadmium, ICP-OES, medicinal plants, green market

CHELATING EFFECT OF MANGIFERA FOETIDA L. LEAF AQUEOUS EXTRACT IN SERUM OF THALASSEMIA PATIENT BY EX VIVO TEST

(Oral presentation)

Field of medicine: **Pharmacy**
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Faculty: **Faculty Of Medicine**

Introduction: The prevalence of thalassemia in Indonesia remains high, 3-5% to 10% for B-thalassemia and 2.6 to 11% for A-thalassemia. Reguler blood transfusion cause uncomfortable consequence to patients. Therefore, Deferoxamine is widely used as a chelating agent but its quite expensive price and some uncomfortable side effects resulting in low patient compliance and high possibility of therapy failure. Mangiferin which was extracted from Mangifera indica L. stem has shown an iron chelating effect. Leaf of Mangifera foetida L. contains high level of mangiferin compared to the other cultivars.

Aim: The purpose of this study was to utilize natural substance as an alternative therapy.

Material and methodology: This study was an experimental study using 7 serums of patient with thalassemia from Cipto Mangunkusumo Hospital (serum equivalent to 200 μM ferritin).The experimental groups were serum (negative control), 100 mcg mangiferin, 200 mcg deferoxamine, and aqueous extract of Mangifera foetida L. leaf 0.375 and 1.175 mg dose. The experiments were conducted in a standard medium and citrate. Serum reaction and treatment was measured using spectrophotometer and analyzed by One-Way ANOVA, p=0.05.

Results: Aqueous extract of Mangifera foetida L. leaf 0.375 and 1.125 mg dose have shown an iron chelating effect when compared to negative control (p=0.001). A higher chelating effect was shown by Aqueous extract of Mangifera foetida L. leaf 1.125 mg dose (p=0,193) than 0.375 mg dose (p=0.07).

Conclusion: It has been proved that extract has chelating effect on serum, which 1.125 mg dose has similar chelating effect to mangiferin 100 mcg.

Key words: Mangifera foetida L, chelating effect, thalassemia

TESTING THE IMPACT OF MODIFIED REFORMATSKY REACTION ON THE SYNTHESIS OF 3,3-BIS-(4-CHLOROPHENYL)-3-HYDROXYPROPIONIC ACID

(Oral presentation)

Field of medicine: **Pharmacy**
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Introduction: Inflammation is a unspecific defense reaction of the organism. It is caused by mediators and prostaglandines are the most notable ones. Prostaglandins are created from arachidonic acid that is derived enzymatically from cyclooxygenase. In silico studies showed that 3,3-bis-(4-chlorophenyl)-3-hydroxypropionic acid inhibits cyclooxygenase, thus it is expected that this compound has an anti-inflammatory effect.

Aim: Work aim is assessment of Reformatsky reaction modification impact on the yield and purity of 3,3-bis-(4-chlorophenyl)-3-hydroxypropionic acid.

Material and methodology: 3,3-bis-(4-chlorophenyl)-3-hydroxypropionic acid is synthesized in two ways. The first represents classical Reformatsky reaction, where ethyl-ester reacted with bromoacetate and ketone in the presence of Zn and THF at temperature of 65-69˚ C. The other represents modified Reformatsky reaction where α-bromo-ethanoic acid and ethyl-vinyl-ether synthesize ester, which is dripped in solution of ketones in THF with Zn, at temperature of 65-69˚ C. In both cases acid hydrolysis of the products is carried out, and purity was examined by HPLC method.

Results: The yield of the reaction was 30% (first method) and 55% (second method). Purity of the product was 44.6% (first method) and 95.9% (second method). The structure of obtained compounds is characterized by LC/MS and IR spectroscopy.

Conclusion: It is concluded that the optimal synthetic route to obtain 3,3-bis-(4-chlorophenyl)-3-hydroxypropionic acid is modified Reformatsky reaction. In this way a higher yield of the products are obtained and a higher level of purity. As anti-inflammatory effects of the synthesized compound are expected, it is necessary to make researches in vivo.

Key words: 3,3-bis-(4-chlorophenyl)-3-hydroxypropionic acid, Reformatsky reaction, yield, purity

NEW TECHNOLOGIES IN ADMINISTRATION OF CEFUROXIME SODIUM

(Oral presentation)

Field of medicine: **Pharmacy**
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Co-author(s): **Nikola Stojanović**
Supervisor(s): **Prof. Dr Mirjana Antunović**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction: Endophthalmitis is the most difficult complication of ophthalmic surgery. The results of ESCRS (European Society of Catharacte and Refractive Surgery) study have shown a statistically significant decrease of endophthalmitis incidence after surgery if intraocular injections of cefuroxime sodium as active component had been used.

Aim: The aim of this research was to determine the conditions of preparation of cefuroxime sodium intraocular injections, pH value and content of the active compound immediately, 24h and 48h after preparation, as well as determining the role of hospital pharmacists in preparation and examination of these injections.

Material and methodology: Dry suspension of cefuroxime sodium is resuspended under aseptic conditions in a sterile 9g/l sodium chloride solution. With addition of sodium hydroxide, pH value is set to approximately 7,4. After dosing and homogenization, the solution is sterilized by filtration through a bacterial filter into a sterile glass packaging. The made preparation is signed according to regulation. We examined the content of cefuroxime sodium in the solution (HPLC method) as well as the pH value (pH-meter) during the recommended use period of 48 hours.

Results: Cefuroxime sodium content in examined samples corresponds to the regulation and the pH value is near 7,4 which is optimal for intraocular use.

Conclusion: We concluded that it is possible to prepare cefuroxime sodium injections for intraocular use of the appropriate quality in hospital pharmacies. Since water solutions of this compound do not exist as „ready to use" preparations, but call for ex tempore making, the role of hospital pharmacist is crucial.

Key words: Cefuroxime-sodium, intraocular injections, endophthalmitis

EVIDENCE OF PREMATURE ACTIVATION OF CATIONIC PANCREATIC PROTEASES UPON LONG-TERM HYPOCHLORHYDRIA IN RATS

(Poster presentation)

Field of medicine: **Biochemistry**
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Co-author(s): **Borodina T.V.**
Supervisor(s): **PhD Dvorshchenko K.O., Professor Ostapchenko L.I.**
Country: **Ukraine**
Faculty: **ESC "Institute Of Biology"**

Introduction: Long-term hypochlorhydria (LTH) is associated with dysbiosis development that leads to colonization of GIT by opportunistic microbiota, favouring inflammatory processes both in GIT and associated organs, including pancreas. Premature activation of pancreatic proteases (PP) and gland self-digestion are potential consequences. Levels of different PP in pancreatic tissue, juice, serum, urine and feces indicate the rate of these processes.

Aim: The aim of study was to assess the activity of different PP and level of α-1-antitrypsin (A1AT) in pancreatic tissue and juice, blood serum, urine and feces upon LTH.

Material and methodology: The study was performed with white non-strain male rats. LTH was induced by 28-day long abdominal injection of omeprazole. Control animals were treated with water. Serum A1AT level and urine anionic trypsin-2 were determined by immunoturbidimetric and immunochromatographic assays, respectively. Trypsin activity were measured in blood serum and pancreatic tissue with BAEE-assay. Fecal and pancreatic juice proteolytic profiles were assessed with contact zymography.

Results: The 2,9-time elevation of serum A1AT (trypsin and elastase inhibitor) level was observed; however, serum trypsin activity, as well as anionic trypsin-2 level weren't changed upon LTH. Low cationic (but not anionic) trypsin activity (1,6-times higher than control) were found in pancreatic tissue upon LTH. Enzymography of faecal and juice samples showed increased activity of cationic proteases, which were identified as cationic elastases-1/2 and trypsin-3 starting from 21st day of hypochlorhydria.

Conclusion: Thus, there is evidence of premature activation of cationic (but not anionic) elastase and trypsin isoforms upon hypochlorhydria. Results are specific to a particular pathology.

Key words: hypochlorhydria, elastase, trypsin, pancreatitis

EXPRESSION OF NADPH OXIDASE MEMBRANE-BOUND AND CYTOSOLIC SUBUNITS IN THE BRAINS OF GERBILS TREATED SUBACUTE WITH ALUMINUM CHLORIDE

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **NEBOJŠA PRIJOVIĆ**
Co-author(s): **Mikan Lazović, Zlatko Pravdić**
Supervisor(s): **Prof. Nataša Petronijević, Gordana Jevtić**
Country: **Serbia**
Faculty: **School Of Medicine Belgrade**

Introduction: Aluminum (Al) is considered as a cofactor in the pathogenesis of Alzheimer's disease (AD). Molecular mechanisms of its action are unknown. It has been shown that Al induces oxidative stress. Enzyme NADPH oxidase (NOX) produces free radicals and exists in almost every cell in the body. The correlation between this enzyme and cognitive deficit in AD patients has been shown.

Aim: The goal of our study was to determine the effects of subacute peroral administration of Al on the expression of cytosolic and membrane-bound subunits in the gerbil brain.

Material and methodology: In our study we used gerbils. One group of animals was treated with AlCl3 in dose LD10 (0,74 g/kg body weight) and the other with NaCl for three weeks by gavage. Expression of cytosolic subunits (p67phox i p47phox) and membrane-bound subunit (p22phox) was determent via Western blot.

Results: The results of our research have shown increased expression of p67phox in the cortex and decrease in the hippocampus of gerbils treated with aluminium. Expressions of other subunits were unchanged both in the cortex and the hippocampus of the gerbil brain treated with aluminum compared to control.

Conclusion: Based on our results we may conclude that Al produces changes similar to those seen in the patients suffering from AD.

Key words: Alzheimer's disease, NADPH oxidase, p67phox, p47phox, p22phox

THE ROLE OF INSULINE – DEPENDENT SIGNAL PATHWAY IN MODULATION OF NEUROTOXIC EFFECTS OF ALPHA-SYNUCLEIN IN VITRO

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **SASENKA VIDICEVIC**
Co-author(s): **Ratko Radeta**
Supervisor(s): **Dr Marija Dulovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: The pathological hallmark of Parkinson's disease is the accumulation of alpha-synuclein (ASYN) in neurons. PI3K/Akt signalling pathway prevents cell death in affected neurons. Insulin receptor activation, which leads to activation of Akt signalling patway, plays an important role in CNS.

Aim: The aim was to investigate the role of insulin-mediated activation of Akt signalling pathway in neuronal damage caused by ASYN overexpression.

Material and methodology: All experiments were conducted in all-trans retinoic acid differentiated SH-SY5Y cells, conditionally expressing wild type ASYN (a-syn-), and the control cells (b-gal). Production of ASYN and activation of Akt (pAkt) were monitored using immunoblotting. The cell viability was assessed using Trypan Blue and crystal violet assays.

Results: The crystal violet assay demonstrated significant reduction of cell number in time-dependent manner in both differentiating a-syn- cells, as well as in control cells (b-gal). Differentiating a-syn- cells showed significant increase in number of dead cells. In contrast to a decrease in Akt activation in differentiating a-syn- cells, Immunoblot analysis showed time-dependent increase in pAkt in b-gal cells. After insulin treatment, immunoblot analysis showed increase in pAkt in differentiated, as well as in undifferentiated a-syn- cells. Cell viability analysis revealed significant increase in viability after insulin treatment in differentiated a-syn- cells (34,4%, 81,3%, respectively).

Conclusion: It could be concluded that ASYN overproduction induces cell death in differentiated SH-SY5Y cells. ASYN prevents the cytoprotective activation of Akt signalling pathway, possibly playing a role in ASYN-induced neurotoxicity. Insulin leads to an increase in Akt activation, contributed to better cell survival.

Key words: alpha-synuclein, Akt, insulin

NOVEL RUTHENIUM (II) COMPLEX EXERTS ANTI-TUMOR ACTIVITY AGAINST HUMAN LEUKAEMIC CELLS IN VITRO

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **PETAR RAŠIĆ**
Supervisor(s): **Prof. Dr Ivanka Marković**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: Important efforts are put into development of the potential cytostatic agents against various types of leukaemia.

Aim: To investigate the anti-tumor potential of novel Ru(II) complex on HL-60 cell line and peripheral blood mononuclear cells (PBMC) isolated from blood of leukaemic patients and healthy volunteers

Material and methodology: Cell viability was determined using acid phosphatase assay. The cell cycle analysis was performed by flow cytometry, following propidium-iodide staining.

Results: Cell viability showed that novel ruthenium complex displays high cytotoxic activity following 24-hour treatment. The IC50 values, i.e. concentration of ruthenium complex that decreased cell number to 50% compared to untreated cells, for HL-60 cell line and patients' PBMC were 2.13±0.32μM and 3.75±0.7μM, respectively, whereas IC50 value obtained for PBMC of healthy volunteers was 11.63±1.17μM. DNA fragmentation analysis revealed that treatment with Ru(II) complex in concentration of 5μM resulted in statistically significant increase in percentage of cells in subG0 phase to 45.18% for chronic myeloid leukemia cells, compared to 14.03% for untreated cells ($p<0.05$). Similarly, 24-hour treatment induced DNA fragmentation in HL-60 cell line (70.76% of cells with fragmented DNA, compared to 6.20% in untreated cells) ($p<0.05$), whereas PBMC of the healthy volunteers were less sensitive to this compound (12.54% of cells with fragmented DNA, compared to 1.36% for corresponding untreated cells).

Conclusion: Novel Ru(II) complex displayed potent and fairly selective antitumor action against patients' PBMC and HL-60 cell line. The observed anti-tumor effect seems to be, at least in part, mediated by the apoptotic mechanism.

Key words: Ru(II) complex, leukemia, HL - 60, cytotoxicity, apoptosis

THE ROLE OF PI3K/AKT SIGNALLING PATHWAY IN PARKINSON'S DISEASE, IN VITRO

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **RATKO RADETA**
Co-author(s): **Sasenka Vidicevic**
Supervisor(s): **Marija Dulovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: α-synuclein (ASYN) is regarded as essential in Parkinson's disease pathogenesis. Deregulation of PI3K/Akt signalling pathway is observed in neurodegenerative diseases including Parkinson's disease.

Aim: Investigation of PI3K/Akt signalling pathway modulation in neuronal damage caused by ASYN over-expression.

Material and methodology: All experiments were conducted in all-trans retinoic acid differentiated SH-SY5Y cells, conditionally expressing wild type ASYN (a-syn-), and the control cells (b-gal). Production of ASYN and activation of Akt (pAkt) were monitored using immunoblotting. The cell viability was assessed using crystal violet assay, and the signs of cell death were monitored using TEM.

Results: The crystal violet assay demonstrated significant reduction of cell number after 6 days of differentiation in both ASYN over-expressing cells (α-syn-), as well as in the differentiating control cells (β-gal). However, in the differentiating a-syn- cells, the cell number was significantly lower. Consistent with the cell viability analysis, the cell death was confirmed in a-syn- cells by ultrastructural TEM analysis. The pro-survival kinase Akt was activated in differentiating b-gal cells, while a decrease in pAkt was observed in differentiating α-syn- cells. Inhibition of Akt with DEBC or LY294002 markedly increased cell death in differentiating b-gal cells. Immunoblot analysis confirmed decrease in pAkt in differentiating b-gal cells.

Conclusion: It could be concluded that the ASYN over-production induces cell death in the differentiated SH-SY5Y cells. ASYN over-expression in differentiated SH-SY5Y cells prevented the cytoprotective activation of Akt signalling pathway, suggesting that modulation of Akt activity may be promising therapeutic strategy in Parkinson's disease.

Key words: Parkinson's disease, α-synuclein, neurotoxicity, Akt

TESTING THE INFLUENCE OF THE EXTRACTS OF BLACKBERRY (RUBUS FRUCTUOSUS) ON BIOCHEMICAL PARAMETERS OF LIVER FUNCTION

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **MILOS MIROVIC**
Supervisor(s): **Doc. Dr Tatjana Ćebović**
Country: **Serbia**
Faculty: **Faculty Od Medicine Novi Sad**

Introduction: Blackberry is an excellent source of natural antioxidants, possess high antioxidant capacity and is able to reduce the risk of cancer.

Aim: The aim of this study was to examine the impact of Rubus fruticosus extract on biochemical parameters of liver function (bilirubin, alanine and aspartate aminotransferase, total protein, hydroxyproline and hepatic DNA) in order to assess the possible existence of an antioxidant and hepatoprotective effect of the tested extracts.

Material and methodology: The experiment included 24 individuals Sprague Dawley rats (4 groups of 6 rats), which received an intraperitoneal aqueous extract of blackberry, or physiological solution. CTRL group - the control group, the animals that received physiological solution. Group CTRL + CCl4 - negative controls, animals that received physiological solution in addition to the solvent carbon tetrachloride (CCl4). Groups EXTRACT - animals treated with tested aqueous extract of blackberry. Groups EXTRACT + CCl4 - treated animals tested aqueous extract and CCl4 solution.

Results: Blackberry extract did not affect the change of parameters in comparison to the control group. Addition of CCl4 significantly changed the investigated parameters, which showed hepatotoxic effects. Pretreatment with the blackberry extract at higher doses failed to reverse the effect of CCl4, returning values of the investigated parameters on the level of the control group, thus showing a significant hepatoprotective effect.

Conclusion: On the basis of results displayed and discussed next, it can be concluded that the tested extract of blackberry, in the vivo showed hepatoprotective and antioxidant effects and potential.

Key words: Blackberry, liver, hepatoprotective effect, antioxidant capacity.

PLENARY SESSION III

DENTISTRY,INFECTIOUS DISEASES,MICROBIOLOGY, EPIDEMIOLOGY

Date: July 19th 2013

ORAL PRESENTATIONS
Start time: 8:30 AM
Amphitheatre 2 - Faculty of Medicine Novi Sad

POSTER PRESENTATIONS
Start time: 10:00 AM
Main Hall at Faculty of Medicine Novi Sad

TESTING FUNCTIONALITY OF CUSTOM-MADE MOUTHGUARDS IN YOUNG ATHLETES

(Oral presentation)

Field of medicine: **Dentistry**
Author(s): **DJORDJE RADOVANOVIC**
Co-author(s): **Zorica Seslija**
Supervisor(s): **Prof. Dr Zoran R. Vulicevic, Dr Milos Beloica**
Country: **Serbia**
Faculty: **Faculty Of Dental Medicine Belgrade**

Introduction: Nowadays, mouth and teeth injuries have been highly prevalent in sports, especially contact sports. This is why engaging in sports activities without proper protection entails high risk of being injured. Custom-made mouthguards offer the best protection from injuries and present primary prevention.

Aim: The aim of this pilot study was to determine the awareness level of young athletes of orofacial injuries, as well as to rate the properties of custom-made mouthguards by method of questionnaire.

Material and methodology: This pilot study included 300 young athletes, aged 13 to 19, chosen from four Belgrade sport clubs. After having completed the questionnaire, dental examinations, and the evaluation of potential risk factors, 85 of them were chosen to have their mouthguard for protection . Check-ups were performed on 7th, 14th and 28th days of having used the mouthguards during games and trainings. At these check-ups, commodity, retention and potential discomfort were evaluated.

Results: The analysis of the data collected from the athletes resulted in a high percentage of positive reviews of custom-made mouthguards.

Conclusion: Based on the results of this pilot study, and the proven protection that mouthguards provide, it can be concluded that custom-made mouthguards should be an essential part of every athlete's equipment.

Key words: protection, mouth and teeth injuries, custom-made mouthguards

THE SUCCESS OF TREATMENT OF CHRONIC HEPATITIS C IN OPIATE ADDICTS IN CLINICAL CENTER OF VOJVODINA

(Oral presentation)

Field of medicine: **Infectious diseases**
Author(s): **MILICA ODAVIC**
Supervisor(s): **Doc. dr Tomislav Preveden**
Country: **Serbia**
Faculty: **Faculty of Medicine Novi Sad**

Introduction: Chronic hepatitis C (CHC) is a disease with a high prevalence in the population of intravenous drug users (IVDU). Serious clinical course of the disease, which can lead to cirrhosis of the liver with all its complications, has a large epidemiological and clinical significance.

Aim: To determine the success of antiviral treatment of CHC in injecting drug users of and to define indicators of successful treatment in this population.

Material and methodology: This retrospective study included 316 patients treated with standard therapy for CHC, pegylated interferon and ribavirin, in the Department of Infectious Diseases, Clinical Center of Vojvodina in Novi Sad in the period from January 2007. until December 2012. Patients were divided into groups of injecting drug users (n = 163) and a group of other modes of transmission of hepatitis C virus (HCV) (n = 153) and indicators of successful treatment in both groups were measured.

Results: A total 51.57% of the respondents belonged to the group of IVDU. The therapy has been successful in 87.15% of cases, while in the group of patients infected by other means success was achieved in only 53.47% of cases. The positive effect of therapy was associated with younger age, shorter duration of infection, low levels of fibrosis and a higher percentage of infected with HCV genotypes 2 and 3.

Conclusion: The population of IVDU can be effectively treated with the standard therapy for CHC even more successful than the population infected in some other way.

Key words: chronic hepatitis C, intravenous drug users, drug addicts, drugs, pegylated interferon, ribavirin, fibrosis, therapy.

HISTORY OF CHAGAS DISEASE

(Oral presentation)

Field of medicine: **Infectious Diseases**
Author(s): **MAÍRA MALVAR OLIVEIRA**
Country: **Brazil**
Faculty: **Faculdade de Ciências Médicas de Minas Gerais**

Introduction: Chagas disease is a zoonosis caused by a protozoan called Trypanosoma cruzi. It is endemic in Latin America. Underdevelopment, poverty and lack of political priority are crucial for their existence, emergence and re-emergence. The disease usually has two phases: acute and chronic.

Aim: The aim of this work is to show clinical, social and historical aspect of Chagas disease, which is a public health problem in Latin American countries, which unfortunately remains neglected and the leading cause of death among parasitic diseases. Furthermore, it is important to emphasize that it was discovered by a brilliant Brazilian, at the beginning of the twentieth century.

Material and methodology: For this work, we reviewed scientific articles published in reputable journals, searched in databases as SciELO, PubMed, Lilacs, Virtual Health Library, and further research in the areas pathology and parasitology's books.

Results: Chagas disease is still very prevalent today. It is estimated a total of 16 to 18 million individuals infected with T. cruzi in Latin America.

Conclusion: Chagas disease is a preventable disease, and the governments of endemic countries should invest in public policies that would improve the living conditions of populations at high risk of contracting it, such as investing in infrastructure of their homes.

Key words: Chagas disease, history of Chagas disease, Carlos Chagas, Oswaldo Cruz

RABIES THE CLINIC FOR INFECTIOUS DISEASES IN SKOPJE FROM 2007 TO 2011

(Poster presentation)

Field of medicine: **Infectious diseases**
Author(s): **STOJANOVSKI ANGJEL**
Co-author(s): **B. Panova, N. Panov,G. Sumanov, G. Panova, V. Nikolova, L. Nikolovska**
Supervisor(s): **Prof. D-r Gordana Panova, Prof. D-r G. Sumanov**
Country: **Macedonia**
Faculty: **General Medicine Stip**

Introduction: Rabies is an acute infectious disease of viral etiology, and belongs to a group of agents. The virus attacks the nerve cells. The disease is manifested by anxiety and muscle spasms, and paralysis due to the breathing center comes to death.

Aim: To display the total number of persons treated at the Clinic for Infectious Diseases, injured by a dog bite or cat, for the period of 2007-2011, To analyze injured persons by age, sex and residential areas.

Material and methodology: Used a descriptive epidemiological method with statistical data processing. Used in data from the Clinic for Infectious Diseases in Skopje for the period 2007-2011. In this clinic to all injured persons bitten by a dog or cat opens history of disease, as well as other inpatients.

Results: The total number of persons treated at the Clinic for Infectious Diseases that have been bitten by a dog in the period 2007-2011 totaled 749, and the cat had been bitten 78 people. Most of the injuries from dog bites man is a total of 439 bites, and most of the injured cat bites are women (38). In all assisted persons in the period of 2007-2011, which had been injured by a dog bite or cat is made adequate immunoprophylaxis against rabies and tetanus.

Conclusion: Most important in the prevention and eradication of rabies vaccination is mandatory domestic animals (dogs, cats) because they are the main source of infection for humans.

Key words: rabies, cat, dog

EFFECTS OF PROPOLIS ON LACTOBACILLUS ACIDOPHILUS

(Poster presentation)

Field of medicine: **Microbiology**
Author(s): **STEFAN KNEZEVIC**
Supervisor(s): **Prof.Dr. Desanka Cenić-Milošević, Dr. Zoran Tambur**
Country: **Serbia**
Faculty: **Faculty of Dentistry Pancevo**

Introduction: Propolis is used worldwide for its potential therapeutic effects.

Aim: The aim of this study was to determine which propolis solution had the most antimicrobial activity on Lactobacilus acidophilus.

Material and methodology: Antibacterial activity of propolis extracted by various solvents: ether, acetone, benzene, and methyl-chloride was investihated on culture of Lactobacillus acidophilus ATCC 4356 procured from Becton Dickinson, USA.The chosen microorganism was first multiplied by growing overnight at 37°C in Mueller-Hinton Broth at pH=7.4. Antimicrobial activity of propolis extrats was determined by the dilution method. Four dilutions (100, 50, 12,5 and 6,3 µg/ml) of propolis extracts were mixed whit deMan-Rogosa-Sharpe (MRS) agar and put into Petri dishes in a 4 mm layer. The tested bacteria was inoculated at about 10^6 bacteria/cm^3. The Petri dishes containing anaerobic inoculates were put into anaerobic pots and incubated at 37°C for 24h. Results are shown as a minimum inhibitory concentration (MIC). All samples were tested in triplicates.

Results: Because the minimum inhibitory concentration (MIC) for all propolis extracts, excapte propolis extracted by aceton was low, i.e. 12,5 µg/ml; while minimum inhibitory concentration MIC for propolis extracted by aceton was very low, i.e. 6,3 µg/ml In order to test the effects of solvents themselves on micro-organism, solvents in concentration ranging from 60 to 96 precentage were used instead of propolis extracts. They had not any effect on micro-organisms.

Conclusion: Propolis demonstrated antibacterial activity on Lactobacillus acidophilus when extracted by ether, acetone, benzene or methyl-chloride. The obtained results are very interesting.

Key words: Propolis, antibacterial effects, solvents, Lactobacillus acidophilus.

DISTRIBUTION OF INFLUENZA VIRUS INFECTIONS DURING 2011/2012. IN POPULATION OF SOUTH BAČKA DISTRICT

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **ANA-MARIJA VEJNOVIC**
Supervisor(s): **Prof. Dr. Vesna Milošević**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Influenza is the most frequent disease nowadays. Carriers of infections are influenza A and B in people. Early detection of virus using PCR technique and ELISA serologic test enables an appropriate therapy.

Aim: To examine the distribution of influenza A and B virus infections during 2011 and until November 2012 in population of South Bačka district.

Material and methodology: In the period from January 2011 until November 2012, 620 serum samples from different age groups were analyzed to influenza A and 590 to influenza B. In order to detect specific IgM, IgA, and IgG antibodies to influenza A and B, the collected samples were tested by ELISA test. Specific sets of primers and probes for real-time RT PCR were used for the detection and subtyping of influenza A in 88 patients during the winter season 2011. Data were statistically analyzed by χ2-test and graphically presented.

Results: Acute influenza A infection was detected in 140/620 patients, and influenza B virus was found in 101/590 patients. Seroprevalence of influenza A was 30.16%, and for influenza B 35.25%. The majority of patients were 50 years old and peak representation of both viruses was in March 2011 and 2012. Females slightly dominated in the frequency of infections (62%). Influenza A (H1N1) 2009 was detected in 51.1% (45/88) of patients.

Conclusion: Pandemic influenza A (H1N1) 2009 was detected as subtype of influenza A. People older than 50 years accounted for the largest number of infected people and the most acute infections were noticed in March.

Key words: Influenza, seroprevalence, PCR.

DIRECT CONTACT WITH DOGS AS A SOURCE OF HUMAN INFECTION CAUSED BY TOXOCARA CANIS

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **ANDRIJA JEKIC**
Co-author(s): **Oliver Stevanović, Stefan Šerbanović, Marko Pižuk, Saša Ilić**
Supervisor(s): **Prof. Dr Aleksandar Džamić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: Toxocara canis (T. canis) is the most prevalent intestinal roundworm of dogs, foxes and other canid species, with zoonotic potential for human beings. Humans, as paratenic hosts, can be infected by ingestion of infective T. canis eggs via contaminated soil, contaminated food or contact with puppies. There are data which suggest that dogs infected with T. canis may infect people by direct contact.

Aim: The aim of the study was to estimate whether direct contact with dogs represents a major source of human infection by T. canis eggs.

Material and methodology: In this study, 39 patients positive for T. canis IgG antibodies were included. All the patients were residents of Belgrade, Republic of Serbia. A total of 39 questionnaires were created. After the analysis of the questionnaires, patients were divided in two groups: first group with positive answers and second group with negative answers about direct contact with dogs. Fisher exact test was used to evaluate the data (Graph Pad Prism 6.0).

Results: Five from a total of the thirty nine patients suffering from VLM were under the age of 18, while 34 patients were older than 18. Eight patients gave a positive response about contact with dogs, while 31 gave negative response. Fisher's exact test showed a statistically significant difference ($p<0.05$).

Conclusion: There is a higher number of patients with VLM who did not have contact with dogs. Direct contact with dogs was not the main source of infection caused by T. canis eggs.

Key words: contact, dogs, Toxocara canis

HUMAN ORBITAL OPHTHALMOMYIASIS CAUSED BY LUCILIA SERICATA

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **SASA ILIC**
Co-author(s): **Andrija Jekić**
Supervisor(s): **Prof. Dr Aleksandar Džamić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: Infestation of the eye caused by insect larvae are rare in urban areas. Ophthalmomyiasis can be localised as internal, external or orbital infection. Flies lay eggs on conjuctiva and developing larvae possibly penetrate eye and surrounding tissue. Affected patients are usually old and suffer from debilitating underlying conditions. Condition is more frequent in countries in tropical regions. Orbital localisation is the least common of all infection types of ophthalmomyiasis.

Aim: Case report of a patient with orbital ophthalmomyiasis.

Material and methodology: Ophthalmological and parasitologiacal examination followed by surgical removal of insect larvae.

Results: A 87-year-old women was presented with a history of cerebro-vascular disease, no outside communication, in severe general condition followed by swelling and redness of the left eye. Conjunctiva and cornea showed intact surface, but inside the conjunctival epithelium few larvae were crawling while the rest were detected in deeper periocular tissue. Sixteen fly larvae were removed and the globe was irrigated with antiseptic solution and chloramphenicol. Parasitological examination identified larvae as Lucilia sericata (Diptera: Calliphoridae) or green bottle fly.

Conclusion: Underlying disorders such as neurological diseases, as well as poor hygiene may be risk factors for ophthalmomyiasis. Green bottle fly is extremely rare agent of ophthalmomyiasis, and presented case is the first report of such condition in Serbia. According to our knowledge, orbital Lucilia infestation has not been reported without prior eye injury or surgery. The most effective way to prevent myiasis consists of providing nets for windows, practicing personal hygiene, and proper care of patients.

Key words: ophthalmomyiasis, Lucilia sericata, larvae, flies

THE IMPORTANCE OF ALCOHOL SHOCK PROCEDURE APPLICATION IN CULTIVATION OF CLOSTRIDIUM DIFFICILE FROM STOOL SAMPLES

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **SANJA BANKOVIC**
Co-author(s): **Nikola Stojanovic, Milica Živkovic**
Supervisor(s): **Doc. Dr Predrag Stojanovic**
Country: **Serbia**
Faculty: **Medical Faculty Nis**

Introduction: Strains of Clostridium difficile that produce toxins in the majority of cases cause diseases after antibiotics' administration

Aim: The aim of the paper was to determine the importance of alcohol shock procedure application in the cultivation of Clostridium difficile

Material and methodology: The investigation was conducted at the Public Health Institute Nis in the course of 2012. The investigation comprised the 180 examinees. Right after receiving the stool samples in the laboratory, the samples were directly cultivated on selective CCF CCF (cykloserin, cefoxitin, fructose) agar for Clostridium difficile cultivation. At the same time, the cultivation of samples on CCF agar after the processing of the samples by the alcohol shock procedure was carried out.

