7th International Medical Students' Congress
In Novi Sad

ABSTRACT BOOK 2012

July 19th - 22nd 2012, Novi Sad
Republic of Serbia

Copyright and Print

Publisher: Faculty of Medicine Novi Sad
Copyright: Faculty of Medicine Novi Sad, 2012.
Printed by: IRIS Zrenjanin
Circulation: 300

CIP - Каталогизација у публикацији
Библиотека Матице српске, Нови Сад

61 (048.3)

INTERNATIONAL Medical Students' Congress (7; 2012 ; Novi Sad)
Abstract book 2012 / 7th International Medical Students' Congress in Novi Sad, July 19th – 22nd 2012 , Novi Sad ; [editor – in - chief Marija Mihalj] . – Novi Sad : Faculty of Medicine, 2012 (Zrenjanin : Iris) . – 263 str . ; 21 cm

Тираж 300.

ISBN 978-86-7197-382-3
1. Mihalj, Marija [уредник]
а) Медицина – Апстракти
COBISS.SR-ID 272700423

CONTENT

FOREWORD & PREFACE

FOREWORD

Dear participants of the 7th 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 2012. 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 7th 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 190 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 7h 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 7lh 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 7h 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,

It is a great pleasure for us to welcome you to the 7th International Medical Students Congress in Novi Sad. This congress is an official project of EMSA Novi Sad, which is a part of EMSA EUROPE. This project is also supported by the Faculty of Medical Sciences, University of Novi Sad and Serbian Academy of Sciences and Arts.

International Students congress is annual meeting, each year increasing the number of foreign and domestic participants (students and professors) coming to Novi Sad. The Congress itself provides an excellent forum for Medical Students from around the world to interact thru various scientific activities and share knowledge, experience and future ideas.

Our idea is to create connections between students of medicine, stomatology, pharmacology, health care, molecular biology and genetics from all over the world! This congress will be a great opportunity to improve your medical knowledge as well as make friendship between nations, faculties and students.

We are delighted to have you here, taking part in this event, exchanging your scientific proficiencies and we hope that you will have a great time! We are looking forward to seeing the results of your scientific research during this congress. IMSCNS OC will do its best for you in the next few days, and we hope you will come next year, too.

On behalf of the Organising Committee:

Nemanja Đurđev
President of IMSCNS OC

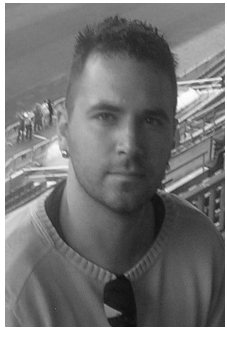
ORGANISING COMMITTEE

IMSCNS 2012

ORGANISING COMMITTEE

PROJECT COORDINATORS

Have supervised progress and run the entire project in the previous year. They have worked hand in hand in order to make this year's IMSCNS better and generally more visitor-friendly. With both new ideas and problems arising they had done a tremendous job of making this congress function as a whole, from the mere beginning to the very end.



NEMANJA ĐURĐEV
president

SANDRA PJEVAC
vice president

FINANCE TEAM

They had the crucial task of collecting funds for this year's event. In these times, it is especially difficult to get sponsorships and donations needed for running an ambitious project IMSCNS is. They have done their very best and kept this congress afloat. We thank them for their arduous work.

ŽARKO ALEKSANDRIĆ

ORGANISING COMMITTEE

SCIENCE TEAM

The 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 the lectures. Having everything under control, they have put together a remarkable plan of sessions, lectures and workshops enabling our visitors to have the improved congress experience with as less trouble and more free time as possible.

ALEKSANDRA VEJNOVIĆ

DEJAN MILJKOVIĆ

BOJAN RADOVANOVIĆ

SANJA POPIN

ORGANISING COMMITTEE

HOSTING TEAM COORDINATORS

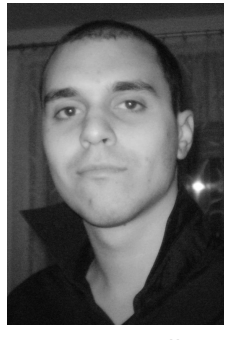
They have done the most important thing for our visitors. They have provided them with accommodation and food. Organized their arrivals, free sightseeing tours of the city, dinners, parties and much, much more. They have made this congress a more pleasant place to be, and they are, presumably, the strongest reason people keep coming back.

However, they are not alone. Hosting team is getting bigger with hosting members before the congress commences, so that no matter and no one will stay unattended. Every one of you has our full and immediate attention.

MILICA MARJANOVIĆ

RADOVAN KALANJ

BILJANA IVKOVIĆ



PREDRAG MILIČEVIĆ

ORGANISING COMMITTEE

HOSTING TEAM MEMBERS


ANA - MARIJA VEJNOVIĆ


ANJA RAŠIĆ


ĐURĐINA RADENKOVIĆ


KATARINA KATIĆ


DRAŽENKA TODOROVIĆ


DUŠAN DŽAMBAS


JELENA NIŠEVIĆ


JOVAN STOJANOVIĆ


MAJA BABIĆ


NINA MILJANOVIĆ


DANIEL FIZEŠAN


MILENA OBADOVIĆ


NIKOLA MARTIĆ


MARKO KOVAČEVIĆ


VLADIMIR KOSTIĆ

ORGANISING COMMITTEE

MARKETING TEAM

Is the ones that sent you your Letter of Invitation, asked for further information, contacted embassies on your behalf and communicated with you in any occasion. It is them that tried to make our congress omnipresent in your digital life and all media. With this being one of the biggest IMSCNS so far with more than 500 applicants and 300 invitees, we would say they have succeeded.

IGOR MEĐEDOVIĆ

MILICA MIRIĆ

KRISTINA BJELICA

MILICA ODAVIĆ

ORGANISING COMMITTEE

TECHNICAL SUPPORT

Boys from the team have kept everything vivid and up-to-date from the very beginning. Željko Nađ 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 support throughout the year, they have proved themselves not only support, but also engine of this organisation.

NAĐ ŽELJKO

ALEKSANDAR KOBILAROV

GUEST LECTURES
IMSCNS 2012

GUEST LECTURES

URINARY INCONTINENCE IN WOMEN AND MALE SPHINCTERIC URINARY INCONTINENCE

Prof. Paul Palascak, PhD, MD

Location: Faculty of Medicine Amphitheatre

Time: Friday, July 20th 2012, 2:30 pm

BIOGRAPHY

Paul PALASCAK, M D, is a native of BRATISLAVA, Czechoslovakia (actually Slovakia).

He graduated there from medical school with one year "intership" in Northlake Hospital, Chicago, USA and completed his residency in urology at the Bratislava University Hospital.

From 1973 to 1981 he served as staff member at the Department of Urology, Comenius University Bratislava and from 1981 to 1985 as Urologist-in-Chef and Associated Professor of the Department of Urology at the University of Constantine, Algeria.

Since 1986 he has served as Chairman of the Department of Urology and General Surgery Hospital Paul Morel in Vesoul, at the University of Besançon, France.

In 1989 he was nominated Associated Professor in Urology at the University of Besançon, France and in 2000 Associated Professor at the University Prague, Czech Rep. He is actually as consultant urologist of the Department of Urology at the Clinic "La Ligne Bleue", Epinal, France.

Doctor PALASCAK has published over 200 articles in peer reviewed journals and over 500 presentations.

He is honorary member of the Europeen Urological Association, French Urological Association., Czech and Slovak Urological Association.

His major interests are reconstructive urology, bladder and prostat cancer. He was an investigator or numerous clinical trials and had organized numerous national and international symposium on bladder and prostat cancer, related topics, and other urologist subjects.

TRENDS IN PEDIATRIC MINIMAL ACCESS SURGERY

Prof. Dragan Kravarusic, PhD, MD

Location: Faculty of Medicine Amphitheatre

Time: Saturday, July 21st 2012, 2:30 pm

BIOGRAPHY

Consultant General and Pediatric surgeon, certified by Israeli and Canadian Surgical Board, working as a Staff Pediatric Surgeon, Deputy Director of Surgery Department and Director of Minimal Access Surgery Service in the Schneider Children's Medical Center of Israel. (www.schneider.org.il)

Following General Surgery residency in Rabin Medical Center, he completed program of secondary residency in Pediatric Surgery, as well as a two years of the International clinical pediatric surgery fellowship program in Canada, accredited by the Canadian Royal College of Surgeons.

His training was dedicated to the minimal access surgery techniques, and included several advanced courses and electives in Canada, USA and Europe.

Dr Dragan is a senior lecturer in the Medical Faculty – University of Tel Aviv , Faculty member of the IPEG Committee (International Pediatric Endoscopy Group) , and from 2008 acting as a principal program coordinator of the International surgical fellowship program in Schneider Children's Medical Center.

Since 2008 selected as Honored member of Serbian Surgical Association and from 2009 elected by the Scientific Council for the title of visiting professor of surgery – Medical Faculty – University of Novi Sad.

Dr Dragan Kravarusic is also a consultant general and pediatric surgeon in the largest Israeli private hospital group - Assuta Medical Center.

Beside the conventional general and pediatric surgery he is proficient in doing wide range of the advanced laparoscopic and thoracoscopic procedures in pediatric and adult patients .

CONGRESS PROGRAMME

IMSCNS 2012

CONGRESS PROGRAMME

July 19th 2012 - 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 20th 2012 - Friday	
07:30 – 09:00	Breakfast (Faculty of Medicine)
08:30 – 10:00	Plenary sessions I -V ORAL PRESENTATIONS (Faculty of Medicine, amphitheatres and classrooms)
10:00 - 11:00	Plenary sessions I -V POSTER PRESENTATIONS (Main Hall of Faculty of Medicine)
10:30 – 11:00	Coffee break
11:00 – 13:00	Workshops in Novi Sad:
	- THE AIRWAY AND INTRAVENOUS ACCESS WORKSHOP - PHARMACOTHERAPEUTICAL APPROACH IN THE TREATMENT OF CERTAIN DISEASES AND CONDITIONS - MINIMALLY INVASIVE APPROACH TO BILIARY CALCULOSIS - EMERGENCY MEDICINE: "STAYIN' ALIVE" - DELIVERY, SURGICAL COMPLETION OF DELIVERY AND CESAREAN SECTION
11:30 - 13:00	Workshops in Sremska Kamenica:
	- THE PRESENT AND THE FUTURE OF CARDIOVASCULAR SURGERY - RADIOTHERAPY WORKSHOP
12:30 - 15:00	Lunch (café ''Scenario'', just across the street)
14:30 - 15:30	Guest lecture: Prof. Paul Palascak, PhD, MD : Urinary incontinence in women and male sphincteric urinary incontinence
15:30 – 16:00	Coffee break
16:30 - 19:30	Sightseeing Tour
19:30 – 20:00	Dinner (City Beach "Strand")
20:30	Graffiti beach party

CONGRESS PROGRAMME

July 21st 2012 - Saturday	
07:30 – 09:00	Breakfast (Faculty of Medicine)
08:30 – 10:00	Plenary sessions VI - IX ORAL PRESENTATIONS (Faculty of Medicine, amphitheatres and classrooms)
10:00 - 11:00	Plenary sessions VI - IX 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 - EMERGENCY MEDICINE: "STAYIN' ALIVE" - THE AIRWAY AND INTRAVENOUS ACCESS WORKSHOP - HANDS ON DENTAL IMPLANTOLOGY - INVOLUNTARY MOVEMENTS - FOOD LABELING – PUBLIC HEALTH ISSUE
11:30 - 13:00	Workshops in Sremska Kamenica:
	- RADIOTHERAPY WORKSHOP
12:30 - 15:00	Lunch (café ''Scenario'', just across the street)
14:30 - 15:30	Guest lecture: Prof. Dragan Kravarusic, PhD, MD: Trends in Pediatric Minimal Access Surgery
15:30 – 16:00	Coffee break
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 22nd 2012 - Sunday	
09:00	Post congress Tour

PLENARY SESSION I

ANATOMY, PHYSIOLOGY

Date: July 20th 2012

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

MORPHOMETRICAL CHARACTERISTICS OF THE UPPER TIBIA END. RELATION BETWEEN JOINT AND NON-JOINT AREAS

(Oral presentation)

Field of medicine: **Anatomy**
Author(s): **ANA ZEKAVICA, Jelena Lekovic, Milenko Bogdanovic**
Supervisor(s): **Dr Lazar Stijak**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

The knowledge of parameters of both lateral and medial condilus is necessary to estimate size of the knee-joint prosthesis.

Aim:

The aim of this study is to define relation between joint and non-joint areas on the basis of upper tibia end.

Material and methodology:

For the lateral condyle field antero-posterior and medial-lateral diameter was measured, upon them the area of the lateral condyle was estimated. For the medial condyle, also the antero-posterior and medial-lateral diameter was measured, based upon them the area of the medial condyle was estimated. From the area of the upper end, the areas of both condyles are deducted to enable space to intercondylar area. These results were used to compare joint and non-joint segments as well as correlation between the lenght and area of the upper end.

Results:

Statistically significant difference between left and right tibia was not found out relating to any factor ($p>0.05$). The length of the tibia correlates with diameters of lateral and medial condyles. All parameters show high statistical significant correlation($p<0.01$). There is statistically signiicant diference between lengths and areas of lateral and medial condyle($p<0.01$; in both cases). It was not estimated that there is any statistically significantdifference between the joint and non-joint parts of tibia($p>0.05$).

Conclusion:

Masuring bone rate 102 tibia we concluded that there is no statistically significant difference between the joint and non-joint tibia end. Increasing the length, the value of joint and non-joint areas of the upper end is increasing, too.

Key words:Tibia, lateral condyle, medial condyle

BEYOND THE BASIN: THE DEVELOPMENT OF A MULTIMEDIA TEACHING RESOURCE ON PELVIC ANATOMY

(Oral presentation)

Field of medicine: **Anatomy**
Author(s): **KISHAN MOOSAI, Tracy Cuffe**
Supervisor(s): **Darrell JR Evans**
Country: **United Kingdom**
Faculty: **Brighton And Sussex Medical School**

Introduction:

Given our current technological climate and the recent revisions in medical curricula, there is a need for novel learning strategies in anatomy education

Aim:

To develop a multimedia teaching resource for medical students and junior doctors on pelvic anatomy, an area currently with relatively limited multimedia resources

Material and methodology:

To gauge demand for this resource, questionnaires were distributed to 4th year students (n=140) who had completed rotations in Obstetrics, Gynaecology and Urology and to clinicians in these fields. A critical evaluation of different types of existing anatomy resources was undertaken. Human cadavers were dissected, and a photographic record was made. The computer programs PowerPoint and Camtasia were used to produce the resource, which was reviewed by medical students

Results:

62% of students believed that there were not sufficient resources on pelvic anatomy and 89% thought that a multimedia format would be most helpful. Clinicians also preferred a multimedia format and stated that emphasis should be put on 3D-visualisation of pelvic anatomy. Evaluation of resources highlighted important features to be included such as clinical relevance, multiple image-types and self-assessment sections. The final package comprised 6 audiovisual screencasts and received an overall score of 8.6/10 when reviewed by 4th year medical students

Conclusion:

This project demonstrates that PowerPoint and Camtasia can be used to produce high-quality teaching packages which can be useful additions to existing resources. This novel approach can be improved with professional IT skills and adopted on a wider scale to produce teaching resources for students, by students

Key words:Anatomy, pelvis, multimedia, teaching

VOLUMETRIC ANALYSIS OF NUCLEUS CAUDATUS IN MALE-TO-FEMALE TRANSSEXUAL PATIENTS

(Oral presentation)

Field of medicine: **Anatomy**
Author(s): **MILAN RADOVANOVIĆ, Dušan Brkic, Slavica Mutavdžin, Nenad Relic, Mirjana Kneževic**
Supervisor(s): **Ass. Dr Ana Starčević, Prof. Dr Branislav Filipović**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Gender identity (one's sense of being a man or a woman) is a fundamental perception experienced by all individuals that extends beyond biological sex. Transsexuals experience themselves as being of the opposite sex, despite having the biological characteristics of one sex. It's unshakable conviction of belonging to the opposite sex, resulting in a request for sex-reassignment surgery and following simptoms could be anxiety and depression because society condemnation. Caudate nucleus is a grey matter structure, beside creating sides of lateral ventricles, also participate in learning and memory and lately reputes as major response for anxiouty and depression.

Aim:

The objective was to investigate sex-specific differences in basal ganglia morphology (caudate nucleus) using MRI and to detect if there is any difference or similarity between male-to-female transsexuals and reference male/female controls in nc.caudatus volumetry examination.

Material and methodology:

We performed MRI (Magnetic-Resonance-Imaging) scans on 8 male-to-female transsexuals and 10 healty controls. We used some computer software (MIPAV, DICOM) for image analyses and to measure the volume of left and right caudate nucleus.

Results:

Significant sex difference were found for caudate nucleus in male-to-female transsexuals and reference male/female controls, even in some cases a high significant difference.

Conclusion:

Our study reveals that there is clearly a significant difference for caudate nucleus in male-to-female transsexuals and controls, but considering low number of adult subjects in the study to conclude that basal ganglia in this type of transsexuals has different volume compared to controls, we need to increase number of subjects to confirm this conclusion.

Key words: Transsexuality, caudate nucleus, volumetry

THE CEREBRAL ARTERIAL SEMICIRCLE IN HUMAN ADULT CADAVERS

(Oral presentation)

Field of medicine: **Anatomy**
Author(s): **MILENA TRANDAFILOVIĆ, MD**
Supervisor(s): **Ljiljana Vasović, MD PhD**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

The variations of the cerebral arterial circle (CAC) are very common, but there is insufficient data about incomplete cerebral arterial circle ("cerebral arterial semicircle – CAS") in adult period.

Aim:

This morphological study was aimed at adding new facts about angioarchitecture of human adult CAC, by describing and determining the relationship between arterial diameters of vascular components of CASs.

Material and methodology:

Analysis was performed on 12 cases (aged 44-87 years; 7 male and 5 female; different cause of death, among them 2 cases of cerebrovascular pathology) of CASs selected among 217 human adult cadaveric brains. Measurement of the outer diameter of arteries was performed with software processing ImageJ program; the statistical analysis included calculation of average caliber values, standard deviation, and t-test.

Results:

Incidence of CAS was 5.53%. In 11 of cases (5.07%) CAS was presented as unilateral absence of posterior communicating artery (PCoA), 7 (3.23%) on the left and 4 (1.84%) on the right side. In a single case (0.46%) bilateral absence of PCoA was found. Among the cases of CAS, basilar artery had significantly larger caliber in comparison with right internal carotid artery ($p<0.05$). In 2 of the cases of the right PCoA absence, a persistent excess artery was noted on the left side.

Conclusion:

This investigation proved the presence of incomplete CAC independent of age, gender or cause of death. This rare, asymmetrical type of the carotid-vertebrobasilar anastomosis configuration on the brain base may be associated with persistent primitive vessel.

Key words: human adult cadaver, brain, cerebral arterial circle, posterior communicating artery, morphometry

MORPHOMETRIC CHARACTERISTICS OF LESSER WING OF SPHENOIDAL BONE IN FETAL PERIOD

(Oral presentation)

Field of medicine: **Anatomy**
Author(s): **STEVAN ĐORĐEVIĆ, Andriana Jovanović**
Supervisor(s): **Slobodan Vlajkovic MD PhD, Milena Trandafilović MD**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Developmental studies of the human skulls found that anterior cranial fossa concentrically grow in all directions, with more or less constancy in the growth. Knowledge of the drowth dynamics of the skull structure during gestation is important because of many congenital malformations.

Aim:

The aim of study was to observe geometry and measure the certain linear and angular parameters of a lesser wings of sphenoidal bone in the certain periods of gestation, and to determine the relationship between these parameters.

Material and methodology:

The material represents 42 cases of human fetal skulls, aged between 13 and 25 weeks of gestation. During examination, basis of the fetal skulls were photographed. On each case, length, width and lateral angle of lesser wings of sphenoidal bone were measured by using ImageJ programme.

Results:

The average values of length of the lesser wing of sphenoidal bone by the respective months of gestation varied between 6.04 mm and 13.08 mm, while the average value of its width varied between 4.64 mm and 9.04 mm. The average value of the lateral angle of the lesser wing varied between 68.16° and 39.92°.

Conclusion:

Length and width of the lesser wing of sphenoidal bone in human fetuse, statistically significant increased in V and VI lunar month, while the lateral angle decresed with fetal age, but with statistical significance only in VI lunar month. These parameters show a left-right asymmetry without a significant statistical difference.

Key words:fetal skull, anterior cranial fossa, lesser wings of sphenoidal bone.

ANATOMICAL VARIATIONS OF THE BRANCHING PATTERN OF THE HUMAN LEFT CORONARY ARTERY

(Oral presentation)

Field of medicine: **Anatomy**
Author(s): **UROŠ KADIĆ, Bojana Čolić**
Supervisor(s): **Docent Doktor Dušica Marić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

The branches of the left coronary artery may be from 2-4 in number. There is controversy between authors in naming the third and the fourth branches. The arterio-venous trigone is formed by the intersection of the great cardiac vein, the anterior interventricular artery and the circumflex artery, located in the superior portion of the left ventricle on the pulmonary face of the heart. The third and the fourth branches of the left coronary artery crossed inside the arterio-venous trigone.

Aim:

The aim of this study was to determine the number of terminal branches of the main trunk of the left coronary artery, the incidence of arterio-venous trigone, and content.

Material and methodology:

The study included 32 adult human hearts collected from Department of Anatomy, Medical faculty, Novi Sad. The hearts were macroscopically inspected for the branching pattern of the left coronary artery and the arterio-venous trigones were morphologically analyzed.

Results:

The left coronary artery branched out of the aortic sinus and give rise to two branches (bifurcation) in 56.26%, three branches (trifurcation) in 40.62%, and four branches (quadrifurcation) 3.12 % of the hearts. The arterio-venous trigone was found in 20 hearts (62.5 %). The predominant pattern found was "closed pattern" (70%), "open inferiorly" (20%), and the pattern "fully open" (5%) and "open superiorly" (5%).

Conclusion:

Sufficient knowledge about the anatomy and variations of left coronary artery is important for proper interpretation of the coronary angiographies.

Key words:Heart; Coronary artery; Anatomy; Human

CHARACTERISTICS OF EMOTIONAL EMPATHY IN STUDENTS OF MEDICINE AND DEFECTOLOGY

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **BOJANA VUKOVIC, Ivan Zivkovic, Boris Pejic, Zeljko Maras**
Supervisor(s): **Jasmina Karić, PhD, Siniša Ristić, PhD**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty of Medicine East Sarajevo**

Introduction:

The research has shown that the level of empathy is decreasing during medical study, and doctors in their practice do not show empathic reactions. It is also shown in the research that there is a relation between the level of empathy and treatment results

Aim:

to determine the level of empathy in students of medicine and defectology, and, on the basis of the research, to suggest working plan in order to solve this problem

Material and methodology:

109 students of defectology and 93 students of medicine, were involved in this research. Test of Emotional Empathy was used in the research, and according to the results of these tests the examinee were divided into three groups (low, medium and high level of empathy).

Results:

Low level of empathy was present in 47,3% students of medicine ,whereas only 28% of them had medium level of empathy, and the rest belong to the category of high level of empathy (24.7%). In students of defectology, 41.3% of them had medium level of empathy, 33% of them had low level of empathy, and 25.7% of them had high level of empathy.

Conclusion:

The results from this research show that this students in general have lower results of emotional empathy,and that must be changed due to the work they do.Both doctors and defectologists should learn this skill, and clinical empathy as one of the communicative skills should be incorporated into their education.

Key words:emotional empathy, level of emotional empathy, doctor ,defectologist

EFFECTS OF CENTRAL GHRELIN APPLICATION ON CIRCULATING LEPTIN AND LIPID STATUS IN DIFFERENTLY FED RATS

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **RASTKO RAKOČEVIĆ, Jasmin Popara, Joko Poleksic**
Supervisor(s): **Darko Stevanović**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Energy homeostasis represents balance between energy intake and expenditure. Ghrelin is brain-gut peptide which both has strong growth hormone-stimulating effect and numerous effects on preserving energy homeostasis

Aim:

Investigation of changes in body mass (TM), circulating leptin status, total cholesterol, triglycerides, HDL, LDL and free fat acids (FFA) after intracerebroventricular (ICV) ghrelin application in normal-fed (NF), food restricted (FR) and high-fed (HF) rats

Material and methodology:

Eight weeks old male Wistar rats (n=42) that were on different nutritional states, had been treated every 24h with ICV ghrelin (1μg ghrelin/5μL PBS, n=7 per group) or solvent (5μL PBS, n=7) during 5 days. Animals were on ad libitum feeding regimen during experiment, and were sacrificed 1h after last ICV application when blood was taken for further analysis.