Results: By the analysis of the results obtained from all the examined groups, it can be noted that, in total, 13 isolates of Clostridium difficile were cultivated. These isolates were obtained by the application of alcohol shock procedure, while only six isolates were obtained by direct cultivation on the selective agar (p=0.005). It was also noted that by the application of alcohol shock procedure, the isolates of Clostridium difficile were cultivated and identified more rapidly (p=0.0001).

Conclusion: The results of the investigation indicate that the application of alcohol shock procedure is more sensitive in the cultivation of Clostridium difficile compared to the direct cultivation of samples on the selective agar Therefore, it should be applied in detection of this bacterial species in the stool samples both in symptomatic patients and asymptomatic carriers

Key words: Clostridium difficile, culture, alcohol shock

THE FREQUENCY OF FUNGAL INFECTIONS WITH PATIENS WITH SUSPECTED ONYCHOMYCOSIS

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **MARINA ANTIC**
Co-author(s): **Bojana Miletic**
Supervisor(s): **Asist. Dr Eleonora Dubljanin**
Country: **Serbia**
Faculty: **Medicine Faculty Belgrade**

Introduction: Onychomycosis, fungal infection of nail, is the primary cause of onychodystrophia (50%). It is usually caused by dermatophyte, yeasts and non-dermatophyte moulds. Accurate diagnosis to confirm the presence and identification of species/genera of fungi is necessary for correct and rational use of antimycotics.

Aim: To determine the major causes of onychomycosis and to conduct a comparative analysis of individual or combined tests used in laboratories to confirm presence of onychomycosis.

Material and methodology: The research included 65 patients with changes on their nails in the period from November 2012 to February 2013. Each sample was used both for direct microscopy (KOH and Blankophor) and in vitro laboratory culture (SDA, R-SDA and DTM). Sensitivity and negative predictive value was made for each test to identify additional features (specific qualities and positive predictable values) and clinical significance of used tests. Blankophor was chosen as gold standard for statistical analysis.

Results: Distal subungual onychomycosis (DSO) was the most common form of onychomycosis (68.6%). Dermatophyte were isolated in 25 samples out of 41 (61%), the most common being the dermatophyte T. rubrum (76%). The best sensitivity and negative predictive value were shown by combination of tests BF+DTM and BF+R-SDA. When compared to Blankophor as a gold standard, the best specific quality was shown by KOH, and the best PPV by the KOH+R-SDA combination.

Conclusion: As an individual test, Blankophor is the most sensitive diagnostic method. Combination of BF with DTM or R-SDA results in a good sensitivity and allows the identification of fungi. It is recommended to combine several tests and introduce new methods (PCR).

Key words:onychomycosis, dermatophyte, laboratory diagnosis

MACROLIDE RESISTANCE PHENOTYPES IN NONINVASIVE CLINICAL ISOLATES OF STREPTOCOCCUS PNEUMONIAE IN SERBIA

(Oral presentation)

Field of medicine: **Microbiology**
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Supervisor(s): **Prof. Dr Natasa Opavski**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: Streptococcus pneumoniae is major cause of community acquired respiratory tract infections infections, such as otitis media, sinusitis and pneumonia. Pneumococcal resistance to macrolides is a problem, because macrolides are among the most common oral drugs used to treat patients with upper respiratory tract infections and community-acquired pneumonia. There are two major mechanisms of macrolide resistance in S.pneumoniae - target modification and drug efflux that are phenotypically expressed as inducible and constitutive MLS and M phenotypes.

Aim: The aim of this study was to analyze macrolide-resistant phenotypes among noninvasive pneumococcal isolates in Serbia.

Material and methodology: A total of 100 noninvasive macrolide resistant S. pneumoniae strains were received from regional microbiological laboratories throughout the entire country at the NRL for streptococci and pneumococci between 2010 and 2012. Macrolide resistance phenotypes were determined by a double disc diffusion test, using erythromycin (15µg) and clindamycin (2µg) discs. Minimal inhibitory concentrations (MICs) of erythromycin and clindamycin were determined by E test.

Results: Eighty one isolates (81%) expressed MLSB resistance phenotype. 78 (78%) and 3 (3%) out of 81 strains were assigned to the cMLS and iMLS phenotype, respectively. M phenotype was found in 19% of macrolide resistant strains. Isolates displaying the MLSB phenotype showed higher MICs to erythromycin than isolates with the M phenotype.

Conclusion: Our study highlights that cross resistance to MLS antibiotics is dominant phenotypes among macrolide resistant pneumococcus in Serbia. The predominance of cMLSB phenotype, with high level of macrolide resistance, should be stressed.

Key words: Steptococcus pneumoniae, Macrolide resistance, phenotypes

FIBERS IN DENTISTRY-GLASS FIBERS IN USE-CASE STUDY

(Poster presentation)

Field of medicine: **Dentistry**
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Faculty: **Dentistry, University of Silesia**

Introduction: Development of science and technological progress allows the use of methods of core build-ups or the missing teeth very fast. An alternative to conventional reconstruction or prosthetic reconstruction in dentistry is the use of fibers.

Aim: Aim of this study was to rebuild the missing tooth using techniques sparing the remaining bulk of the tooth,

Material and methodology: Glass fibers are used to reconstruct maxillary lateral incisors using direct and indirect, and the reconstruction of premolars. Age of patients:22-40.

Results: Achieved aesthetic reconstruction of missing teeth.During the time between screening were two cases of damage reconstruction.

Conclusion: The use of glass fibers in dentistry allows of quick reconstruction. Nowadays it is good alternative for temporary or even permanent reconstruction for young patients.

Key words: glass fibers,fibers in dentistry,reconstruction

ANTIBACTERIAL EFFECTS OF RASPBERRY CONCENTRATE IN IN VITRO CONDITIONS

(Oral presentation)

Field of medicine: **Microbiology**
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Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: A contemporary antibacterial therapy significantly reduces the period of acute infectious diseases and prevents the development of various complications associated with ethiological agents of these diseases. However, there is a rise in the occurrence of microbial strains resistant to a wide range of antimicrobial agents. The task of the pharmaceutical industry is to provide adequate antimicrobials which provide positive effects even on the latest genetically modified microbial pathogens. As a source of many solutions, nature offers different plants whose effects have not yet been tested and still have not been given the importance as potential anti-inflammatory, anticarcinogenic or antibacterial agents.

Aim: Determination of possible antibacterial effects of red raspberry fruit (Rubus idaeus L.).

Material and methodology: Antibacterial effect of the concentrate of red raspberry fruit, obtained in sterile conditions through a modified disk diffusion method, was later studied in order to determine its antibacterial effects. The following standard ATCC bacterial strains have been used: Staphylococcus aureus, Enterococcus faecalis, Bacillus cereus, Listeria monocytogenes, Escherichia coli, Salmonella Typhimurium, Klebsiella pneumoniae, Cronobacter muytjensii and Pseudomonas aeruginosa.

Results: Red raspberry concentrate displayed an antibacterial effect on the following bacterial species: Staphylococcus aureus > Listeria monocytogenes > Bacillus cereus > Enterococcus faecalis > Escherichia coli > Cronobacter muytjensii > Pseudomonas aeruginosa > Salmonella Typhimurium.

Conclusion: The red raspberry fruit or any of its processed form is an affordable and easily accessible nutrient that can be used in pharmaceutical, chemical and food industries as a new antibacterial agent with broad-spectrum effects.

Key words: Antibacterial effect, red raspberry, raspberry juice.

MULTIPHOTON MICROSCOPY DEMONSTRATES TRANSDERMAL GENE DELIVERY USING AN ANTIBIOTIC-FREE MINIMALIZED NOVEL PLASMID VECTOR WITHOUT TOPICAL TRANSFECTION ENHANCERS

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **JESSICA COLLERY, FRANK LAY**
Co-author(s): **Amir Ansari, Devin Reilly, Sayed Mohammad Hosseini, Don Rees**
Supervisor(s): **John W. Harmon, MD And Guy P. Marti, MD**
Country: **United States**
Faculty: **Johns Hopkins University School of Medicine**

Introduction: Efficient and safe gene delivery is an unsolved problem presenting an obstacle on the path to gene therapy. We explored a nonviral topical approach using naked plasmid DNA and multiphoton microscopy to demonstrate transfection in vivo. This approach avoided the potential toxicity of viral vectors and harsh chemical agents and physical methods.

Aim: To utilize mutliphoton microscopy in order to demonstrate transfection in vivo.

Material and methodology: B6.129 (Cg)-Gt(ROSA)26Sortm4(ACTB-tdTomato,-EGFP)Luo/J mice possess a membrane-tagged tdTomato cassette and express red fluorescence in all tissue. The dorsum of all mice were shaved, depilated and dermabraded using Dermasweep-Mini machine at 20 mmHg pressure. For topical application, 50 µg of NTC8385-EGFP or 50 µg of NTC8385 empty plasmid DNA was applied in 25 µL of a methylcellulose gel. The sites were protected with DuoDERM*. For controls, 50 µg of NTC8385-EGFP or NTC8385 empty vector plasmids were injected at the right and left upper dorsum.

Results: Highest transfection were 36 hours after topical application and 72 hours after intradermal injection. Mice were examined using multiphoton laser scanning microscope at an excitation wavelength of 800 nm in both green and red channels. Red fluorescent background was visible in all images due to membrane-tagged tdTomato. Sites treated with EGFP-plasmid exhibited green fluorescence that appeared in cells of the epidermis, and in cells associated with hair follicles.

Conclusion: Topical application of the plasmid DNA is a noninvasive approach for plasmid delivery into cells and multiphoton fluorescence microscopy can be used as an efficient technique to assess the successful transfection of plasmid.

Key words: Transfection

ISOLATION OF COAGULASE-NEGATIVE STAPHYLOCOCCI FROM BLOOD CULTURES

(Oral presentation)

Field of medicine: **Microbiology**
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Supervisor(s): **Asist. Dr Anika Považan**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Coagulase-negative staphylococci represent a major cause of bacteremia in patients with medical implants and in immunocompromised patients, although considered to be contaminants through the years. Increasing number of methicillin-resistant isolates is registered with emerging antimicrobial resistance.

Aim: The aim of this study was to determine the presence of the most common coagulase-negative staphylococci isolated from blood cultures and to determine susceptibility pattern of the methicillin-resistant isolates.

Material and methodology: The study was performed at the Centre for Microbiology, Immunology and Virology of the Institute for Pulmonary Diseases in Sremska Kamenica in 3-year period. The study included 136 blood cultures with coagulase-negative staphylococci. Identification was performed by using the BBL Crystal Identification Systems Gram-positive ID kit. For each strain antimicrobial susceptibility was determined by the disk diffusion method.

Results: Among 136 coagulase-negative staphylococci the most prevalent was Staphylococcus haemolyticus 56 (41.2%), followed by Staphylococcus epidermidis 54 (39.7%), Staphylococcus hominis 12 (8.82%) and Staphylococcus capitis 5 (3.68%). Methicillin-resistant were 82 (60.3%) isolates. Multiple resistance was observed in 70 (83.4%) methicillin-resistant isolates. The resistance rates of methicillin-resistant strains were for gentamicin 91.5%, for erythromycin 89%, for ciprofloxacin 85.4% and for clindamycin 70,7%. All strains were sensitive to vancomycin and linezolid.

Conclusion: The most common isolates are Staphylococcus haemolyticus and Staphylococcus epidermidis. A significant number of strains were methicillin-resistant with multiple resistance. The most common resistance pattern is 4.

Key words: Coagulase-negative staphylococci, resistance, blood culture

RARE DISEASES AND ORPHAN DRUGS - CHALLENGE FOR DOCTORS AND STUDENTS

(Poster presentation)

Field of medicine: **Epidemiology**
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Faculty: **Faculty of Medicine Plovdiv**

Introduction: One of the definitions of a rare disease is a disease that affects no more than 1 in 2000 people. However, the prevalence of different rare diseases widely varies. Although there could be very few people for a single disease, the huge number of all rare diseases places them as one of the major priorities of EU. The Information Centre for Rare Diseases and Orphan Drugs is the first Eastern European educational and information service dedicated to patients, medical professionals and associations interested in rare diseases and orphan drugs.

Aim: Our aim is to unite the Eastern European rare diseases stakeholders' efforts for progress in this field. We would like to share our experience and to present part of our scientific work with rare diseases.

Material and methodology: Database, registers of patients with rare diseases in Bulgaria, questionnaires.

Results: The results of our work are establishment of registers for some rare diseases in order to know the exact number of all suffering from it, to assess morbidity, to assess the economic burden and to collect more data on the effect of treatment and the time until the diagnosis is put.

Conclusion: In conclusion we would like to say that increasing the level of awareness among medical students regarding the problems of people with rare diseases is extremely important for the improvement of professional skills of doctors and the quality of life of people with rare diseases.

Key words: rare disease, orphan drug, information center

NEEDLE STICK INJURIES AMONG UNDERGRADUATE AND GRADUATE DENTAL STUDENTS AT MARMARA UNIVERSITY

(Oral presentation)

Field of medicine: **Epidemiology**
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Faculty: **Faculty of Dentistry Istanbul**

Introduction: The Dental Students who are exposed to needle and sharp injuries in their clinical activities are at increased risk of acquiring needle stick injury which may lead to serious or fatal infections with blood-born pathogen infections .

Aim: To evaluate the determinant factors of needle stick injuries Among undergraduate and Graduate dental students at Marmara University, School Of Dentistry.

Material and methodology: A retrospective ,descriptive-analytical survey was carried out among Graduate and undergraduate Dental Students at Marmara University, School of Dentistry .We used a self-administered questionnaire that included variable on socio-demographic status ,immunization history, rate of needle and sharp injuries and rate of reported it and factors that associated to sharp injuries and these reported.

Results: The participants were 100 dental students that were 82.3% male and 18.7% female. The rate of sharp injuries were 65.4% that were reporting 14.3% of them .The most cause for injury was harry up ,the most injuries occurred during injection and syringe needleization. There was not any significant relationship between demographic data and the incidence rate of sharp injuries.

Conclusion: Because the high rate of sharp injuries, it is necessary to educate the dental students and dentists about the roots of preventing injury and post exposure follow ups.

Key words: Dental Students , needle stick injury , immunization history

EVALUATION OF MOBILE PHONE UTILISATION BY MEDICAL STUDENTS IN BELGRADE

(Oral presentation)

Field of medicine: **Epidemiology**
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Country: **Serbia**
Faculty: **Faculty of Medicine Belgrade**

Introduction: Mobile phones are the modern means of communication widely used all over the world.

Aim: The aim of this study was to assess mobile phone utilization among medical students.

Material and methodology: This cross-sectional study was conducted in among first-year and sixth-year medical students of Belgrade University. Anonymous questionnaire was used containing data about social and demographic characteristics and about mobile phone use.

Results: A total of 638 medical students (304 first year students and 334 sixth year students) filled in the questionnaire. A total of 97.2% of students have their own mobile phones, significantly more female students ($\chi 2=5.699$; $p=0.034$). Of all number of students included in research, 82.6% think that mobile phones are useful or necessary. Significantly more female students think that mobile phones allow them communication with friends ($\chi 2=6.133$; $DF=2$; $p<0.047$) and more assurance in outgoing ($\chi 2=37.81$; $DF=2$; $p<0.001$).

Conclusion: Mobile phones have enabled medical students in Belgrade communication in any moment and also access to a lot of information and amusing contents.

Key words: mobile phone use, medical students, cross-sectional study

PREVALENCE OF CONTRACEPTIVE USE AMONG MARRIED WOMEN OF REPRODUCTIVE AGE GROUP IN A RURAL AREA OF BANGLADESH

(Oral presentation)

Field of medicine: **Epidemiology**
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Country: **Bangladesh**
Faculty: **FACULTY OF MEDICINE DHAKA**

Introduction: The present study is an attempt to assess the prevalence of contraceptive use among married women of reproductive age in a selected rural area in Bangladesh.

Aim: To assess the prevalence of contraceptive use among married women of reproductive age group in a rural area of Bangladesh.

Material and methodology: It was descriptive type of cross sectional study. Purposive sampling technique was followed. Data were collected in a structured questionnaire through face to face interview. Study population was all married women of reproductive age group. Sample size was 265. Inclusion criteria: Married women of reproductive age group, permanent residents of Mulaid village, co-operative. Exclusion criteria: Married or unmarried women below 15 years and above 49 years of age, unmarried women of reproductive age, non-cooperative.

Results: Majority 62.3% were using any form of contraceptive methods at the time of the study . 81.69% had adopted oral contraceptive pill and 56.34% were using contraceptive methods for less than 3 years. 82.15% respondents used contraceptive methods correctly. Who did not use contraceptive methods correctly, 44.74% forgot to take OCP daily. Majority 45.28% respondents experienced no side effects.

Conclusion: Our study revealed the awareness about contraceptive used among the married women. The knowledge about contraceptive methods played a major role in the acceptance of contraceptive use, though many other factors also involved in it. More women should be encouraged if they got proper health education about reproductive health and family planning services.

Key words: Prevalence of Contraceptive use, Reproductive age group

THE USE OF 4% ARTICAIN AND 2% LIDOCAIN IN ENDODONTIC TREATMANT AND TEETH EXTRACTION

(Poster presentation)

Field of medicine: **Dentistry**
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Introduction: Local anesthesia is a procedure where local anesthetic solution was used to produce painless limited anatomical area of an organism. Vital extirpation is an intervention on a suffer pulp, where by the effect of local anesthesia pulp tissue was completely removed from cavum dentis. Extraction of teeth is a procedure where a tooth gets separated from alveolus and removed from it.

Aim: was to compare intensity of anesthesia 2% lidocain with 1:80 000 adrenaline and 4% articain with 1:100 000 adrenaline at vital extirpation of teeth's pulp and extraction of lower teeth.

Material and methodology: The experimental study was conducted at at the Dental Clinic of Vojvodina, which included 24 patients. Two groups of patients were included in study in which vital extirpation or extraction of lower teeth was indicated. Before intervention 12 patients was anesthetized with lidocain. Articain was used on remaining patients. After the intervention patients have been shown Visual-analogue scale that enabled precised determination of painful interventions based on subjective experience.

Results: In the group of examiners 15 were male and 9 female, with average 46, 42 years. Average intensity of pain at vital extirpation after use of lidocain was 2,33, while by the use of articain was 1, on a scale 1-10. At extraction of lower teeth average pain intensity after the use of lidocain was 1, while articain was 0,33 determinwd using the Visual-analog scale of pain.

Conclusion: 4% articain was more effective in the treatment of endodontic teeth then 2% lidocain

Key words: 2% lidocain, 4% articain, vital extirpation, teeth extraction

THE CLINICAL COMPARISON OF THE EFFECT OF ANTIDEPRESSANT AND ANTIHYPERTENSIVE DRUGS ON THE DRY MOUTH

(Oral presentation)

Field of medicine: **Dentistry**
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Country: **Turkey**
Faculty: **Dentistry Yeditepe University**

Introduction: This study aimed to determine the relationship of some medications with dry mouth, various properties of saliva and decay.

Aim: The aim of this study was to evaluate the correlation between antidepressants and antihipertensives on dry mouth, saliva' s buffering effect and flow rate and D1-2 MF-T (D1: decay with non-cavity D2: decay with cavity)

Material and methodology: One hundred and twenty patients (58 M/62 F) using either antidepressants or antihipertensives (n=40) and a control group were included. Subjective and objective findings were assessed using Dry Mouth Questionnaire (DMQ) and the Challacombe Scale (CS), respectively. Caries were classified by ICDAS criteria and recorded as D1-2 MF-T values. saliva flow rate buffering capacity were also recorded. Statistical significance was set at $p < 0.05$.

Results: The correlation between DMQ and CS was statistically significant (p=0.026). There was no significant correlation between CS and saliva buffering capacity-flow rate (p=0,170 / p=0,057). There was no significant relationship between study and control groups (p=0,093). The saliva flow rate was significantly lower in patients using both drugs (p=0,001). There was no significant correlation between risk groups and buffering capacity (p=0,762) whereas the relationship between initial caries and flow rate was statistically significant (p=0,001).

Conclusion: In studies evaluating dry mouth, objective and subjective criteria should be used to reveal patients' needs. Although no difference was found between different drugs, it is essential that preventive applications are planned specific to the individual needs.

Key words: dry mouth, Challacombe scale, antihypertensives, antidepressants

COMPARATIVE EVALUATION OF TWO DIFFERENT METHODS OF DIRECT PULP CAPPING

(Oral presentation)

Field of medicine: **Dentistry**
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Country: **Serbia**
Faculty: **Stomatoloski Fakultet Pancevo**

Introduction: Direct pulp capping (DPC) is a therapeutic procedure which aims to preserve pulp vitality.

Aim: The AIM of this clinical research has been to investigate and compare the quality of two different methods of DPC.

Material and methodology: In this clinical investigation the pulp was covered on twenty front teeth of the upper jaw in patients of both sexes, aged 30 to 40 years. The study was conducted at the School of Dentistry in Pancevo. Pulp was accidentally open during tutorials. The patients were divided into two groups of ten, depending on the method of direct pulp capping: by using a calcium hydroxide or laser. The vitality was monitored during the following year with the Vitalion device. A year later the results were compared with Chi-square test.

Results: In the group of patients where pulp was capped with laser, there was no change of vitality in eight cases, while the vitality was changed at two patients, but the teeth were without subjective symptoms. In the group of patients where the pulp was capped with a calcium hydroxide there was no change of vitality at six cases, in two cases the vitality was changed without subjective symptoms, while at two patients the examined teeth were avital. According to the Chi square test, there were no statistical significant differences between groups.

Conclusion: Based on the results we can conclude that both methods can be successfully used in the treatment of conservation of the pulp.

Key words: Pulp capping, laser, calcium hydroxide, vitality

COMMUNICATION IN DENTAL PRACTICE

(Oral presentation)

Field of medicine: **Dentistry**
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Co-author(s): /
Supervisor(s): **Dr Svetlana Jovanovic**
Country: **Serbia**
Faculty: **Faculty Of Stomatology Belgrade**

Introduction: Communication between patient and dentist represents basis for the upbuilding patient-dentist relations,for necessary exchange of information and in order to create therapeutic relation that is required for solving oral problems and to achieve mutual trust.

Aim: Goal of labor was to exam influence of dentist's communication on patient's satisfaction in communication practice.

Material and methodology: It was covered by the research 117 examinees (50 males and 67 females),from age 18 to 76 (average age 32,2),which dental health insurance materialize in Health center „Dr Simo Milosevic" ,Sremcica. As researching instrument was used questionnaire that was specially constructed for needs of research,and with the questionnaire were gained data about social-demographic features ,as well as about stances and opinions of examinees ,about factors that affect on communication.Data were treated by using x2 test.

Results: The examinees opinion about personal and professional characteristics of the dentists(are there enough commitment from the dentist in aspect of time and care ,is he recognizes patient's opinion ,is he clearly informing patient about mouth and teeth diseases and about plan of therapy and is he familiar with his generic medical condition) statistically significantly affects to interpersonal communication (p 0,01).Most of the examinees (78,8 %) considere that dentists are kind,and less of half examinees(47,9 %) is satisfied by kindness of the nurses.

Conclusion: Continuously improvement of the communication in dental practice,should lead to reaching higher level in efficiency and success of work,as well as to increase pleasure of patients,health officers and collaborators.

Key words: communication,dental practice,patients opinions.

ANALYSIS OF ORAL MICROFLORA AND ORAL HEALTH OF STUDENTS IN SECONDARY DENTAL SCHOOL

(Poster presentation)

Field of medicine: **Dentistry**
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Supervisor(s): **Prof. Dr Dejan Markovic**
Country: **Serbia**
Faculty: **Faculty Of Dental Medicine Belgrade**

Introduction: Dental plaque (biofilm) is a complex community, highly variable structural entity resulting from sequential colonization and growth of microorganisms on the surfaces of teeth and restoration consisting of microorganisms of various strains and species that are embedded in the extracellular matrix, composed of bacterial metabolic products and substance from serum, saliva and blood.

Aim: The aim of this study was to analyse the specificity of oral microflora of students in secondary dental school, as well as to evaluate the oral health and the level of oral hygiene.

Material and methodology: Forty students were selected for this study, from 1st to 4th grade. After the participants brushed their teeth for 3 min, the toothbrushes were taken from the participants and few fibers from each toothbrush were collected for the microbiological analysis. Each participant filled the questionnaire about the habits and the oral hygiene and then the clinical examinations were made by two experienced dentists in order to determine the values of DMFT and CPITN.

Results: Healthy periodontium was present in 62,5 % of the students, while the mean values of DMFT was 3,20. The most dominant isolated microorganisms were: Staphylococcus aureus (25,5%), Streptococcus mutans (17,5%) and Micrococcus spp. (17,5%).

Conclusion: In addition to the microorganisms that are part of the normal oral microflora, the microorganisms that are not common colonizers of the mouth were isolated from the samples in this study. It is necessary to improve oral health and education, in order to prevent the most common oral diseases.

Key words: biofilm, bacterial communities, dental plaque

DIFFERENCES IN ORAL HEALTH RELATED BEHAVIOR AND DENTAL ANXIETY LEVELS AMONG DENTAL, MEDICAL AND MANAGEMENT STUDENTS

(Oral presentation)

Field of medicine: **Dentistry**
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Supervisor(s): **Mr.sci Maja Lalic**
Country: **Serbia**
Faculty: **Stomatoloski Fakultet Pancevo**

Introduction: Oral health behavior and attitude habits correlate with oral health status, and can be considered to be its predictors.

Aim: To compare oral health related behavior, attitudes and dental anxiety levels among, dental, medical and management students.

Material and methodology: The study included 107 dental, 91 medical and 95 management final-year students from Vojvodina, Serbia. Students filled-in the 17-item questionnaire about their oral health related attitudes and behavior (oral hygiene, fluoride supplement, diet, dental visits). Index of Dental Anxiety and Fear (IDAF-4C) was used to assess dental anxiety and fear among the students.

Results: Significantly more dental than non-dental students reported regular use of dental floss, proximal brushes and fluoride rinses and lower sugar intake between the meals. Management students significantly more often stated pain as the main reason for dental visit, while medical and dental students visited dentist mostly due to non-symptomatic reasons. Considerably more non-dental students held a belief that the deterioration and loss of teeth are inevitable during one's lifetime. Dental anxiety scores were significantly higher among nondental students.

Conclusion: Dental students had better oral health attitudes and behavior in terms of oral hygiene, diet and dental visits and lower dental anxiety levels compared to the non-dental students, which is most likely a result of their formal dental education. Oral health promotion activities are required to increase non-dental students' awareness of oral health importance.

Key words: attitudes, dental anxiety, oral health behavior, students

CLINICAL DIAGNOSES BASED ON THE RDC/TMD AND DENTITION-RELATED ASPECTS IN TEMPOROMANDIBULAR DISORDERS AMONG DENTAL STUDENTS

(Poster presentation)

Field of medicine: **Dentistry**
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Faculty: **Faculty Of Medicine Foca**

Introduction: Temporomandibular disorders (TMD) is a collective term embracing a number of clinical conditions that involve masticatory muscles, the temporomandibular joint and associated structures. The aetiology of TMD is multifactorial, with occlusal, craniofacial, psychological factors, trauma, age or gender as risk or contributing factors. Introduction of the Research Diagnostic Criteria for TMD (RDC/TMD) was aimed to standardize clinical protocols for TMD assessment and decrease variability of results between the studies.

Aim: To investigate the presence of TMD according to the RDC/TMD, and their relation to gender and occlusal factors among dental students.

Material and methodology: Seventy-five students of dentistry (mean age 24.5 years) underwent physical evaluation by RDC/TMD protocol. According to presence or absence of RDC/TMD diagnosis, they were divided into the TMD group (N=34) and the Control group (N=41). In both groups occlusal analysis was performed according to Helkimo occlusal index. Descriptive and bivariate statistics were computed and the P value was set at .05.

Results: Myofascial pain, disc displacement and other joint disorders were observed in 11.8%, 44.1% and 50.0% of TMD patients, respectively. Prevalence of females was over twice as high in the TMD group compared with the controls ($P<0.05$). Lower overbite values were observed among patients with joint disorders ($P<0.05$).

Conclusion: Dental students exhibited high prevalence of TMD, with arthralgia as the most prominent subtype. While presence of TMD in general was related to female gender, decreased overbite could be related to joint disorders. Other variables probably also play a role and should be investigated.

Key words: craniomandibular disorders, gender, RDC/TMD, occlusion

EPIDEMIOLOGICAL CHARACTERISTICS OF VIRAL HEPATITIS "B" IN MACEDONIA IN THE PERIOD FROM 2001 TO 2010

(Oral presentation)

Field of medicine: **Epidemiology**
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Supervisor(s): **Prof. d-r Gordana Panova, Prof. d-r Gorgi Sumanov**
Country: **Macedonia**
Faculty: **Faculty of medicine Shtip**

Introduction: Viral hepatitis B (VHB) is a public health, social and economic problem worldwide. Today there are opportunities for successful prevention of this disease, which depends on the condition of national health systems.

Aim: To analyze and display the epidemiological characteristics of viral hepatitis B in the Republic of Macedonia in the period 2001-2010 year.

***Material and methods*:** Retrospective study on the basis of official reports and epidemiological data for patients with VHB, Institute of Public Health in Skopje.

Results: Between 2001 - 2010 the territory of the Republic of Macedonia registered a total of 1770 people infected hepatitis B virus. The majority of infected persons registered in 2007 (215), the rate of infection of 1.08 / 100 000, and the lowest number (132) in 2002 at a rate of infection of 0.66 / 100 000. Since 2007, the number of infected people began to decline continuously. According to gender representation 61% (1086) were men and 39% half (692) were female persons. In the analyzed period ten most infected persons are registered in the age group of 20-29 years (429), while the lowest number was registered in the age group up to 1 year (10). The situation is similar in other infectious diseases that are preventable with effective vaccines and other preventive measures.

Conclusions:Viral hepatitis B is a public health, social and economic problem in the country and in other countries. Since 2007, the number of infected people began to fall continuously, as a result, primarily, of the successful implementation of primary and secondary prevention of this disease.

Keywords: Viral hepatitis B epidemiology, prevention

RHABDOMYOSARCOMA OF THE ORAL CAVITY

(Poster presentation)

Field of medicine: **Dentistry**
Author(s): **RATKOVIC VEDRANA**
Menthors: **Dragana Tegeltija, Aleksandra Lovrenski**
Country: **Bosnia & Herzegovina**
Faculty: **Medical Faculty Foca**

Case report

Results: Rhabdomyosarcoma (RMS) is a malignant tumor of striated muscle origin. In oral cavity it represents 10% to 15% of all non-parameningeal RMS and 7.5% of all sarcomas. Pleomorphic rhabdomyosarcoma (PRMS) is more common in old men and has a poor prognosis. The 21-year old woman comes to the dentist complaining about problem she has while opening her mouth and painful swallowing in the right cheek area. Clinical examination revealed painless, relatively well circumscribed, fixed node with size of 25x20 mm. According to histological examination with standard histochemical staining (H&E) infiltration of oral mucosa by tumor was found. The large atypical bizzare polygonal pleomorphic cels were determined to be sceletal muscle rhabdomyoblasts with a storiform growth pattern and numerous pathological mitosis without necrosis. The cytoplasm was abundant eosinophilic with focal striated features. According to histochemistry and immunoprofile, tumor as pleomorphic rhabdomyosarcoma was diagnosed. In spite of the total extirpation of the tumor and subsequent radio and chemotherapy,the patient died three months after the diagnosis.

Conclusion: The prognosis of PRMS is very bad even if it is diagnosed at an early stage. Further studies about the factors causing PRMS are necessary.

Key words: oral cavity, diagnosis, pleomorphic rhabdomyosarcoma, prognosis.