Results:

All examined groups (NF, FR, HF) showed significant ($p<0.05$) increase in TM and food intake after ICV ghrelin treatment compared to corresponding controls. ICV ghrelin application significantly decreased ($p<0.05$) circulating leptin levels in NF group as well as LDL levels in FR group. Same treatment increased circulating triglycerides in FR group as well as FFA serum levels in all examined groups. Central ghrelin treatment did not change circulating cholesterol and HDL levels in all examined groups compared to controls

Conclusion:

ICV ghrelin application increased body weight, food intake and FFA levels, which proved its orexigenic and adipogenic effects at the hypothalamic level. Ghrelin showed an inhibitory effect on leptin secretion only when energy homeostasis was preserved

Key words:Ghrelin, rat, ICV, leptin, lipid status

THE SPECIFIC COX-2 INHIBITOR PARECOXIB INTENSIFIES ANTITUMORAL EFFECTIVENESS OF TSPP-BASED PHOTODYNAMIC THERAPY

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **TIBERIU POPESCU, Iuliana Nenu, Mihaela Aldea, Andreea Lupas, Rodica Boros**
Supervisor(s): **Senior Lecturer Adriana Filip MD, Professor Adriana Muresan MD PhD, Senior Lecturer Dan Gheban MD**
Country: **Romania**
Faculty: **General Medicine Cluj-Napoca**

Introduction:

Photodynamic therapy (PDT) is a promising therapy in cancer that exerts its antitumoral action by generating ROS with consequent inflammation and hypoxia that induces the expression of angiogenic and survival factors.

Aim: To hinder abnormal cell proliferation by combining TSPP-PDT with a COX-2 inhibitor.

Material and methodology:

The study was performed on 5 groups (n=40) of Wistar male rats, bearing Walker 256 carcinosarcoma: group 1 (control) received TSPP alone (TSPP), group 2 was irradiated 24h thereafter (TSPP+IR) and group 3 received Pcox prior to irradiation (Pcox+IR); group 4 received TSPP and Pcox before irradiation (TSPP+Pcox+IR) while group 5 received Parecoxib only thereafter (TSPP+IR+Pcox). We investigated the oxidative (malondialdehyde-MDA, carbonylated proteins-CP, reduced glutathione-GSH) and nitrosative (NO) stress parameters, interleukin (IL)-12, MMP-2 and VEGF levels. We have also imunohistochemically assessed COX-2 expression and quantified apoptosis by using the TUNEL assay.

Results:

MDA tumor levels were significantly elevated in the group 5 compared to group 2 ($p<0.05$) in correlation with a decrease of GSH ($p<0.05$) and NO levels ($p<0.002$). An increased index of apoptosis was observed in the same group ($p<0.05$). COX-2 levels were also elevated when compared to groups 2 and 4. Group 4 showed an increase in both VEGF protein levels ($p<0.03$) and NO production ($p<0.002$), suggesting that this therapeutic regimen induced the expression of angiogenic macromolecules. Finally, tumor tissue IL-12 and MMP levels were not correlated.

Conclusion:These results provide strong evidence that administration of a selective COX-2 inhibitor after TSPP-based PDT might improve its therapeutic effectiveness.

Key words: PDT, cancer, TSPP, inflammation, Parecoxib

L-CARNITINE DECREASES OXIDATIVE STRESS INDUCED BY EXPERIMENTAL HYPOBARIC HYPOXIA

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **BODEA FLAVIU, Bocea Adrian, Chichinejdi Salomea**
Supervisor(s): **Dr. Chis Irina**
Country: **Romania**
Faculty: **General Medicine Cluj-Napoca**

Introduction:

Researches show that exposure to simulated high altitude - hypobaric hypoxia - induces changes of reactive oxygen species (ROS) and antioxidant systems. L-carnitine, a natural compound, restores the equilibrium in the prooxidant-antioxidant substances balance and prevents lipid peroxidation impairment.

Aim:

The aim of this study was to investigate the protective effects of L-carnitine treatment on oxidative stress induced by exposure to hypobaric hypoxia.

Material and methodology:

The experiments were carried out on 30 male Wistar rats which were divided into 3 equal sized groups: 1st Group – control group, which was kept in normoxic conditions; 2nd Group – rats were exposed to hypobaric hypoxia in the barochamber (simulated high altitude was the equivalent of 5500 meters) for 14 days-placebo; 3rd Group - rats were exposed to hypobaric hypoxia for 14 days and treated with L-carnitine (L-carnitine, 100 mg/kg) every day. After 14 days, the serum levels of lipid peroxides expressed by the value of malondialdehyde (MDA), carbonylated proteins (CP), glutathione and donor hidrogen ability (DHA) were determined for all rats.

Results:

The results showed an elevation in MDA and CP levels, after the exposure to hypobaric hypoxia. L-carnitine significantly decreased ($p<0.05$) the levels of the MDA and CP and significantly increased ($p<0.05$) the serum antioxidant capacity: glutathione and DHA.

Conclusion:

This study suggests that the administration of L-carnitine can be restorative by attenuating the oxidative stress associated with exposure to high altitude. Therefore, L-Carnitine could be used in cardiac and pulmonary pathologies, where oxidative stress conditions appear.

Key words:hypobaric hypoxia, oxidative stress, L-carnitine

RECOVERY OF THE COMPOUND ACTION POTENTIAL AMPLITUDE AFTER EXPOSURE TO HIGH CONCENTRATIONS OF LIDOCAINE HLORIDE

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **JELENA VUCINIC, Jovan Milic,Nemanja Turkovic**
Supervisor(s): **Jelena Scekic MD;prof Mara Drecun**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction:

Clinical studies, whole animal and in vitro studies have shown that lidocaine can be neurotoxic at clinically available concentrations.

Aim:

Present study was designed to estimate the recovery of nerve fibers excitability 24 hours after exposure to high concentrations of lidocaine.

Material and methodology:

In the study, 20 frog sciatic nerves, divided into two groups (10 nerves in each group), were examined. Nerves were incubated in Ringer solution for 2 hours and control measurements of amplitude of the compound action potential (CAP) were taken. Than, nerves were incubated for 15 minutes in: Control group: Ringer solution; Experimental group: 100,0 mmol/l lidocaine solution. After that, nerves were washed and incubated in Ringer solution for 24 hours. Measurements of CAP were done after incubation in lidocaine and after 24 hours of the recovery period. CAP was induced by stimulator with single electrical stimulus and amplitude was measured using digital oscilloscope. Data were collected and analysed using the statistical computer programe GrapPadPrism 5.0.

Results:

The amplitude of all nerves from experimental group was blocked after 15 minutes long incubation in lidocaine. After 24 hours of recovery period difference between the mean amplitude values of control (17.52±4.85 mV) and experimental group (13.76±2.41 mV) was statistically significant ($p<0.05$).

Conclusion:

Study results showed decreasment of the amplitude during 24 hours recovery period after exposure to high concentrations of lidocaine. Since the amplitude is proportional to the number of excited fibers, it may be concluded that high lidocaine concentrations, significantly reduce nerve excitability.

Key words: Lidocaine, CAP, amplitude

THE COMPOUND ACTION POTENTIAL LATENCY PERIODS RECOVERY RATE AFTER EXPOSURE TO HIGH CONCENTRATIONS OF LIDOCAINE HLORIDE

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **JOVAN MILIC, Jelena Vucinic,Nemanja Turkovic**
Supervisor(s): **Jelena Scekic,MD;prof Mara Drecun**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction:

The past decade has seen a large number of case reports and incidence studies that implicate the lidocaine as being more neurotoxic than other commonly used local anesthetics.

Aim:

The aim was to examine the recovery of nerve fibers conductivity after application of high concentrations of lidocaine.

Material and methodology:

In the study, 20 frog sciatic nerves, divided into two groups (10 nerves in each group), were examined. Nerves were incubated in Ringer solution (2,0 mmol/l calcium solution) for 2 hours and control measurements of latency periods were taken. Than, nerves were incubated for 15 minutes in: Control group: Ringer solution; Experimental group: 100,0 mmol/l lidocaine solution. After that, nerves were washed and incubated in Ringer solution for 24 hours. Measurements of CAP were done right after incubation in lidocaine and after 24 hours of the recovery period. CAP was induced by stimulator with single electrical stimulus and amplitude was measured using digital oscilloscope. Data were collected and analysed using the statistical computer programe GrapPadPrism 5.0.

Results:

After 15 minutes, both latency periods of all nerves in the experimental group were completely blocked. The difference in mean values of both latency periods between the groups was statistically significant after 24 hours of the recovery period ($p<0.01$).

Conclusion:

Since the latency periods represent the nerve impulse conduction time along fast and slower conducting fibers, conductivity along the corresponding fibers was ireversibly reduced during 24 hours after the application of 100,0 mmol/l lidocaine.

Key words: Lidocaine, CAP, latency periods

THE EFFECTS OF CYCLOOXYGENASE (COX) INHIBITORS ON OXIDATIVE STRESS IN ISOLATED RAT HEART

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **KATARINA GICIĆ, Željko Marinkovic, Aleksandra Vranic**
Supervisor(s): **Prof. Dr Vladimir Jakovljević**
Country: **Serbia**
Faculty: **Faculty Of Medical Sciences Kragujevac**

Introduction:

Despite the widespread clinical use of cyclooxygenase (COX) inhibitors there are small amounts of data on the possible impact of these drugs on the production of reactive oxygen species

Aim: To examine the effects of COX inhibitors (with or without non-specific inhibitor of nitric oxide synthase, L-NAME) on oxidative stress markers in isolated rat heart.

Material and methodology:

The hearts of male Wistar albino rats (n = 30, age 8 weeks, body mass 180-200g) were retrogradely perfused according to the Langendorff technique at gradually increased perfusion pressure (40-120 cmH2O). The experiments were divided into 5 groups: 1) control group, 2) 100μM administration of acetylsalicylic acid (aspirin), alone or in combination with 30μM L-NAME, 3) administration of 0.3 μM meloxicam (movalis), alone or in combination with 30μM L-NAME, 4) administration of 3 μM movalis (alone or in combination with 30μM L-NAME) and 5) administration of 30μM L-NAME. Oxidative stress parameters (TBARS, NO, O2- and H2O2) were determined spectrophotometrically in coronary venous effluent.

Results:

TBARS was significantly decreased by 3μM movalis, 30μM L-NAME and aspirin+L-NAME. NO was decreased in group treated with 3μM movalis+L-NAME and 30μM L-NAME. There was also drop in O2- levels after application of 0.3μM and 3μM movalis+L-NAME, whereas aspirin caused its increase. H2O2 showed a significant decrease when applied 3 μM movalis, 3μM movalis+L-NAME, 30μM L-NAME and aspirin+L-NAME.

Conclusion:

It seems that COX inhibitors, by decreasing production of oxidative stress markers, may have a cardioprotective effect, which becomes more pronounced in presence of NOS inhibition.

Key words: COX inhibitors, isolated rat heart, oxidative stress

THE EFFECTS OF DIFFERENT HOMOCYSTEINE COMPOUNDS ON CARDIAC CONTRACTILITY AND CORONARY FLOW IN ISOLATED RAT HEART

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **ALEKSANDRA VRANIĆ, Željko Marinkovic, Katarina Gicic**
Supervisor(s): **Prof. Dr Vladimir Jakovljević**
Country: **Serbia**
Faculty: **Faculty Of Medical Sciences Kragujevac**

Introduction:

Limited data exist in the literature regarding the effects of Hcy on the cardiac muscle and heart function.

Aim:

To estimate the influence of different Hcy isoforms on parameters of contractility and coronary flow in isolated rat heart.

Material and methodology:

The hearts (total number n=18, 6 for each experi¬mental group) excised from male Wistar albino rats, 8 weeks old, with body mass of 180-200 g, were retrogradely perfused according to the Langendorff technique at constant perfusion pressure (70 cm H2O) and administered with 3 isoforms of 10 μM homocysteine (DL-Hcy, DL-Hcy thiolactone-hydrochloride (TLHC) and L-Hcy TLHC). After the insertion of the sensor in the left ventricle, the parameters of the heart function: maximum rate of left ventricular pressure development (dP/dt max), minimum rate of left ventricular pressure development (dP/dt min), systolic left ventricular pressure (SLVP), diastolic left ventricular pressure (DLVP), mean blood pressure (MBP) and heart rate (HR)) were continuously registered. Coronary flow (CF) was measured flowmetrically.

Results:

L-Hcy TLHC induced a statistically significant reduction in dp/dt max, dp/dt min, SLVP and drop in CF. DL-Hcy TLHC and DL-Hcy also caused a decrease in value of dp/dt max, SLVP and fall in CF.

Conclusion:

From all estimated Hcy compounds, L-Hcy TLHC induced the strongest reduction of the isolated rat heart contractility and reduction of coronary flow, and thus showed highest cardio-depressive effect

Key words: homocysteine, cardiac contractility, isolated rat heart

BODY MASS INDEX AND PERCENTAGE OF BODY FAT AS PREDICTORS OF TRANSAMINASE LEVELS IN YOUNG ATHLETES

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **DUŠAN BRKIĆ, Slavica Mutavdžin, Milan Radovanovic, Milica Pešic**
Supervisor(s): **Doc. Dr Sanja Mazić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Body mass index (BMI) and percentage of body fat (BF) are widely used anthropometrical references. While BMI shows strong correlation with alanine transaminase (ALT) and aspartat transaminase (AST) in general population, it is unclear is there a correlation of BMI and BF with ALT in young athletes.

Aim:

The aim of this study is to investigate which anthropometrical references (BMI and BF), predictors of a nutritional status, better correlate with AST and ALT.

Material and methodology:

Investigation was made in group of 112 male (22.96 ± 2.27 years) and in group of 103 female athletes (19.08 ± 3.02 years). Measured anthropometrical references and biochemical test of liver function are: body high (BH), body mass (BM), BMI, BF, concentrations of AST and ALT in serum.

Results:

BMI, as well as AST and ALT, were significantly higher in male athletes ($p<0,01$). Strong pozitive correlation beetwen BMI and BF was observed in both groups. In male athletes, correlation was not found between BMI with AST and ALT, and BF with AST and ALT. In female athletes a strong negative correlation was found beetwen BMI with AST and ALT, and BF with AST and ALT.

Conclusion:

Our study has showed that BMI and BF do not correlate with AST and ALT in male athletes, while they strongly correlate in female athletes, therewith BF correlate better with AST and ALT. Therefore, BF is better predictor than BMI of transaminase levels in female athletes.

Key words: body mass index, percentage of body fat, AST, ALT

PEAK CARDIAC POWER OUTPUT AND HEART RESERVE IN PHYSICAL NONACTIVE WOMEN

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **VALENTINA ČUKA**
Supervisor(s): **Aleksandar Klašnja, MD, Ph.D**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Peak cardiac power output (CPOpeak) achived during maximal physical stimulation have shown to be a direct indicator of overall cardiac function and one of major determinant of exercise capacity. Heart reserve (CPOmax-CPO) is difference between maximal cardiac power output (CPOmax) and cardiac power output (CPO).

Aim:

The aim of this study was to determinate peak cardiac power output (CPOpeak) and heart reserve (CPOpeak-CPO) in young, healthy physical nonactive women in our population.

Material and methodology:

The study included 30 female subjects (mean±SD, age 21,17±0,69) who were subsequently divided, by achived values of heart reserve (CPOpeak-CPO), in Group 1. with higher and Group 2. lower heart reserve. Values of determinants of hearts work and circulatory condition were measured before end after maximal physical stimulation on cycle ergometer with echocardiographic exam. From these values peak cardiac power output (CPOpeak) and heart reserve (CPOpeak-CPO) were calculated.

Results:

Whole group had 4,03 (±0.64) W peak cardiac power output (CPOpeak) and 2,99 (±0,48) W heart reserve (CPOpeak-CPO). Significant difference ($p<0,05$) between Group 1. and Group 2. after maximal phyisical stimulation were found in values of: systolic pressure (TASy), mean arterial pressure (MAP), cardiac output (CO), peak cardiac power output (CPOpeak), heart reserve (CPOpeak-CPO).

Conclusion:

Value of peak cardiac power output (CPOpeak) in young, healthy physical nonactive women in our population is 4,03 (±0.64) W and value of heart reserve (CPOpeak-CPO) is 2,99(±0,48) W. Heart reserve (CPOmax-CPO) correlates with achieved load on cycle ergometer.

Key words: peak cardiac power output (CPOpeak); heart reserve (CPOpeak-CPO); echocardiography.

STRUCTURAL AND ULTRASTRUCTURAL CHANGES OF CELLS OF THE EXOCRINE PANCREAS IN RATS TREATED WITH FURFURAL

(Oral presentation)

Field of medicine: **Physiology**
Author(s): **NIKOLA TODOROV, Aleksandar Milicevic, Grigorije Jovanović**
Supervisor(s): **Prof. Snežana Cekić, MD, PhD**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Furfural as a hepatotoxic substance causes the damage of the liver. Because of the functional relation between the liver and the pancreas, it is expected to cause the damage of the pancreatic tissue.

Aim:

The aim of this research was to analyze the structural, ultrastructural and functional changes of cells of the exocrine pancreas.

Material and methodology:

We used the white male Wistar rats divided into 2 groups. The control group comprised 10 animals, and the experimental group involved 40 rats. The experimental animals were treated with furfural. The ultrastructure of cells of the exocrine pancreas was examined by electronic microscopy.

Results:

The structure of the exocrine pancreatic cells shows changes. Granulated endoplasmic reticulum is dominated, condensed, with prominent ribosomes. Mitochondria are rare, normal membranes, but, oedematous matrix, and often shortened or torn cristas. Golgi complex is less prominet too, mainly, dilated. Smooth endoplasmic reticulum is not so prominent, condensed. Zymogenic granules are very rare and pale, hyposecretory. Nuclear membrane is without changes, and chromatin is condensed.

Conclusion:

Based on our results a conclusion may be drawn that furfural reduces the synthesis and deposits of enzymes in the cells of exocrine pancreas.

Key words: rats, furfural, exocrine pancreas, electronic microscopy

ANALYSIS OF ABDOMINAL VISCERAL FAT AREA REGARDING TO GENDER, NUTRITION LEVEL AND WAIST CIRCUMFERENCE

(Poster presentation)

Field of medicine: **Anatomy**
Author(s): **JELENA NIŠEVIĆ**
Supervisior(s): **doc. dr. Biljana Srdić, doc. dr. Olivera Nikolić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

The visceral fat mass is a predictor of complications of obesity. A lot of methods is used in its assessment, among which the most superior are imaging methods.

Aim*:*

To analyze the surface of abdominal visceral adipose tissue in relation to gender, level of body weight and waist circumference.

Material and methods:

The study group consisted of 98 subjects of both genders, aged 57.81 ± 16.55 years, who underwent measurements of BMI, waist circumference, and the area of visceral adipose tissue (VAT) on CT-scan images.

Results:

Men had higher VAT than women (268,49±102,35 *vs*. 207,14±76,92 cm^2). VAT values were different between men and women, although there was no difference in their waist circumference and nutrition level. Subjects of both genders with increased waist circumference had significantly higher values of VAT compared to those with normal waist circumference. Obese men had significantly higher values of VAT compared to normal weight and overweight men. Obese women had significantly lower values of VAT compared to obese and overweight women. VAT significantly correlated with the nutritional level and the waist circumference in both sexes. The correlation was stronger with waist circumference, and regarding to gender, it was stronger in men.

Conclusion:

Waist circumference is a better indicator of the VAT than level of nutrition, while the association of body mass index with VAT shows gender specific differences.

Key words: Obesity; Visceral adipose tissue; BMI; Waist circumference

CONGENITAL MALFORMATIONS OF THE EPIDIDYMIDES IN HUMAN FETUSES

(Poster presentation)

Field of medicine: **Anatomy**
Author(s): **VASYL' KUFTIAK, Natalia Antoniuk, Tetiana Popadiuk**
Supervisor(s): **Prof. Tetiana Khmara**
Country: **Ukraine**
Faculty: **Faculty Of Medicine Chernivtsi**

Introduction:

The information, dealing with different malformations of the epididymis is encountered in bibliographical sources, the mechanism of their origin is not definitively ascertained.

Aim:

To investigate the topographoanatomical characteristics of the epididymides in 5-6-month fetuses.

Material and methodology:

The research has been carried out on 24 fetuses by means of the macroscopic method and morphometry.

Results:

A cyst of the right epididymis was detected in a 5-montth old fetus. The corpus epididymis and a vesicular formation adjoined the posterior margin of the right testis, the formation joining the epididymal body in such a way that the epididymal head as part of the organ is undeveloped in a fetus. The two bodies of epididymis connected with a common head were detected in a 6-month old fetus. An almost isolated location of the epididymides in relation to the testes was revealed in three fetuses.

Conclusion:

1. A disturbance of embryotopographic correlations at an early stage of ontogenesis results in changes in the dynamics of a normal form-building process of the epididymides in human fetuses. 2. The evidence of the mesentery of the testiculoepididymal complex in fetuses is one of the factors of a demarcated location of the epididymis and testis. 3. A detected epididymal cyst is a consequence of the processes of dysembryogenesis in the region of the formation of the tubular system.

Key words: epididymis, morphogenesis, fetus, malformation.

DEPOLARIZATION TIME OF THE COMPOUND ACTION POTENTIAL RECOVERY AFTER HIGH CONCETRATIONS OF LIDOCAINE HLORIDE

(Poster presentation)

Field of medicine: **Physiology**
Author(s): **NEMANJA TURKOVIC**
Supervisor(s): **Jelena Šćekić MD, Prof. Mara Drecun**
Country: **Montenegro**
Faculty: **Faculty Of Pharmacy Podgorica**

Introduction:

The depolarization time of the compound action potential (CAP) represents a period between the onset and the peak of the CAP.

Aim:

The aim of study was to examine the effects of high concentrations of lidocaine on blocked sodium channels recovery.

Material and methodology:

In the study, 20 frog sciatic nerves, divided into two groups (10 nerves in each group), were examined. Nerves were incubated in Ringer solution (2,0 mmol/l calcium solution) for 2 hours and control measurements of depolarization time were taken. Than, nerves were incubated for 15 minutes in: Control group: Ringer solution; Experimental group: 100,0 mmol/l lidocaine solution. After that, nerves were washed and incubated in Ringer solution for 24 hours. Measurements of CAP were done right after incubation in lidocaine and after 24 hours of the recovery period. CAP was induced by stimulator with single electrical stimulus and amplitude was measured using digital oscilloscope. Data were collected and analysed using the statistical computer programe GrapPadPrism 5.0.

Results:

The depolarization time of all nerves in the experimental group was blocked after 15 minutes. After 24 hours, the mean depolarization times were 302±72.69 μs and 380±62.53 μs for the nerves in the control and the experimental group, respectively ($p<0.01$).

Conclusion:

Knowing the fact that the depolarization time shows the impact on sodium channel blockade, it may be concluded that 100,0 mmol/l lidocaine concentration ireversibly blocks sodium channels, since the complete recovery of the depolarization time didn't occurred after 24 hours after its application.

Key words: lidocaine, CAP, depolarization time

A COMPARISON BETWEEN A NOVEL PHOTOSENSITIZER (TSPP) AND THE CONVENTIONAL 5-ALA IN EXPERIMENTAL PHOTODYNAMIC THERAPY

(Poster presentation)

Field of medicine: **Physiology**
Author(s): **LUCIAN CRACIUN, Andreea Lupas, Mihaela Aldea, Iuliana Nenu, Tiberiu Popescu, Rodica Boros**
Supervisor(s): **Adriana Filip MD PhD, Adriana Muresan MD PhD, Dan Gheban MD PhD**
Country: **Romania**
Faculty: **General Medicine Cluj-Napoca**

Introduction: Photodynamic therapy (PDT), a novel treatment for cancer, implies a photosensitive drug (PS) administration followed by visible light irradiation to produce oxidative stress and cell death.

Aim: To evaluate the effects induced by the well-known porphyrin, 5-aminolevulinic acid (5-ALA) and a new synthetic porphyrin, 5,10,15,20-tetra-sulphonato-phenyl-porphyrin (TSPP).

Material and methodology: The study was performed on 3 groups (n=15) of Wistar male rats (250±10g), inoculated with Walker 256 carcinosarcoma. Group 1 was irradiated with red light (λ=685 nm, D=100 J/cm2, 15 min) 3h after i.p administration of 250 mg/kg b.w. 5-ALA. Group 2 received TSPP (10mg/kg b.w.) and was irradiated after 24h in the same way. Group 3 received no treatment. The effects of PDT were monitored by measuring the PS concentration in tumor, the morphological studies, the caspase-3 activity and the parameters of oxidative stress (malondialdehyde, carbonyl proteins and the antioxidant capacity measured with DPPH assay).

Results: MDA and PC levels increase in tumor at 24 hours ($p<0,05$) after 5-ALA PDT and in plasma after 6h, in association with the maximum level of PpIX detected in the tumor. At 24 hours after TSPP PDT, the ROS generation increases, as revealed by PC and MDA levels, and the antioxidant capacity decreases in the tumor ($p>0,05$). Tumoral TSPP levels detected have the same evolution with maximum at 24h ($p<0,05$). Tumoral caspase-3 activity increases significantly in 5-ALA PDT and insignificantly when using TSPP.

Conclusion: Our results suggest that the porphyrins used are effective and their action is mediated by oxidative stress and activation of apoptosis.

Key words: Photodynamic therapy, TSPP, 5-ALA

PLENARY SESSION II

HISTOPATHOLOGY, FORENSIC MEDICINE, ONCOLOGY, PATHOPHYSIOLOGY

Date: July 20th 2012

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

INFLUENCE OF REPEATED IMMOBILIZATION STRESS ON THE HISTOLOGICAL FEATURES OF THE THYMUS IN MICE

(Oral presentation)

Field of medicine: **Patohistology**
Author(s): **ANA-MARIJA VEJNOVIC, Katarina Katic**
Supervisior(s): **Ass. Dr. Ivan Capo**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

The animal model is widely represented in our studies of the pathogenesis of stress and its characteristics. It is well known that stress affects the immune system and the changes can be observed on the thymus.