PLENARY SESSION IV

INTERNAL MEDICINE, ONCOLOGY

Date: July 20th 2013

ORAL PRESENTATIONS
Start time: 8:30 AM
Amphitheatre 1 - Faculty of Medicine Novi Sad

POSTER PRESENTATIONS
Start time: 10:00 AM
Main Hall at Faculty of Medicine Novi Sad

SIGNIFICANCE OF PROGNOSTIC FACTORS IN PATIENTS WITH NON-HODGKIN LYMPHOMA (DLBCL) OF GASTROINTESTINAL TRACT

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **SRDJAN NIKOLOVSKI**
Supervisor(s): **Ass. Dr Darko Antic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: Non-Hodgkin lymphomas of gastrointestinal tract are the most frequent form of all extranodal lymphomas. The most significant risk factors which have influence on their occurance are age, gender, immunosuppression, autoimmune and immunodeficient conditions, microorganisms, exposition to toxic chemicals, lifestyle, and genetic factors.

Aim: Determination of significance and influence of basic prognostic factors in survival of patients with diffuse large B-cell lymphoma of gastrointestinal tract.

Material and methodology: The survey included 97 patients treated against non-Hodgkin lymphoma of gastrointestinal tract in the period 2001-2013 on Institute of Hematology, Clinical Center of Serbia in Belgrade. We analyzed clinical characteristics of these patients which were compared with the degree of disease progression and recurrence and overall survival. Statistical methods used in this study were univariate and multivariate analysis.

Results: There was significant difference in relation between five year overall survival and Ann Arbor stadium ≥ 2, ECOG performance status ≥ 2, international prognostic index ≥ 2, high levels of thrombocytes and C reactive protein, hypoalbuminemia and newly defined inflammatory stage-modified international prognostic index ($p<0,05$).

Conclusion: Patients with non-Hodgkin lymphoma of gastrointestinal tract have ECOG performance status, international prognostic index, thrombocytosis, high levels of C reactive protein and hypoalbuminemia as main predictors of overall survival. We have defined new inflammatory stage-modified international prognostic index as the best prognostic factor.

Key words: primary extranodal non-Hodgkin lymphoma, diffuse large B-cell lymphoma, Ann Arbor classification, inflammatory stage-modified international prognostic index

OCCURENCE OF HEART FAILURE IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION WITH ST ELEVATION TREATED WITH PRIMARY PERCUTANEOUS CORONARY INTERVENTION (PPCI)

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **IRENA OSTRIĆ**
Co-author(s): **Andrija Pavlović**
Supervisor(s): **Doc. Dr Milika Ašanin, Prof. Dr Mihailo Matić**
Country: **Serbia**
Faculty: **School Of Medicine Belgrade**

Introduction: Heart failure is a common complication in patients with acute myocardial infarction with ST elevation (STEMI).

Aim: We aimed to identify the predictors of heart failure (HF) during hospitalization in patients with STEMI treated with primary percutaneous coronary intervention (pPCI).

Material and methodology: This study includes 169 patients with STEMI treated with pPCI in the Emergency room. Patients have been divided into two groups: patients with HF (n=27) and those without HF (n=142).

Results: Patients with HF were older ($p=0,01$), had previous myocardial infarction (MI) ($p=0,018$), higher heart rate ($p=0,001$), leukocyte ($p=0,024$) and glycemia levels on admisssion ($p=0,043$) and lower ejection fraction of the left ventricule (EFLV) ($p<0,001$). Multivariant predictors of HF during the hospitalization were lower EFLV (OR=0,888, 95%CI=0,840-0,940, $p<0,0001$), previous MI (OR=6,570 , 95%CI=1,119-38,567, $p=0,037$) and hyperglycemia on admission (OR=1,140 , 95%CI=1,019-1,275, $p=0,022$).

Conclusion: Patients with lower EFLV, previous MI and hyperglycemia on admission are more likely to develop congestive HF during the hospitalization for STEMI treated with pPCI.

Key words: Heart failure, acute myocardial infarction with ST elevation, primary percutaneous coronary intervention

CLINICAL COURSE, COMPLICATIONS AND PROGNOSIS OF THE OUTCOME OF INFECTIVE ENDOCARDITIS

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **CEASOVSCHIH ALEXANDR**
Supervisor(s): **Professor, Dr.Sci. Grib Liviu; Associative Profesor, Cand.Sci Grejdieru Alexandra**
Country: **Moldova**
Faculty: **General Medicine "Nicolae Testemitsanu"**

Introduction: The infective endocarditis (IE) is serious immune-inflammatory disease characterized by vegetative damage of cordis and causing serious complications. The average annual sick rate is 3-10 cases for 100000 of population, and mortality is 16-20%.

Aim: The analysis of infective endocarditis complications and studying their influence on the disease course was the goal of this research.

Material and methodology: 132 patients with the firm IE have been examined. The procedure included the estimation of clinical and paraclinical parameters.

Results: The positive hemoculture was found in the 41.5% of cases, mostly staphylococcus (44%) and streptococcus (38%). It was proved echocardiographically the endocardium damage in 72.6% of cases: vegetations (64%), the decompensation of prosthetic valve (25%), breakage of cords (18%), myocardium apostasis (3.79%). The damage of the aortal and mitral valves prevailed in 53.5 and 41.5%, respectively. Cardiac decompensation by the NYNA FC was observed in all the patients. In 20% of cases there were diagnosed embolisms. Due to predicting of thromboembolic complications using special formulas in our patients the result was 7%. The forecast of the outcome was favorable in 74% patients, relatively favorable and unfavorable was observed in 17% and 9%, respectively.

Conclusion: The IE course severity is determined by several criteria: "masked" clinical picture, delayed diagnosis, high frequency of complications and the problems of the early detection of them, as well as the complexity of selection of an efficient treatment. High CD FC by NYNA, embolisms and high percentage of negative hemocultures were the predictors of lethal outcome.

Key words: infective endocarditis, vegetations, complications, prognosis.

USE OF DIURETICS IN PATIENTS WITH STEMI AND HEART RATE GREATER THAN 80 BMP AS MORTALITY PREDICTOR

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **MARIJANA PETROVIC**
Co-author(s): **Marija Pavlovic, Stefan Simovic**
Supervisor(s): **PhD Dr Goran Davidovic**
Country: **Serbia**
Faculty: **Faculty of Medical Sciences Kragujevac**

Introduction: Myocardial infarction occurs during coronary artery occlusion. Studies and clinical observations have shown that there is an increased risk of mortality when heart rate exceeds 80 bpm, because there is a significant shortening of diastole and greater myocardial damage. Diuretics promotes excretion of water and can be helpful in treatment of myocardial infarction and heart failure.

Aim: Aim was to investigate the influence of use of diuretics on the final outcome in patients with STEMI and heart rate greater than 80 bpm.

Material and methodology: This study, included 140 patients with anterior wall STEMI treated in Coronary Unit, CC Kragujevac in the period form January 2001-June 2006. Heart rate was calculated in the first 30 minutes after admission. Diuretcs were applied according to the Killip class. All data was statistically analyzed in the SPSS.

Results: Statistialy significant difference was between patients with a fatal outcome and those who survived, in the group of patients with anterior wall STEMI and heart rate greater than 80 bpm (χ2-test, p=0,001) with higher values in patients who died (75,7%) comparing to the patients who survived (43,1%). Patients who did not recive diuretics mostly survived (56,9%) comparing to those who died (24,3%). Multivariate and univariate regression analysis singled out use od diuretics as independent mortality predictor in the group with increased heart rate [expB (95%CI) - 0,111 (0,013-0,952); p=0,045)] and [expB (95%CI) - 0,243 (0,100-0,588); p=0,002)].

Conclusion: In the observed group of patients, use of diuretics was statisticaly siginificant and independent predictor of mortality.

Key words: STEMI, heart rate, diuretics

USE OF ANTIARRHYTHMIC DRUGS IN PATIENTS WITH STEMI AND HEAT RATE GREATER THAN 80BMP AS MORTALITY PREDICTOR

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **MARIJA PAVLOVIC**
Co-author(s): **Marijana Petrovic, Stefan Simovic**
Supervisor(s): **PhD Dr Goran Davidovic**
Country: **Serbia**
Faculty: **Faculty of Medical Sciences Kragujevac**

Introduction: Acute myocardial infarction occurs during coronary artery occlusion. Studies and clinical observations have shown that there is an increased risk of mortality when heart rate exceeds 80 bpm, because there is a significant shortening of diastole and possibility of heart muscle feeding failes. Antiarrhythmic drugs are used to suppress abnormal rhythm of the heart.

Aim: Purpose was to investigate the influence of use of antiarrhythmic drugs on the final outcome in patients with STEMI and heart rate greater than 80 bpm.

Material and methodology: This study, included 140 patients with anterior wall STEMI treated in Coronary Unit, CC Kragujevac in the period form January 2001-June 2006. Heart rate was calculated in the first 30 minutes after admission. Antiarrhythmic drugs were applied as recommended by the European Heart Rhythym Association. All data was statistically analyzed in the SPSS.

Results: Statistialy significant difference was noticed between patients with a fatal outcome and those who survived, in the group of patients with anterior wall STEMI and heart rate greater than 80 bpm (χ2-test, p=0,011) with higher values in patients who died (83,8%) comparing to the patients who survived (59,7%). Patients who did not recive antiarrhythmic therapy mostly survived (40,3%) comparing to those who died (16,2%). Univariate regression analysis singled out use of antiarrhythmic therapy as independent mortality predictor in the group with increased heart rate [expB (95%CI) - 0,287 (0,106-0,775); p=0,014)].

Conclusion: In the observed group of patients use of antiarrhythmic drugs was statisticaly siginificant and independent predictor of mortality.

Key words: STEMI, heart rate, antiarrhythmic drugs

PREVALENCE OF PSYCHOSOMATIC DISORDERS IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **NATALIA ZHEBEL**
Co-author(s): **Alina Dovgan**
Supervisor(s): **MD, MScD, PhD T.V. Konstantinovich**
Country: **Ukraine**
Faculty: **Medical Faculty № 1**

Introduction: Chronic obstructive pulmonary disease (COPD) is a significant medical and social problem. It is characterized by disorders of respiratory, but also psychosomatic disorders (PD), that deeply affect the quality of life in patients with COPD and the course of the disease.

Aim: Establish the prevalence of PD in patients with COPD.

Material and methodology: PD and respiratoty disorders were evaluated in 43 patients with COPD (30 men, 13 women, age (65,1 ± 1,9) years by a structured psychiatric interview and physical examination. Average duration of COPD (10,6±1,2) years) and 21 individuals of control group. Psychiatric screening was carried out using standardized techniques: the self-assessment scales of Wasserman test (to score neuroticism), Spielberg-Hanin test (to reveal personal and reactive anxiety) and Zung Self-Rating Depression Scale. Following data was analyzed statistically on PC using the SPSS package for Windows (trail-version).

Results: Prevalence of neuroticism (79%), reactive (41,8%) and personal (76,7%) anxiety, depression (23,2%) was statistically significant higher than in apparently healthy people of control group (14,3%, 23,8%, 28,6%, 4,7%, respectively; p<0,01). In patients with COPD was diagnosed statistically admissible higher level of clinically significant somatopsychic syndrome in 19% versus 4,7%(p<0,01) in control group .

Conclusion: Patients with COPD have a significantly higher prevalence and severity of PD compared with healthy individuals, that indicates their somatogenic conditionality. Presented data could help general practitioners to individualize and optimize approaches to the therapy on the basis of revealed changes.

Key words: Chronic obstructive pulmonary disease, psychosomatic disorder, quality of life.

FASTING GLYCEMIA, AS PREDICTOR FOR EARLY DISCOVERING OF GESTATIONAL DIABETES

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **STEFAN DUGALIC**
Co-author(s): **Jovana Stevic, Slavica Mutavdzin, Milan Radovanovic, Natasa Stankovic**
Supervisor(s): **Doc. Dr Marija Matic, Doc. Dr Aleksandra Jotic**
Country: **Serbia**
Faculty: **School Of Medicine Belgrade**

Introduction: Gestational diabetes (GD) is a metabolic disorder for the first time recognized during pregnancy and has a very complicated genesis. Universal screening is used for testing all women, but selective screening is only for some risk groups. As for the family history and history of illnesses, women are divided into three groups: with low, mediate and high risk. According to the most recent revisions, all women in 24-28th week should be tested with 75g 2h oral glucose tolerance test (OGTT) and only one pathological value is enough for diagnose.

Aim: To show if fasting glycemia is good predictor of GD.

Material and methodology: Retrospective analysis of 42 OGTTs collected at the Institute for metabolic diseases of Clinical Center of Serbia. Pregnant women, age 27 to 35, primiparous, with normal body mass and without hypertension, were divided into three groups, based on fasting glycemia (the first with the lowest and the third with the highest values). The difference in glycemia between these groups is monitored.

Results: It is shown that of all women 47.6% have glycemia bellow 10mmol/L, and the rest (52.4%) over 10mmol/L. The first group has the lowest percent of GD (14.3% of women have OGTT first hour glycemia >10 mmol/L), while 92.9% women in the third group develop GD (OGTT first hour glycemia >10 mmol/L). There is a significant difference in OGTT first hour glycemia among all groups and also in GD occurrence between groups.

Conclusion: Fasting glycemia is strong predictor of GD.

Key words: fasting glycemia, OGTT, GD

HEMOSTATIC DYSFUNCTIONS IN PATIENTS WITH ARTERIAL HYPERTENSION AND MICROALBUMINURIA

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **SOLOMIIA R. SAVEDCHUK**
Co-author(s): **Anna I. Kirpach, Olha M. Plenova, Nonna V. Netiazhenko**
Supervisor(s): **Vasyl Z. Netiazhenko, Professor, PhD**
Country: **Ukraine**
Faculty: **Medical #2**

Introduction: Microalbuminuria is considered to be a marker of cardiovascular risk and endothelial dysfunction. In patients with arterial hypertension microalbuminuria is associated with changes in hemostasis, therefore may have important physiopathological implications and expose these patients to increased risk for thrombohemorrhagic complications.

Aim: To establish the correlation between hemostatic abnormalities and presence of microalbuminuria in patients with arterial hypertension.

Material and methodology: 65 patients with arterial hypertension (grade 2) were examined in Railway Clinical Hospital #2, Kyiv. 1st group included 25 patients with microalbuminuria, 2nd group included 40 patients without microalbuminuria. Mean age of the patients was 53,3±5,4 years. Venous blood samples were drawn after an overnight fasting and examined for: 1) coagulation activity: Activated Partial Thromboplastin Time (aPTT), Thrombin Time (TT), Soluble Fibrin-Monomer Complexes (SFMC) 2) fibrinolytic activity: XII-a dependent fibrinolysis; 3) anticoagulation activity: Antithrombin III, Protein C.

Results: 1st group of patients exhibited acceleration of aPTT (14,4 % shorter in comparison to aPTT of the 2nd group (p=0,041)), acceleration of TT (11,5% shorter in comparison to TT of the 2nd group (p=0,04)). No significant differences were found between subjects in 1st and 2nd group in SFMC and XII-a dependent fibrinolysis. However, patients with microalbuminuria exhibited 1.37 times lower level of Protein C (p=0,049), while AT-III concentrations where approximately the same in both groups.

Conclusion: Microalbuminuria in patients with arterial hypertension is associated with activation of thrombin and fibrin formation, and reduction of anticoagulation potential, which proves significance of microalbuminuria in development of thrombotic complications in this group of patients.

Key words:hemostasis, hypertension, microalbuminuria

CLINICAL VALUE OF DETERMINATION ARTERIAL WALL STIFFNESS AT PATIENTS WITH ARTERIAL HYPERTENSION ACCORDING WITH APPLANATION TONOMETRY

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **LAZARIEVA K.**
Co-author(s): **Rudenko J., Katsitadze I .**
Supervisor(s): **PhD, Professor Amosova K.**
Country: **Ukraine**
Faculty: **Second Medical Faculty National O.O.Bohomolets Medical University**

Introduction: Recently, to identify early predictors of target organ damage in patients with arterial hypertension (AH) began to explore options stiffness of the arterial wall: augmentation index (AI) and wave reflection (WR) with advanced non-invasive automated devices.

Aim: Explore options arterial wall stiffness in patients with AH.

Material and methodology: The research included 66 patients (32 men and 34 women) with uncomplicated essential hypertension stage I-II. Mean age was 57,5 ± 3,52 years, duration of illness 8,4 ± 3,2 years.Measurement of arterial wall stiffness parameters: AI,augmentation pressure (Pauh.), WR, systolic (SBP), diastolic (DBP), central systolic (cSBP) and central pulse (cPBP) blood pressure were obtained by applanation tonometry using the SphygmoCor device (AtCor Medical, Sydney, Australia) .

Results: In a correlation analysis was found significantly higher Pauh. in patients older than 60 years (13 ± 0,52 -11,6 ± 0,46; p <0,05), as well as in women (15,3 ± 0,61 - 9 ± 0,36; p <0,05). In the subgroup of patients with a heart rate less than 70 beats per minute cSBP, cPBP and Pauh were significantly higher, while WR was significantly lower.

Conclusion: Patients with AH age more than 60 years have higher Pauh (11%). W omen with AH , compared with men, marked increase Pauh and IA (by 41.8% and 23% respectively). Patients with a heart rate less than 70 per minute,compared with more highly associated with less WR (16%) combined, however, with the increase of cSBP , cPBP (4% and 9.7%,respectively) and Pauh (on 21.4%).

Key words: Arterial hypertension, central aortic pressure, wave reflection, augmentation index.

DOES THE BASELINE HEART RATE INFLUENCES THE FINAL OUTCOME IN PATIENTS WITH STEMI?

(Poster presentation)

Field of medicine: **Internal medicine**
Author(s): **DUSICA OGNJANOVIC**
Co-author(s): **Srdjan Milanov, Draga Nozinic**
Supervisor(s): **MD/Phd Violeta Iric-Cupic, MD/PhD Goran Davidovic**
Country: **Serbia**
Faculty: **Faculty Of Medical Sciences Kragujevac**

Introduction: Acute myocardial infarction is a clinical form of the coronary heart disease with permanent damage or loss of cardiac tissue. Heart rate is the most important determinant of myocardial oxygen demand and cardiac workload. Many prospective studies have shown association between baseline heart rate lower than 80 beats per minute(bpm) and better outcome in patients with STEMI.

Aim: Aim was to investigate the influence of baseline heart rate levels on the final outcome in patients with STEMI

Material and methodology: This retrospective, population-type study, included 167 patients with STEMI treated in Coronary Unit, Clinical Center Kragujevac from January-June 2011. Baseline heart rate was defined according to the first ECG on the admission. All data were statistically analyzed in the SPSS for Windows.

Results: Study included 167 patients, of whom 13(7,8%) died and 154(92,2%) survived. Baseline heart rate lower than 80 bpm was present in 106(63,5%;χ2-test;p=0,000). Among the survivors, 98(58,7%) had heart rate lower than 80 bpm and 56(33,5%) greater than 80 bpm; and in the group with a fatal outcome 8(48%) patients had heart rate lower than 80 bpm comparing to 5(3%) patients with heart rate greater than 80 bpm. Mean baseline heart rate among the survivors was 79.27±21.59 (36-177) beats per minute

Conclusion: In our patients baseline heart rate lower than 80 bpm was associated with a better outcome, but also a lot of patients who survived had heart rate greater than 80 bpm which indicates that heart rate had an important but not the major role in a surviving

Key words: STEMI, heart rate

ARE THE ARTERIAL STIFFNESS MARKER AND LIPOPROTEIN PROFILE DISORDERS CONNECTED IN PATIENTS WITH STEMI?

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **SRDJAN MILANOV**
Co-author(s): **Dusica Ognjanovic, Draga Nozinic**
Supervisor(s): **PhD Violeta Iric-Cupic, PhD Goran Davidovic**
Country: **Serbia**
Faculty: **Faculty Of Medical Sciences Kragujevac**

Introduction: Arterial stiffening is a hallmark of the aging process with higher incidence of elevated pulse pressure and isolated systolic hypertension; also a marker for increased cardiovascular risk, including myocardial infarction. Lipoprotein profile disorders contribute to the development of atherosclerosis. Atherosclerosis changes the arterial wall characteristics, on the other side stiffening may play a primary role in the development and progression of atherosclerosis.

Aim: Purpose was to investigate the connection of arterial stiffness markers and risk factors for atherosclerosis.

Material and methodology: This retrospective study, included 167 patients with STEMI, treated in Coronary Unit, Clinical center Kragujevac from January-June 2011. Pulse pressure was defined as a difference between systolic and diastolic blood pressure on admission; levels over 40mmHg were considered as risk factor. Lipoprotein profile components were measured on admission and clasified according to AHA, NIH and NCEP consensus recomendation. Collected data were statistically analyzed using SPSS.

Results: Parameters that we observed were statistically significant: pulse pressure higher than 40mmHg in 68.9% patients (χ2-test;p=0,000); systolic blood pressure elevated in 73.1%;(t-test;p=0,000); low HDL-cholesterol (χ2-test;p=0,000), as dominant, and high LDL-cholesterol (χ2-test;p=0,002). Pulse pressure over 40mmHg had significant connection only with low HDL-cholesterol as a dominant lipoprotein profile disorder (χ2-test;p=0,047), connection with high LDL-cholesterol was present in a large procent but without statistical significance.

Conclusion: Pulse pressure and isolated systolic hypertension, low HDL-cholesterol and high LDL-cholesterol were significant risk factors for STEMI. Connection between pulse pressure as a marker of vascular stiffening and low HDL-cholesterol as risk factor for atherosclerosis does exist.

Key words: pulse pressure, arterial stiffness, atherosclerosis, HDL, LDL

THE 10 YEAR PROBABILITY OF MAJOR FRAGILITY FRACTURE BASED ON FRAX MODEL AND LUMBAR DUAL X-RAY ABSORPTIOMETRY (DX): A CROSS SECTIONAL STUDY IN 498 POSTMENOPAUSAL WOMEN

(Poster presentation)

Field of medicine: **Internal medicine**
Author(s): **MADALINA DUMITRU, DUMITRU FERCHIDE**
Supervisor(s): **Catalina Poiana, Mara Carsote**
Country: **Romania**
Faculty: **Faculty of Medicine Bucharest**

Introduction: While postmenopausal low trauma fracture become an epidemiological issue, new tools a part from the golden standard DXA are registered as FRAX algorithm which estimates the 10-year fracture probability using clinical parameters of the patients.

Aim: We correlate FRAX values without femoral neck DXA results and lumbar DXA.

Material and methodology: This is a cross-sectional study in postmenopausal women. Central DXA (GE Lunar Prodigy) was performed. Based on DXA report, the patients had normal DXA, osteopenia or osteoporosis. FRAX (Romanian version) was used to estimate the 10-year absolute risk of major fracture. The prevalent fragility fractures were self-declared. The statistical analysis used SPSS 5.0, with statistical significance at $p<0.05$.

Results: 498 women were included with a mean age of 57.75+/-7.5 years. 429 of them had no prevalent fractures. The repartition based on central DXA was: 154 with normal DXA, 227 with osteopenia and 117 with osteoporosis. The 10-year probability of fracture was: 4.56% for the entire cohort, 3.82% for the patients with no fractures, 3.35% in women with normal DXA, and 4.74%, respective 5.83% in subjects with osteopenia, respective osteoporosis. The simple regression coefficient (r) between lumbar bone mineral density and major fracture risk based on FRAX was: for all the patients r=-0.25, $p<0.005$; for the women with no fractures: r=-0.56, $p<0.005$, for the women with normal DXA: r=0.03,p=0.75; for osteopenia group: r=-0.07,p=0.29; for osteoporosis group: r=-0.02,p=0.83.

Conclusion: Modest negative correlations but statistical significant were found between 10-year probability of major fracture and lumbar bone mineral density, providing new dimensions in fragility fracture risk assessment.

Key words: D.X.A. , frax , values, trauma , fracture, post menopausal women, osteopenia

STEM CELLS TRANSPLANTATION IN MYOCARDIAL INFARCTION: OUR FIRST EXPERIENCE

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **HARIS BABACIĆ**
Co-author(s): **Elma Kandić, Avdi Murtezani, Anamarija Jovanovska, Elena Gjorchevska**
Supervisor(s): **Assist. Hristo Pejkov, MD; Prof. Borche Georgievski, MD, PhD**
Country: **Macedonia**
Faculty: **Faculty Of Medicine Skopje**

Introduction: We report the early results of our first case of intracoronary administration of autologous bone marrow-derived stem cells after acute myocardial infarction (MI). According to the criteria of Myocardial Stem Cell Administration After Acute Myocardial Infarction (MYSTAR) Study, the patient was randomized for the group A (early treatment within 21-42 days after MI).

Aim: The aim of the study was to help determining the role of stem cells in treating MI.

Material and methodology: One patient with extensive anterior, ST elevation, acute myocardial infarction (AMI) was treated by primary angioplasty. Left ventricular ejection fraction (LVEF) was 35% and wall motion score index (WMSi) was 1.77. Forty days after infarction, bone marrow mononuclear cells were administered by intracoronary infusion in the infarct-related artery. Bone marrow was harvested by multiple aspirations from posterior iliac crests and cells were filtered, centrifuged and resuspended in serum-free culture medium and infused the next day, through the catheter, into the infarct-related artery.

Results: No major cardiac events occurred after the transplantation, during early follow-up period (30-120 days after the infarction). Control myocardial perfusion scan showed improvement in the myocardial perfusion, 4 and 48 months after the administration of stem cells. Improvement of global left ventricular function was assessed during echocardiography assessment (LVEF = 44% and WMSi = 1,44). NYHA function class improved from II to I.

Conclusion: There was a moderate, but significant, improvement of the myocardial function after the intracoronary transplantation of autologous bone marrow stem cells.

Key words: autologous stem cells, myocardial infarction, intracoronary transplantation, MYSTAR study

TUBERCULOSIS IN CHILDREN AND ADOLESCENTS IN AUTONOMOUS PROVINCE OF VOJVODINA

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **NIKOLINA TOMASEVIC**
Co-author(s): **Ljiljana Vitas**
Supervisor(s): **Ass. Dr Miroslav Ilic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Tuberculosis (TB) in recent years, is once again becoming a health problem around the world. World Health Organization (WHO) has created a strategy ("Directly observed treatment short-course-DOTS"), in order to reduce morbidity and mortality from TB, Serbia is a part of this global project.

Aim: The aim of this study was to determine the status of TB in children and adolescents with active TB in the autonomous province of Vojvodina after the start of implementation of the DOTS strategy in Serbia.

Material and methodology: This retrospective study included 77 children and adolescents treated for tuberculosis in Vojvodina (January 2005-December 2011.). The treatment started in residential institutions, continued under the control of a competent specialist departments or health centers across Vojvodina. The data used in the study were obtained from the login/checkout sheets for TB.

Results: The total number of TB cases in Vojvodina has a trend of decrease from 26.3 2005th year to 14.6 per 100 000 population 2011th 72.7% is in the age group of 15 to 19 years. 48% were pupils of primary and secondary schools. In 92.2% of patients with treatment outcome was successful.

Conclusion: All the main objectives of the National Program for Tuberculosis and WHO have been fulfilled, in consideration of the youngest age group of the population. It is necessary to give priority to the continuing education of teaching staff and parents of children in order to promote awareness of the disease and prompt attention for early detection of tuberculosis.

Key words: tuberculosis, DOTS, children, adolescents

FACING UP TO THE PROBLEM OF NO NEED FOR ROUTINE LABORATORY MONITORING OF NEW ORAL ANTICOAGULANTS (DIRECT THROMBIN INHIBITORS, DIRECT FACTOR XA INHIBITORS)

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **DARIA V. KULESHOVA, M.D.**
Supervisor(s): **Andrey G. Obrezan, M.D., Ph.D.**
Country: **Russian Federation**
Faculty: **Faculty Of Medicine St. Petersburg**

Introduction: At present, due to the lack of recommendations the anticoagulation monitoring is not carried out.

Aim: To assess the problem of no need for routine coagulation laboratory monitoring of direct thrombin inhibitors and direct factor Xa inhibitors.

Material and methodology: 52 patients with nonvalvular atrial fibrillation, coronary artery disease and at least one CHA2DS2VASc risk factor were enrolled. Mean CHA2DS2VASc score 4,6, mean HAS-BLED score 2. Exclusion criteria: eGFR < 30 ml/min. 40 patients receiving dabigatran bid (75, 110 or 150mg). 12 patients receiving rivaroxaban 15 or 20mg q.d.

Results: Taking into account prescribing information, the laboratory monitoring was not obtained. Sporadic coagulation measurements showed thrombin time significant (at least two-fold) extension at the end of the first week of therapy with dabigatran and in some cases had reached 240 seconds. After a month of therapy some patients had thrombin time at the upper limit of normal. However in several examples it remained about 2-4 fold increased in a dose-dependent manner (dabigatran 150 mg bid). Furthermore, after the first week of therapy the aPTT was prolonged by 1.5-2.2 times in comparison to the initial value and reached the upper limits of normal by the end of the first month. Blood test revealed 14-32% reduction in platelet count compared to baseline (up to 52% in one patient). These phenomena appeared to be dose-independent.

Conclusion: Further studies are necessary to find the affordable algorithm for long-term anticoagulation therapy monitoring. Interaction with other pharmacological agents (especially with anti-arrhythmic drugs) should be specified.

Key words: rivaroxaban, dabigatran, routine laboratory monitoring

HAEMODIALYSIS REQUIRMENT AFTER CARDIOVSCULAR SURGICAL PROCEDURES

(Oral presentation)

Field of medicine: **Internal medicine**
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Co-author(s): **Vladimir Prelevic**
Supervisor(s): **Marina Ratkovic, MD PhD**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction: Acute renal failure requring dialysis develops in 1-5% of patients undergoing cardiac surgery and it is associated with higher intrahospital mortality. Postoperative dialysis requiring acute renal failure can be result of two different pathophysiological pathways: complicated perioperative course due to urgent –emergent surgery or main intraoperative techinical complications in patients with preoperative normal renal function. Acute renal failure occurs in up to 30% of patients who undergo cardiac surgery, with dialysis being reguired in approximately 1% of patients.

Aim: The aim of the study was to identify risk factors associated with dialysis requirment in patients after cardiac surgery.

Material and methodology: All data were collected respectively from 2008 to 2013 and stastically proceeded.

Results: In last five years we preformed dialysis in 19 patients after cardiac surgerey in Cardiovascular Surgery Department. Main risk factors associated with acute renal failure and dialysis requirment were: male gender in 64,8%, diabtes (52,6%), chronic obstructive pulmonary disease (21,05%), peripheral vascular disease (15,8%), renal insufficiency before treatment (31,6%), congestive heart failure (52,6%), left ventricle ejection fraction < 35% in 42,1%, cardiogenic shock (63,1%), lenght of CPB (43,7%), cross -clamp time and nonpulsatile flow.

Conclusion: General measures to prevent acute renal failure after cardiac surgery are: identification of high – risk patients, optimatization of renal perfusion during surgery procedures, avoidance of nephrotoxins, perioperative hydration and use of hemodynamic monitoring and inotropic agents to optimaze cardiac output, treatment of volume depletion and congestive heart failure before cardiac surgery.

Key words: cardiovascular surgery, acute renal failure, haemodialysis, risk factors

ASSESSMENT FAMILY FUNCTIONING IN FAMILIES OF PATIENTS WITH ISCHAEMIC HEART DISEASE

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **SLADJANA NOVKOVIC**
Co-author(s): **Sanja Popin**
Supervisor(s): **Tijana Momčilov Popin, Jasminka Markovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Ischaemic Heart disease (IHD) are the leading cause of death and disability for work throughout the Word. Etiologic agent can be classified as: genetic, social, psychological mentally certain patterns of behavior , diet , nonspecific illness, thrombotic tendencies, disorders of metabolism. Recently the heart research moves toward its impact and importance family that may affect the patients with IBS.

Aim: Research was to determine whether the families ofwith IHD are different degree functionality in relation to family healthy persons with the hypothesis that the differences are there and that the family of pts of IHD less functional , measured with "FACES IV",

Material and methodology: The study reference covering the 114 pts who were divided and the two groups: test and control. Test group are committed patients with diagnosis made by IBS, while the second group respondents were control group consisting healthy persons. The respondents have completed the questionnaire "FACES IV,(Olson et al).

Results: Derived from the differences between control group and are explored in the following dimensions the questionnaire level cohesiveness, level flexibility, connectivityrigidity, family communication, and family satisfaction.