Aim:

The aim of this study was to examine the influence of repeated immobilization stress on the histological features of the thymus.

Materials and Methods:

The research included 15 mice separated into two groups: the control group (5 mice) and the experimental group (2x5 mice). Experimental group was divided into two smaller groups. The first group has been put under stress for 10 consecutive days, and the second group for 20 days. Four nonadjacent parts of the thymus were photographed by the microscope and then we determined volume fraction of thymic cortex and medulla in ImageJ computer program.

Results:

The thymus in the control mice group had a specific structure, composed of two lobes covering 2/3 of the anterior side of heart, while the stunted lobes in the experimental mice group were located just in corona cordis. Significant reduction in thickness of the cortical thymic part was noticed in the experimental group which were influenced by stress for 20 days after stereological and statistical analyses of the histological cortical and medullary sections in the control and the experimental group.

Conclusion:

(Grossly) thymic involution in mice stressed for 10 and 20 days and the reduction in thickness of the cortical thymic part was noticed in the experimental group stressed for 20 days.

Keywords: stress, thymus, immobilization.

THE INFLUENCE OF REPEATED IMMOBILIZATION STRESS ON THE HISTOLOGICAL FEATURES OF THE ADRENAL GLAND IN MICE

(Oral presentation)

Field of medicine: **Patohistology**
Author(s): **KATARINA KATIC, Ana-Marija Vejnovic**
Supervisior(s): **Ass. Dr. Ivan Capo**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

The adrenal gland is one of the main organs in the process of stress, especially when it comes to chronic stress. In addition to hormonal signs of chronic stress indicators are reflected in and through the histological changes of the tissues.

Aim:

The objective of this study was to examine the influence of repeated immobilization stress on the histological features of the adrenal gland.

Materials and Methods:

Experiment included 15 healthy NMRI mice, male and female, 3 months of age. Animals were divided into two groups: the experimental (10 mice) and the control (5 mice). Experimental group was divided into 2 subgroups of 5 mice, where the first group was treated by repeated immobilization stress for 10 consecutive days for 2 hours a day, while the second subgroup was treated by the same principle for 20 days. After the complete autopsies, the adrenals were fixed, dehydrated, mold in paraffin, cut on the microtome and stained using standard histological method of hematoxylin and eosin. The results were graphically shown.

Results:

Chronic stress leads to the following changes in the adrenal gland in the experimental compared to the control group:
1. Volume increase in the whole body.
2. Cortex volume increase and the volume of the adrenal medullary decrease .
3. The increase of the glomerulose zone and the zone fasciculate, and the reduction of the reticularis zone.

Conclusions:

Chronic repeated immobilization stress leads to histologic changes in cortical and medullary segment of the mouse adrenal.

Keywords*:* stress, adrenal gland, immobilization.

MISMATCH DNA REPAIR TRANSCRIPTIONAL ACTIVITY IN HUMAN URINARY BLADDER

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **SOTIRIOS DOUKAS, Dimitra Vageli**
Supervisor(s): **Dimitra Vageli**
Country: **Greece**
Faculty: **Faculty Of Medicine Thessaly**

Introduction:

hMSH2, hMLH1, hMSH6 and hPMS2, MMR genes cooperate to protect DNA from a mutator phenotype that could allow malignant transformation of tissue cells. Changes in MMR genes expression reflect dysfunction of DNA repair system.

Aim:

To quantify for the first time the MMR genes mRNA transcripts in paired bladder tumor and adjacent normal tissues.

Material and methodology:

hMSH2, hMLH1, hMSH6 and hPMS2 mRNA expression was quantified, by applying Q-real time-RT-PCR, in surgical material of 25 paired bladder tumors (24 UCCs & 1 PUNLMP) and adjacent normal tissue (ANT) from each patient.

Results:

We observed reduced mRNA levels of hMSH2 & hMSH6, in precancerous or cancerous urothelium. In addition reduced hMLH1, mRNA levels were indicated only in PUNLMP and its ANT while elevated hMLH1 mRNA levels were related only with UCCs and their ANTs. hMSH6 found the most frequently reduced (47.8%) in UCCs relative to their ANTs but this was not related with any tumor or patient characteristic while overexpression of hMSH2 (47.8%), hMLH1 (35%) and hPMS2 (30%) was statistically associated with gender (male) and histological grading or staging.

Conclusion:

Low transcriptional activity of hMSH2 & hMSH6 proposed as indicator of high risk of cancer urothelium. Similarly low transcriptional activity of hMLH1 is suggested as indicator of non-malignancy potential urothelium on a contrary to hMLH1 trancriptional activation might be a promising marker in urothelium malignancy. Finally, the gradually transcriptional activation of hMSH2, hMLH1 and hPMS2 could be correlated with tumor progress in human urinary bladder.

Key words: Bladder cancer, MMR genes, Q-real time RT-PCR

ASSOCIATION OF FIBROADENOMA WITH HISTOLOGICAL TYPES OF BREAST CARCINOMA

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **BOJANA IVANOVIC, Jelena Vuckovic**
Supervisor(s): **Prof. Dr Svetislav Tatic, Ass. Dr Dusko Dundjerovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

The risk of developing cancer within a fibroadenoma of in breasts of patients previosly treated for fibroadenoma is low, although a slight increased risk has been reported before.

Aim:

Examining the cases of breast carcinoma associated with fibroadenoma(CF). Comparing those with the control group (CK) of carcinoma that are not associated with fibroadenoma, according to pathohistological and immunohistochemical findings.

Material and methodology:

This retrospective study statistically analises 19 cases of pathohistologicaly confirmed CF. Also comparation with CK of 19 cases was made.

Results:

Frequences in CF were: NST 84,2%, papilar, lobular and tubular carcinoma 5,26% each. 42,1% were grade 1 and 57,9% grade 2. 31,25% had lymph node metastases. 63,15% had fibrocystic change. 53% were estrogen, progesteron and HER2 negative. Average age in this subgroup was 47 years and 77,77% of these had fibrocystic change. 10 cases were estrogen negative and average age of these patients was 48,4. Fibrocystic change is more frequent in CF ($p<0,01$) than in CK. Estrogen markers are more expressed in CK ($p<0,01$).

Conclusion:

Breast carcinomas, associated with fibroadenoma, comparing with breast carcinoma at all, have lower grade, are less likely to metastase into lymph nodes, have more frequent association with fibrocystic change and lower expression of estrogen receptors.

Key words: breast carcinomas, fibroadenoma, fibrocystic change, estrogen

RELATIONSHIP OF PERICORONARY ADIPOCYTE SIZE AND CORONARY ATHEROSCLEROTIC LESION TYPES

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **ILIJA GOLUBOVIĆ, Ivan Rancic, Vladan Miloševic, Nina Jancic**
Supervisor(s): **Prof. Dr Gorana Rančić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Dysfunction or an excess of coronary adipose tissue directly induces modification of its arterial wall and it may be involved in the pathogenesis of its atherosclerotic lesion. Adipose tissue grows by two mechanisms: hyperplasia (cell number increase) and hypertrophy (cell size increase).

Aim:

To determinate pericoronary adipocyte size (area and perimeter) and its changes in correlation with 6 histological types of atherosclerotic lesions classified according to Stary et al.

Material and methodology:

Samples of upper segments of left anterior descending coronary artery (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. Computer assisted image analysis used ImageJ software.

Results:

Adipocyte size varies from type to type of atherosclerotic lesion. The highest values of adipocyte area were present in the first and third types, then values decrease with age. Perimeter values show a similar distribution of values in different types of atherosclerotic lesions as values of adipocyte size.

Conclusion:

The findings suggest the existence of a correlation between pericoronary adipocyte size and different advanced types of atherosclerotic lesions. It consists of area and perimeter changes in different types of atherosclerotic lesions, with associated wall's changes reflecting the development, initiated and advanced atherosclerotic process.

Key words: pericoronary adipose tissue, adipocyte size, atherosclerosis

REGENERATIVE CHARACTERISTICS OF BETA CELLS IN ALLOXAN INDUCED DIABETES IN RATS

(Oral presentation)

Field of medicine: **Histopathology**
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Supervisor(s): **Ivan Čapo, M.D.**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Alloxan is one of the most commonly used inductors of diabetes in experimental models. In current studies great importance is given to the regenerative processes of beta cells in islets of Langerhans by transdifferentiation and neogenesis.

Aim:

To examine beta cells regenerative characteristics and it's immunohistochemical properties in chemically induced diabetes.

Material and methodology:

The experiment included 18 Wisttar rats that were divided in three groups (control and two experimental). Rats of the experimental group were sacrificed on the second and the twenty first day after alloxan application. After complete autopsies, tissues samples from splenic pancreas were taken, fixated, dehydrated, embedded in paraffin and cut on rotary microtome. Sections were stained using immunohistochemical method for insulin. From each specimen 30-50 islets of Langerhas were analyzed. Following parameters were determined: diameter of islets, islets volume, numerical density of beta cells per islet and the number of beta cells per islets. The results are shown graphically.

Results:

Application of alloxan resulted in complete destruction of beta cells two days after it was administered. On the twenty first day regeneration was observed and proved with morphometry with visible signs of transdifferentiation.

Conclusion:

Using immunohistochemical analysis for alloxan induced diabetes, with different times of sacrifice, we have determined spontaneous regenerative capabilities of beta cells in islets of Langerhans.

Key words: beta cells, alloxan, transdifferentiation, immunohistochemistry, morphometry

INVESTIGATION OF ACUTE TOXIC EFFECT OF DACARBAZINE ON EXPERIMENTAL MODEL

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **DUŠAN STEFANOVIĆ**
Supervisor(s): **PhD Dušan Lalošević, Dr. Boris Milijašević**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

The therapy of soft-tissue sarcomas usually involves Dacarbazine – an alkylating agent which works by methylation of DNA. Side effects of Dacarbazine therapy include gastrointestinal, liver and kidney problems, myelosuppression and pneumonia. The precise hematological and histological changes that occur during Dacarbazine therapy aren't described in available literature.

Aim:

The goal of our experiment was to study changes of hematologic parameters, organs and tumor caused by Dacarbazine, and to determine minimal antiproliferative dose of this drug.

Material and methodology:

The experiment involved 5 adult Golden Syrian hamsters. BHK cells were inoculated to them, and two weeks later they were given different doses of Dacarbazine: 0 (control), 1400, 1600, 1800 and 2000 mg/m2. Seven days later, they were sacrificed with ether, and their blood, heart, lung, liver, kidney, small intestine, spleen and tumor samples were proceeded. We used special ocular accessory with engraved chamber to count mitoses in tumor.

Results:

Dacarbazine per se caused leucopenia and toxic hepatitis. Together with fibrosarcoma, it caused anemia and thrombocytopenia. Interstitial pneumonia was secondary manifestation of primary illness – fibrosarcoma, but Dacarbazine made it more severe. Fibrosarcoma nuclei were rounded with condensed chromatin, leaving optically empty space inside nucleus, so we named this process "ballooning degeneration of nuclei". Number of mitosis is lowered relatively to Dacarbazine dose.

Conclusion:

Described morphological and hematological changes are due to hepatotoxicity and myelotoxicity of Dacarbazine. Histological changes of tumor's cells caused by Dacarbazine are first time described.

Key words: Dacarbazine, BHK, fibrosarcoma, cytostatic drug

HISTOMORFOLOGICAL STRUCTURE OF SMALL AND LARGE INTESTINE

(Oral presentation)

Field of medicine: **Histopathology**
Author(s): **JELENA VELJKOVIĆ, Stevan Stojanovic, Milana Dujakovic**
Supervisor(s): **Asist. Dr Aleksandra Levakov**
Country: **Serbia**

Introduction:

The digestive system is developed from the primitive gut, despite the esophagus and stomach, divided into small intestine, which consists of: duodenum, jejunum and ileum, and colon with appendix. The digestive system plays a role in resorption of nutrients, the duodenal Brunner glands are responsible for the production of mucus, colon participates in the resorption of water and electrolytes, and the appendix is charged for maturation of B-lymphocytes, and also have participation in humoral immunity system.

Aim:

The examination of the histomorphological characteristics of the digestive system in different location of persons of twenty to seventhy nine.

Material and methodology:

For determination histomorfological characteristics of the small and large intestine, it was observed 28 biopsy samples from five different locations

Results:

From taken samples tunica mucosa is most pronounced in the jejunum and lowest in the duodenum. The results showed that the tunica submucosa and most of intestinal glands are the most numerous in the ileum.

Conclusion:

This study had showed the following: the tunica mucosa of the jejunum is most prevalent, while in the duodenum showed contrary. Conclusion is that, the tunica submucosa and a number of intestinal cripts, are the largest in the ileum, but the lowest are in the appendix and jejunum of the digestive tube.