Conclusion: we confirmed that the families of pts with IHD differ in degree functionality, in relation to family healthy persons. Family patients with IHD is characterized by a lack of closeness among members, communication problems and a low degree of satisfaction with in the family

Key words: Iachaemic heart disease, family functioning.

ASSESSMENT OF THE FAMILY FUNCTIONING IN THE FAMILIES OF WOMEN WITH ISCHAEMIC HEART DISEASE

(Oral presentation)

Field of medicine: **Internal medicine**
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Co-author(s): **Slađana Novković**
Supervisor(s): **Prof. Dr Tijana Momčilov Popin**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Ischemic heart disease (IHD) is the leading cause of death and disability worldwide. Etiologic agents can be classified as: genetic, social, psychological, certain patterns of behaviour, diet, nonspecific illness, thrombotic tendency, disorders of metabolism. Recent studies have shown that the characteristics of IHD, risk factors, clinical course and prognosis, and therapeutic procedures IHD in women differ from the same in a man. Also recently hub research shifted towards the impact and importance of the family that may have on patients with IHD.

Aim: This study was to determine whether the families of women with IHD differ in the degree of functionality compared to families of men with IHD with the hypothesis that there is a difference and that the families of women with IHD less functional scale measured FACES IV.

Material and methodology: We observed 137 patients who were divided into two groups. The first were women with a diagnosis of IHD (68), while the second group consisted of men with IHD (69). Respondents to the questionnaires FACES IV, designed by Olson et al.

Results: Winning the differences between the men and women on the following dimensions: the level of cohesiveness, level of flexibility, connectivity, rigidity, family communication and family satisfaction.

Conclusion: The families of women with IHD characterized by excessive looseness relationship among family members, communication problems and low levels of satisfaction with in the family in relation to the men studied, thus undermining the very disease prognosis and outcome.

Key words: ischemic heart disease, women, family function

HIGHER EXPRESSION OF HIF-1A IN SEROUS CYSTADENOCARCINOMA COMPARED TO CYSTADENOMA OVARY

(Oral presentation)

Field of medicine: **Oncology**
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Country: **Indonesia**
Faculty: **Faculty of Medicine Gadjah Mada**

Introduction: Hypoxia-inducible factor 1a (HIF-1a) plays an important role as transcriptional factor that regulates genes to keep oxygen homeostatic and promote neoangiogenesis which is considered essential for tumor progression. Ovarian cystadenocarcinoma needs higher HIF-1a level to adapt in hypoxic environment and keep the cells growing. HIF-1a has emerged as an attractive target for cancer therapy so that it can decrease mortality of ovarian cancer. the aim of this research: To know the difference of HIF-1a expression between serous cystadenoma and cystadenocarcinoma ovary.

Aim: to know the difference of HIF-1a expression between Serous Cystadenocarcinoma compared to Cystadenoma Ovary, so that can be considered to determine prognosis and therapy.

Material and methodology: This research used 58 samples, consist of 29 cystadenoma and 29 cystadenocarcinoma ovary. Immunohistochemistry staining was performed with Anti-HIF-1a monoclonal antibody as primary antibody. HIF-1a expression is showed by histoscore which is derived from intensity and the number of "positive" tumor cells expressed HIF-1a. Histoscore value is the average of 5 random field of microscopic views. Data were analysed by Mann-Whitney comparative test.A P-value of <0.05 was considered statistically significant.

Results: There was significant differences of HIF-1a expression between serous cystadenocarcinoma and cystadenoma ovary (p=0,000 with 95%CI).

Conclusion: HIF-1a expression is different between serous cystadenoma and cystadenocarcinoma ovary. Higher expression of HIF-1a in cystadenocarcinoma can be considered to determine prognosis and therapy.

Key words: HIF-1a, serous, cystadenocarcinoma, cystadenoma

SENTINEL LYMPHNODE DETECTION IN BREAST CANCER-FIRST EXPERIENCE

(Oral presentation)

Field of medicine: **Oncology**
Author(s): **HRISTIJAN KIMOSKI**
Co-author(s): **Sinisa Stojanoski, Nevena Ristevska**
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Faculty: **Medical Faculty Skopje**

Introduction: Breast cancer is a major disease in women. Positive axillary lymphnodes predict developing of distant metastases and negative outcome earlier- hence, the status of the sentinel lymphnode (SLN) chain is crucial for the appropriate management of these patients.

Aim: To determine the role of SLN and benefits in patients with breast cancer.

Material and methodology: 21 female patients (pts), age 44+/- 12 years, with T1-2 N0 M0 staged breast cancer were included. SLN detection and lymphoscintigraphy were acquired using gamma- camera and gamma-detection probe after periareolar, subcutaneous injection of 99mTc radiolabelled colloids (99mTechnetium–SENTISCINT), followed with dynamic phase (0-30min p.i.) and static lymphoscintigraphy (30min and 2h p.i.). Intraoperatively, after the blue dye injection, SLN was extirpated and ex tempore histopatologically explored.

Results: SLN was negative and the lymphnode chain preserved in 15/21(71%) pts, while in 6/21(29%) was positive, followed with radical lymphnode chain extirpation. 6 pts had more than one SLN i.e. 2 SLN, 4/6 pts from those had negative and 2/6 pts had positive SLN. 1 patient had a rare, double drainage to axilla and internal mammary arteria and was selected for a more aggressive radiation therapy.

Conclusion: Our study confirmed that SLN detection technique should be performed in this subset of breast cancer patients (T1-2 N0 M0) in order to avoid the unnecessary radical surgical procedure and postoperative surgical complications.

Key words: breast cancer, sentinel lymph node, radionuclide detection.

COMPARISON OF THE EFFECTIVENESS OF NUTRITIONAL SUPPORT IN CANCER PATIENTS AFTER RADICAL GASTROINTESTINAL SURGERY

(Oral presentation)

Field of medicine: **Oncology**
Author(s): **NAZAR BELEY**
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Supervisor(s): **MD PhD Taras Shlyakhta**
Country: **Ukraine**
Faculty: **Faculty of Medicine Uzhhorod**

Introduction: Today postoperative feeding has 2 variants – enteral and parenteral nutrition. In the scientific literature doesn`t stop a discussion about the effectiveness and appropriateness of these two types of feeding.

Aim: To analyze the effectiveness of enteral and parenteral nutrition in oncology patients who underwent gastrointestinal surgery.

Material and methodology: We selected 2 groups of patients for our study. Group 1 (20 patients) was cared exlusively on enteral nutritional support after surgery. The group 2 (39 patients) received parenteral nutrition. Effectiveness was assessed by the patients` average length of stay in the intensive care department (ICD), term of gases discharge and total protein measured before operation, on the day 1 and 4 after surgery.

Results: The length of stay for patients in ICD for group 1 was 5,6 ± 1,5 day, and for the group 2 - 5,8 ± 1,3 days. The term gases discharging in the group 1 was 3,5 ± 0,9 days and in the second one - 3.9 +1.1 days. In patients receiving parenteral nutrition total protein was 69,21±4,22 g / l one day before surgery, one day after surgery - 54,05±5,72 g / l, on day 4 - 55,04±3,95 g/l. The same parameters for enteral nutrition group was: 71,76±5,15 g/l, 58,33±6,67 g/l and 54±13,04 g/l relatively.

Conclusion: Our results shows that statistically significant differences were not found comparing basic biochemical indices, patients` staying length in ICD and the term of gases discharging in patients receiving enteral and parenteral nutrition.

Key words: intensive care, enteral nutrition, parenteral nutrition

IMPROVED METHOD FOR THE DETECTION OF STEROID RECEPTOR-LIGAND INTERACTIONS

(Poster presentation)

Field of medicine: **Oncology**
Author(s): **ZSADÁNYI SÁRA, TOMIĆ MAJA**
Supervisor(s): **Dr. Anđelka Ćelić, Dr. Edward Petri**
Country: **Serbia**
Faculty: **Faculty Of Sciences Novi Sad**

Introduction: Lung, prostate and colorectal cancers are the most common cancers in men, and represent ~40% of cancers worldwide. Androgen (AR) and glucocorticoid (GR) receptor signaling play opposing roles in tumorigenesis: AR is important in the development and progression of prostate cancer, while GR mediated mechanisms can trigger cell death, depending on the cancer type. Both AR and GR are major therapeutic drug targets, and belong to the group of nuclear steroid receptors (SR), which have essential functions as transcription factors. Receptor dimerization is a crucial post ligand-binding event necessary for SR transcriptional activity.

Aim: Development of a non-radioactive, non-transcriptional, high-specificity, high-throughput method for the detection of steroid receptor-ligand interactions.

Material and methodology: AR and GR ligand binding domains (LBDs) were fused to yellow fluorescent protein (YFP), and expressed in Saccharomyces cerevisiae FY250 yeast cells. Steroid receptor-ligand interactions induce AR or GR dimerization, causing increased YFP fluorescence due to fluorescence resonance energy transfer (FRET). Assay sensitivity can be improved by increasing cell permeability, either chemically or enzymatically. Reagents: testosterone, cortisol. The fluorescence of YFP fusion proteins in ligand-treated cells can be analyzed by 96-well fluorescence plate reader.

Results: Fluorescence signals correlate with ligand binding to steroid receptor ligand binding domains (LBDs).

Conclusion: The fluorescent cellular sensors developed here could be used to detect steroid interactions with therapeutically relevant compounds, such as synthetic steroid derivatives.

Key words: cancer, androgen receptor, glucocorticoid receptor, yeast biosensors, receptor-ligand interactions, FRET

EVALUATION OF OSTEOARTHRITIS AFTER BALNEARY THERAPY

(Poster presentation)

Field of medicine: **Internal medicine**
Author(s): **MADALINA DUMITRU, DUMITRU FERECHIDE**
Supervisor(s): **Mircea Lupusoru, Gabriela Lupusoru**
Country: **Romania**
Faculty: **Faculty of Medicine Bucharest**

Introduction: We know the fact that evolution of osteoarthritis is progresive, slowly and with a degradation of articulations of the huckle more accentuated, sometimes with major disfunctions, we considered that is necessary an execution of a study case, where we are evaluating the pain and the functional index after 3 weeks of balneary therapy for the patients with osteoarthritis.

Aim: The patients therapy had as principal objectives the follow things: the growth of articulations functionality and the maintainig of actual function respectively the prevention of disfuctions and of the disabilities.

Material and methodology: The study had been realised during 4 months and it had been efectuated on 40 patients, who were divided in two parts : a control part (n=20) which received an analgesic simtomathic therapy, electrotherapy, physiotherapy, massage and the part with balneary therapy(n=20) which received hydrotherapy(special hot baths from the Sarata-Monteoru Station), electrotherapy, physiotherapy, massage in the Ceres Balneary Complex from Sarata-Monteoru,Romania. The patients were evaluated in the first dayand after 3 weeks, with the help from the similary scale of visual for the evalution of the pain at the passive and active motion (Visual Analog Scale – VAS), the index score of arthrosis(Western Ontario and MCMaster Universities Osteoarthritis Index -WOMAC) and the functionaly index of LEQUESNE for arthrosis.

Results: After the patients evalution from the two parts, after the set parameters(the VAS scale, WOMAC score, the functional index LEQUESNE), in the first and the last dat of the therapy, it's been noticed the fact that the majority of patients know an semnificative improvement of the painful perception due to the arthrosis pain, both at the passive and active mobilization of articulations of the huckle.

Conclusion: The obtained results in this study confirm the effectiveness of both therapy methods The pain improvement was similary at the patients of the both parts, during the study, the balneary therapy being prefered because of the benefic semnificative effects and the minimal adverse effects.

Key words: Coxartrozis, electrotherapy,kinectotherapy,massage, VAS, WOMAC

CORRELATION BETWEEN SYSTOLIC FUNCTION AND NUMBER OF OCCLUDED CORONARY ARTERIES IN PATIENTS WITH ACUTE CORONARY SYNDROME

(Poster presentation)

Field of medicine: **Internal medicine**
Author(s): **DRINCIC TANJA**
Co-author(s): **Željka Rogač, Vlahović Dunja**
Supervisor(s): **Prof.dr Ljilja Musić**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction: Acute coronary syndrome presents couple of clinical syndromes caused by cardiac ischemia. Value of ejection fraction (EF) represents left ventricular function which can be damaged in acute coronary disease.

Aim: Estimation of relationship between number of occluded coronary arteries and systolic function in patients with acute coronary syndrome.

Material and methodology: Investigation is designed as cross-sectional study . 101 patients with diagnosis of acute coronary syndrome were included. All of them had no diagnosis of heart failure before. Echocoronarography was used to estimate ejection fraction and coronarography was used for estimation of number of occluded coronary arteries.

Results: All of patients with one occluded coronary artery had EF > 51%. 53% of patients with two occluded arteries had EF <50% and 47% had EF >50%. 67% of patients with three occluded arteries had EF< 50% and 33% EF > 50%. Patients with four and more occluded arteries had in 70% of cases EF < 50%.

Conclusion: Systolic function decreases with increasing of number of occluded coronary arteries.

Key words: systolic function, coronary arteries,acute coronary syndrome

THE SPECIALITY OF COMORBID COMBINATION OF CORONARY HEART DISEASE AND DIABETUS MELLITUS IN DWELLERS OF DIFFERENT ALTITUDE REGIONS OF TRANSCARPATHIA

(Oral presentation)

Field of medicine: **Internal medicine**
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Supervisor(s): **Doctor Of Medical Sciences, Prof. Rishko M.V.**
Country: **Ukraine**
Faculty: **Medical Faculty Uzhhorod**

Introduction: The relevance of coronary heart disease research is conditioned by its significant prevalence, high mortality and disability, and significant socio-economic losses that affect the labour potential of the country. Patients that have a CHD and DM combination represent the most vulnerable group.

Aim: Study the combination of comorbid coronary artery disease and diabetes in the population of Transcarpathia.

Material and methodology: The group under study consisted of 111 CHD patients that were treated in the Transcarpathian Regional Cardiology Clinic in 2007-2012 and underwent coronary angiography. 52 patients had diabetes and 59 did not.The group under study consisted of 24 females and 88 males, 80,2% patients over 50 and 19,8% under 50 years of age.

Results: All the patients were divided into 2 groups in accordance with the presence or absence of diabetes: Group 1 consisted of patients who did not have DM; Group 2 consisted of DM patients. In Group 1 single vascular affection was observed in 22,0% of patients, 2 blood vessels were affected in 22% of patients, and one-third of patients did not have hemodynamically significant vascular lesions (32,2%); in Group 2 50% of patients had three vascular lesions, in 25% of patients ischemic changes were found in 2 coronary arteries, and in 13,5% of patients – in one coronary artery.

Conclusion: Half the patients with CHD on the background of diabetes had three vessel lesions and much more common ventricular aneurysm compared with patients without concomitant diabetes.

Key words: Coronary heart disease, diabetus mellitus

HEART RHYTHM DISORDERS AS MORTALITY PREDICTOR IN PATIENTS WITH STEMI AND HEART RATE GREATER THAN 80BMP

(Oral presentation)

Field of medicine: **Internal medicine**
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Co-author(s): **Marija Pavlovic, Marijana Petrovic**
Supervisor(s): **Prof. Dr Goran Davidovic, Prof. Dr Violeta Iric-Cupic**
Country: **Serbia**
Faculty: **Faculty Of Medical Sciences Kragujevac**

Introduction: AMI occurs during coronary artery occlusion.Studies and clinical observations have shown that there is an increased risk of overall and cardiovascular mortality when heart rate exceeds 80bpm.Heart rhythm disordes are usually signal of myocardial damage or other electrolyte disbalance,and can reduce survival.

Aim: Purpose was to investigate the influence of heart rhythm disorders on the final outcome in patients with STEMI and heart rate greater than 80bpm

Material and methodology: This study, included 140 patients with anterior wall STEMI treated in Coronary Unit,Clinical center Kragujevac in the period form January 2001-June 2006.Heart rate was calculated as the mean value of baseline and heart rate in the first 30min after admission. Heart rhythm disorders were diagnosed by 24 hour ECG monitoring.All data was stored in database,and statistically analyzed in the SPSS

Results: Statistialy significant difference was noticed between patients with a fatal outcome and survivors, in the group of patients with anterior wall STEMI and heart rate greater than 80 bpm (χ2-test, p=0,043) with higher values of heart rhythm disorders in patients who died (89,2%) comparing to the patients who survived (72,2%) Patients who did not have heart rhythm disorders mostly survived (27,8%) against those who died but did not have these disorders (10,8%). Univariate regression analysis did not singled out heart rhythm disorders as independent mortality predictor in the group with increased heart rate [expB (95%CI)-0,315(0,099-1,004); p=0,051)]

Conclusion: In the observed group of patients with anterior wall STEMI and heart rate greater than 80bpm,heart rhythm disorders was significant predictor of mortality

Key words: STEMI,heart rate,heart rhythm disordes

THE ROLE OF HELICOBACTER PYLORI INFECTION AND NSAIDS IN PATOGENESIS OF PEPTIC ULCER DISEASE

(Poster presentation)

Field of medicine: **Internal medicine**
Author(s): **ŠABAN JOVANA**
Co-author(s): **SANJA VUCETIĆ, ŽELJKA ROGAČ**
Supervisor(s): **DR BRIGITA SMOLOVIĆ**
Country: **Montenegro**
Faculty: **Medical Faculty Podgorica**

Introduction: The relation between Helicobacter pylori and non-steroid antiinflamatory drugs (NSAIDs) in pathogenesis of peptic ulcer disease is controversial.

Aim: To determine interaction of Helicobacter pylori infection and NSAIDs, for the occurs of peptic ulcer disease.

Material and methodology: This is a randomised, study. Patients ,who are enrolled in study have degenerative disease, requiring treatment with NSAIDs for a long period. Patients are randomized by gender, age, type and daily dose of NSAIDs and indication for treatment with NSAIDs. Not enrolled patients with ulcer history, concurrent use of aspirin, anticoagulant, corticosteroid, disease of liver, kidney, cardio-respiratory system, disease of hematopoetic system. 38 positive and 33 H.pylori negative patients are followed.

Results: Peptic ulcer disease are founded in 55,3% positive and 36,3% H.pylori negative patients. The probability of duodenal ulcers are 35 in Hp- and 36,8% in Hp + patients. The prevalence of gastric ulcers are similar among negative (28,9%) and H.pylori positive (33,3%) patients. Duodenal ulcer is commoner in men than in women in H.pylori negative (7,7% vs o%) as well as in H.pylori positive (43,7% vs , 31,8%) patients. Patients receving diclofenac in H.pylori negative group have gastric ulcer in 47,1% and duodenal ulcers in 5,9%. While in H.pylori positive group gastric ulcers have 36% and duodenal ulcers 40% of patients. Patients receving ibuprofen in H.pylori negative group have gastric ulcer 18,7%.

Conclusion: H.pylori and NSAIDs are two independent risk factors in the patogenesis of peptic ulcer disease. H.pylori contributes ulcer risk in patients starting long term treatment with NSAIDs.

Key words: peptic, disease, .h.pylori, ibuprofen, diclofenac

INFLUENCE OF LAMOTRIGINE ON BONE MINERAL DENSITY IN ADOLESCENTS WITH EPILEPSY

(Oral presentation)

Field of medicine: **Internal medicine**
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Co-author(s): **Aleksandra Pertrović, Milica Živković**
Supervisor(s): **Doc. Dr Milena Dimić**
Country: **Serbia**
Faculty: **Medical Faculty Nis**

Introduction: Antiepileptic drugs can produce negative influence on bone mineral density.

Aim: Was to evaluate influence of lamotrigine (LTG) on lumbar bone mineral density (BMD L1-L4) in adolescents with epilepsy.

Material and methodology: We evaluated lumbar BMD L1-L4 in 15 adolescents with epilepsy aged 13-18 years, both genders, treated with lamotrigine longer than 1 year. Patient lumbar spine BMD Z-scores values were compared with matched control group values (23 healthy adolescents, both genders). Patient and control group are gender, weight and height matched. For statistical analysis we used softwere SPSS version 15 (Mann-Whitney U-test and Pearson,s correlation). Statistical significance was $p<0,05$.

Results: There were no statistically significant difference between male and female patient and control group lumbar spine BMD absolutely values (1,153±0,09 g/cm2 vs. 1,167±0,04 g/cm2; p=0,72; n.s.) (1,149±0,07 g/cm2 vs. 1,167±0,08 g/cm2; p=0,64; n.s.). The lumbar spine BMD Z-score values in patients group were not significantly lower compared control group values (0,69±0,93 vs. 0,96±0,86; p=0,37; n.s.). Therapy duration had not negative influence on lumbar BMD in patients (rxy=0,10; p>0,05).

Conclusion: Lumbar BMD Z-scores were lower in patients group treated with lamotrigine compared a control, but not significantly, and there are not dependent of therapy duration.

Key words: epilepsy, lamotrigine, adolescents, bone mineral density, Z-score

ESTIMATION OF DYSFUNCTION OF AUTONOMIC NERVOUS SYSTEM IN PATIENTS WITH VASOVAGAL SYNCOPE USING SHORT-TERM HEART RATE VARIABILITY

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **SLAVICA MUTAVDZIN**
Co-author(s): **Milan Radovanovic, Natasa Stankovic, Stefan Dugalic, Jovana Stevic, Mihailo Micic**
Supervisor(s): **Prof. Dr Branislav Milovanovic**
Country: **Serbia**
Faculty: **School Of Medicine Belgrade**

Introduction: Syncope represents a syndrome defined as a sudden transient and temporary loss of consciousness and postural tone due to generalized cerebral ischemia.

Aim: Estimation of autonomic dysfunction in patients with vasovagal syncope and orthostatic hypotension (OH) using short-term heart-rate variability (HRV).

Material and methodology: Examined group consisted of a control group, persons with syncope and persons with syncope and OH. Examination included short-term analysis of RR variability and spectral analysis of heart-rate variability at rest.

Results: Parameters of short-term analysis of RR variability, that are the indicators of vagal activity, had higher values in patients with syncope and with syncope and OH than in the control group. Mean values of the difference of RR interval (mean dRR), standard deviation (SD dRR), square root of the mean of the sum of the squares of differences between adjacent RR intervals (r-MSSD), and number of adjacent RR intervals differing >50 ms (PNN50) had statistically significant difference among the compared groups. Results of comparison of the parameters of spectral analysis of heart-rate variability show increased parasympathetic activity and decreased sympathetic activity. The indicator of sympathetic activity, low frequency normalized units (LFnu), was lower, while the indicator of the parasympathetic activity, high frequency (HF), was higher in both pathological groups, showing statistically significant differences.

Conclusion: Results indicate that in the group of patients with syncope and with syncope and OH the sympathetic activity is decreased, while the activity of parasympathicus is increased in comparison to healthy persons.

Key words: syncope, short-term analysis of RR variability, spectral analysis of heart-rate variability

PLENARY SESSION V

GYNECOLOGY, DERMATOLOGY, NEUROLOGY, PSYCHIATRY, PEDIATRICS, RADIOLOGY

Date: July 20th 2013

ORAL PRESENTATIONS
Start time: 8:30 AM
Amphitheatre Pharmacy - Faculty of Medicine Novi Sad

POSTER PRESENTATIONS
Start time: 10:00 AM
Main Hall at Faculty of Medicine Novi Sad

CHARACTERISTICS OF THE PERINATAL INFECTION IN ROMA PEOPLE

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **BEATA VIRGINAS**
Supervisor(s): **Dr. Annamaria Virginas**
Country: **Romania**
Faculty: **Faculty of Medicine Targu-Mures**

Introduction: Roma are the second largest ethnic minority in Romania, the most socially and economically disadvantaged minority. There is a lack of studies on perinatal infection in roma women .

Aim: The study aimed at determining the prevalence of perinatal infection among roma pregnant women and risk factors for colonization.

Material and methodology: total of 300 pregnant women were enrolled in this study - from August 1, 2012 to March 31, 2013 at a tertiary care hospital in Targu-Mures, Romania- divided into two groups: 170 roma women and 130 romanian women (control group).Women were screened for bacterial colonization on admission for premature rupture of membranes and delivery. Insemination sample were collected from maternal cervix.

Results: The average age of roma patient was 22 + 5, respectively 28 + 6 of the control group. There was a significant difference in socioeconomic status of the two groups. The presence of risk factors was similar. The prevalence of negative test result in the roma and the control group were 82 % and 54 %, respectively. (p 0.158). GBS colonization was recorded in 60 (20%) women: 20 (12 %) roma and 40 (31 %) control and E coli carriage was 10(6 %.) roma and 20 (15%) control.

Conclusion: However the majority of roma people had a low socioeconomic status with deficient pregnancy follow up, significant differences between the groups in the rates of the perinatal infection were not observed. Further clinical trials are needed to confirm these findings.

Key words: Roma, E coli, GBS, Perinatal infection.

DEMODEX MITE RELATION WITH SEBORRHEIC AND ATOPIC DERMATITIS

(Oral presentation)

Field of medicine: **Dermatology**
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Country: **Iran**
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Introduction: Seborrhoeic dermatitis (SD) and Atopic dermatitis (AD) are common inflammatory skin disease for which no single cause has been found, although many factors have been implicated. these can present in a range of symptoms from mild to very severe and distressing. The mite Demodex folliculorum (DF) is most commonly seen in the pilosebaceous unit in humans. SD is located in areas that are rich in sebaceous glands, which are also preferred by DF.

Aim: The aim of this study was To determine the prevalence of demodicosis in SD and AD and to investigate any possible relationship between the DF mites and the presence of SD and AD

Material and methodology: we collect samples from the skin around the nasal tip of 60 randomized patients,were reffered to Amir Al-Momenin hospital dermatology clinic in Tehran,Iran for different reason, to examine the precence of Demodicosis (DF) infestation under optical microscop. Finally, data analysis using SPSS software were analyzed

Results: our study show no significant association between The Demodicosis (DF) prevalence with SD (p=0.68) and AD (P=0.70).

Conclusion: The number of DF mites was not significantly higher in patients with SD or AD

Key words: Demodex, seborrhoeic dermatitis, Atopic Dermatitis

A RARE CASE OF PSEUDOXANTHOMA ELASTICUM

(Poster presentation)

Field of medicine: **Dermatology**
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Introduction: Pseudoxanthoma elasticum or Gronblad Stranberg syndrome is a rare genetic disorder with an autosomal recessive inheritance. The average age of onset is 13 years and it affects females twice as often as males.

Aim: To present a rare case of Pseudoxanthoma elasticum

Material and methodology: We report on the case of a 45 year old female patient from the rural area that addresses our clinic presenting yellow, polygonal papules of 3-5 mm in diameter, asymptomatic, with a reticular pattern, located on the lateral and anterior aspect of the neck. The patient asserts that the disease occurred during childhood, around the age of 5 years, but she wasn't investigated due to the asymptomatic nature of the lesions.

Results: The histopathologic exam using orcein stains indicates elastic tissue disorganization by clumped, irregular, fragmented elastic fibers in the mid and deep reticular dermis. Ophthalmologic examination: best corrected visual activity (BCVA) right eye=1/8; left eye=1; fundus: angioid streaks, bilateral lesions. Right eye Optical Coherence Tomography (OCT) indicates hyperreflective subfoveal choroidal neovascular membrane with cystoid macular oedema. Biologic findings show hypercholesterolemia and hypertrygliceridemia, the rest being in the normal range. The cardiologic consult was normal.

Conclusion:

The histopathologic exam confirms the clinical suspicion of pseudoxanthoma elasticum. Since the cutaneous lesions don't require medical treatment the patient was directed towards the ophthalmology clinic where she started treatment with intravitreal Bevacizumab injections.

Key words: pseudoxanthoma elasticum, angioid streaks

EXECUTIVE FUNCTIONS IN NON-DEMENTED PATIENTS WITH PARKINSON'S DISEASE

(Oral presentation)

Field of medicine: **Neurology**
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Country: **Serbia**
Faculty Of Medicine Novi
Faculty: **Sad**

Introduction: Parkinson's disease is a neurodegenerative disease characterized by movement disorder. Executive functions are a group of complex cognitive processes.

Aim: The aim of this study was to determine the degree and domains of executive dysfunction in patients with early Parkinson's disease and Mini Mental State Examination score of 30, using the Addenbrooke's Cognitive Examination – Revised test battery.

Material and methodology: The study was conducted at the Neurology Clinic of the Clinical Center of Vojvodina. It included 30 adults, aged 45-73 years, divided into a group of Parkinson's disease patients (13 adults) and a control group of healthy adults (17). All subjects were tested by the Addenbrooke's Cognitive Examination – Revised questionnaire, which is a test sensitive for examining cognitive functions and useful for determining cognitive decline in patients with Parkinson's disease.

Results: There was no statistically significant difference in Addenbrooke's score between the patients and controls. Statistically significant differences were observed in the domains of memory and language with regard to age and education.

Conclusion: There was no statistically significant difference in total Addenbrooke's scores among non-demented subjects in early stages of Parkinson's disease. The earliest sign of executive dysfunction was noticed in the domain of language abilities.

Key words: Parkinson's disease, executive functions, the Addenbrooke's Cognitive Examination- Revised.

CLINICAL PRESENTATION OF SUBCLAVIAN STEAL SYNDROME: REPORT OF TWO CASES AND REVIEW OF THE LITERATURE

(Poster presentation)

Field of medicine: **Neurology**
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Co-author(s): **Adriana Konjovic**
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Faculty: **Faculty of Medicine Novi Sad**

Introduction: Subclavian steal syndrome develops in stenotic and occlusive lesions of proximal part of subclavian artery, before vertebral artery arises. Dagnosis relies on radiological findings, typical difference of arterial pressures on forearms, and inversion of blood flow direction in vertebral artery. Ischemic symptoms of hand and posterior brain circulation are the most frequent clinical presentations. Rarely is it asymptomatic or cortical symptoms appear.

Aim: To analyze our own clinical experience and the data available in literature, in order to assess epidemiology, risk factors and clinical presentation of subclavian steal syndrome.

Material and methodology: We presented two clinical cases of subclavian steal syndrome with different clinical presentations using medical documentation. In second part we give review of the literature formed by searching PubMed.

Results: Case of 50 year old man was described, who referred with due to ataxia, vertigo, speech and swallowing disturbances. On MR scan and CT angiography large ischemia in teritory of left posterior inferior cerebellar artery was shown, Occlusion of proximal subclavian artery and inversion of blood flow was proven by ultrasound. Other is case of 58 year old man with gradual personality changes and cognitive impairment. Inversion of blood flow direction in left vertebral artery seen on sonography and subclavian stenosis of about 70%, were confirmed by digital subtractional angiography. Review of literature concerning epidemiology, risk factors and clinical presentation of subclavian steal syndrome was done, and presented in the table.

Conclusion: Subclavian steal syndrome is characterised mainly by symptoms of posterior cerebral circulation. Risk factors are identical to ones for ischemic stroke.

Key words: steal syndrome, subclavian artery, inversion of the blood flow, brain stem, cerebral cortex

FACTORS WHICH PROVOKE SEIZURES IN CHILDREN, ADOLESCENTS AND YOUNG GROWN UPS WITH EPILEPSY

(Oral presentation)

Field of medicine: **Neurology**
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Faculty: **Faculty of Medicine Novi Sad**

Introduction: Epilepsy is a common, chronic neurological disease characterized by repeated spontaneous seizures due to sudden and occasional local electrical discharge of gray matter. With regard to etiology of epilepsy can be idiopathic, cryptogenic, symptomatic and provoked. Seizures could be caused by various internal and external factors, such as mental stress, lack of sleep, menstrual cycle, a sound, light, alcohol, psychoactive substances.

Aim: The aim of our study is to determinate the existence and frequency of certain provocative factors in children, adolescents and young grown ups with epilepsy .

Material and methodology: The study included 40 patients of both gender, aged 6-30 years who fits in the criteria for the diagnosis of active epilepsy and were treated at the Neurological Clinic of the Clinical Center of Vojvodina in the period between 1. November 2011. and 1. February 2012. Data were collected through a survey designed for this research. The questionnaire that was used in this research was filed in by respondents themselves.

Results: Of the 40 respondents, 32 (80%) recognized that some of these provocative factors prior to epileptic seizures. Statistically significant differences were obtained by comparing the gender of the respondents and the type of attack epileptic seizure and etiological types of epilepsy and mental stress as a provocative factor.

Conclusion: Most patients recognized provocative factors, and the most common are sleep deprivation, light stimuli, mental stress and alcohol.

Key words: epilepsy, provocative factor, sleep deprivation.

THE SIGNIFICANCE OF CONTRAST TRANSCRANIAL DOPPLER ULTRASOUND IN PATIENTS WITH MIGRAINE HEADACHE

(Poster presentation)

Field of medicine: **Neurology**
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Faculty: **Faculty of Medicine Novi Sad**

Introduction: Migraine is a complex, reccurent, primary headache. One out of 10 in population have repeted migraine attack. Etiopathogenesis of migraine is still unclear. The prevalence of patent foramen ovale is higher at patients with migraine and may have an influence in pathophysiological mechanism of migraine attack. The positive TCD Bubble test could have an important role as an indirect indicator of patent foramen ovale.

Aim: The aim of this study is to give the clinical presentation of migraine attack and to evaluate the significance of TCD bubble test as an indirect indicator of patent foramen ovale in patients with migraine.

Material and methodology: A retrospective study was performed. Medical documentation of 32 migrenous patients was analyzed. A Transcranial Doppler with contrast (TCD bubble test) was done to all of these patients.

Results: The study included 87% women and 13% of men. Mean age is 36,8. About 21,87% of patients suffered from migraine with aura, and 87,13% of migraine without aura. Nausea (68,75%), vomitus (59,37%) and combination of photophobia, phonophobia and osmophobia (34,40%) are the most common symptoms beside the headache in clinical presentation of migraine. Weather changes (53,20%), menstrual cycle (40,60%) and stress (28,12%) are the most frequent precipitating factors. The positive TCD bubble test as an indirect indicator of patent foramen ovale was found in 31,25% of cases (57,14% in patients with migraine with aura).

Conclusion: The clinical presentation of migraine headache is characterized by typical symptoms of disease, which are described with explicit diagnostic criteria in The International Classification of Headache Disoredrs. Precipitating factors are often present. The significant statistical relation is confirmed between positive TCD bubble test as an indirect indicator of patent foramen ovale and migraine ($p< 0,05$, $\chi^2=15,253$).

Key words: migraine headache, patent foramen ovale, Transcranial Doppler with contrast

EXECUTIVE FUNCTIONS IN EARLY PARKINSON'S DISEASE

(Oral presentation)

Field of medicine: **Neurology**
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Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Parkinson's disease is a chronic neurological disease caused by insufficient production of dopamine in the basal ganglia. Executive functions are a product of complex coordination of different motor and cognitive processes with the purpose of achieving aims in flexible way.

Aim: To determine the degree and domains of executive dysfunction in non-demented patients with Parkinson's disease using the Frontal Assessment Battery, the Executive Interview and the Addenbrooke's Cognitive Examination - Revised tests and to determine the influence of age and educational level on these scores.

Material and methodology: The study was conducted at the Neurology Clinic of the Clinical Center of Vojvodina, and included 39 adults. Data was collected using a battery of standardized tests for evaluation of executive functions in patients with Parkinson's disease: the Frontal Assessment Battery, the Executive Interview, the Addenbrooke's Cognitive Examination – Revised.

Results: The results of the Frontal Assessment Battery and the Addenbrooke's test confirmed existence of executive dysfunctions, especially in the domains of mental flexibility, sensitivity to interference, verbal fluency, and language.

Conclusion: Signs of executive dysfunctions can be determined by the Frontal Assessment Battery and the Addenbrooke's battery of tests and these scores showed a significant correlation with subjects' educational level and age.

Key words: Parkinson's disease, executive functions, Frontal Assessment Battery, The executive interview, The Addenbrooke's Cognitive Examination – Revised.

QUALITY OF LIFE IN PATIENTS WITH MULTIPLE SCLEROSIS

(Poster presentation)

Field of medicine: **Neurology**
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Faculty: **Faculty Of Medicine Podgorica**

Introduction: Multiple sclerosis is a chronic inflammatory disease of the central nervous system which affects 2.5 million people worldwide. Infections,genetic factors,sunlight exposure and vitamin D are the most frequently investigated environmental factors in the etiology of MS.

Aim: Measurement of quality of life in patients with MS, insight into the overall impact of the disorder on everyday life of the patients.

Material and methodology: Investigation was designed as cross-sectional study.Inclusion criteria: membership in Association of Multiple sclerosis in Montenegro. Exclusion criteria exacerbation in last month and physical disability in making contact with patients.Among 250 members,study included 215 patients. Instrument of measurement was Questionnaire MSQOL-54.

Results: Sensory, motor and cognitive symptoms of MS can interfere with activities of daily living, which may subsequently result in significantly reduced health-related quality of life in people with MS. Physical disability complicated by depression and cognitive impairment contributes to an unemployment of these patients. Depression was associated with lower quality of life with respect to health perception (p=0.02), sexual dysfunction (p=0.03), emotional dysfunction (p=0.04), Together with their family members, they are also bear a burden related to home and transport modifications and the need for additional personal services.

Conclusion: In patients with MS a subjective perception of symptoms and signs, must be considered. Most of them don't feel discrimination of society,but they consider environment could be more sensitive for their needs. MS has a impact on patients social roles. This study showed different demographic and clinical parameters had a major effects on psychosocial llfe.

Key words: Multiple sclerosis,quality of life

LIPID STATUS AND BODY MASS INDEX AS PROGNOSTIC FACTORS IN PATIENTS WITH AMYOTROPHIC LATERAL SCLEROSIS

(Oral presentation)

Field of medicine: **Neurology**
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Introduction: Amyotrophic lateral sclerosis (ALS) is the most serious degenerative motor neuron disease in adults which relentless course leads to death within 2 to 5 years, generally due to respiratory failure. Besides age and site of onset, no other factors have been consistently demonstrated to be related to ALS outcome.

Aim: To investigate the influence of serum lipid levels (cholesterol and triglyceride) and body mass index at the time of diagnosis on survival rates in ALS patients.

Material and methodology: The study included 234 patients with ALS who have been diagnosed and followed over a time period of 8 years (2004–2011) at the Neurology Clinic of Clinical Centre of Serbia, of whom 59 had complete lipid status which was analysed. Survival has been assessed by the Kaplan-Meier and Mantel-Cox methods.

Results: In this study 19 (32.2%) patients have had normal values of lipids and 40 (67.8%) have had hyperlipidaemia. The mean survival time from the onset of symptoms for patients with normal lipidaemia has been 3.21 ± 1.44 years, while in patients with hyperlipidaemia 3.3 ± 1.59 years (p = 0.71). Significant difference in survival rates between different site and age of onset, and gender has not been proved. Furthermore, our study could not confirm that BMI has significant influence on patient life expectancy.

Conclusion: Results acquired in this study show that hyperlipidaemia and higher values of BMI cannot be related with better survival rates of patients with ALS.

Key words: amyotrophic lateral sclerosis, hyperlipidaemia, survival, body mass index

ULTRASOUND DIAGNOSTICS BENIGN DISEASE OF THE UTERUS IN WOMEN OF REPRODUCTIVE AGE

(Oral presentation)

Field of medicine: **Gynecology**
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Faculty: **Medical №2**

Introduction: Timely detection of benign pathology of endo and myometrium is rather difficult problem. The recent researches have revealed that timely and accurate diagnosis of adenomyosis is determined only for 4,6% patients.

Aim: Optimization of algorithm of differentiating diagnostics of benign pathology of endo and myometrium among women of fertile age applying transabdominal and transvaginal ultrasonography for womb and uterine appendages.

Material and methodology: Ultrasonic scanning enabled to examine 135 women divided into 3 clinical group: the first group included women suffering from adenomyosis (A); the second included patients suffering from endometrial hyperplasia (EH); the third group included the women with mixed pathology (A+EH). Also 30 healthy women regarding gynecology were examined that represented control group.

Results: The enlargement of sizes of uterine was revealed among 83,7% of women representing A group and plumpness with asymmetric thickening of one of uterine wall was revealed among 67,4%. 84,4% women had unhomogeneous, hyperechoic structure of myometrium from A group and 97,8% with A+ HE; appearance of anechoic inclusions within diameter 1-3 mm in endometrium before menses was revealed among 71,1% women: prevailing with A 82,22% and A+EH – 93,33%;

Conclusion: Ultrasonic scanning enables to highly accurate detect diffuse form of adenomyosis, endometrial hyperplasia and mixed benign pathology of uterine. High capacity of transvaginal ultrasonography enables to determine right diagnosis in case of benign pathology, determine localization, prevalence rate and identify morpho-functional form.

Key words: Ultrasound

HOW MUCH DO NON-MOTOR SYMPTOMS INTERFERE WITH DAILY-LIFE IN PARKINSON`S DISEASE PATIENTS?

(Oral presentation)

Field of medicine: **Neurology**
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Faculty: **Faculty Of Medicine Cluj-Napoca**

Introduction: Parkinson's Disease is a neurodegenerative disorder characterized by tremor, bradykinesia, postural instability and rigidity. However, non-motor symptoms have a great importance when it comes to quality of life.

Aim: The aim of the study is to investigate the impact of non-motor symptoms in daily life of Parkinson`s Disease (PD) patients. Furthermore, we are interested to find out which of these symptoms are better correlated with a low quality of life.

Material and methodology: The study is done on 55 patients suffering from idiopathic Parkinson`s Disease with a Mini-Mental State Examination score higher than 10. We applied 4 tests: UPDRS (Unified Parkinson`s Disease Rating Scale), PDQ-39 (Parkinson`s Disease Questionnaire - 39), NMS (Non-Motor Scale), PDSS (Parkinson`s Disease Sleep Scale). The scores from the tests were analysed in IBM SPSS Statistics 20 using Spearman`s rank correlation coefficient.

Results: We found the following statistically representative results: a strong correlation (Spearman coefficient $\rho>0,5$) between PDQ-39 and UPDRS, NMS, mood disorders, psychosis, PDSS and nightmares; a low correlation ($0,25<\rho<0,5$) between PDQ-39 and MMSE, cardiovascular disorder, restless leg syndrome, pain and paraesthesia and daytime sleepiness. As far as sleep is concerned, we found a good correlation ($\rho>0,5$) between PDSS and NMS, restless leg syndrome, pain and paraesthesia.

Conclusion: Among the most important factors that interfere with life quality are the cognitive decline, psychosis, mood disorders and sleep. In addition, a poor sleep is best correlated with hand and leg dyskinesia, paraesthesia and pain.

Key words: Parkinson's Disease, non-motor symptoms, quality of life

TRANSCRANIAL BRAIN PARENCHYMA SONOGRAPHY IN THE DRUG ADDICTS

(Poster presentation)

Field of medicine: **Neurology**
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Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Transcranial brain parenchyma sonography has been proved useful in the diagnosis of Parkinson's and other neurodegenerative diseases. However, no study has been conducted in opiate addicts. This method is noninvasive, inexpensive and safe.

Aim: To evaluate the frequency and significance of the size of hyperechogenicity of substantia nigra measured by transcranial parenchyma ultrasound in population of untreated opiate addicts and opiate addicts on methadone therapy.

Material and methodology: This was a comparative, single-blinded, controlled study, which included three groups: group of untreated opiate addicts (n = 30), group of patients on methadone replacement therapy (n = 38) and healthy controls (n = 32). The groups were matched by sex and age. Substantia nigra hyperechogenicity was analyzed by transcranial parenchyma Doppler ultrasound.

Results: Significant hyperechogenicity of substantia nigra was found in 20% of untreated opiate addicts, in 10.53% of treated with methadone, and 3.13% of healthy subjects. T-test showed statistically significant difference in size of hyperechogenicity between the groups of untreated opiate addicts and healthy controls ($p<0.05$), as well as between the group of treated with methadone and healthy ($p<0.05$) controls, whereas this was statistically unsignificant between the group of untreated and treated opiate addicts.

Conclusion:

In this study we found significantly higher prevalence of hyperechogenicity of substantia nigra in untreated opiate addicts. These results can not be compared, as this is to the best of our knowledge the first study of this kind so far. Further evaluation on bigger samples are required to confirm the validity of these results.

Key words: transcranial parenchyma ultrasound, opiate, substantia nigra

VOLUMETRIC ANALYSIS OF PUTAMEN IN PATIENTS WITH GENDER IDENTITY DISORDER

(Oral presentation)

Field of medicine: **Psychiatry**
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Faculty: **School Of Medicine Belgrade**

Introduction: Gender identity disorder is unshakable conviction of belonging to the opposite sex, resulting in a request for sex-reassignment surgery and following symptoms could be anxiety and depression because society condemnation. There are two types of this gender identity disorder: female-to-male and male-to-female. Putamen is a grey matter structure, beside involving in extrapyramidal system, also participate in learning and memory and lately reputes as major response for anxiety and depression.

Aim: The aim of the study was to investigate sex-specific differences in basal ganglia morphometry (putamen) using MRI and to detect if there is any difference/analogy between patients and reference male/female controls in putamen volumetric examination

Material and methodology: We performed MRI (Magnetic-Resonance-Imaging) scans on 10-patients and 10-healthy controls. We used some computer software (MIPAV, DICOM) for image analyses and to measure the volume of left and right putamen.

Results: Significant sex difference were found for putamen (left and right) in female-to-male patients and both controls, even in some cases a high significant difference. But in male-to-female patients we didn't find significant difference for putamen in relation with both reference controls.

Conclusion: Our study reveals that there is clearly a significant difference for putamen in female-to-male patients and controls, but considering low number of adult subjects in the study to conclude that basal ganglia in female-to-male patients has different volume against healthy controls, we need to increase number of subjects to confirm this conclusion.

Key words: gender identity disorder, putamen, volumetry

HYGIENE HABITS IN CHILDREN

(Poster presentation)

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Introduction: Hygiene sciense of health is field of medicine that is considering peoples' health and influence of enviroment on humans' health. This cuctums one building necessary conditions for good brain function, and one creating feelining of freshness and energy.

Aim: Considering the level of children's hygiene habits in elementary school.

Material and methodology: For reaserching was used cross sectional study. Questioning of 180 students of forth class of elemantary school. The instrument of measuring was closed type questionaire that counts 23 questions which relate to habits of personal hygiene, hygiene of dreaming and rest, sport and recreation.

Results: After analysis and statistical managment of results and comparision with avaliable studies the results were mostly optimal after coming home the most part of children are regularly washing hands, while minor number of them is doing that sporadicaly. After using the toilete 94% of children one regularly washing hands 3% of then one not doing that, while 3% is doing that sometimes. Most part of students 86% one washing their theet several times during day, 11% one doing that once, and only 3% of them one doing that rarely.

Conclusion: Hygiene habits of qestioned children is quite optimal after comparing the results with relevant reaserches. Oral hygiene is at the high level if we consider the age of queationed children.

Key words:Hygiene habits, children

TRANSCATHETER CLOSURE OF ATRIAL SEPTAL DEFECT IN CHILDREN AND ADOLESCENTS

(Oral presentation)

Field of medicine: **Pediatrics**
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Introduction: Atrial septal defect (ASD) is relatively common congenital anomaly. Precise measurement and location of defect are crucial for successful transcatheter closure.

Aim: Examining efficiency and safety of transcatheter closure of ASD in pediatric patients. Analysis of size and localization of defect will try to determine differences between patients submerged to interventional catheterization and surgically treated group.

Material and methodology: This study includes 25 patients of 7-18 years of age with ASD type secundum, treated in University children's hospital, from 2008 to 2012. Study included following parameters: age, sex, body weight, echocardiography, TEE, balloon sizing estimated diameter of ASD, quality of rims towards surrounding structures, diameter of aortic and pulmonic valve before and after the intervention. Data were processed by descriptive statistics methods.

Results: Patients were divided into two groups: first group included patients treated by transcatheter closure (n=14), and second group included patients treated surgically (n=11). Univariant and multivariant logistic regression showed statistically relevant difference between two groups concerning ECHO evaluated size of ASD (OR=0.708, CI 95%, 0,538-0,933, p=0,014). We estimated size of rims towards superior and inferior vena cava (9,34±5,53mm), AV valve (11,92±5,83mm) and pulmonary vein (4,78±0,93mm). Average diameter of pulmonary artery showed statistically relevant difference (p=0,003) before (22,75±2,27mm) and after closure (24,94±4,21mm).

Conclusion: Transcatheter closure of atrial septal defect is a safe and effective method in group of patients of 7-18 years of age. There is relevant difference in ECHO findings between patients treated surgically and those treated by interventional catheterization.

Key words: ASD, transcatheter closure, children

IMPORTANCE OF INTERVENTIONAL (CATHETERIZATION) CARDIOLOGY IN THE DIAGNOSTICS AND MANAGEMENT OF CONGENITAL HEART DISEASE

(Oral presentation)

Field of medicine: **Pediatrics**
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Introduction: Congenital heart disease (CHD) is the most common and important heart disease in the early years of life. There are two basic types of CHD, shunts (left-to-right/right-to left) and obstructions to flow. 2/3 of CHD requires cardiac surgical treatment. Most of CHD is corrected completely with the first, another in a multi-stage cardiac surgery operation. Increases the number of CHD being treated non-cardiac surgery operating. Interventional (catheterization) cardiology allows the diagnostics and management of CHD before and after the various stages of cardiac surgical palliation. For some CHD is an alternative to cardiac surgical solution, other times it is the method of choice of treatment, with some remains controversial.

Aim: To evaluate an efficiency of interventional (catheterization) cardiology methods in the diagnostics and management of CHD at various stages of cardiac surgical palliation.

Material and methodology: A total of 93 newborns and children with various form of CHD (atrioventricular septal defect, patent ductus arteriosus, tetralogy of Fallot, d-transposition and l-transposition of great arteries, persistent truncus arteriosus, tricuspid atresia, coarctation of the aorta, aortic stenosis, interrupted aortic arch, hypoplastic left heart syndrome, pulmonary atresia, cor tritriatum, double inlet left ventricle, double outlet right ventricle) treated by cardiac surgery were evaluated by interventional (catheterization) cardiology methods.

Results: 55.9% of CHD were corrected by interventional therapeutic cardiac catheterization. 30.1% of CHD required interventional therapeutic cardiac catheterization and/or multi-stage cardiac surgical correction.

Conclusion: Evaluation/bundle of CHD by interventional cardiology methods could be relevant component useful in medical research and clinical practice.

Key words: Congenital heart disease. Surgical palliation. Interventional (catheterization) cardiology.

HOLTER ECG MONITORING FEATURES IN CHILDREN WITH ABNORMAL CHORDS IN LEFT CARDIAC VENTRICLE.

(Oral presentation)

Field of medicine: **Pediatrics**
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Introduction: Presence of abnormal chords (AC) according to literature data, mostly describes as normal condition. Other researchers show that AC can be the risk factors of internal cardiac hemodynamics changes and cardiac arrhythmia appearance. The question of AC arrhythmogenics is contradictory – from recognition of unfavourable "arrhythmic" prognosis to complete denial of its role in cardiac arrhythmias appearance.

Aim: To estimate the type of arrhythmia in children with AC using Holter ECG monitoring.

Material and methodology: Holter ECG monitoring was carried out to 27 children aged from 13 to 16 years with confirmed AC.

Results: The structure of heart conducting system disturbances was: all children had single supraventricular extrasystoles, 20 of them (74%) were polytopic; 5 of them (18,5%) had single ventricular extrasystoles and 1 of them (3,7%) was politopic. There were no high gradation ventricular extrasystoles registered. All examined patients had tachyarrhythmia and sinus arrhythmia. 7 children (25,9%) had pacemaker migration. 2 children (7,4%) had sinoatrial blockade. Extrasystole appearance can be connected with manifestation of vegetative system dysfunction which is characterized by changes in heart rhythm, confirmed by Holter ECG monitoring. Also, it is supposed that AC can be the additional electrical conduction pathway. So, small heart anomalies such as AC of left cardiac ventricle take place in development of supraventricular and ventricular heart rhythm disorders.

Conclusion: Children with AC are the risk group of polytopic extrasystole appearance, they must be under ambulatory observation by pediatrician and child cardiologist.

Key words: Arrhythmia, abnormal chords, Holter ECG monitoring.

PERINATAL RISK FACTORS FOR INTRACRANIAL HEMORRHAGE IN PREMATURE NEWBORNS

(Oral presentation)

Field of medicine: **Pediatrics**
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Co-author(s): **Sonja Zigic**
Supervisor(s): **Doc. Dr Slobodan Spasojevic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Due to progress in neonatal care and treatment mortality of premature newborns has been reduced significantly. However, intracranial hemorrhage still remains important factor of premature newborns' morbidity and mortality.

Aim: Determination of certain maternal, obstetric and neonatal factors as risk factors for intracranial hemorrhage in premature infants born at < 37 week of gestation.

Material and methodology: Retrospective analysis of medical records of premature newborns treated at the intensive care unit in the period from 1st of January 2012. until 1st of January 2013. The study included newborns that made brain ultrasound up to the 3 first days of life, as a control ultrasound up to 7 days of life. Determining the degree of intracranial hemorrhage was done according to classification Papillae and associates.

Results: The study group was based on the ultrasonography classification of intracranial hemorrhage by Papille and associates. The presence of intracranial hemorrhage grade I was present in 25 (58.13%), grade II in 5 (11.62%), grade III in 2 (4, 65%) and grade IV in 11 (25.58%) participants. In ten maternal and obstetric factors mode of delivery showed statistically significant difference. Analysis of neonatal factors showed statistically high significant difference for gestational age, birth weight, Apgar score in 1 st and 5 th min, application of cardiopulmonary resuscitation, placement of umbilical venous catheter. Statistically significant difference is find during use of bicarbonate.

Conclusion: Measures to reduce the incidence of intracranial hemorrhage was probably very preterm birth prevention.

Key words: intracranial hemorrhage, preterm newborn, risk factors.

SIMPLE ASYMPTOMATIC KIDNEY CYSTS ON ULTRASOUND EXAMINATION

(Oral presentation)

Field of medicine: **Radiology**
Author(s): **JELENA CUBRILO**
Co-author(s): **Aleksandar Cirovic**
Supervisor(s): **Doc. Dr Biljana Markovic**
Country: **Serbia**
Faculty: **School Of Medicine Belgrade**

Introduction: Cysts are most common mass changes of the kidneys. They can be congenital or acquired, primary or secondary, benign or malignant. Being usually asymptomatic, cysts are mostly diagnosed as an incidental finding. The role of diverse diagnostic methods is not only diagnosing cystic lesions but distinguishing simple from complicated, potentially malignant cysts.

Aim: The aim of this study was to investigate frequency of simple renal cysts among asymptomatic patients and to point out the role of ultrasound examination in diagnosis and evaluating of cystic lesions.

Material and methodology: Examination of abdomen was performed in 30 patients (23 man and 7 women, aged 31-83 years, average 61). Findings were compared concerning age, sex and evidence of symptoms.

Results: Cysts were detected in 11 of 30 examined patients. Difference in the percentage of detected cysts related to age was statistically significant, with higher incidence in older patients. Compared to sex no difference was found. In 6 cases cyst was solitary. Five patients had multifocal lesions. The diameter of the lesions was from 19-81mm (average 38.9mm). Left kidney was more frequently affected. Concerning renal morphology most common localization was inter-polar. Regarding symptoms, no statistically significant difference was found among positive and negative findings.

Conclusion: On ultrasound examination renal cyst was detected in one third of all patients. All findings were incidental. All cysts were simple and no further diagnosis was required. Ultrasound examination is initial and in most cases sufficient method in diagnosis of simple renal cysts.

Key words: Kidney cyst, asymptomatic patients, ultrasound examination

COMPARISON OF PLAIN RADIOGRAPHY AND COMPUTERIZED TOMOGRAPHY IN THE DIFFERENTIAL DIAGNOSIS OF THE PARANASAL SINUSES DISEASES

(Oral presentation)

Field of medicine: **Radiology**
Author(s): **DANIJEL DOMIC**
Co-author(s): **Aleksa Janovic MD.**
Supervisor(s): **Professor Zoran Rakocevic, MD. PhD**
Country: **Serbia**
Faculty: **Faculty Of Dentistry Belgrade**

Introduction: Although CT is the gold standard in the diagnosis of paranasal sinus diseases, initial radiological examination should be performed using standard radiography. However, there are no precise data regarding the overall diagnostic accuracy of the standard radiography compared to CT.

Aim: nvestigate the diagnostic accuracy of the plain radiography in relation to CT in the diagnosis of paranasal sinus diseases.

Material and methodology: Radiological examination were performed in 40 patients with standard radiography and with CT. The following parameters were analyzed on both radiographs: the continuity of the sinus bony walls, the presence of content within the sinus space (Lund-Mackay score), the intensity and homogeneity of the sinus content. Obtained data were statistically analyzed using SPSS 15.0.

Results: The age of the patients were 45.98 ± 14.17 years. There were 21 (52.5%) males and 19 (47.5%) females. Assessment of the continuity of the bony walls on a standard X-ray was the most reliable for the posterior ethmoids and sphenoid sinuses (100%). Statistical analyses showed the significant difference (t=-2,765; p<0,01) between Lund Mackay score calculated on plain radiography and CT.plain radiography had the same accuracy as CT in the diagnosis of the lesions with bone-like intensity. Plain radiography was also imprecise in detecting the homogeneity of the sinus content.

Conclusion: Sinus wall lesions and presence of the osseous-like content within the sinuses could be accurately estimated with plain radiography, while the general assessment of the presence of the sinus content and its homogeneity could not be estimated with accuracy.

Key words: plain radiography computed tomography, paranasal sinus diseases

THE FREQUENCY OF ENDOMETRIAL CARCINOMA IN WOMEN WITH ULTRASOUND DIAGNOSED ENDOMETRIAL HYPERPLASIA

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **BOJANA SCEPANOVIC**
Supervisor(s): **Doc. Dr Ljiljana Mladenovic Segedi**
Country: **Serbia**
Faculty: **Medical Faculty Novi Sad**

Introduction: Endometrial hyperplasia represent abnormal proliferation of endometrium which is diagnosed with ultrasound examination. It is usually benign, but it may be basis for development of endometrial carcinoma and it represents 3,9% of all malignant tumors of women.

Aim: The aim was determination of frequency of endometrial carcinoma in women with ultrasound diagnosed endometrial hyperplasia.

Material and methodology: Research included 102 patients with uterine bleeding and 94 without uterine bleeding in postmenopausa, which had ultrasound diagnosed endometrial hyperplasia and who underwent fractional explorative curettage or hysteroscopy. Statistical data from anamnesis and histopathological findings were analyzed too.

Results: In the group of postmenopausal women with uterine bleeding is recorded higher number of endometrial carcinoma (10.8%) than in the group of patients without uterine bleeding (3.2%). There was a statistically significant difference in presence of risk factors for the occurrence of endometrial carcinoma in regard to the arterial hypertension and obesity, but not for nulliparity, diabetes and breast carcinoma between these two groups. The average thickness of endometrium in patients with uterine bleeding was 14.78 mm, and 11.29 mm in patients without uterine bleeding. Most common pathological diagnosis, besides endometrial carcinoma were: endometrial polyp, simplex endometrial hyperplasia, simplex endometrial hyperplasia with polyp, cervical polyp, submucosal leiomyoma and squamocellular cervical carcinoma. There were also normal findings.

Conclusion: Considering the facts that the causes of endometrial thickening can be benign and malignant, it is necessary to do further research for definitely confirmation of histopathological diagnosis, and further adequate treatment.

Key words: endometrial hyperplasia, risk factors, ultrasound, endometrial carcinoma

HYBRID REVASCULARISATION OF MULTIPLE ARTERIAL LESIONS OF AORTO-ILIO-POPLITEAL SEGMENT: EARLY RESULT

(Oral presentation)

Field of medicine: **Radiology**
Author(s): **TIJANA KOKOVIC**
Supervisor(s): **Doc. Dr Viktorija Vucaj-Cirilovic, Asist. Dr Djordje Milosevic**
Country: **Serbia**
Faculty: **Faculty Of Medicine in Novi Sad**

Introduction: Hybrid revascularization is a combination of open and endovascular treatment. The purpose was to present early results of hybrid revascularization, in patients with multisegmental aorto-ilio-femoro-popliteal disease.

Aim: Results of treatment of patients treated with hybrid revascularization of multiple arterial lesions of aorto-iliac-fem oro-popliteal segment.

Material and methodology: Retrospective, 5 years period (May 2007 to August 2012) study included 32 patients with PAOD, who were treated with hybrid revascularization of multisegmantal arterial lesions of aorto-ilio-femoro-popliteal segment. Treated patients had TASC type A, B or C lesions of aorto-iliac, and TASC C or D lesions of femoro-popliteal segment. Initially it was performed endovascular revascularization of aorto-iliac segment, and within 48 hours open revascularization of infraingvinal segment.

Results: Before the intervention, the average ankle brachial index (ABI) for a. tibialis anterior (ATA) was 0.38, and for a. tibialis posterior (0.56). Postoperative ABI were 0.64 for ATA, and 0.76 for ATP. A successful duly passed on 29/32 (90.6%) patients. Control duplex ultrasound, performed after an average of 32 months, demonstrated on 31/32 (96.8%) patients stent and bypass patency. On 1/32 (3.2%) patient, on duplex examination 38 months after hybrid procedure, it was detected suspecting narrowing within the stent without hemodynamic disturbances.

Conclusion: In selected patients, hybrid procedure has a good effect of revascularization. With a combination of open and endovascular revascularization longer stent and bypass patency is achieved.

Key words: Hybrid revascularization, chronic critical limb ischemia, TASC, duplex ultrasound 4 hours ago

CORRELATION OF RADIOLOGICAL RESULTS WITH HISTOPATHOLOGICAL PROGNOSTIC AND PREDICTIVE FACTORS IN BREAST CANCER

(Oral presentation)

Field of medicine: **Radiology**
Author(s): **ADRIANA KONJOVIĆ**
Supervisor(s): **Doc. Dr Dragana Bogdanović Stojanović**
Country: **Serbia**
Faculty: **Medical Faculty Novi Sad**

Introduction: Breast cancers are the most frequent type of cancer in women, one of the leading cause of death. The lifetime risk of morbidity is 12.5%, every eight women is affected. The most used and prefered diagnostic method for visualisation of leasons in breast is mammography. Histopathological prognostic and predictive markers (axillary lymphonode status, tumor size, histological type, grade, steroid receptors and HER2 receptors) are important indicators for prognosis, treatment and success.

Aim: The aim of this research is to present the distribution of parameters and relation between radiological findigs (BI-RADS) and histopathological markers, with demographic features.

Material and methodology: The research included retrospective analysis of documentation of patients , treated from February 2, 2009 to November 8, 2010 at the Oncology Institute of Vojvodina in Sremska Kamenica.

Results: This research included 108 women, 30-84 years old. Mammogram of patients was described as BI-RADS 5 in 69.45%. Invasive ductal cancer was found in 75.96%. The most frequent tumor size is up to 1.5 cm (25.92%), and size 1.51 to 2.5 cm (26.86%). The most frequently described grade are 2 and 3 (85%). The histopathological pattern is dominated by positve estrogen (77.78%), positive progesterone (71.30%) and negative HER-2 receptors (66.67%). These histopathological features were evaluated and analysed in each BI-RADS category (4, 5, 6), that showed significant correlation ($p<0,05$).

Conclusion: Prognostic and predictive markers are defining the level of malignancy, so they provide the adequate radiological image, that can be recognised in the first steps of diagnostic.

Key words: mammography, BI-RADS, prognostic and predictive factors, breast cancer

NEW METHOD OF EMBRYO SELECTION - SPECTROSCOPY

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **ERCAN BASTU, EMIL ALIYEV**
Co-author(s): **Cihan Comba**
Supervisor(s): **Erkut Attar, M.D, PhD**
Country: **Turkey**
Faculty: **Istanbul Faculty Of Medicine**

Introduction: Spectroscopy is new method in embryo selection. Those method is so far beyond the selection of ebryos improvised extensively. The basic principle of this method is used in the selection of embryos by Spectroscopy method relies on analysis of fluid. Embryo secrete fluids ans waste materials (for example uric acid) around the cell. Spectroscopic and molecular size distribution of the density of beam material an idea of the embryo. This means that the embryo is agrued that for 9 months to withstand.