Key words: Small intestine, colon, intestinal crypts

COMPARATIVE ANALYSIS OF CLINICAL AND FORENSIC FINDINGS OF THE NATURAL DEATH OF NEWBORN

(Oral presentation)

Field of medicine: **Forensic medicine**
Author(s): **AHMO HABIBOVIC, Selma Redzovic, Vuk Andrijasevic**
Supervisor(s): **Ass. Dr Miroslav Milosevic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Kosovska Mitrovica**

Introduction:

Newborn child is born before of 37 weeks of gestation. Due to the general immaturity of organs often leads to death. If death occurs in the first 28 days of life it is a neonatal death.

Aim:

The objective of this study was to determine basic anthropometric parameters of newborns died, and the frequency of the immediate causes of death based on clinical and forensic examination

Material and methodology:

The study was conducted as a descriptive retrospective study that included 70 preterm births, deaths, and then autopsied babies. During the study analyzed autopsy records from the Institute of Forensic Medicine in Belgrade as well as previous history of disease..

Results:

Of the 70 autopsied babies, 24 (34%) were female and 46 (66%) males. Mean gestational age was 24.91 (+ / - 2.17) weeks, the average length of life was 139.24 (+ / - 155.04) hours, average APGAR score in the first minute was 2.52 (+ / - 1.53), while in the fifth minute, 2.99 (+ / - 1.97), mean body weight at birth was 914.76 (+ / - 352.74) grams. The most common clinical diagnosis was angoris syndrome (distress) neonati respiratoria in 66 cases (94.28%), while the autopsy records commonly found intracranial hemorrhage, even in 64 cases (91.42%)

Conclusion:

Based on the obtained data we can conclude that most infants die due to the general immaturity of the organism, and as the immediate cause of death was most frequent respiratory distress syndrome and intraventricular hemorrhage.

Key words: premature infants, characteristics, thanatology

GENETIC POLYMORPHISM OF AUTOSOMAL STR LOCI IN THE POPULATION OF VOJVODINA

(Oral presentation)

Field of medicine: **Forensic medicine**
Author(s): **JELENA SAVIĆ**
Supervisor(s): **Dušan Vapa MD, Igor Veselinović MD, Ph.D**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

The analysis of microsatellite loci (Short tandem repeats – STR), located in the non-coding regions of DNA, is a method of choice in analysis in the field of medical criminalistics, disputed kinship testing and human identification.

Aim:

The aim is to analyze genetic polymorphism of the autosomal STR loci in the population of Vojvodina and to evaluate the possibility of their use in forensic analysis.

Material and methodology:

The research was conducted on the results of DNA analysis of 597 non-related adults living on the territory of Vojvodina. The database was made using the standard analysis for the isolation of nuclear DNA with Chelex-100 reagens and Proteinase K, and amplification with the PCR in combination with AmpFlSTR Identifiler identification kit. The detection of amplification products was performed with capillary electrophoresis. The statistical parameters were calculated, and the forensic were obtained using the PowerStats 1.2 software package, Promega Madison, WI. The Student's t – test was used for the statistical analysis.

Results:

The highest polymorphism rate was shown on loci D2S1338 (PIC = 0.86) and D18S51 (PIC = 0.86), and the lowest on TPOX (PIC = 0.55). All of the observed loci showed PD>0.85 and percentage of heterozygosity >70%, except for the locus TPOX. There is no statistically significant difference between the observed and expected heterozygosity values.

Conclusion:

The research results are in concordance with the Hardy – Weinberg's law, while allels show high polymorphism rate, which makes them suitable for the use in forensic analysis on the territory of Vojvodina.

Key words: STR markers, polymorphism, AmpFlSTR Identifiler

HIGH GRADE (III AND IV) MALIGNANT GLIOMAS CAN BE BETTER TREATED WHEN ASSOCIATING METFORMIN TO TEMOZOLOMIDE-BASED CHEMOTHERAPY

(Oral presentation)

Field of medicine: **Oncology**
Author(s): **ALDEA MIHAELA, Tiberiu Popescu, Bobe Petrushev, Ciprian Tomuleasa, Iuliana Nenu, Lucian Craciun, Andreea Lupas**
Supervisor(s): **Gabriel Kacso, MD PhD; Olga Soritau, MD PhD**
Country: **Romania**
Faculty: **General Medicine Cluj-Napoca**

Introduction: Malignant gliomas are infirmities with a dismal prognosis, despite the modern treatments applied. Recent years have bought significant advances in tumor biology, including the discovery that malignant gliomas appear to be supported by cells with stem-like properties, which are resistant to chemo- and radiotherapy.

Aim:In the current study we proposed to assess the effects of combining the standard treatment with metformin, an antidiabetic drug that has shown fairly surprising results in the treatment of breast cancer and several other malignancies.

Material and methodology:The subjects of our study were 8 patients with newly diagnosed high-grade gliomas, operated at the Department of Neurosurgery - Clinical University Emergency Hospital, Cluj Napoca. Tumor tissue cultures were established and characterized using immunocytochemical assays and PCR analysis. The sensitivity to metformin and temozolomide (TMZ) was tested through an MTT proliferation test, apoptosis (via chip flow cytometry) and autophagy (via immunofluorescence microscopy), while the angiogenesis was quantified by Microvascular density (MVD) assay.

Results:A positive correlation between the number of endothelial cells, the phenotype of isolated tumor cells and the response to adjuvant chemoradiotherapy was observed in 7 of the 8 cases. While there was no difference between TMZ and control, 6 patients showed an important tumoral inhibition via apoptosis and autophagy when combining metformin with temozolomide.

Conclusion:Metformin shows an unexploited anti-neoplastic effect in malignant gliomas, by enhancing the effect of TMZ via tumoral stem cell inhibition and cellular death promotion.

Key words: malignant gliomas, metformin, temozolomide

EFFECT OF L-NAME AND 24 HOUR LIGHT ON THE AORTIC WALL

(Oral presentation)

Field of medicine: **Pathophysiology**
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Supervisor(s): **Prof. MUDr. Fedor Šimko, CSc., MUDr. Kristina Repova, Bc. Kristina Krajcirovicova**
Country: **Slovakia**
Faculty: **Faculty Of Medicine Bratislava**

Introduction:

Blood pressure and blood stream take part in remodelation of the vascular wall. Metylester N(G)-nitro-L-arginin (L-NAME) inhibition of synthasa of nitric oxide NO results in arterial hypertension. Inhibition of circadian increase of melatonin by continuous illumination leads to gradual increase of blood pressure.

Aim:

To evaluate the association between the effect of permanent light and L-NAME and the grade of expression of collagen type I and type III in the aorta.

Material and methodology:

Total of 33 bioptic tissue speciments with the aorta of 2 month old male rats tribe Wistar feeding by standard granulated food (group/A), food enriched by L-NAME (group/B), in 24:0 hour daily cycle light/dark (group/C), we examined the thickness of tunica media of the wall and inner circumference of aortic lumen and we detected the expression of the collagen type I and type III in the interstitial tissue space of tunica media of the aorta. The plane of crosswise section of the aorta, diameter of the internal lumen as well as the ratio of inner lumen and thickness of tunica media of the aortic wall we derived mathematically.

Results:

In B and C compared to A the thickness of tunica media of the wall was increased. In B compared to A the total collagen was increased and in C was decreased.

Conclusion:

Application of the L/NAME is accompanied by the increase and the exposition to 24 hour light is accompanied by the decrease of the total collagen (type I and III).

Key words: the aortic wall, L-NAME, 24 hour light

CORRELATION OF PATHOHISTOLOGICAL AND MORPHOLOGICAL CHARACTERISTICS OF GALLBLADDER POLYPS

(Oral presentation)

Field of medicine: **Pathophysiology**
Author(s): **BORIS MASLOVSKI, Zoran Vasilic**
Supervisor(s): **Vladimir Jurisic, PhD, Professor**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty Of Medicine Sarajevo**

Introduction:

Polyps of gallbladder are tumor-like lesions of this organ. Main pathohistological lesions include cholesterol polyp/cholesterosis, cholesterosis with fibrous dysplasia of gallbladder, adenomyomatosis, hyperplastic cholecystosis, and adenocarcinoma. It is determined that high-fat diet increase the risk of gallbladder polyps.

Aim:

The Aim of this research was to examine and compare morphological and pathohistological characteristics of gallbladder polyps.

Material and methodology:

Methods of this research included survey and family history, laboratory tests (values of total cholesterol, HDL, LDL and triglycerides, glucose), ultrasonography, surgical treatment, histopathology of polyp of the gallbladder and the statistical analysis (Statistica, PASW 18).

Results:

It was found that the most common histopathological findings were polypus cholesterol polyps (42.1%), and cholesterosis of gallbladder (39.5%). Also 34% of the respondents had additionally cholelithiasis. It was found that the relationship between the number of polyps and gall bladder calculi, and the number of polyps and thickness of the gallbladder is highly statistically significant ($p < 0.01$), while the ratio between the number of polyps and HDL was statistically significant ($p < 0.05$).

Conclusion:

Based on the results of our study we can conclude that calculosis and wall thickness of the gallbladder is in direct correlation with the number of polyps, and that the concentration of HDL in the blood is also associated with the number of polyps. Polyps of the gallbladder is a clinically important factor in possible future emerging gallbladder cancers and therefore it is necessary to diagnose them and treat in due time.

Key words: polyps, gall bladder, calculosis.

THE DISTRIBUTION OF HISTOLOGICAL TYPES OF LUNG CANCER IN CYTOLOGICAL MATERIAL

(Oral presentation)

Field of medicine: **Pathophysiology**
Author(s): **LJUBINKO PETKOVIC**
Supervisor(s): **Mr Sci. Med. Dr Mirjana Cuk**
Country: **Bolivia**
Faculty: **Fakulty Of Medicine Foca**

Introduction:

The increast in number of patients with lung cancer requires quick and precise diagnostic in everyday clinical work. Recent years cytodiagnostic has imposed itself as a very practic method for diagnosis of lung cancer, for its simplicity, speed, ease and economic.

Aim:

To conclude the number of sputum, pleural punctate and transthoracic punctate with present cancer cells and to and examinate the frequency of certain types of cancer in the study population.

Material and methodology:

The study included 1374 patients whose cytologic material was examined in Clinical Center of Foca during the period 2006-2010. From the total number, study has included 1028 sputum, 296 pleural punctate and 50 transthoracic punctate. Cytological materials was stained with MMG and PAPA methods and analysed on ligh microscope.

Results:

In examined sputum, cancer cells were found in 25 cases. Of these, 8 adenocarcinoma, 8 squamous cells cancer, one small cell cancer, one Non small cell cancer and 7 suspected. In pleural punctate, cancer cells were found in 25 cases. Of these, 12 adenocarcinoma, 3 small cell cancer, one Non small cell cancer and 3 suspected. In transthoracic punctate, cancer cells were found in 30 cases. Of these, 7 small cells cancer, 8 squamous cell cancer, 10 adenocarcinoma and 2 Non- small cell cancer.

Conclusion:

In examined sputum,the most frequent are squamous cell cancer and adenocarcinoma, in pleural punctate is adenocarcinoma and in TTP is adenocarcinom. In examined population the most frequent is adenocarcinoma (37% of all cancer cells).

Key words: sputum, pleural punctate, transthoracic punctate, cancer

„SEMI-THIN" ANALYSIS OF MOUSE KIDNEY IN ACUTE AND CHRONIC INTOXICATION WITH BIRTHWORT (ARISTOLOCHIA CLEMATITIS)

(Poster presentation)

Field of medicine: **Histopathology**
Author(s): **DEJAN MILJKOVIC**
Supervisior(s): **asist. dr Ivan Čapo**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Birthwort is representive of genus Aristolochia which main toxin is aristolochic acid, ant it is very toxic and cancerogenic.

Aim:

The aim was to investigate with "semi-thin" analysis, acute and chronic toxicity of plant birthwort in kidneys of NMRI mice.

Materials and Methods:

Experimental animals were divided in three groups of ten species: Groups E1 and E2-that got infuse of birthwort in concentration of 40g/1000ml of water; control group got only water. The fragments of kidneys (dimension 2x2mm) were taken and placed in mixture of glutaraldehyde. After fixation and dehidratation, tissue was molded in Durcupan resin and cut on ultramicrotome. The tissue was histologically analised using Toluidine blue and hematoxylin-eosin stain. Determination of morphology in renal glomeruli was performed using computer programs ImageJ and ImageTool 3.00. The statistical significance of results was tested by student's t-test.

Results:

Qualitative differences between control group and group E1 are seen only in form of slightly damaged tubules, while quantitatively there is significant difference in percentage distribution of capillaries and mesangium in glomeruli. Differences between control group and E2 group are obvious qualitatively, due to the infiltration of lymphocytes into/around the glomeruli; there is visable damage of tubules with hyaline cylinders within lumen. Quantitatively there is significant statistical difference in presence of capillaries, Bowman's space, podocytes and mesangium.

Conclusion:

Due to the acute and chronic toxicity of birthwort there is a change in the appearance of tubules as well as changes in the quantitative content of individual cells in glomeruli, which has important significance.