Aim: Aim of our method is choosing the best embryoes for IVF. That means, we open the new road for traditional IVF method, which selected the embryoes with laboratory staff.

Material and methodology: fully equipped IVF unite, Raman Spectroscopy

Results: A total of 69 days 3 spent embryo culture media samples from 30 patients with known outcome were evaluated using Raman or near-infrared spectroscopy. Culture media from 36 embryos arising from 16 patients treated at YFC were evaluated with Raman spectroscopy. Of the 36 embryos transferred, 15 implanted and led to delivery (100% sustained implantation), and 21 did not implant (0 implantation). All samples were analyzed successfully and were included in the data analyses.

Conclusion: The embryos would continue to grow for 2 more days in the laboratory, awaiting genetic analysis. The unaffected embryos are then transferred to the uterus at the blastocyst stage on day 5 of embryo culture and subsequently a child would be born unaffected from the screened genetic disease. That's the succes of spectroscopy method.

Key words: Raman Spectroscopy,IVF,embryo selection,spectroscopy

DELIVERY OF MONOAMNIOTIC/MONOCHORIONIC TWINS WITH MUTUALLY INTERTWINED AND TIGHTENED UMBILICAL CORDS – CASE STUDY

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **ZORAN NOVAKOVIC**
Supervisor(s): **Prof. Dr Mirjana Bogavac**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Multiple pregnancy involves development more than one fetus in mother's womb. Fertilization of the egg, in this case, results in developing of identical twins, and if separation occurs between 8. and 9. day after fertilization result will be monoamniotic/monochrionic twins.

Aim: The aim of this study was to indicate the importance of timely diagnosis, monitoring and delivery of pregnancy complicated with pre-eclampsia in monoamniotic/monochorionic twins with mutually intertwined and tighten umbilical cords, and thus point out to another danger which threatens to delivery of this high risk pregnancy.

Material and methodology: The case shows pregnancy in 32. week of gestation monoamniotic/monochorionic twins, complicated with hypertension with pathological CTG, which is completed surgically.

Results: Patient with determined monoamniotic/monochorionic pregnancy came to clinic of Gynecology and Obstetrics, Novi Sad, due to hypertension which is established in first trimester, and therefore she is taking methyldopa tablets. On admission ultrasound examination showed abnormal positions of both fetus, with normal Doppler parameters, and normal CTG. Laboratory tests were taken according to the protocol of pre-eclampsia. Next day CTG showed deeps at both twins. It was decided for surgically completion of delivery. Caesaren section was normal course. Amniotic fluid was clear and adequate amounts. Umbilical cords of both fetus were multiple intertwined and tightened. The postoperative course was uneventful.

Conclusion: In twin pregnancy, as high risk, especially in monoamniotic/ monochorionic twins, it is important oversight and timely recognition of complications with aim to reduce perinatal morbidity and mortality

Key words: Multiple pregnancy, monoamniotic/monochorionic twins, preeclampsio

INDICATED AND SPONTANEOUS PREMATURE BIRTH-RATE, METHOD AND BIRTH OUTCOMES

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **IRINA STANIC**
Supervisor(s): **Asist. Dr Vesna Mandic**
Country: **Serbia**
Faculty: **Medical Faculty Belgrade**

Introduction: Preterm or premature labor is labor that occurs before the 37th weeks of gestation. Prematurity is the single most important cause of neonatal morbidity and mortality.

Aim: The aim of this study was to determine the relationship between indicated and spontaneous preterm labor and outcome on the sample of the first 100 patients with singleton pregnancies and preterm labor in 2012. on GAK "Narodni front".

Material and methodology: In a retrospective study, we evaluated the age and parity of mothers, and the existence of associated diseases or conditions related to pregnancy that threatens the health of the mother or fetus. From the data related to birth was registered gestational weeks at delivery, duration of labor, time elapsed from rupture of membranes to delivery, mode of delivery, infant birth weight, sex, Apgar score in the first and fifth minute.

Results: In the group of spontaneous preterm labor was statistically significantly longer duration of delivery and time of rupture of membranes to delivery. In the group of indicated premature labor significantly more frequent delivery Cesarean section compared to the group of spontaneous premature delivery. In the subgroup of spontaneous preterm labor with intact amniotic membranes significantly more frequent delivery Cesarean section compared to the subgroup with preterm rupture of membranes.

Conclusion:

Spontaneous preterm labor was more common than indicated. Preterm birth without spontaneous rupture of membranes is more common than the preterm labor with preterm prematurely ruptured membranes. Preeclampsia occurs as the most common cause of indicated preterm labor.

Key words: spontaneous premature labor, indicated premature labor, rupture of membranes

UROGENITAL INFECTIONS FOR WOMEN WITH ENDOMETRIOSIS

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **OLENA MOLCHANOVA**
Supervisor(s): **PhD,prof. Viktor Besedin**
Country: **Ukraine**
Faculty: **Medical #1 Lviv**

Introduction: The problem of endometriosis discussed broadly in the medical community since the XX century with special congresses and symposiums, and continues to excite both doctors and patients in the XXI century. Etiology and pathogenesis of endometriosis is not well understood. There are 34 theories of this disease, including one of the leading - theory of immune disorders. This hypothesis can explain the fact that endometriosis is often accompanied with comorbidity of genitals - specific and non-specific, acting on the principle of "reciprocal burdening". Chlamydia, ureaplasma, mycoplasma, cytomegalovirus, toxoplasma, gardnerella, herpes virus HSV-2 - this is a basic list of urogenital infections, determining in women of reproductive age by polymerase chain reaction (PCR).

Aim: The aim of our study was to make an analysis of the frequency of urogenital infections for women with endometriosis in reproductive age.

Material and methodology: We conducted a study of medical cases of women with endometriosis who have been treated in the Lviv Regional Clinical Hospital since 2003.

Results: The average age of patients was 38,26 ± 9,4 years. Urogenital infections were observed in 27.3% of cases.The second step was questionnaires-correspondence with patients. Importantly, the percentage limit of detection of urogenital infections have increased significantly - to 36.4%. Ureaplasma (12.1%) and gardnerella (24.3%) have dominated in the structure.

Conclusion: Urogenital infections often accompany endometriosis and have to be detected on time and treated properly.

Key words: Urogenital infections, endometriosis

ASSOCIATION OF PSEUDOFOLLICULITIS WITH DEMODICOSIS

(Oral presentation)

Field of medicine: **Dermatology**
Author(s): **SHABESTANIPOUR G (GP)**
Co-author(s): **TizMaghz A (GP)**
Supervisor(s): **Belgheiszade H**
Country: **Iran**
Faculty: **Faculty of Medicine Tehran**

Introduction: Pseudo-folliculitis is common skin conditions for which no single cause has been found, although many factors have been implicated. these can present in a range of symptoms from mild to very severe and distressing. The mite Demodex folliculorum (DF) is most commonly seen in the pilosebaceous unit in humans. Pseudofolliculitis is a foreign-body reaction caused by close shaving to skin. Indeed it is inflammation of hair follicles without the infection.

Aim: The aim of this study was To determine the prevalence of demodicosis in Pseudo-folliculitis and to investigate any possible relationship between the number of DF mites and the presence of This condition.

Material and methodology: we collect samples from the skin around the nasal tip of 60 randomized patients, were referred to Amir Al-Momenin hospital dermatology clinic for various reasons ; mild acne or itching and scaling, to examine the presence of Demodicosis (DF) infestation under optical microscope. Finally, data analysis using SPSS software were analyzed.

Results: our study show significant association between The Demodicosis (DF) prevalence with Pseudo-folliculitis prevalence. (P=0.001)

Conclusion: The presence of DF mites was Significantly higher in patients with Pseudo-folliculitis. This study suggests that Demodex mites may play a role in pathogenesis of Pseudo-folliculitis.but further Analytic investigation are advised.

Key words: Demodicosis , Pseudo-folliculitis , inflammation, infestation

QUALITY OF LIFE IN PATIENTS WITH URTICARIA

(Oral presentation)

Field of medicine: **Dermatology**
Author(s): **VALENTINA ČUKA**
Co-author(s): **Milica Odavić**
Supervisor(s): **Aleksandra Petrović, MD, Ph.D**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Urticaria is a common disease that affects 15-25% of the general population. Dermatology Life Quality Index (DLQI) is one of the most frequent used questionnaire when it comes to the evaluation of the quality of life of dermatological patients. DLQI has been translated into many languages including Serbian language, but so far there are no published data on its use in patients with urticaria in our county.

Aim: To determinate impact of urticaria on patients quality of life.

Material and methodology: A prospective study of 35 patients with urticaria hospitalized at Clinic for Skin and Venereal disease Clinical Centar of Vojvodina in period from october 2012. untill february 2013. was performed. Demographic data, information about disease and its imapct on emotional life was covered by the study. All patients completed a questionnaire DLQI in Serbian.

Results: The average age of patients was 47.7 years, 29 of them (82.9%) were female, and 31 (88.6%) with an acute form of the disease. The mean value of total DLQI score was 9.09 pointing that the imapact of disease in quality of life was moderate. Segment of life in which quality urticaria had the most imapct was tied to the performance and activities at work or school (69.3%).

Conclusion: In our patients urticaria had a moderate impact on quality of life (DLQI=9.09). Segment of life in which quality urticaria had largest negative impact (69.3%) includes activities in school and the workplace.

Key words: urticaria; quality of life; DLQI.

BURNOUT SYNDROME

(Oral presentation)

Field of medicine: **Psychiatry**
Author(s): **NENAD PANOV H. Stojanov, G. Sumanov, B. Panova, , G. Panova, A. Stojanovski L. Nikolovska, S. Jovevska, D. Trajanovski, D. Asanova**
Supervisor(s): **Prof. d-r Gordana Panova**
Country: **Macedonia**
Faculty: **Faculty of medicine Shtip, Trakiski univerzitet Stara Zagora.**

Introduction: Increasing work responsibilities, allocation of duties, loss of energy and motivation in everyday activities, emotional exhaustion, lack of time for themselves, insufficient time for rest and recreation, dissatisfaction in private life. All these symptoms can be cause of Burnout Syndrome.

Aim: To see the importance of this syndrome, the consequences of job dissatisfaction, the environment, family and expression in drastic changes in mood and behavior.

***Material and methods*:** The survey was conducted on 24 nurses from center hemodialysis. Respondents were divided into two groups: the first comprises 12 nurses with work experience to 10 years, and the other includes the hemodialysis nurses with work experience over 10 years. The average age of the first group was 28.75 years and 32.92 years, the second.

Results :Based on the completed questionnaire to stressful situations at work 100% said the strongest factor stress for nurses in hemodialysis death of a patient, then the second is placed deteriorating health condition of the patient and complications during the third dijaliza.Na place the patient is uncooperative, and the fourth occurs tension in relations team. Nurses should provide enough time for rest and relaxation, and it will result in efficient operations, pleasant attitude and care for patients.

Conclusions: The test may be concluded that in addition to the requirements in the workplace affected by age and length of service or by increasing the length of service and age of the person increases the risk of BURNOUT SYNDROME. Each person in each profession is a candidate for the emergence of BURNOUT syndrome.

Keywords: BURNOUT syndrome, nursing

STRESS IN HEALTH WORKES

(Poster presentation)

Field of medicine: **Psychiatry**
Author(s): **NENAD PANOV H. Stojanov, G. Sumanov, ,B. Panova, N. Panov, G. Panova, L. Nikolovska, S. Jovevska, D. Trajanovski, S. Salkoski, D. Ramovski, A. Stojanovski**
Supervisor(s): **Prof. d-r Gordana Panova**
Country: **Macedonia**
Faculty: **Faculty of Medicine Shtip, Trakiski univerzitet Stara Zagora.**

Introduction: Stress associated with modern lifestyles and fast pace that it imposes. Stress due to physical, mental or emotional condition accompanied by disturbing the natural balance of the body that can lead to the emergence of disease

Aim: To analyze the position and state of health workers in case of chronic stress during work in health care settings

***Material and methods*:** Created test for health professionals by the method of Dr. Beverli Potter (psychologist), determines the effect of chronic stress they feel towards their care and concern for patients, the results of their work, taking care to improve the health of patients and stresses the interactive relationship health worker-patient relationship, their connection and acceptance or refusal of the patient by staff.

Results: Based on the completed questionnaire to stressful situations at work (100%) reported that the strongest stress factor for health professionals death of a patient, then the second place (60%) is included deterioration of the health condition of the patient and complications during disease. The third (40%) uncooperative patient, a fourth (25%) occurs in tension relationships in health team.In the terms of ways of reducing stress among health care workers, the results are in the following order of effectiveness:Walking in nature (80%), sports (50%), chat with other members of the team (20%).

Conclusions: Until recently prevailing opinion that stress is a result of external pressure on the individual. However, this thesis does not explain why people in identical situations react differently. Today is considered the response to stress depends on the relationship between the individual and his environment.

Keywords: Dr. Beverli Potter, stress, work

PLENARY SESSION VI

GENERAL EDUCATION SUBJECTS,
OTORHINOLARYNGOLOGY, SURGERY, NURSING

Date: July 20th 2013

ORAL PRESENTATIONS
Start time: 8:30 AM
Amphitheatre 2 - Faculty of Medicine Novi Sad

POSTER PRESENTATIONS
Start time: 10:00 AM
Main Hall at Faculty of Medicine Novi Sad

COMPUTER–BASED LEARNING BETWEEN DENTAL GRADUATE AND UNDERGRADUATE STUDENTS

(Oral presentation)

Field of medicine: **General Education Subjects**
Author(s): **RYAN.F.SORIANO**
Co-author(s): **Pejman Panahi, Omid Panahi**
Supervisor(s): **Dr.sali.m.Aguilar**
Country: **Philippines**
Faculty: **Faculty of Dentistry, CEU**

Introduction: Computer-based learning specifically has played an exceptional role in increasing educational access and opportunity.

Aim: The study is based on questionnaire method. A questionnaire was distributed among the graduate and undergraduate students to collect desired data.

Material and methodology: The study is based on questionnaire method. A questionnaire was distributed among the graduate and undergraduate students to collect desired data.

Results: Course class notes and handouts and also textbooks were as the sources used often by students (88%), while 54% of students are accessing computer-based at school and 78 % of them accessing it at home to prepare their assignments and additional notes for their subjects requirements like pictures and animations .

Conclusion: The participants in this study were positive about Computer-based learning to collect educational materials and deliver it.

Key words: Computer-based, graduate and undergraduate, questionnaire.

INCEPTION OF HEALTH CARE IN SREMSKI KARLOVCI AND MD ALEKSANDAR DANKUC

(Oral presentation)

Field of medicine: **General Education Subjects**
Author(s): **ALEKSANDAR KOBILAROV**
Supervisor(s): **Asist. Mr Sc. Med. Vladimir Sakač**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: There are few cities who can boast with its historical greatness, and still remain and stay so small with their geographical and population size. This glorious destiny has accompanied with the many great doctors even a glorious name of md Aleksandar Dankuc who has come to Karlovci from Farkazdin.

Aim: /

Material and methodology: /

Results: How Karlovci did developed as town and the center of Serbian culture in this way also develops and Health, and that 1753rd get a first hospital. First educated surgeon Kark Fischer was worked in Karlovci from 1778th. Md Zivkovic tried to bring clean water to Karlovci epilogue of that was the fountain „the four lions". From Pancevo beside Jovan Jovanovic Zmaj in Sremska Karlovce came another great doctor –Aleksandar Dankuc 1892nd. In Pancevo enrolled Gymnasium, school days he spent with the great names of serbian history Paja Jovanovic, Uros Predic, Mihajlo Pupin. In Sremski Karlovci he become doctor of Patriarch Georgije Brankovic. Patriarch appointed him to the high school doctor until retirement 1928th, he also worked in the seminary, he issued a textbook for Secondary school –hygiene.

Conclusion: Md Aleksandar Dankuc was decent time in which had lived, his actions and activities he was improved health education in our society and make health habits of our's people better. If we lose ourselves in this modern times, bright examples of our history we have not yet forgot and we have a lot of one example to follow.

Key words: Farkazdin Sremski Karlovci, md Aleksandar Dankuc

EFFECT OF MEDICAL TREATMENT ON FINDING OTOACUSTIC EMISSIONS (TEAOE) IN CHILDREN WITH CHANGES IMPEDANCE OF THE MIDDLE EAR

(Oral presentation)

Field of medicine: **Otorhinolaryngology**
Author(s): **MILAN BOZINOVIC**
Supervisor(s): **Doc. Dr Mila Bojanović**
Country: **Serbia**
Faculty: **Medical Faculty Nis**

Introduction: Introduction: To obtain specific information about the potential impact of secretory otitis media in the transmission of acoustic energy through the middle ear, OAE measurement is very useful. In patients with severe disorders of the middle ear function, transient otoacoustic emissions (TEOAE) and distortionary products (DPOAE) can be significantly modified or even completely absent.

Aim: To evaluate the effect of medical treatment on the course of secretory otitis and finding otoacoustic emissions.

Material and methodology: This was a prospective clinical study 50-time child grows 2-15 years with otoscopic, otomikroskopic, audiometry, and ratification impedansmetric ¬ stances secretory otitis with finding transient otoacoustic emissions (TEAOE)

Results: Values of S / N were significantly higher in patients treated drug therapy. The use of drug therapy (intranasal corticosteroid spray, antihistamine, secretolitic) leads to a significant improvement of SOM on the basis of positive findings and tympanogram TEAOE. Differences in the distribution of patients in relation to the finding of type A or C1 and TEAOE positive findings, as well as type B or C2 between children treated with drug therapy and adenoidectomy were not statistically significant in all six tests.

Conclusion: We believe that in the beginning to prescribe a combination of intranasal steroid sprays, antihistamines, and antibiotics for secretolitics demonstrated a positive effect on the disease.

Key words: TEAOE, middle ear, therapy.

IMPLICATIONS OF COMORBIDITIES IN OSA

(Poster presentation)

Field of medicine: **Otorhinolaryngology**
Author(s): **DR. TALEA FLORIN ADRIAN , DR. DUMITRU MADALINA MIHAELA**
Co-author(s): **Dr. Oana Deleanu**
Supervisor(s): **Conf. Dr. Florin Mihaltan**
Country: **Romania**
Faculty: **Medicina Generala Bucharest**

Introduction: Obstructive sleep apnea is the most common form of apnea. Obstructive sleep apnea (OSA) also called obstructive sleep apnea syndrome , occurs when there are repeated episodes of complete or partial blockage of the upper airway during sleep. During a sleep apnea episode, the diaphragm and chest muscles work harder to open the obstructed airway and pull air into the lungs.

Aim: Statistically significant correlation: OSA -cardiovascular disease association more significant to severe OSA, similar data from the literature => therapeutic approach energetic high morbidity and mortality due to cardiovascular disease.

Material and methodology: We studied 200 patients with a mean age: 49.94 years (17-79 years) Epworth questionnaire average score: 7 (performed in 66% of patients receiving CPAP therapy), consultant ENT: 96.4% of patients. SOMNOSTAR type detector devices, another one, APNOE CHECK AUTOSET. Titrarea Shepham CPAP with type devices, Respironics, VIASYS, AUTOSET.

Results: Association SASO-DM, dyslipidemia, endocrine diseases (hypothyroidism) consistent conflicting data in the literature. Statistically significant correlation: OSA -cardiovascular disease association more significant to severe OSA, similar data from the literature => therapeutic approach energetic high morbidity and mortality due to cardiovascular disease. OSA complex pathology, multiple interference metabolic, hormonal => bidirectional cause-effect relationship with different diseases that require complex investigation at the time of presentation (associated comorbidities).

Conclusion: The prevalence in predominantly male population, according to literature data (78% vs. 55%). Pathology more severe in male population (52% male vs female. 21%).

Key words: Sleep apneea syndrome, comorbidities, active treatment.

NOVEL ANTIBIOTIC-FREE MINIMALIZED PLASMID VECTOR TRANSFECTS KGF THOUGH SCAR TISSUE WITHOUT ENHANCERS AND IMPROVES QUALITY OF DIABETIC WOUND SCARS WHEN TOPICALLY APPLIED

(Oral presentation)

Field of medicine: **Surgery**
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Country: **United States**
Faculty: **Johns Hopkins University School of Medicine**

Introduction: Ulcer wounds, particularly those in patients with diabetes, heal slowly and in a different pattern than normal wounds, often leaving large scars. While cosmetically displeasing, the main concern is the durability of the skin in these areas, as well as future angiogenesis and wound healing. There is also a need in the field of medicine for non-invasive, fast acting genetic therapy.

Aim: 1. Induce transfection with non-invasive methods and prove successful transfection 2. Induce KGF in cells near scars 3. Diminish scarring using a novel, minimalized, antibiotic-free KGF plasmid vector 4. Test blood flow and skin size changes with treatment vs. control

Material and methodology: In our experiment, we used 22 adult diabetic mice with scars formed 60 days post 8mm excision wound closure. Two groups were made, one with an application of methylcellulose gel (1%hydroxypropyal methylcellulose, 5% glycerin, 94% T.E. Buffer), the other with NTC-8385-VA1-KGF plasmid and methylcellulose gel. Mice were analyzed via plannimetry, doppler, histology, and IHC.

Results: By day 14, there was in the treated group: significant reduction in scar size (2-3 times greater improvement), significantly higher blood flow, significantly greater epidermal and dermal thicknesses, a trend for increased hair follicle count, and transfection of KGF was significantly greater.

Conclusion: Our results showed successful transfection, as well as noticeable and statistically significant reductions in scar size and increases in blood flow in treated areas with the plasmid. Our next step will be to test this treatment as a preventative scarring agent in atrophic skin

Key words: KGF, Atrophic, Scarring

TRANSFECTION OF MURINE DERMIS VIA TOPICAL DNA PLASMID DELIVERY

(Oral presentation)

Field of medicine: **Surgery**
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Introduction: Techniques for topical gene delivery to the skin reported so far have required chemical alteration of the skin barrier and are not exempt of safety concerns. Here we present a novel approach that permits gene transfer and expression following topical application of naked plasmid DNA to mouse skin without physically or chemically aggressive means. NTC8385-VA1, a potent minimalized antibiotic-free plasmid vector with VA1 and HTLV-1 R expression enhancers, was used to transfer the reporter gene Luciferase and target gene KGF topically following minimally invasive microdermabrasion.

Aim: To demonstrate a minimally invasive, and practical, method of topical gene transfection.

Material and methodology: Twenty SV129 mice were evenly assigned to Luciferase and KGF groups. The dorsum was shaved and depilated. The microdermabrasion zone was brushed with a Dermasweep-Mini machine at 20mmHg pressure. Fifty µg diluted NTC8385-VA1-Luciferase plasmid or NTC8385-VA1-KGF plasmid was topically applied and covered on each brushed zone every 12 hours. Luciferase imaging assessed transfection efficiency. Biological effect of KGF transfection was also assessed, with the Luciferase treated microdermabrasion zone as the negative controls.

Results: Luciferase group showed significantly increased expression of luciferase after microdermabrasion. The epithelial thickness in the microdermabrasion zone in the KGF group significantly increased to 25.9µm compared to the control group, 15.9µm ($p = 0.045$). Dermal thickness tended to be increased in the KGF group 254.9 vs. 162.1µm ($p = 0.057$).

Conclusion: Microdermabrasion can enhance topical delivery of target genes in mouse skin with multiple applications and KGF may be a useful therapeutic to restore atrophic dermis.

Key words: Topical transfection

LATE RECURRENT UROTHELIAL CARCINOMA IN THE STUDER NEOBLADDER: CONVERSION TO CONTINENT RESERVOIR

(Oral presentation)

Field of medicine: **Surgery**
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Country: **Egypt**
Faculty: **Faculty of Medicine Alexandria**

Introduction: Bladder cancer being the second most common genitourinary malignancy, is considered as a major health problem in Egypt and the Middle East and represents a considerable issue in Egypt and the Middle East. Radical cystectomy and orthotopic neobladder represent the standard of care for managing cases with invasive bladder tumour. There are few cases reported in the literature considering the urothelial recurrence in the urethra, connected to neobladder

Aim: We are presenting a rare case of a young female patient, with an aggressive urothelial tumour, recurring 13-year post-radical cystectomy, and the Studer neobladder.

Material and methodology: Our case was managed by urethrectomy and conversion of the neobladder into continent reservoir, with good short-term oncological and functional outcomes.

Results: bladder cancer cases should be followed thoroughly throughout their life. Follow-up every year by urethroscopy and cytology should be done for all cases of post-radical cystectomy, regardless of patients' symptoms

Conclusion: Late urothelial recurrence of post-radical cystectomy is possible and, in our case, happened 13 years following surgery. The Studer neobladder can be safely converted into continent reservoir, allowing good functional outcomes. Also, recurrence in the Studer neobladder can be safely managed, allowing good oncological outcomes, without the need for any ureteroileal interventions

Key words: neobladder, late recurrence, radical cystectomy

SURGICAL REPAIR OF THE AORTA COARCTATION WITH HYPOPLASTIC OF THE AORTIC ARCH IN NEWBORNS

(Oral presentation)

Field of medicine: **Surgery**
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Country: **Ukraine**
Faculty: **Cardiovascular Surgery Odessa**

Introduction: The surgical repair of the aortic coarctation with hypoplasia aortic arch is an urgent problem in modern cardiac surgery.

Aim: To show results of surgical correction of the hypoplastic distal aortic arch in newborns in combination with coarctation of the aorta.

Material and methodology: 40 patients with a diagnosis of coarctation of the aorta were operated in the cardiovascular department of Odessa Regional Children's hospital from 2009 to 2012. 16 cases were performed two-steps operation. The first step include plasty of the distal aortic arch by modification Amato method, the second step include closure of PDA and resection of coarctation with extended end-to-end anastomosis. 24 patients underwent only extended aortoplasty according to the standard procedure.

Results: All infants survived the procedure well. The average weight of patients was 3.03 ± 0.21 kg, and the mean age – 14.02 ± 3,5 days, than the lowest weight was 1.7 kg, and age 2 days. The ratio of the diameter of the aortic arch to the body weight before the operation was on the average 1.32, after the operation 2.04 mm / kg.

Conclusion: The single-stage plasty of the aortic arch by modification Amato method with extended end-to-end anastomosis is an optimal method of repair of the aorta coarctation with the hypoplastic aortic arch in newborns.

Key words: Coarctation of the aorta, aortic arch hypoplasia, aortoplasty, a newborn.

METHOD OF PROPHYLAXIS OF ANGIOSPASM AT RADIAL ARTERIAL APPROACH IN PCI

(Oral presentation)

Field of medicine: **Surgery**
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Faculty: **Medical Faculty Vinnytsia**

Introduction: Nowadays vascular surgery interventions occupy leading positions among the diagnostic methods and treatment of cardio-vascular diseases. In most cases the access to coronary arteries is a femoral. However, this access is not without limitations. It is known that most met problem at radial access is a spasm of radial artery, that limits manipulation possibilities of doctor.

Aim: To develop the method of prophylaxis of angiospasm during intervention to radial approach.

Material and methodology: For 2012 was carried out in 265 patients interventions. In 253 (95,47%) cases coronary angiography was performed through femoral access and 12 (4,53%) through right radial artery. The method of prophylaxis of angiospasm during intervention to radial access was regional anesthesia with 1% lidocaine (patent on an useful model №47118).

Results: Alternative arterial approach was needed at impossibility of carrying out of research through a femoral artery (occlusion or expressed stenosis of ilio-femoral segments and others). The prophylaxis of angiospasm at radial access was obtained at the regional anesthesia with local anesthetic (10-20 ml, 1% lidocaine) after catheterizations of artery, that did not influence on its anatomic position. Among 12 patients to whom interference were performed radial access on the developed method of angiospasm and extra cardiac complications not observed.

Conclusion: The catheterization of coronary arteries is carried out through radial approach, as an alternative and safe method as compared to the femoral approach, if we used for prophylaxis of angiospasm the regional anesthesia with 1% lidicaine.

Key words: Radial access, PCI, regional anesthesia.

TREATMENT OF POSTOPERATIVE MASSES OF ABDOMINAL CAVITY IN CHILDREN

(Oral presentation)

Field of medicine: **Surgery**
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Faculty: **Medical №3 Faculty Odessa**

Introduction: Acute inflammatory diseases of the abdominal cavity and their complications occupy the leading place in the pediatric surgery due to theirs frequency of occurrence and severity of the clinical course.

Aim: To improve the efficiency of treatment of postoperative masses in children.

Material and methodology: Analysis of treatment of 37 children aged 4 to 17 years with postoperative mass of the abdominal cavity using the method of potentiated regional antibiotic therapy. Retroperitoneal injection of antibiotic solution (kanamycinum) was performed daily through the microirrigator in the right iliac area, with subsequent impact of constant current field with density from 0.02 to 0.05 mA/cm2, exposure - 15-20 minutes, total course 7 - 10 procedures.

Results: Using of the proposed method favorably influenced the course of the disease: general temperature normalized on 4-5 days faster, pain syndrome stopped on 3-5 day, motor-evacuation function of the intestine started recovering from 2-4 days, postoperative wound complications were not observed, ultrasound monitoring confirmed the stopping of inflammation in the abdominal cavity on 4-5 days faster, hospital stay decreased by 35.4%.

Conclusion: The use of regional potentiated antibiotic therapy in postoperative masses of abdominal helps to avoid abscess formation, accelerates the stop of inflammation in the abdomen and pelvis, reduce terms of staying in hospital.

Key words: children, postoperative masses, regional antibiotic therapy

PRELIMINARY RESULTS WITH NEOCHORDAE LOOP MAKER: A NEW TECHNOLOGY FOR CREATING PRE-MEASURED NEOCHORDAE LOOPS IN MITRAL VALVE REPAIR

(Oral presentation)

Field of medicine: **Surgery**
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Country: **Iran**
Faculty: **Faculty Of Medicine Tehran**

Introduction: Mitral valve repair using neochordae has been encountered complexity in intraoperative length measurement and neochordae size refinement, specially in minimally invasive surgeries.

Aim: To report the initial results of using a new technology for making neochordae loops before starting the surgery.

Material and methodology: Neochordae loop maker is a novel device which models left ventricular apparatus in each individual patient. Preoperative transthoracic echocardiography is used to identify the geometry of each papillary muscle and setup the device for each patient. All required neochordae loops are made at the operative room and before initiating the cardiopulmonary bypass. The accuracy of this method in measuring the length of normal chordae was evaluated in calibration phase. Therefore, seven consecutive patients candidate for mitral valve replacement underwent transthoracic echocardiography. The device was setup for each patient and the length of their normal chordae and respective neochordae was compared by Bland-Altman analysis. After determining the accuracy of this device, four consecutive patients underwent mitral valve repair using this technique.

Results: From seven excised mitral valves, twenty one chordae considered normal. The legth of these normal chordae (1.92 ± 0.67 Centimeter) and respective neochordae (1.93 ± 0.69 Centimeter) showed agreement by Bland-Altman analysis. Four patients (mean age of 46.75 ± 14.90) who underwent mitral valve repair with the proposed technique, required total 11 neochordae loops. None of them required length refinement after saline test and intraoperative and follow up transesophageal echocardiography showed none or trivial regurgitation. No complication was seen during 6-month follow up.

Conclusion: This method showed successful results.

Key words: Artificial Chordae

COMPARISON BETWEEN PERSONALITY TRAITS AND ACADEMIC ACHIEVEMENT IN DENTAL STUDENTS

(Oral presentation)

Field of medicine: **General Education Subjects**
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Country: **Turkey**
Faculty: **Faculty of Dentistry Akdeniz University**

Introduction: Personality Psychology is a field of individual differences that in academic performance have been linked to differences in intelligence and personality which may impact on clinical skills.

Aim: The present study was designed to determine the relationship between personality traits and academic achievement of graduate and undergraduate dental students of Akdeniz University.

Material and methodology: This cross-sectional study was carried out among 150 undergraduate and graduate dental students in random sampling in fall 2012. The data were collected using the Big Five Inventory which involved five broad domains of personality include, Agreeable, Neurotism , Extroversion, Conscientiousness.

Results: Conscientiousness (85%), Openness (80%) and Extraversion (84.4%) were the most common personality characteristics among students.

Conclusion: Overall association between academic status and some of personality characteristics confirmed. Most of dental students were extraverted. Since in this major, practical course is more important than theoretical one, stronger social relationships would be more likely essential to be successful in future careers.

Key words:Academic Achievement, Cross-Sectional, Extraversion, Conscientiousness

THE NEW LAPAROTOMY STRATEGY IN THE SURGICAL MANAGEMENT OF THE COMPLICATED INTRA-ABDOMINAL INFECTION AT UNIVERSITY HOSPITAL HERNANDO MONCALEANO PERDOMO SINCE 2005 TO 2011.

(Oral presentation)

Field of medicine: **Surgery**
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Faculty: **Faculty Of Medicine Surcolumbiana**

Introduction: In severe secondary peritonitis, there are 2 surgical treatment strategies following an initial emergency laparotomy: planned relaparotomy on-demand relaparotomy strategy. There are not quality standards that guide the selection of any strategy in each special situation. For these reasons we studied this group of patients at our institution

Aim: Determine which relaparotomy strategy provides better management and prognosis

Material and methodology: Retrospective, observational and cohort study realized at University Hospital of Neiva, Colombia. We reviewed the surgical report books stored in the database of general surgery service. Only 119 reports were according with the inclusion criteria

Results: 47% of patients were in on-demand group and 53% were in planned group. 63% of patients presented an APACHE II score > 10 points. Patients in the on-demand group had a significantly shorter UCI stay (median, 3.7 vs 8.2 days in the planned group). Median number of days that patients were mechanically ventilated was higher for the planned group (4.73 days) vs the on-demand group (1.64 days). The proportion of patients with 3 or more relaparotomies was 16% in on-demand group compared with 72% in planned group. Mortality was 28%. Mortality was higher in patients in planned group compared with patients in on-demand group (40% vs 15%)

Conclusion: Having an APACHE II score > 10 not predicts relaparotomy strategy to choose. The on-demand relaparotomy strategy has more benefits: It decreases ICU stay, days of mechanical ventilation, number of relaparotomies, complications, risk to become a tertiary peritonitis and lower mortality

Key words: Complicated intra-abdominal infection; on demand relaparotomy; planned relaparotomy; APACHE II

SURGICAL TREATMENT METHODS IN HYDATIC HEPATIC CYST

(Poster presentation)

Field of medicine: **Surgery**
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Introduction: Hydatic hepatic cyst is a parasitosis caused by the development of cystic tumors by the larva of Taenia Echinococus granulosus. Although it is a condition known and studied for many years as a benign disease, its evolution has an extreme gravity because HHC has a negative impact on the entire body through toxic allergic reaction.In spite of various conservative (percutaneous drainage) or medical(albendazol) treatments ,surgery remains the milestone therapeutical approach

Aim: The purpose of this study is to analyze the results of surgical treatment, mainly the results on the evolution of billiary fistula .Our study presents a general analysis of the surgical techiques used in Clinical Hospital Colentina, Department of General Surgery Clinic II, Bucharest, Romania ,during the period April 2012-April 2013.

Material and methodology: Therapy can only be surgical with total removal of the parasites. Main operative approaches , known in litterature are drainage procedure and the obliteration of the cyst cavity after evacuation of the cystic content without drainage.

Results: In E. cysticus this is almost always possible by enucleation-resection or pericystectomie following evacuation of the cyst and instillation of 20% sodium-chloride or formaldehyde. Such radicality is the exception in E. alveolaris.

Conclusion: Here partial resections, biliodigestive and hepatodigestive anastomoses as palliative measures are carried out predominantly to ensure bile passage. Endoscopic retrograde cholangiopancreatography is also used to identify stones, tumors, or narrowing in the bile ducts through an endoscope.

Key words: Hydatic hepatic cyst ,surgical treatment

VALUE OF ALVARADO SCORE IN DIAGNOSIS OF ACUTE APPENDICITIS

(Oral presentation)

Field of medicine: **Surgery**
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Faculty: **MBBS**

Introduction: Alvarado Score is followed all over the world for diagnosis of Acute Appendicitis.Some doctors believe that Alvarado Score is not that accurate for diagnosis of Acute Appendicitis

Aim: This study was conducted to evaluate the Diagnostic value of Alvarado Score in Acute Appendicitis in Patients referred to Sir Salimullah Medical College Mitford Hospital

Material and methodology: This study was conducted in Sir Salimullah Medical College Mitford Hospital. All patients that referred to our institute with acute abdominal pain from January 2011 to January 2012 were assessed retrospectively by their medical records. Incomplete records were excluded. Alvarado criteria such as migratory pain, Anorexia, nausea and vomiting, tenderness and rebound tenderness of right lower quadrant, fever, leukocytosis and neutrophilic shift to left extracted from medical records and total score of 8 and above 8 was considered positive for Alvarado score. The pathology report was considered as gold standard and Accuracy, Sensitivity, Specificity, Positive predictive value, negative predictive value for Alvarado Score in Acute Appendicitis were calculated.

Results: Among all the 214 cases 70.1% were male and 29.9% were female and the mean age of the patients was 27.71±13.6. 202 patients had acute appendicitis and 12 patients had normal Appendix in the Pathology report. Accuracy, Sensitivity, Specificity, Positive predictive value and negative predictive value for the Alvarado Score was 56.1%, 45.8%, 60.7%, 94.4% and 4% respectively

Conclusion: Use of Alvarado Score in Acute Appendicitis give a rapid and correct diagnosis.But newer methods should be invented to be 100% accurate in diagnosis of Acute Appendicitis.

Key words: Acute Appendicitis, Alvarado Score

CONGENITAL ISOLATED TRACHEOESOPHAGEAL FISTULA. DIAGNOSIS AND SURGICAL TREATMENT

(Oral presentation)

Field of medicine: **Surgery**
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Country: **Ukraine**
Faculty: **Medical Faculty №2**

Introduction: The congenital isolated tracheoesophageal fistula (CITEF) is uncommon malformation with frequency 1:100000, characterized by high rate complications and mortality.

Aim: Optimization of diagnosis and surgical correction.

Material and methodology: 34 CITEF-patients aging from 1 day to 3 years and 10 months (mean age 4 months): 91% under 1 year, 41% - newborns were identified. S.Cohen and M.Kodja tests, esophagography, tracheobronchoscopy, esophagoscopy and fistula catheterization were used for diagnosis. Fistula dividing was the goal of surgery. Access - left (n=26) and right (n=3) cervicotomy and right thoracotomy (n=2). Application of auto-tissue strips, dislocation of tracheal and esophageal suture lines and tracheoplasty with demucosated wall of the fistula were used as recurrence preventive measures.

Results: Symptoms involved coughs when feeding, recurrent pneumonia, abdominal distension. Three patients were admitted to our clinic in a terminal condition due to pneumonia and sepsis and died before surgery could be carried out. There were no intraoperative complications and mortality. Postoperative complications occurred in 6 (19%) cases: suture leak (n=3), fistula recurrence (n=3) treated by drainage or recurrent fistula division respectively. Positive long-term outcome was reached in 28 (90.3%) operated patients. Over the postoperative period 3 (9.7%) patients died.

Conclusion: CITEF is characterized by triad symptoms: cough when feeding, recurrent pneumonia, abdominal distension. Verification requires complex X-ray and endoscopic examination. Cervical access proved efficient for defect correction. Auto-tissue strips interposition, dislocation of tracheal and esophageal suture lines and tracheoplasty with demucosated fistula wall were effective for prevention of fistula recurrence.

Key words: congenital isolated tracheoesophageal fistula, diagnosis, surgical treatment, children.

HARRIS HIP SCORE ASSESSMENT AFTER TOTAL HIP ARTHROPLASTY WITH SHORT-STEM VERSUS STANDARD-STEM:RANDOMIZED CLINICAL TRIAL

(Poster presentation)

Field of medicine: **Surgery**
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Country: **Iran**
Faculty: **Faculty Of Medicine Tehran**

Introduction: Short-stem prostheses for total hip arthroplasty(THA)have been designed to overcome the weakness of standard-stem prostheses and improve surgical outcomes

Aim: was to compare short-stem with standard-stem prosthesis outcomes

Material and methodology: This study was performed as a randomized clinical trial.Subjects were selected among patients referred to Sina University Hospital,Tehran,Iran between April2010 and April2012.THA were performed with short-stem or standard-stem prostheses after obtaining written informed consent from patients.Balanced Block Randomization method was used to get a random sample in each group.Clinical outcomes were evaluated based on Harris Hip Score (HHS).Patients were followed up for at least one year. All patients were examined at2w,6w,3m,6m and 1y after surgery.In each visit,Control X-Ray was obtained and prosthetic position were assessed. Also the symptoms such as infection,pain,claudication,ability to climb stairs,using crutches and weight bearing were rechecked

Results: 84THA were studied.13 patients were lost to follow-up or had infection and failure.One patient died with the prosthesis in situ from causes not related to the surgery.Finally 70 patients were analyzed.Of these,34and36hips underwent small stem and standard stem THA, respectively.The mean age of the patients 61.1±8.68years(range,48-86years).Most common reasons for THA were osteoarthritis, avascular necrosis and dysplasia of hip.There were significant differences between the 2study groups in bleeding during surgery(p=0.001). There were no significant differences among the study groups in HHS except for 6th week and 3th month(p=0.000).

Conclusion: The use of short-stem prosthesis can improve the performance of patients in short-term but no significant difference with standard-stem prosthesis in long term

Key words: total hip arthroplasty,total hip prosthesis,short stem prosthesis,Harris Hip Score

THE FREQUENCY OF FLEXOR PALM TENDON INJURIES

(Oral presentation)

Field of medicine: **Surgery**
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Supervisor(s): **prof. dr Pavle Jeremic, ass. dr Dimitrije Jeremic**
Country: **Serbia**
Faculty: **Faculty of Medicine Novi Sad**

Introduction: The hand is the main tool of a man. Injury of muscle tendon can result in hand function impairment. Verdan defined five anatomic zones of the palm. Surgical treatment of flexor tendon depends on the zone in which tendon injuru is located in.

Aim: The aim of this study is to determine the predominance of hand flexor tendon injury by sex and age, the frequency of injury by handside, the frequency of finger involvement, time from injury to surgery, and the anatomical location of the injury (according to Verdan).

Material and methodology: This retrospective study included 122 patients treated in the Clinic for Plastic and Reconstructive Surgery of the Clinical Center of Vojvodina in the three-year period (1. January 2010-31. December 2012.). Data collected from the medical records was analyzed by standard statistical methods.

Results: Injuries of flexor tendons were most frequent in males 35-44 years old (28.7%). Right hand was affected in 57.7% of subjects, the second finger was involved in 22.2%. Eighty nine point tree percent of subjects were operated on within 24 hours after injury. Flexor tendon injuries were most frequently located in the second zone according to Verdan (53.7%).

Conclusion: Majority of the subjects injured their right hand. Eighty nine point tree percent of patients were operated within 24 hours after injury, which benefits more favorable postoperative prognosis. Injured tendon in 53.7% of cases is in zone II according to Verdan, which is the most demanding for treatment because of the anatomic relations.

Key words: flexor tendons injuries, hand, Verdan zones

ACUTE ABDOMINAL SYNDROME IN EMERGENCY PEDIATRIC SURGERY

(Oral presentation)

Field of medicine: **Surgery**
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Supervisor(s): **Prof. Dr. Melnichenko M.G.**
Country: **Ukraine**
Faculty: **Odessa National Medical University**

Introduction: According to the different authors, surgery of acute appendicitis makes up to 75% of all emergency procedures for children.

Aim: To increase the efficiency of the diagnosis and the treatment of children with acute abdominal syndrome based on the development of the integrated algorithm of actions in emergency surgical services.

Material and methodology: Analysis of management of children with acute abdominal syndrome (AAS) within 4-year period. During this period about 84 thousand children turned to the department of emergency surgery - one of five children with AAS among them. One of six (2732, 15.67 %) were hospitalized with acute surgical diseases (appendicitis, its complications, etc.)

Results: Acute abdominal syndrome is a priority surgical problem among children, for which more than 20.8% of patients are treated. According to our data stable indicators of surgical activity during AAS remain: an average 64.2%, but good effects of timely diagnosis and "appendicitis alertness" of urgent surgeons is the tendency to reduce the number of destructive and complicated forms of appendicitis on 25.6%, and the increase of non-destructive disease on 12.6%. The flow of common appendicular peritonitis in 80% of cases is accompanied by abdominal sepsis.

Conclusion: The use of "surgical pause" and stationary monitoring technology gives the opportunity to thoroughly diagnose, identify accompanying pathology, define rational tactics, adequacy of treatment and reduce the complications of AAS.

Key words: acute abdominal syndrome, children, emergency surgery.

RISK FACTORS FOR CUTANEOUS MELANOMA IN THE OBSERVED POPULATION OF WOMEN IN VOJVODINA

(Oral presentation)

Field of medicine: **Surgery**
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Supervisor(s): **Asst. Dr. Med. Jelena Nikolic**
Country: **Serbia**
Faculty: **Medical Faculty in Novi Sad**

Introduction: Melanoma is a malignant tumor of melanocytes which is one of the most pressing problems of medicine today. Factors that increase the risk of melanoma in the literature are divided into two major groups: factors of the host and environmental factors. Risk factors related to the host include: heredity, FAMMM syndrome, previously diagnosed melanoma, more than 50 pigment moles on the body, and others. The environmental factors include: UV radiation, the use of tanning, sunburn in childhood caused by excessive sun exposure, and others.

Aim: The objective of this study is to examine what of the risk factors for melanoma are present in this group of women in Vojvodina and distribution of these factors in different age categories.

Material and methodology: The prospective study was performed from July 2012. until February 2013. at the Department of Plastic and Reconstructive Surgery, Clinical Center of Vojvodina in Novi Sad. The study included 178 females. For data collection, the questionnaire and physical examination subjects was used.

Results: This group of women in Vojvodina usually presened the following risk factors: skin photo type II by Fitzpatrick, light hair and light eyes, more than 50 moles on the body, exposure to UV light in spare time, sunburn in childhood. Looking at the distribution of these factors by age categories, we see that in the younger categories are more common: the use of solariums and hormonal contraception, while in the older categories to occupational exposure to UV radiation and previously diagnosed malignant non-melanoma skin cancers.

Conclusion: Identifying risk factors and forms of behavior that are prevalent in our population, are important to implement targeted preventive measures that would be aimed at particularly vulnerable to certain age groups, for these important risk factors.

Key words: melanoma, the risk factors

ASSESSMENT OF THE PATIENTS WITH ADVANCED STAGE OF BRONCHOGENIC CARCINOMA AND TREATMENT CHOICES

(Oral presentation)

Field of medicine: **Nursing**
Author(s): **MITROVIC EMILIJA**
Supervisor(s): **Ass. Mr Sc. Med. Dr Nensi Lalić**
Country: **Serbia**
Faculty: **Medical Faculty Novi Sad**

Introduction: One thousand and two hundred new cases of lung cancer are diagnosed annually at the Institute for Pulmonary Diseases of Vojvodina. More than 85% of patients with lung cancer needed palliative care due to many symptoms that were present from the beginning or that were reported during the illness.

Aim: The aim of the research was to show the influence of the application of palliative care to general condition of patients with lung carcinoma, as well as monitoring changes of TNM stage during one year.

Material and methodology: The research was included 30 patients with lung carcinoma. Medical diagnosis was made with histological or cytological examination of material taken from the patients.

Results: Average age of the 30 examined patients, was 66. Adenocarcinoma were diagnosed at 13 patients, 10 were with squamous cell carcinoma and 7 with small cell lung carcinoma. When the diagnosis of the disease was made, according to the ECOG scale, 27 patients had grade1, and 3 patients had grade2. After a year, 12 patients had grade1, grade2 had 10 patients, grade3 had 6 patients and grade4 had 2 patients. During that period, there was no change in the TNM disease stage.

Conclusion: A year after diagnosis of lung carcinoma was established, the value of ECOG scale was changed, but there was no changes in the TNM staging. Progression of the ECOG scale was partially because of the disease progression more than because of different treatment options.

Key words: lung carcinoma, performans status, TNM stage of the disease

OUTCOMES TO DISCHARGE FROM HOSPITAL FOR LATE PRETERM INFANTS

(Oral presentation)

Field of medicine: **Nursing**
Author(s): **NUCU-ALEXANDRU MARICA**
Co-author(s): **Andrada Pasc, Adrienn Soos, Alina Cucian , Alexandra Stanescu, Manuela Cucerea, Marta Simon**
Supervisor(s): **Dr. Laura Mihaela Suciu**
Country: **Romania**
Faculty: **Faculty Of Medicine Targu Mures**

Introduction: Late preterm infants, defined by birth at 34, 0/7 through 36, 6/7 gestational weeks, are less physiologically and metabolically mature, even if they are often the size and weight of some term infants. Because of this fact, they may be treated by healthcare professionals as though they are developmentally mature and at low risk of morbidity.

Aim: To determine whether, when controlling for confounding factors, there was still an association of late preterm birth with adverse neonatal outcomes.

Material and methodology: This retrospective case control study took place in one academic Romanian secondary level Neonatal Care Center. Charts of all women (n=1063) having singleton live births and charts of their new born babies in 2011 were retrieved. Data collected on paper form were entered into an electronic database. Maternal data were linked with infant data, and all data were independently validated.

Results: After statistic controlling for known confounding factors, late preterm birth was associated with increased risk of admission to Neonatal Intensive Care Unit [OR 6 (3.5-10.3)], delayed breastfeeding initiation [OR 2.68 [1.8-3.9)], and longer observational hospital stay [OR, 3.14 (2.2- 4.5)]. The rate of cesarean delivery [OR 0.9 (0.6- 1.3)], low Apgar score [OR 0.6 (0.2-1.1)] and birth related injuries [0.8 (0.6-1.3)] were less frequent among late preterm infants.

Conclusion: Independent of known confounding factors, late preterm infants experience significantly more neonatal morbidity compared to term infants. Evidence based recommendation for appropriate discharge timing for late preterm infants are needed to prevent neonatal morbidity.

Key words: late preterm infants, breastfeeding, neonatal morbidity

TESTING BEGINNERS' ENGLISH LANGUAGE I AT FACULTY OF MEDICINE, BELGRADE UNIVERSITY

(Oral presentation)

Field of medicine: **General Education Subjects**
Author(s): **S. CALIC**
Co-author(s): **P. Paunovic, T. Vukic**
Supervisor(s): **Dr Sofija Micic, Associate Professor Of English**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: After the Bologna reforms in higher education, the English Language in Medicine for beginners in the first two years of undergraduate education was introduced.The curriculum has been implemented for the students who learnt some other foreign language or they do not speak the English language well,because it was the second or elective course in high school.In the academic 2012/13, there were 36 first year students who attended the Beginners' English Language I course consisting of 60 classes.

Aim: The purpose of the study was to see how the students progressed during the academic year.They regularly attended the lectures and practicals where different exercises and tests of medical terminology and grammar structures were done.Reading, speaking, writing and listening were practiced, as well as all the relevant tenses in the English Langauge.

Material and methodology: The progress was followed by general and professional English Language achievement tests.

Results: At the end of the first term,General English achievement test (GEAT) was done by 36 students, 70% passed. In the middle of the second semester, another GEAT was done by 25 students, 44% passed.At the end of the second term, 32 students took Professional English Language Test (PELT), 94% of them passed.

Conclusion: Based on the results, upon the completed school year, it may be concluded that majority of students mastered the English Language I essentials. The progress of the students has been visible, so more conclusive results are to be obtained upon additional testing and the completed English Language II course.

Key words: Beginners' English in Medicine, GEAT, PELT, students' progress

REPRESENTATION OF ETHICS IN MEDICAL EDUCATION

(Poster presentation)

Field of medicine: **General Education Subjects**
Author(s): **JORDANCHO JORDANOVSKI**
Co-author(s): **N.Panov, H.Stojanov, D.Jordanovski, D.Ramovski, A.Stojanovski, G.Sumanov, B.Panova, S.Jovevska**
Supervisor(s): **Doc. dr Gordana Panova**
Country: **Macedonia**
Faculty: **Faculty Of Medical Sciences Stip**

Introduction: The word "doctor" means 'to teach: A teacher is someone acknowledged as a guide or helper in processes of learning. Teaching is a necessary professional attribute for doctors. The General Medical Council (GMC), stated in its 2010 version of the document Good Medical Practice that all doctors should be willing to contribute to teaching and those doctors involved in teaching should adopt the skills, attitudes and practices of a good teacher. Commitment to ongoing education is one of the principles of professionalism which are specific to family medicine.

Aim: The aim of this presentation is to discuss the challenges, clues and future projections of ethics education for general practitioner/family physicians through different aspects of the matter.

Material and methodology: This is a literature review about medical ethics education in general practice/family medicine from past to the future.

Results: As medical educators family physicians have a lot of responsibilities such as being a information provider in the clinical context, being a role model on the job and being a resident assessor etc. Besides, medical ethics education in family medicine needs some different dimensions beginning from self awareness to analytical approach to obligations and law.

Conclusion: We can begin to teach residents about what the term "profession" means. With our professional role modeling residents and students can see equity, clinical wisdom and ethical values inaction.To teach and evaluate social part of the medicine like ethics and professionalism presents the most challenging part of education. Have notes the great conflict of the young physicians between humanistic values and dehumanizing features of the health care system.

Key words: Medical ethics, education, professionalism, general practice, family medicine

SATISFACTION OF PHYSICIANS IN PRIMARY HEALTH CARE

(Poster presentation)

Field of medicine: **General Education Subjects**
Author(s): **AIDA KALAČ**
Supervisor(s): **Prof. Dr Agima Ljaljević**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction: Government of the Republic of Montenegro, through the Ministry of Health, Labor and Social Welfare conducted reform in the health system since 2005. Job satisfaction and motivation of physicians is very important factor in the quality of health care in reformed health system.

Aim: The aim of the paper was to assess some of the parameters of job satisfaction among physicians in reformed health system.

Material and methodology: Transversal study, which included 58 physicians with various specialties, worked off 3rd and 12th November 2012 in the Health center in Podgorica. A questionnaire of 20 closed-type questions was used. Satisfaction is graded by five-graded scale. Research findings were presented by charts.

Results: Almost every second examinee is satisfied with their jobs after the reform In the Podgorica Health Center. About two-thirds of examinee believe that the job is more complex than in the period before the reform. More than half of examinee were satisfied with the achieved relationship with patients and colleagues. Every second examinee was undecided (neither satisfied nor dissatisfied) with opportunities for further education, while two-thirds of examinee were very dissatisfied with the financial compensation for their work.

Conclusion: The main cause of dissatisfaction is insufficient financial compensation for work which is more complex and demanding after the reform in the health care. The reformed health system is well accepted by physicians.

Key words: Reformed health system, physicians, satisfaction.

ASSESSMENT OF HELATH CARE WORKERS WILLIGNESS FOR LONG DISTANCE LEARNING

(Poster presentation)

Field of medicine: **General Education Subjects**
Author(s): **NATASA JOVICIC**
Co-author(s): **Bojana Krunic**
Supervisor(s): **Doc. Dr Predrag Djuric**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Long distance learning is a form of education which is becoming more and more popular and giving great results worldwide. Through long distance learning health workers are able to follow the latest medical improvements everyday and thereby improve their skills.

Aim: The objective of this study was to determine the level of readiness for distance learning, as well as the success of previous training of health care workers in this way.

Material and methodology: The study included 90 health workers from primary care. The information were obtained through questionnaire that assess representation of distance learning among health care workers, the success of medical education, which they attended so far and their personal opinions about this method of training.

Results: Most of the participants, almost 80% don't have experience with learning on distance, 65.6% of that are supporters of this type of education. Approximately quarter of medical workers have positive opinion about learning on distance and are satisfied with education until now and they gladly apply it.

Conclusion: The highest percentage of health care workers were neutral towards the problem of distance learning. The study showed that the current readiness of health workers for distance learning is at a moderate level.

Key words: distance learning, medical education, health care workers

THE ROLE OF ACADEMICIAN O.V.KORCHAK-CHEPURKIVSKIY AS FOUNDER OF PROPHYLACTIC STRATEGIES IN UKRAINIAN MEDICINE

(Oral presentation)

Field of medicine: **General Education Subjects**
Author(s): **OLENA ANTONYUK**
Supervisor(s): **Rector Of Bogomolets National Medical University, Academician, Professor Moskalenko V.F.**
Country: **Ukraine**
Faculty: **Soc. Medicine And Org. Of Health Protection**

Introduction: This is the original study of experience of O.V.Korchak-Chepurkivskiy in historical context. We analyzed the main results of his scientific works devoted to the problems of prophylactics.

Aim: The aim was to show the role of academician O.V.Korchak-Chepurkivskiy as investigator of prophylactic strategies in Ukrainian medicine based on analyzing original scientific works.

Material and methodology: We analyzed 49 monographs and scientific articles written by O.V.Korchak-Chepurkivskiy and documents from 7 Ukrainian Central Government and local archives.

Results: In the modern world there are a lot of challenges to the public health. The activity of academician O.V.Korchak-Chepurkivskiy (1857–1947), academician, the Minister of Public Health and Welfare (1919), Necessary Secretary of All-Ukrainian National Academy of Science (1929 -1934) was aimed on prophylactics in medicine. He studied and proposed effective events forced again numerous epidemics of infectious diseases as the main reason of death. The Minister tried to improve public health, to increase life expectancy of population; studied influence of social factors on health. He first used new statistical methods and studied rate of birth and death among population based on materials of 'metrics registration' in Orthodox Church. In the XIX century it was the most objective information which was used in each town and village of Russian Empire.

Conclusion: In this article the activity of academician O.V. Korchak-Chepurkivskiy was shown. He formed the main tasks of social hygiene. In fact he became the founder of prophylactic strategies in public health. His experience and scientific works are still very important nowadays.

Key words: O.V.Korchak-Chepurkivkiy, public health, prophylactic strategies

MISSIONARY OF RED CROSS AND FRIEND OF SERBIAN NATION, CATHERINA CLARA STURCENEGGER

(Oral presentation)

Field of medicine: **General Education Subjects**
Author(s): **MILICA MARJANOVIC**
Supervisor(s): **Prof. dr Mira Govorčin**
Country: **Serbia**
Faculty: **Faculty of Medicine Novi Sad**

Introduction: Catherina Sturcenegger, publicist, was a great man and a fighter for truth and justice. These facts supporting her comprehensive biography and bibliography. For everything she did, she invested a lot of effort, work and waiver. The working time of this remarkable woman, went from teachers, postal officer, journalists and photographers to the nurse and benefactors. Through a comprehensive work was published in German and French, a number of books, articles, publications. Some of these works have been translated to other languages of the world. For successful work, which is carried out through all the listed profession, she was awarded with various awards and commendations. She was a member of the Swiss and the International Committee of Red Cross. As a close friend of its founder, Henry Dunant , she visited different parts of the world, in the service of objective envoy the International Committee of Red Cross and nurse.

Aim: Introduction and analyzing to the personality, life and work of Catherina Clara Sturcenegger, publicists and activist of the Red Cross.

Material and methodology: The data available from literature sources were analyzed retrospectively.

Conclusion: The present paper we tried to get closer to the life and work, of women who a lot helped Serbia when it is most needed, in times of war, suffering and poverty. Analyzing the personality and work Catherina Clara Sturcenegger, it can be concluded that she was an exceptional woman, a philanthropist. Unfortunately, it is one of the figures that have fallen into oblivion, and it is a bit of literature data about her.

Key words: Catherina Sturcenegger, Red cross, famous Swiss

DR DJORDJE NATOSEVIC – BABA, FROM DOCTORS TO MODERN EDUCATION FOUNDERS VOJVODINA

(Poster presentation)

Field of medicine: **General Education Subjects**
Author(s): **NATASA JOVICIC**
Supervisor(s): **Prof. dr Ksenija Boskovic**
Country: **Serbia**
Faculty: **Faculty of Medicine Novi Sad**

Introduction: This paper will attempt to shed light on the character of the Dr. Djordje Natosevic Baba who has, practically, devoted his entire career to education reform his country's school system by installing a solid foundation for future generations.

Material and methodology: By analysing contents of primary and secondary literature sources it's showed the character and work of Djordje Natosevic Baba in order to promote and preserve from oblivion his reformation, the enlightenment and publishing work.

Results: Djordje Natosevic was born in Slankamen, July 31st,1821. After finishing his high school education in Karlovacka gimnazija (Karlovacka grammar school) he went to Segedin for two-year philosophical studies in order to qualify for the law studies. In September 1840 he moved to Eperjes (Presov) to study law, put after one year he enrolled in Medical school in Pesta. After four years he transferred to Vienna and finished his medical studies there.As a son of a wealthy merchant, Natosevic „usually rented two rooms in Vienna, in one, he nurtured and fed the birds, and also took in poor students and beside the shelter he also gave them his clothes and laundry". His readiness to help his poor friends is most eloquently confirmed by the gratitude of one of those friends, Branko Radicevic.Soon after graduation, Djordje Natosevic came to Novi Sad and began his meadical practice and he „didn't accept payment for his services from the poor people". At that time he became close with the bishop Platon Atanackovic, he became his personal doctor and, probably under his influence, he chose education to be his profession.At the beginning of the 1853/54 school year, he became a professor and administrator of the Serbian grammar school in Novi Sad. Since then, until the end of his life in 1887, he was a tireless reformer of Serbian schools in the former Habsburg monarchy, performing a variety of duties. Among other things, he was the supervisor of all Serbian schools in Hungary and the chief clerk of Serbian schools in Diocese of Karlovci. At one point, at the invitation of Prince Mihailo Obrenovic, he was the officer on duty at the Ministry of Education of the Principality of Serbia. He was also the president of „Matica srpska".

Conclusion: What Djordje Natosevic has achieved in Serbian school system wasn't achieved by no one teacher, before of after him, so he is considered as a founder of modern education.

Key words: Dr. Natosevic - Baba, pedagogue, reformer, educator, schooling

KYPHOSIS AND SCOLIOSIS IN CHILDREN

(Poster presentation)

Field of medicine: **Surgery**
Author(s): **SVETLANA JOVEVSKA, M. Jovevska, , M. Zdravkovska, G. Sumanov, B. Panova, N. Panov, G. Panova A. Stojanovski, , L. Nikolovska,**
Supervisor(s): **Prof. d-r Gordana Panova,**
Country: **Macedonia**
Faculty: **Faculty of Medicine Shtip**

Deformities of the spine can be caused by congenital defects, paralysis on one side of the body, improper posture or because different posture of the legs. Scoliosis is a sideways curvature of the spine that can develop in various areas. Spine can be bent to the right (most of the chest), left (usually the lumbar part), or to fold around a vertical axis. Kyphosis is curvature of the spine with convexity saginalnata plane backwards.

The purpose of this paper is to determine the frequency of appearance of scoliosis and kyphosis, the period of their occurrence in children and their gender distribution

Keywords: Spine, vertebra, turn, frontal plane, sagittal curve

WORKSHOPS

IMSCNS 2013

1. DELIVERY, SURGICAL COMPLETION OF DELIVERY AND CESAREAN SECTION

Time: July 19th 2013, 11:00 AM
Supervisors: Prof. dr Tihomir Vejnović, Prof dr Mirjana Bogavac, doc. dr Ljiljana Mladenovic Segedi
Student demonstrators: Zoran Novaković, Aleksandra Vejnovic
Place: Clinical Center of Vojvodina, Department of Gynecology and Obstetrics

This workshop is designed in an interactive form where you can learn about the mechanism of normal delivery and possible complications of delivery with review of cesarean section delivery modified by Vejnovic. As we know cesarean delivery is the most common obstetric surgery today. Improvement of operative techniques, anesthesia, care and transfusion has contributed to safety of the procedure and expansion of indications. In the opening lecture you can learn about one of new operative techniques - Cesarean section delivery modified by Vejnovic. The main characteristic of modification Vejnović is shortening uterus suture so the subsequent scar is smaller.

This lecture will be supported with live video operation of cesarean section delivery. After the lecture there will be discussion in which all participants can participate. In practical part of workshop all participants will actively participate in normal vaginal delivery on obstetricial and childbirth simulator models.