Keywords: mice, Aristolochia clematitis, "semi-thin" analysis, glomeruli , tubuli

HISTOLOGICAL TYPES OF BREAST CANCER AND EXPRESSION OF ESTROGENE PROGESTERONE AND HER2/NEU PROTEIN

(Poster presentation)

Field of medicine: **Histopathology**
Author(s): **JELENA VUCKOVIC, Bojana Ivanovic**
Supervisor(s): **Asist. Dr Dusko Dundjerovic**
Country: **Serbia**

Introduction:

Breast cancer is one of the most common cancer in women in Republic of Serbia. Histologic type of breast cancer and receptor expression of estrogene (E), progesterone(P) and HER2/neu protein (H) are required for making decision which therapy to choose.

Aim:

To identify histological types of breast cancer, their representation and immunohystochemical profile. To determine connection between histologic types and receptor expression of E,P,H.

Material and methodology:

In retrospective study conducted at Institute of Pathology, Medical School, University of Belgrade, patohistological reports of breast cancer patients were analyzed for period from January 1st till 31st of December 2010. With the insight in reports,following factors were analyzed : patient's age and sex,the types of tumor,their grade.stage,presence or absence of E,P,H receptors. Standard statistical methods were used for data analysis.

Results:

395 cases of breast cancer were registred in the above mentioned period. They are mostly registered with female sex (99,75%). The average age was between 62 and 63 years, and most represented carcinoma was NST type (77%). The greatest number of samples was grade II (78%) and in stage III (46%) with receptors expression E+P+H- (45%).

Conclusion:

The most represented histologic type of breast cancer is NST,which is E+,P+. By virtue of statistical methods we are abel to predict expression of E,P,H receptors within NST type. Because of that we can see that in next 4000 new cases with breast cancer NST type 1905 (48%) will be E+P+H- which means better prognosis for this patients.

Key words: breast cancer,estrogene,progesterone, HER2/neu protein

ANALYSIS OF MYELNATION OF DORSAL FUNICULUS IN THE GUINEA PIG SPINAL CORD USING SEMI-TIN CUTS

(Poster presentation)

Field of medicine: **Histopathology**
Author(s): **MILAN POPOVIC, Svetlana Petkov, Ivan Capo, Dusan Lalosevic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

One of the most striking facts about brain maturation is certainly the process of gliogenesis and myelination as a consequence. This process happens intrauterine thanks to longer gestation at guinea pig.

Aim:

The aim of our research was the analysis of the dorsal funiculus myelination applying half thin slices.

Material and methodology:

The experiment included 12 fetuses of guinea pigs, 35-days-old (3 fetuses), 45-days-old (3 fetuses). 50-days-old (3 fetuses) and 55-days-old (3 fetuses). Specimens were fixed by transcardial perfusion, and half thin slices taken from cervical part of the spinal cord were used for electron microscopy. Dorsal funiclus was studied and its surface needed to be calculated as well as number og glial cells per surface unit.

Results:

Between 35th and 55th day of the gestation obvious increase of the cross section of spinal cord it the C7 level is evident. Density of gliogenesis raches its maximum during 45th day while with the gestation progress the number of cells decreases exponentially.

Conclusion:

Thanks to prenatal process of gliogenesis guinea pig as a myelination model represents a good animal model for this study.

Key words: myelination, oligodendrocytes, guinea pig

WHITE MISTLETOE EXTRACT (VISCUM ALBUM) TESTED ON EXPERIMENTAL ANIMALS AS THERAPY FOR CANCER

(Poster presentation)

Field of medicine: **Oncology**
Author(s): **ANGJEL STOJANOVSKI, I.Milev, B.Panov, B.Panova, N.Velickova, L. Nikolovska**
Supervisor(s): **Prof. D-r Gordana Panova, B.Sc. Pharm. Spec. Biljana Nastova Sci**
Country: **Macedonia**
Faculty: **Faculty Of Medicine Shtip**

Introduction:

Despite the efforts made to achieve early detection,effective and successful treatment of malignant diseases,adjuvant therapy has become increasingly popular to provide better results and reduction the mortality rates from cancer. In Europe extracts from Viscum album, the European white-berry mistletoe,are widely used as alternative treatment for patients with cancer. On the whole mixture of active components in the aqueous solution of white mistletoe,antineoplastic strongest potential has lectin.

Aim:

The purpose of this paper is to prove the antitumor effect of lectin from mistletoe extract on white Wistar rats with stimulation of immune system by increasing the number and activity of varios types of white blood cells.

Material and methodology:

The three groups of mice (5 mice / group) was placed on the 4 day semi-synthetic diet. All mice were treated subcutaneously with melanoma cells (B16F10 cells). One group served as placebo control group,that is not treated with lectins and the rest were treated with ML-1 with a daily dose of lectin to 1,0 ng/kg (this is experimental number becose we have aqueous solution of plant).The examination is worked over 9 days

Results:

After 72 hours of treatment with lectin cytotoxicity of NK cells doubles and the number of granulated lymphocytes increased three times compared with the untreated control group.

Conclusion:

From the analysis and results we can conclude that the lectin acts stimulating the immune system, perform stabilization of DNA in white blood cells,stimulate an increase in the number and activity of certain types of leukocytes.Lektin induces macrophage cytotoxicity,phagocytosis,then increasing cytokine secretion in vivo.

Key words: Cancer

MALIGNANT PROLIFERATIVE DISORDER OF LEUKOCYTES ASSOCIATED WITH FATHER-SON PSYCHIC TRAUMATISM

(Poster presentation)

Field of medicine: **Oncology**
Author(s): **JURAJ SEDLACEK, Vladimir Sisovsky (2), Maria Turakova (3), Lenka Slapakova (2), Tomas Galis (1), Pavel Kotoucek (4)**
Supervisor(s): **Pavel Kotoucek, M.D. (4), Assoc. Prof. Tomas Galis, ThDr., Ph.D. (1)**
Country: **Slovakia**
Faculty: **(1) Faculty Of Roman Catholic Theology, (2) Faculty Of Medicine Bratislava**

Introduction:Malignant proliferative disorders of leukocytes (MPDL) constitute the most important disorders of white cells. The exact etiology of MPDL is not clear.

Aim:To describe an acute myeloid leukaemia and Hodgkin's lymphoma in two young men exposed to psychosocial stress due to the deficit of the man's role of their father (father-son psychic traumatism) in their social relationship "father–son".

Material and methodology:Subjective/objective examinations. Formalin-fixed and paraffin-embedded biopsy specimens with bone marrow and lymph node were besides conventional histological staining evaluated histochemically. Trustworthiness/ functionality of social relationship „father–son" and personal features of „father" were examined by a questionnaire method.

Results:Case Reports. 20-year-old (Adam) and 21-year-old (Boris) men with psychoneurotic syndrome were admitted to the clinic of haematology with the suspecting MPDL. In Adam a preleukaemic syndrome there was present for a few months ago. Bone marrow examination revealed acute myeloid leukaemia. In Boris there was in history a low-grade fever with night sweats, weight loss, painless, movable and firm lymphadenopathy. Biopsy of the lymph node showed Hodgkin's lymphoma. Psychiatric-psychological examination revealed sensitive men, in whom trustworthiness/functionality (confidence of a son in) of a social relationship "father–son" is minimal to none. In the long term men since the childhood were exposed to serious psychosocial stress from father-son psychic traumatism (deficit of a role of their father: aggressiveness, indifference, absence) and frustration from not fulfilled desire for a functioning social relationship "father–son".

Conclusion:Seemingly innocent psychosocial stressors (father-son psychic traumatism) could be possibly associated in susceptible individuals also with MPDL.

Key words: Malignant proliferative disorder of leukocytes. Father-son psychic traumatism.

THE ASSOCIATION BETWEEN THE MULTIKINASE INHIBITOR SORAFENIB AND THE ORAL ANTI-DIABETIC METFORMIN TARGETS GLIOBLASTOMA STEM CELLS

(Poster presentation)

Field of medicine: **Oncology**
Author(s): **IULIANA NENU, Mihaela Aldea, Bobe Petrushev, Ciprian Tomuleasa, Tiberiu Popescu, Lucian Craciun, Andreea Lupas**
Supervisor(s): **Gabriel Kacso, MD PhD; Olga Soritau, MD PhD**
Country: **Romania**
Faculty: **General Medicine Cluj-Napoca**

Introduction:Glioblastoma multiform is an aggressive brain tumor with a prognosis that rarely exceeds 12 months. The existence of glioblastoma stem cells (GSC) within the tumor seems to be responsible for the resistance to standard treatment, therefore new drugs should be tested to target these cells.

Aim:Our study hypothesized that the multikinase inhibitor, sorafenib, which is currently undergoing phase I/II clinical trials in malignant gliomas, might have an anti-glioblastoma effect enhanced by the oral anti-diabetic drug, metformin.

Material and methodology:GSC were isolated and proved to express both the stem cell specific markers and neural cell markers. At 24 and 48 h after seeding, cells were treated with metformin, sorafenib and the combination of drugs. An MTT viability test was performed, apoptosis was quantified by on-chip flow cytometry with Anexinn V-Cy5 Apoptosis Detection Kit and autophagy was assessed through fluorescence microscopy using the LC3B Antibody Kit.

Results:Proliferation of GSC lowered when treated with metformin. Sorafenib alone only slightly decreases cell proliferation, GSCs being rather resistant to the action of the tyrozin- kinase inhibitor. Also, better results were obtained when cells were treated permanently with metfomin compared with a single dose of the drug added 24h prior to the cytostatic. Apoptosis and autophagy were highly detected when GSC were treated with the combination of metformin and sorafenib, thus sustaining the results from the viability test.

Conclusion:Due to the property of killing glioblastoma cells with stem like-characteristics, metformin combined with sorafenib might be a new therapeutic in the treatment of glioblastoma.

Key words: glioblastoma, sorafenib, metformin

TRANSPLATATION OF ORGANS - AN OPPORTUNITY FOR LIFE

(Poster presentation)

Field of medicine: **Forensic medicine**
Author(s): **BILJANA RISTIC**
Supervisor(s): **Prof. Dr Karel Turza**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

There are different opinions about the the donation and organ transplantation among people of all ages and levels of education.

Aim:

The aim of this study was to examine the opinion of medical students in Belgrade about donating organs.

Material and methodology:

The study was conducted in 2011 on the the sample of 139 students I, IV and VI year of Belgrade School of medicine. The study used a survey.

Results:

The majority of students first heard for the possibility of organ donation through the media and they are aware of the importance of the existence of the Register of donor organs in Serbia. 76% of the students of the first year, 95% of the fourth and 91% of students of the sixth year support organ transplantation from living donors, and as the reason for this type of transplantation they list humanity, an extension of one's life and improving of its quality. The transplantation of organs from dead donors supports 95% of the fourth-year students and 96% fourth-year students. Transplantation of organs from dead donors support 48% of the first year students (this number is much higher for the elderly students).

Conclusion:

The majority of students supported organ donation, and is aware of its importance in extending one's life.

Key words:transplantation, students, organ donors

PLENARY SESSION III

MICROBIOLOGY, INFECTIOUS DISEASES, IMMUNOLOGY, DENTISTRY

Date: July 20th 2012

ORAL PRESENTATIONS
Start time: 8:30 AM
Ceremonial Room of the Dean - Faculty of Medicine Novi Sad

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

SUSCEPTIBILITY TO ANTIFUNGAL DRUGS OF YEAST FROM GENUS CANDIDA ISOLATED FROM HUMAN STOOL SAMPLES

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **TEODORA PLAVSIC**
Supervisor(s): **Prof. Dr Zora Jelesic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Fungi from the Genus Candida are opportunistic microorganisms which cause severe endogenous infections in immunocompromised patients. The resistance to antifungal drugs has increased in the past few decades.

Aim:

The aim of this study is to test Candida susceptibility to antifungal drugs, to determine most commonly found resistance markers and the compare the susceptibility of Candida albicans and non-albicans species (Candida spp).

Material and methodology:

The experiment was performed at the Institute for Public Health of Vojvodina. It included 200 Candida isolates, originating from the human stool. Standard microbiological methods were used for cultivation and identification of yeasts and for differentiation of Candida albicans from other species from Genus Candida. In vitro susceptibility of all isolates to five antifungal agents was established by using commercial ATB FUNGUS 3 (bioMérieux, France).

Results:

Out of total of 200 isolates from genus Candida, resistance markers were found in 43% isolates. Resistance markers were found to 5- flucytosine (1%of isolates), fluconazole (5.5% of isolates), itraconasole (22% of isolates) and voriconasole (2.5% of isolates). Azole-cross resistance was found in 2.5% isolates. MIC to all 3 azoles was increased at the same time in 20.5% of sensitive isolates. Multiresistance was found in 3.5% of the strains. The frequency of resistance markers was statistically higher in Candida spp. compared to Candida albicans.