2. THE AIRWAY AND INTRAVENOUS ACCESS WORKSHOP

Time: July 19th 2013, 11:00 AM
Supervisors: ass. dr Ana Uram-Benka, dr Izabella Fabri
Place: Faculty of Medicine, Amphitheatre 1

Medical doctors should be familiar with the adequate establishment of a patient's airway. The airway can be secured in several ways, which mainly depend on the degree of respiratory failure of the patient and on the skills and technical possibilities of the performer. The first approach to a person, who is not breathing properly, would consist of several maneuvers aimed at opening of the airway. They consist of an effective chin lift, jaw thrust and head toss of the afflicted. If the measures listed above provide with no result, the patient should be manually or mechanically ventilated and airway should be maintained with a face mask, a supraglottic device or an endotracheal tube. The ability to obtain intravenous (IV) access is an essential skill in medicine. The procedure can appear deceptively simple when performed by an expert, it is in fact a difficult skill which requires considerable practice to perfect. Generally IV's are started at the most peripheral site that is available and appropriate for the situation. IV access is essential to manage problems in all critically ill patients. All critically ill patients require IV access in anticipation of future potential problems, when fluid and/or medication resuscitation may be necessary.

The workshop is designed to provide the participants all the necessary skills which are required in airway establishment and intravenous access. Participants will have the opportunity to learn how to adequately ventilate patients on medical simulator mannequins, to insert several different types of laryngeal masks and endotracheal tubes. Participants also will have the opportunity to practice placement of peripheral intravenous lines. Each practical skill performance will be followed by numerous information from theory related to the given discipline.

3. EMERGENCY MEDICINE: "STAYIN' ALIVE"

Time: July 19th 2013, 11:00 AM
Supervisor: Milos Vujanovic, MD
Place: Faculty of Medicine, Amphitheatre 2

The Bee Gees' famous song is used for the title of this workshop not only because of its symbolic meaning. A small study by researchers from University of Illinois College of Medicine at Peoria established that the Bee Gees disco song "Stayin' Alive" might also help people stay alive upon receiving the cardiopulmonary resuscitation (CPR), if their rescuer knows the 1977 tune. They found that "Stayin' Alive" has a beat of 103bpm, that's in sync with the recommended pace of 100bpm for the chest compressions given during CPR. Very interesting, isn't it?

This workshop will be a course (adjusted to all congress participants) during which you will get basic knowledge and skills in the prehospital management of some life-threatening conditions such as a cardiac arrest and severe external bleeding. The workshop consist of three parts: The first part is theoretical. We will talk about the basic methods of revival (BLS-Basic Life Support) using the Automatic External Defibrillator (AED) and about methods used to stop external haemorrhage.

The second part is a practical session during which you will be able to practice and improve your skills. An Ancient Chinese Proverb & An Educational Aphorism says: "I hear and I forget. I see and I remember. I do and I understand." The third part is made up of a realistic example of an accident, in which case you will be the life rescuer. You will use your skills and knowledge on the mannequins and live simulators. During these exercises you will initiate the best possible rescuing procedure for the injured before the ambulance arrives.

4. ABOUT HYPERTENSION

Time: July 19th 2012, 11:00 AM
Supervisor: Aleksandar Raskovic MD, Ph.D
Place: Faculty of Medicine, Pharmacy - Classroom 1

Hypertension may lead to serious conditions, such as heart disease and stroke. High blood pressure symptoms may be insidious; signs of seriously elevated high blood pressure include severe headache, vision problems, and chest pain. The exact causes of high blood pressure are unknown but may be related to hereditary and environmental factors. Treatment of hypertension includes dietary changes, medications, and exercise.

1.The treatment of hypertension is made of (2):
a) Potassium channel blockers
b) Calcium channel blockers
c) Beta adrenoceptor blockers
d) Thiazide diuretics
e) Organic nitrates

2.The treatment of hypertension is made of (4):
a) Hydralazine
b) Alpha 1 adrenoceptor blockers
c) Alpha 2 adrenoceptor blockers
d) Alpha 2 adrenoceptor agonists
e) Imidazoline receptors agnists

3.The treatment of hypertension is made of (2):
a) Digoxin
b) Angiotensin receptors antagonists
c) ACE inhibitors
d) Lidocaine
e) Amiodarone

4.Cholesterol level may be increased after the use of (1):
a) Potassium channel blockers
b) Calcium channel blockers
c) Alpha 1 adrenoceptor antagonists
d) Thiazide diuretics
e) Organic nitrates

5.Hypertension during pregnancy should be treated with (1):
a) Verapamil
b) Amlodipine
c) Propranolol
d) Methyldopa
e) Hydrochlorothiazide

6. In patients with bronchial asthma, for hypertension, should not be used (1):
a) Potassium channel blockers
b) Calcium channel blockers
c) Beta adrenoceptor blockers
d) Thiazide diuretics
e) Organic nitrates

7. In patients with benign prostatic hypertrophy, for hypertension, should not be used (1):
a) Loop diuretics
b) Calcium channel blockers
c) Beta adrenoceptor blockers
d) Thiazide diuretics
e) Organic nitrates

8.In patients with benign prostatic hypertrophy, for hypertension, should be used (2):
a) Digoxin
b) Angiotensin receptors antagonists
c) ACE inhibitors
d) Lidocaine
e) Amiodarone

9. In patients with heart failure, for hypertension, may be used (3):
a) Loop diuretics
b) Calcium channel blockers
c) Beta adrenoceptor blockers
d) Thiazide diuretics
e) Alpha 1 adrenoceptor antagonists

10. In patients with renal failure, for hypertension, must not be used (1):
a) Loop diuretics
b) Calcium channel blockers
c) Beta adrenoceptor blockers
d) Thiazide diuretics
e) Alpha 1 adrenoceptor antagonists

11. Phenomen of cold extremities is typical for (1):
a) Loop diuretics
b) Calcium channel blockers
c) Beta adrenoceptor blockers
d) Thiazide diuretics
e) Alpha 1 adrenoceptor antagonists

12. Bradycardia, A-V block and heart failure, are side effects of (2):
a) Amlodipine
b) Verapamil
c) Enalapril
d) Propranolol
e) prazosine

13. Constipation, ankle oedema are side effects of (1):
a) Loop diuretics
b) Calcium channel blockers
c) Beta adrenoceptor blockers
d) Thiazide diuretics
e) Alpha 1 adrenoceptor antagonists

14. Dry cough is side effect of (1):
a) Amlodipine
b) Verapamil
c) Enalapril
d) Propranolol
e) Prazosine

15. Fetal and neonatal anuria are caused with (2):
a) verapamil
b) Angiotensin receptors antagonists
c) ACE inhibitors
d) propranolol
e) methyldopa

16. Hypopotassemia is caused with (1):
a) verapamil
b) Angiotensin receptors antagonists
c) ACE inhibitors
d) propranolol
e) hydrochlorothiazide

17. Hypocalcemia is caused with (1):
a) Loop diuretics
b) Calcium channel blockers
c) Beta adrenoceptor blockers
d) Thiazide diuretics
e) Alpha 1 adrenoceptor antagonists

18. Hyperpotassemia may be caused with (2):
a) verapamil
b) Angiotensin receptors antagonists
c) ACE inhibitors
d) propranolol
e) hydrochlorothiazide

19. In patients with hyperthyroidism, for hypertension, should be used (1):
a) Loop diuretics
b) Calcium channel blockers
c) Beta adrenoceptor blockers
d) Thiazide diuretics
e) Alpha 1 adrenoceptor antagonists

20. In postmenopausal women, for the treatment of hypertension, should be used (1):
a) verapamil
b) Angiotensin receptors antagonists
c) ACE inhibitors
d) propranolol
e) hydrochlorothiazide

5. PATIENT - FRIENDLY HEALTH CARE APPROACH

Time: July 19th 2013, 11:00 AM
Supervisor: dr Lidia Turo, Department of Students' Health Care
Place: Faculty of Medicine, Pharmacy Amphitheatre

Patient-centered, patient-friendly health care leads to higher level of active patient engagement at every level of care design and implementation which insures high-quality health care. Crucial to good patient care is good communication with patients, family members, caregivers, consultants and referring physicians. Excellence in listening and talking with patients, families, nurses, therapists and other health care workers should be very high on the list of goals that we want to accomplish in providing good patient care. Patient-centered care supports active involvement of patients and their families in the design of new care models and in decision-making about individual options regarding behavioral change, treatment etc. Engaged patients seem to have better perceived health outcomes. Patient friendly care is respectful of and responsive to individual preferences, needs, and values ensuring that patient values guide all medical decisions. The art of patient care also involes giving information (educating patients) and encouragement, and patient incentive. This workshop will provide students with skills to create excellent physician-patient relationship with emphasis on "whole-person" care approach, communication, patient support and empowerment.

6. INSIDE SCANNING ELECTRON MICROSCOPE (SEM)

Time: July 19th 2013, 11:30 AM
Supervisor: Expert for Electron Microscopy, dipl. biologist Milos Bokorov
Place: Faculty of Sciences Novi Sad – Department of Biology and Ecology

This workshop is a unique opportunity to peek into the micro-world and to become familiar with the Scanning Electron Microscope (SEM). You will learn how SEM works and how it is used. Afterwards you will have the opportunity to see some of the biological specimens under magnification up to almost 500.000 times.

7. CALENDAR OF MY HEALTH

Time: July 20th 2013, 11:00 AM
Supervisor: dr. Vojislav Stojsin
Place: Faculty of Medicine, Pharmacy – Classroom 2

Calendar of my health is a health promotion project which includes messaging services, social networking and website that serves as an educational channel to women of childbearing age to take care of their health and improve it. The system is based on the concept of personalized health promotion where women 18-60 years old are receiving educational health information via SMS messages, and reminders when they should, according to age, go to a check-up. On social networks, women have the opportunity to inform, engage in discussion about their health and consult with your doctor about a particular issue. Get familiarized with the project and learn more about this health promotional campaign.

8. INVOLUNTARY MOVEMENTS

Time: July 20th 2013, 11:00 AM
Supervisor: Aleksandar Jesic, MD, PhD
Place: Faculty of Medicine, Pharmacy – Classroom 1

The workshop is designed in an interactive form supported with short films, where participants will get introduced to the hallmarks of clinical presentation, etiology, diagnosis and therapy of involuntary movements such as tremor, athetosis, horea,ballismus, dyskinesia, diystonia, myoclonus and other specific movement disorders.

9. THE PRESENT AND THE FUTURE OF CARDIOVASCULAR SURGERY

Time: July 20th 2013, 11:30 AM
Supervisor: Prof. Dr Pavle Kovacević
Place: Institute of cardiovascular diseases Vojvodina, Department of Acquired Heart Defects, Sremska Kamenica

The workshop would include one-hour lecture followed by a video presentation about the latest achievements, developments in cardiovascular surgery with special emphasis on:

1. Open and Endovascular Aortic Surgery
2. Minimally invasive procedures in cardiac surgery (mini-incision, torkoscopic and robotic surgery)
3. Treatment of heart failure with VAD (Ventricular assisting heartdevice)

In the case of operators and number of patients, there is the possibility of entering the operating room and direct viewing of surgical procedures.

10. PROTON MAGNETIC RESONANCE SPECTROSCOPY (1H-MRS):BASICS, SPECTRAL PATTERNS IN DIFFERENT ORGANS AND PRACTICAL APPLICATIONS

Time: July 20th 2013, 11:00 AM
Supervisor: Dr. Jürgen Machann, Section on Experimental Radiology, Department of Diagnostic and Interventional Radiology, University Hospital Tübingen, Germany
Place: Ceremonial room of the dean, Faculty of Medicine

11:00 h	Basics of MRS: chemical shift, acquisition techniques for single voxel MRS, and spectroscopic imaging post processing and quantification
11:25 h	Questions
11:30 h	Metabolites assessable by MRS but invisible for MRI
11:55 h	Questions
12:00 h	Spectral patterns in different organs and local peculiarities
12:25 h	Questions
12:30 h	Diagnostic applications and clinical research studies
13:10 h	Questions and Discussion
13:30 h	Adjournment

11. MEDICALLY COMPROMISED PATIENT IN DENTISTRY

Time: July 19h 2013, 11:00 AM
Supervisor: Branislav Bajkin, MD, PhD
Place: Ceremonial room of the dean, Faculty of Medicine

The goal of this workshop is to discuss about dental treatment of medically compromised patients based on patient cases. The focus will be on patients with bleeding disorders and on reviewing of local hemostatic agents. The workshop will be organized as interactive work in small groups of students. Maximum number of participants is ten

12. MINIMALLY INVASIVE APPROACH TO BILIARY CALCULOSIS

Time: July 20th 2013, 11:00 AM
Supervisor: Aleksandar Gluhović, MD
Place: Clinical Center of Vojvodina, Emergency center in Novi Sad

The conventional way of solving problems related to gallbladder calculosis and biliary tract includes surgical removal of the gallbladder by classical laparotomy, with the opening of the common bile duct, extraction of calculus with closure of duct over the outer T tube drainage. This type of surgery involves hospitalization in length of at least a week with significant morbidity rate and prolonged postoperative recovery period of one month. Minimally invasive laparoscopic approach involves a combination of cholecystectomy with intraoperative cholangiography in combination with preoperative or postoperative endoscopic retrograde cholangiopancreatography (ERCP) with endoscopic papillotomy (EPT) and drain of bile duct into the duodenum. The advantages of this type of surgery are: significantly shortened duration of hospitalization (three days), the avoidance of all potential complications of surgical approach with open bile ducts and a reduction in postoperative recovery in a few days. The workshop is designed in interactive form where participants will follow presentation of performing the procedure, after which they will have the opportunity to watch live broadcast of laparoscopic gallbladder surgery with intraoperative cholangiography from the operating room.

13. IMAGING OF COMMON NEUROLOGICAL DISORDERS

Time: July 20th 2013, 11:00 AM
Supervisor: prof. Dr Duško Kozić
Place: Faculty of Medicine, Amphitheatre 2

Neuroradiology is a clinical subspecialty dealing with detection of the brain and spinal cord diseases, using radiological equipment: computed tomography, magnetic resonance imaging and angiography. The lecture will be based on teaching how physicians should make decisions about using imaging, associated withradiological evaluation of some clinical problems like brain inflammation, infections, trauma, ischemic stroke, seizure, hemorrhage and tumors

14. NON-STEROIDAL ANTI-INFLAMMATORY DRUGS : HOW TO CHOOSE THE PROPER ONE?

Time: July 20th 2013, 11:00 AM
Supervisors: doc. dr Olga Horvat, ass. dr Vesna Mijatovic, prof. dr Ana Sabo, Calasan J; Department of Pharmacology, Toxicology and Clinical Pharmacology, Faculty of Medicine, Novi Sad, Serbia
Place: Faculty of Medicine, Pharmacy Amphitheatre

Theoretical lecture
NSAIDs are among the most frequently used medications worldwide. There is, however, overwhelming evidence linking these agents to toxicities affecting the cardiovascular and gastrointestinal systems as well as the liver. During this lecture the students will be introduced about the different side-effect profiles of currently available NSAIDs on the market. In addition, consumption of NSAIDs during a 5-year period in Serbia as well as the most commonly used NSAIDs in our country will be presented. Based on all this, the students will have deeper insight into prescribing and consumption habits of NSAIDs in Serbia. Also, our data is going to be compared with the consumption of NSAIDs in other European countries.

Workshop
Based on the knowledge gain at the theoretical part of the lecture, the student will be encouraged to solve the following therapeutical problems:
1. Patient with osteoarthritis – choose the most adequate NSAIDs for the beginning of the treatment of the pain
2. Patient with osteoarthritis and with increased cardiovascular risk - choose the most adequate NSAIDs for the treatment of the pain
3. Patient with osteoarthritis and with increased gastrointestinal risk - choose the most adequate NSAIDs for the treatment of the pain
4. Patient with osteoarthritis and with hepatic impairment - choose the most adequate NSAIDs for the treatment of the pain

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EMSA - European Medical Students' Association

We are a volunteer-based organisation advocating and representing the voice of all medical students of geographical Europe. EMSA is more than an organization; a team created by enthusiastic medical students, a key player moving medicine forward in Europe and a communication platform for all medical students in world. Founded in 1991, EMSA has become not only one of the important and most successful student organization in Europe but also in world, by staying one step ahead of change throughout its journey of 20 years.

EMSA members are a global player constantly moving toward its objective of duplicating its success in their countries at the European level. We are aiming to be "the best" through student-focused work strategies, attaching due importance to medical education; knowing that developments born through science; internalizing medical ethics and honesty as sine qua non; and understanding that adding power to Europe gives us power in return as increasing European integration.

Find out more about us at **www.emsa-europe.org** or our newly-opened blog www.bluemist.eu .

ISCOMS - The International Student Congress of (bio) Medical Sciences

ISCOMS – International Student Congress of (bio)Medical Sciences – is one of the world's leading student conferences in the (bio) medical sciences.

The ISCOMS is held annually at the University Medical Center Groningen, the Netherlands. It aims to promote student research and the international exchange of it. Students from all over the world will present their research in poster, oral or plenary form. Along with these student sessions there will be fascinating keynote lectures and hands-on workshops. ISCOMS guarantees high qualitative research and an interesting scientific program.

The 20th edition of ISCOMS will take place on the 4th until the 7th of June 2013.

Website: **www.iscoms.org**

ESC - European Students' Conference

The European Students' Conference (ESC) is an international scientific conference held annually at the Charité Medical School in Berlin, Germany. Since its foundation in 1989, the ESC has become one of the largest student-run biomedical scientific conferences worldwide. It is a platform for scientific exchange as well as an important gathering for international students, scientists and researchers.

Emphasis is put on a high quality scientific and educational program. This is realized in scientific sessions, educational workshops, poster and oral presentations and lectures that cover most fields of medicine.

This year, the conference will be held from the 4th to the 7th of September 2013 and its theme is: "Exploring the Unknown".
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Visit us at: **www.esc-berlin.com.**

YES Meeting - The Young European Scientist Meeting

8th YES - Young European Scientist - Meeting is an international conference in Porto, Portugal and its major purpose is to provide biomedi¬cal students all over the world a global platform of scientific and cultural exchange.

The main stage in the conference is taken by the biomedi¬cal projects developed by students, presented to a renowned Scientific Com¬mittee in oral communications, poster sessions and a plenary session, with amazing prizes for the best works.

Get ready to take part in this circuit of culture, knowledge and sci¬ence, between 19 - 22th September 2013!

For further information, please visit us on **www.yesmeeting.org** or **www.facebook.com/YESMeeting.**

MEDICALIS

International Congress for Medical Students & Young Health Professionals

At its 14th edition on the 16-19th of May 2013, Medicalis is a scientific congress for Medical Students and Young Health Professionals located in the heart of Transylvania, in Cluj-Napoca.

This event gives to young bright minds from all over the world the chance to expose their work as an oral presentation or as a poster. The best researchers will be prized. Reuniting students and young doctors from every corner of the planet inquires a prestigious apparition, therefore our invited lectures are representing the best Universities from US, Europe, Asia and Australia and will overwhelm the audience with their high quality presentations.

Through the workshops organized and the hands-on learning process we are also a very attractive opportunity. But because we are young, the social events are not missing and we have prepared for the participants the best evenings in a Romanian traditional style. Be welcome in Cluj-Napoca, Romania, for your best scientific event yet!

More details on **www.medicalis.ro** or **www.facebook.com/Medicalis2013**

Medicalis

International Congress for Medical Students and Young Doctors

BRAINCOMS - Brazilian International Congress of Medical Students

BRAINCOMS 2012 was a unique conference for medical students from all over the world, which aimed at connecting the recent advancements in medical science to the routine curriculum of medical education and was held in São Paulo in July 2012 being attended by Brazilian and foreign delegates with equal enthusiasm. After a more than satisfying closure, we are glad to announce the BRAINCOMS IMMERSION!

BRAINCOMS IMMERSION will be a four-day event to be held on July, 24th - 27th at Hospital do Rim e Hipertensão/Fundacao Oswaldo Ramos, in São Paulo, Brazil. It will feature workshops, deliberations, oral presentations, keynote lectures and oral paper sessions alongside our social and volunteer events.

The IMMERSION consists on a fusion between the models of Academic Congresses and typical european Summer Schools. Students will be able to experience two main moments: during the morning Keynote Lectures with recognized professors will be held, followed by oral presentation by the students. During the afternoon, we will introduce the IMMERSION groups, 9 groups of a few students that will, each day, discuss and participate on practical activities regarding one subject chosen on during the inscription.

Another great accomplishment this year is that, due to Fundacao Oswaldo Ramos, inscription fees will be granted to all papers that are selected by our Scientific Committee after submission.

Submission period is open until June 26th, please access www.braincoms.com for further information and submission.
For further information please access www.braincoms.com and follow us on Facebook (BRAINCOMS).

ICHAMS - International Conferenc e for Healthcare and Medical Students

A student led conference, supported by the Royal College of Surgeons in Ireland, it seeks to provide an opportunity for undergraduate medical and healthcare students to develop their research skills and expand their network in an international setting.

Date: 11th October, 2013 – 12th October, 2013
Venue: Royal College of Surgeons in Ireland, 123 St. Stephen Green, Dublin 2, Ireland

Our mission is to:
- provide undergraduate healthcare students the opportunity to present their research findings in an international setting with structured feedback.
- provide career information on specific research topics and / or countries.
- promote interactions among healthcare students from different countries and exchange of research knowledge and experiences.
- promote and encourage innovative thinking by exposing students to current cutting edge research topics.
- educate healthcare students on the importance of research in the broader medical fields and expose students to future research opportunities

Add us on facebook and be the first to hear our call for abstract sub¬missions! Further information at **www.ichams.org**

MDSC - Medical Scientific Conference for Students & Young Doctors

We would like to welcome the international participants to Bulgaria, then to the town of Pleven and to our University.

This international medical forum has been organized for ten years at Medical University-Pleven, by an Organizing Committee of young people for the purpose of gathering their colleagues from the country and abroad. It has become a platform for exchange of useful ideas, knowledge, experience and medical practices and a huge social event.

Considered to be a significant multi-cultural forum, the conference has become an emblem of our educational institution abroad and a symbol of youth, aspirations and ambitions of students and young specialists.

Our web site: **mdsc.mu-pleven.bg**

IMSRC - International Medical Students' Research Congress

IMSRC would like to welcome you, the students who have a bright future ahead! IMSRC is a unique opportunity to present your research to international medical students, to participate in challenging workshops, to engage with international students to discover career possibilities.

In our social programme we provide you the beauty of Istanbul where Asia and Europe meet. We offer you a great congress like IMSRC'13 which welcomed over 500 students from 37 countries.

ISC - International Students' and Young Scientists' Congress

On October 23-25th, 2013 V (67) International Students' and Young Scientists' Congress «Actual Problems of Modern Medicine» will take place at the Bogomolets National Medical University. During the Scientific Forum it will be held plenary and sectional sessions, educational and practical workshops and scientific lectures. Conference is brought in „The Register of the congresses and scientific & practical conferences which will be spent in 2013". O.A. Kysil Students' Scientific Society and Young Scientists' and Specialists' Society of Bogomolets National Medical University invite You to take part in the Congress. More information on **www.nmusic.org.ua/en/**

AIMSC - Ain Shams International Medical Students' Congress

Ain-shams International Medical Students' Congress (AIMSC), have been held by Ain-shams University since February 1992 by the late professor Ali Kalifa, for ver the past 20 Februarys of the past 20 years. AIMSC is considered one of the most prestegious and oldest medical students' Congresses in the world; and for more than two decades now it have been brining medical student from all over the world; giving them the chance to present their scientific work in front of their own peers and a renowned jury of professors.

We have perfected our stand among medical congresses, with perfect balance of our scientific program, social program, luxurious accommodation and meticulous organization, topped with our post congress tour making the AIMSC experience an unforgettable one.

AIMSC welcomes all medical and bio-medical students, young doctors' professors and lecturers to attend our event and present their work, we also welcome passive participation.

Date: February 2014
Venue: Cairo, Egypt

Ain Shams International Medical Students' Congress

AIMS Meeting - Annual International Medical Students Meeting

The AIMS Meeting (Annual International Medical Students Meeting), presently in its 4th edition, is a conference meant for all students involved in Health Sciences. It will be held at the Lisbon Faculty of Medicine (Portugal) on 15-17 March 2013.

This year we will focus on the following subjects: Regenerative Medicine, Advances in Surgery and Perinatal Care. The AIMS Meeting also offers you the possibility to engage in enriching workshops as well as pre-courses, and enjoy an entertaining social program.

We invite you to submit your abstract for presentation until 31st January. The best oral presentation and the best poster presentation will each be awarded a first prize.

You can find further information and register for the congress at **www.aimsmeeting.org**. You can also follow us on **Facebook (AIMS Meeting) and Twitter (@AIMSMeeting)**

AIMS Meeting

ISC Graz - International Student Congress Graz

From 4th to 6th July, 2013, Austria's first International Student Congress (ISC) on medicine is going to take place at the Medical University of Graz under the slogan: "Discover the diversity of medical research"

Science and Research are essential to the future of every society. For this reason education and training in scientific research as well as the acquisition of scientific working skills are of great significance to academic institutions around the world, especially medical institutions.

The congress aims to bring together students from Bachelor, Master, PhD as well as Diploma studies of medicine and related life sciences. Participants will be offered a chance to present the results of their scientific work and discuss them with their colleagues as well as leading experts.

So, dear colleagues, take this opportunity to present your Bachelor thesis, Diploma thesis, Master thesis or any other scientific work you have undertaken or are currently working on. We also welcome and encourage students of PhD programs to present their research findings at our congress.

Contact us:
Facebook ISC
isc@medunigraz.at
www.medunigraz.at/is

International Student Congress - Medical University of Graz - 2013

WIMS - Warsaw International Medical Congress for Young Scientists

The 9th Warsaw International Medical Congress for Young Scientists, futher named a Conference, is a review of scientific attainments and a competition amongst the best scientific papers.

The Conference will be held on the 9-12th of May 2013 at the Campus of the Medical University of Warsaw in Poland.

More informations on http://www.wimc.wum.edu.pl/

IMSCNS 2013 Post Congress Tour

Date: July 21st 2013 **Start time:** 9:00

Post congress tour, for those who opt for this offer, puts a unique ending to the complete congress experience. With most of the participants and the members of the congress organisation, it makes a day of bonding and fun, as well as introducing the region's cultural and architectural heritage to the visitors.

Starting the trip in the morning (9 - 10 AM), our first stop is Zrenjanin, one of the most beautiful cities in Serbia. Dating back to 1326, Zrenjanin is one of the oldest standing cities in Serbia, as well as the geographically largest city in Vojvodina. It is known for its beautiful bridges and magnificent edifices. Upon our arrival, local guides will introduce us to the city with its breathtaking architecture and the mixture of culture of more than 20 nationalities living there. The tour includes the City Hall, the city museum, galleries and other sights of significance.

Later on, we visit "Salaš Lujza", where we have lunch. Salaš is a typical resort and restaurant for the province of Vojvodina. The group will have the pleasure of enjoying characteristic cuisine, as well as taking a tour of the property. (The price includes the meal, while the drinks are not included.)

After that, we proceed to "Carska bara", a nature reserve park. There, IMSCNS participants will have the opportunity of taking a boat ride through the very core of nature, having the chance to observe many rare animal and plant species in their intact setting.

Following the visit to Carska bara, we move to Spa Rusanda, a local spa resort, where, after a tour, we have traditional dinner and a relaxing evening accompanied with traditional local music.

The post congress tour ends with entertainment programme adapted to all guests, an after-party at a night club in Zrenjanin, starting after 9 PM, where we will party hard and make the night even more memorable. We arrive at the Faculty of Medicine in Novi Sad in the late night hours.

City of Novi Sad

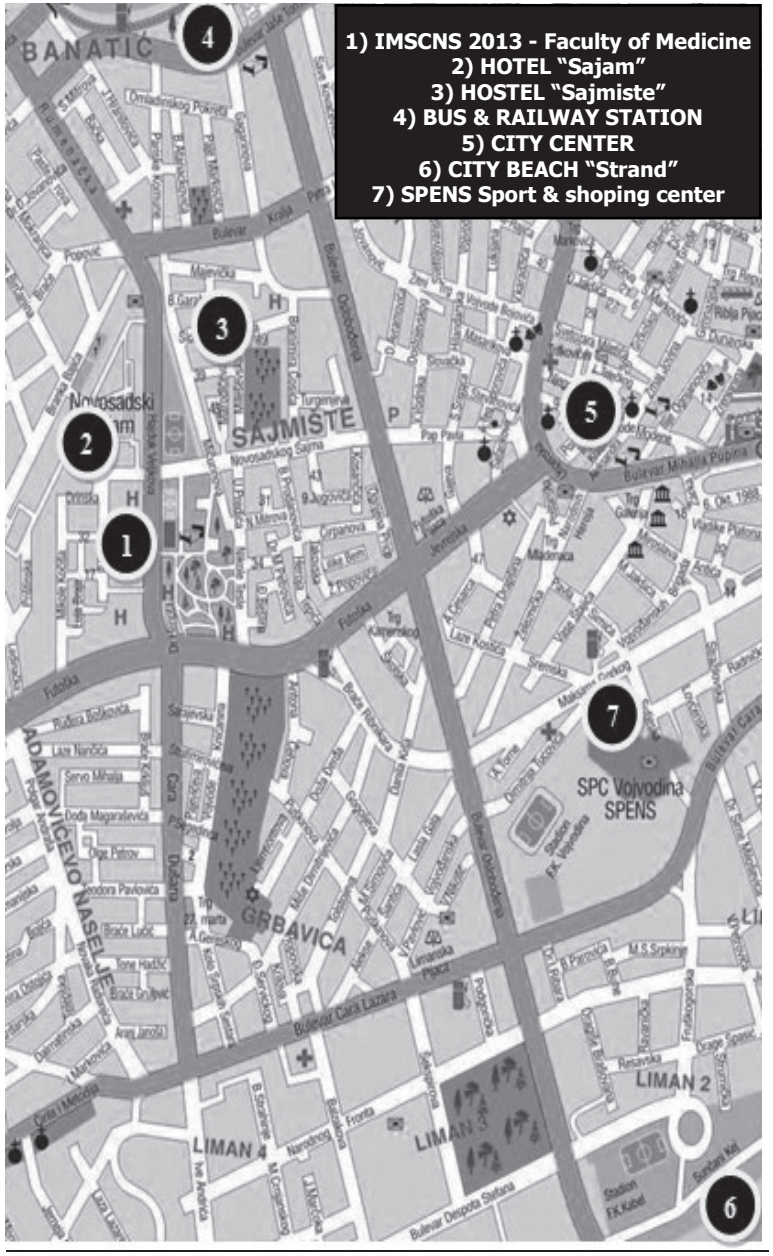
Novi Sad is capital of Vojvodina, the northern region of Serbia. Situated on the Danube river, between Budapest and Belgrade, it is treasured regional and cultural centre.

The city was founded at the end of the 17th century as a vital bridgehead of the Petrovaradin fortress,one of the most beutiful and biggest fortresses in Central Europe, which was being built for about 100 years with the purpose to defend Austria from Turks and known as “The Gibraltar on the Danube”.

Today, Novi Sad is a pleasant city with wide boulevards, modern buildings and special famous Central Square surrounded by the Old Town Hall, the Roman catholic church and a similar buildings dating mainly from the early nineteenth century. The city as well as whole Vojvodina is well-known multicultural, multinational and multireligious region.Among cultural-historical monuments, the best known is the Petrovaradin fortress with its underground corridors, promenades, museums, restaurants and art studios.There are also many churches, monasteries and other cultural monuments.

Novi Sad is known by the longest and the most beautiful sand beach on the Danube, the large marina for river boats and organized water sports, attractive picnic grounds at Fruska Gora and nearby terrein for hunting and fishing. As a university town, Novi Sad is known for a lively bar scene. There are lots of nice bars, cafes and clubs.

Exit Summer Fest, the largest music festival in the South-Eastern Europe, takes plase on a beautiful fortress in NS. Exit attracts each year more and more thousands of visitors enjoing performance of world’s most popular rock bands and Djs.



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