Conclusion:

The presence of antimicrobial resistance and increased minimal inhibitory concentrations in Genus Candida show the importance of systematic monitoring of susceptibility to antifungal drugs of these yeasts.

Key words: Candida, resistance, antifungal drugs

ANTIMICROBIAL ACTIVITY OF MINT (MENTHA PIPERITA) LEAF EXTRACT AGAINST METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) : AN IN VITRO STUDY USING DILUTION METHOD

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **SATRIA ARIEF PRABOWO BSC, Bram Swandika Bsc, Angga Maulidha Muliawati Bsc, Ajibatul Choriqoh, Silvi Malvita Alfiyana**
Supervisor(s): **Sri Purwaningsih MSc, Manik Retno Wahyunitisari MSc**
Country: **Indonesia**
Faculty: **Faculty Of Medicine Airlangga**

Introduction: Bacterial infection remains a major cause of morbidity and mortality despite the antibiotics discovery. The emergence of bacterial resistance, especially Methicillin-resistant Staphylococcus aureus (MRSA) has produced severe clinical and therapeutic consequences. Incidence of MRSA infections continues to rise, where in Asia the prevalence has now reached 70%. Mint (Mentha piperita) has been shown to have antimicrobial activity against Salmonella enteridis, Eschericia coli, and Pseudomonas aeruginosa. However, the effect of mint leaf extract towards MRSA is not yet known.

Aim: This study aimed to investigate the antimicrobial effect of mint leaf extract against Methicillin-resistant Staphylococcus aureus.

Material and methodology: The mint extract was produced from mint leaves, which was powdered and extracted with ethanol. The extract then diluted into several concentration: 0.5; 0.25; 0.125; 0.0625; 0.031; 0.0156; 0.0078; and 0.0039 mg/ml respectively. Antibacterial activity was assessed using dilution method. Incubation was done at 37°C for 24 hours, followed by visual inspection to determine Minimum Inhibitory Concentration (MIC). Minimum Bactericidal Concentration (MBC) was defined as the least concentration in which MRSA could not grow in Mueller Hinton agar plate.

Results: This study demonstrated antibacterial activity of mint extract towards MRSA. This MBC value was shown at 0.5 mg/ml of Mentha piperita leaf extract. This value was obtained using descriptive analysis. The MIC value was not determined due to discoloration of liquid medium by mint extract which made visual assesment difficult.

Conclusion: Mint (Mentha piperita) leaf extract has potent antibacterial activity towards MRSA. Further study is required before it can be utilized in human.

Key words: MRSA, mint, antimicrobial

ANTIMICROBIAL RESISTANCE OF COLIFORM BACTERIA ISOLATED FROM DRINKING WATER

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **JOVAN UGARKOVIĆ, Nadežda Varga**
Supervisor(s): **Asist. Mr. Sc.med. Vera Gusman**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Microorganisms present in drinking water are common cause of infective diseases. Excessive use of antibiotics contributes to increasing antimicrobial resistance.

Aim:

Determine most common microorganisms isolated from drinking water, resistance type of isolated microorganisms to antibiotics and potential way of transmission of antibiotic resistance genes through the water.

Material and methodology:

Study included 888 samples of drinking water. Samples were divided by the origin. Fermentation test (MPN method – most probably number) was performed to detect coliform bacteria. Sensitivity test to antibiotics was performed by standard disk diffusion method, in accordance to recommendations of Clinical and Laboratory Standard Institute.

Results:

Microbiological contamination was detected in 10.4% of samples. There is highly significant statistical difference between water samples from local water supply systems, wells and Novi Sad water system. Isolated bacteria were from the group of coliform bacteria: Enterobacter spp. in 41.8% samples, Citrobacter freundii (21%), Klebsiela pneumoniae (16%), Escherichia coli (14%), Citrobacter spp. in 6% of the samples. Bacterial isolates were resistant to following antibiotics: to cefalexin and cefaclor 80.6% of isolates were resistant, 73.5% isolates to ampicillin, 62.2% isolates to amoxicillin + clavulanic acid , 10,2% isolates to sulfamethoxazole+trimethoprim and cefuroxime, followed by piperacillin-tazobactam 2.0%, cefepime 2.0%, ceftriaxone 1.0%, ceftazidime 1.0% of isolates, while bacterial isolates were fully sensitive to gentamicin, ciprofloxacin, amikacin, imipenem and meropenem

Conclusion:

Coliform bacteria are most common cause of drinking water samples contamination. Resistance tests to antibiotics proved that resistance can be transferred to human normal bacterial flora by drinking water.

Key words: drinking water, coliform bacteria, antibiogram

OTOMYCOSIS: ETIOLOGICAL AGENTS AND SUSCEPTIBILITY STUDY

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **SAŠA ILIĆ, Andrija Jekic**
Supervisor(s): **Prof. Dr Aleksandar Džamić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Otomycosis is fungal infection of external auditory meatus. The most common causative agents are from genus Candida and Aspergillus. Antifungal resistance is one of the issues for therapy outcome.

Aim:

Identification of fungi that cause otomycosis and susceptibility in vitro to antifungals.

Material and methodology:

The outer ear canal swabs were taken from patients with suspection on otomycosis. Isolation of fungi was performed using Sabouraud medium, Chapek agar and Candichrom agar on 26° C and 37° C. Identification of isolates was based on morphological and biochemical characteristics of fungi, or by using API 20C AUX and Candifast commercial kits. Susceptibility testing on antifungals was performed using standard disk diffusion method. Fungal sensitivity was estimated with amphotericin B, nystatin, miconazole, fluconazole, itraconazole, ketoconazole and voriconazole.

Results:

The majority of fungi causing otomycosis are from Aspergillus (66,7%), and Candida (21,67%) species. The most common isolated fungi are Aspergillus niger (70,7%) and Candida albicans (53,87%). The less common identified fungi were Penicillium (n=3), Scopulariopsis (n=1) and Aureobasidium (n=1). Antifungal susceptibility testing showed the most of the isolates were sensitive to miconazole (89.8%), voriconazole (79.7%), nystatin (79.7%) and amphotericin B (66.1%). Fungi from Aureobasidium and Scopulariopsis species showed sensitivity to ketoconazole.

Conclusion:

Timely isolation, identification and susceptibility testing of pathogens is essential in the evaluation of patients with otomycosis. Our study has showed Aspegillus spp. as the most common fungi and miconazole as antifungal agent with the highest in vitro activity.

Key words: otomycosis, Aspergillus, Candida, susceptibility, antimicotics.

EFFECT OF VIPERA AMMODYTES AMMODYTES VENOM ON SELECTED BACTERIA

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **DUSAN KEKIC, Uros Markovic, Maja Stukalov**
Supervisor(s): **Prof.dr Kristina Gopcevic, Prof. Dr Natasa Opavski, Dr Ina Gajic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Bacterial infections, in nowhere days, are not as lethal due to a number of antibiotics, but there is a constant increase in the number of of multiresistant strains. Constant research of new antibacterial agents is certainly a priority, and natural resources are particularly important. Snake toxins are mentioned as one of the possible agents.

Aim:

The aim of this study was to investigate the possible antibacterial activity of Viperae ammodytes ammodytes venom on selected microorganisms.

Material and methodology:

The venom was electrophoretically (SDS-PAGE) and densitometrically profiled. The antibacterial effect was investigated by disk-diffusion method on various concentrations of venom on selected strains Staphylococcus aureus (ATCC 25923), Escherichia coli (ATCC 35218), Pseudomonas aeruginosa (ATCC 27853) and Enterococcus faecalis (ATCC 29212), as well as on their clinical isolates. MIC was determined by broath dilution method.

Results:

The sensitivity of selected bacteria is most pronounced in S.aureus>Pseudomonas aeruginosa> Escherichia col >Enterococcus faecalis, which didn't had antibacterial effect, as well as their clinical isolates. MIC was the most pronounced in S.aureus. Electrophoresis - densitometry showed 11 protein fractions of venom.

Conclusion:

The demonstrated antibacterial property of Viperae ammodytes ammodytes venom highlight it for a further studies according to detect which component is/are responsible of this activity and their potential use.

Key words: Vipera ammodytes ammodytes, snake venom, antibacterial effect, MIC, SDS-PAGE.

IGG ANTIBODIES IN PATIENTS WITH SUSPECTED NEUROCYSTICERCOSIS

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **ANDRIJA JEKIĆ, Saša Ilic**
Supervisor(s): **Prof. Dr Aleksandar Džamić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Neurocysticercosis is the human infection, caused by the larval stage (Cysticercus cellulosae) of Taenia solium. Republic of Serbia is endemic area for this disease. Diagnosis of neurocysticercosis could be made by many diagnostic (clinical, radiological, laboratory and epidemiological) criteria. Immunologic tests which are adviced for rutine using are ELISA or EITB.

Aim:

To investigate a presence of specific anti-Cysticercus IgG antibodies in serum/CSF in patients with suspected neurocysticercosis.

Material and methodology:

Patients were from different parts of Serbia, from urban and rural areas. In this study 163 patients with suspected neurocysticercosis were included. Antigens which were used for detection of specific antibodies were originating from the cystic fluid. Microtiter plates with related antigens and control sera were prepared by the test manufacturer (NovaTec Immundiagnostica GmbH, Germany). ELISA test was used for the detection of specific antibodies. Shi square test was used to evaluate the data.

Results:

In 188 samples, 25 (13.30%) were detected as seropositive. Specific antibodies were detected in 17 samples (10.75%) from a total of 158 serum samples tested. From a total of 30 CSF samples tested, specific antibodies were detected in 8 samples (26.67%). There is statistically significant difference between serum and CSF samples ($p<0.05$). Number of people that had borderline values was 7 (3.72%). Seronegative were 156 samples (82.98%).

Conclusion:

There was higher percentage of present specific IgG antibodies in CSF, than in serum. Detection of specific antibodies remains indispensable mark in evaluation of suspected neurocysticercosis patients.

Key words: neurocysticercosis, diagnosis, ELISA.

SEROLOGICAL PROVING OF COXSACKIE VIRUS INFECTIONS IN CHILDREN AND ADULTS AND THEIR CORRELATION WITH CLINICAL MANIFESTATIONS

(Oral presentation)

Field of medicine: **Microbiology**
Author(s): **MARIJANA MATIJEVIC, Slobodanka Matijevic**
Supervisor(s): **Ivana Hrnjakovic-Cvjetkovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Coxsakie viruses usually cause asymptomatic infections, but can cause serious clinical syndromes: myocarditis, pericarditis, aseptic meningitis, herpangina.

Aim: This study need to point to the frequency of acute and older Coxsackie infections in tested sample and the differences in the occurrence of these infections according to age of respondents and the significance of these infections in particular organs diseases.

Material and methodology: Source of these data were results of serologic examinations performed at Institute of Public Health of Vojvodina, from January to April 2011, on the sample of 300 patients. Detection of IgM and IgG antibodies were performed using ELISA method. χ^2 test was used for statistic calculations.

Results: A total of 14,7% had acute infection, 34,33% had old infection and 33% were seronegative. Distribution among the acutely infected was: active working-79,54%, seniors-11,36%, children and teens-9,09%, and among the earlier infected in the same age order: 35,29%,20%,35,60%. In relation to clinical manifestations, in acutely infected most common were respiratory diseases(28%),virosis(24%) and lymphatic diseases(20%),and in earlier infected were virosis(49,06%), respiratory diseases(18,88%) and heart diseases(16,98%).

Conclusion: It is significantly more seronegative and previously infected comparing with acute infected.In acutely infected, the occurrance of working age respondents is the greatest and clinically is the most respiratory patients(but there is no statistical differences comparing with other groups of diseases).In earlier infected, no statistical difference in the frequency of old infection has been proven in relation to age(this is consequence of short type-specific immunity)and the most patients have diagnosis-virosis non specificata.

Key words: Coxsackie infections, ELISA,clinical manifestations

EPIDEMIOLOGICAL CHARACTERISTICS OF KALA-AZAR IN MONTENEGRO

(Oral presentation)

Field of medicine: **Infectious disease**
Author(s): **MITAR POPOVIĆ**
Supervisor(s): **Prof. Dr Bogdanka Andrić, Prof. Dr Agima Ljaljević**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction:

Kala-azar is a difficult parasitic disease from a group of transmissible zoonoses. In Montenegro, dogs are the reservoir of the parasite Leishmania donovani and the vectors are insects of the genus Phlebotomus. Endemic focus is from Bar to Ulcinj.

Aim:

To present the epidemiological characteristics of kala-azar in Montenegro.

Material and methodology:

It is a retrospective study for the period 2000-2008. The number of patients, their geographical and seasonal distribution, age and sex structure were followed by research. Data on the infected dogs in Montenegro for the period 2006-2008 were also included. As a source of data medical records were used from: Clinic for Infectious Diseases Podgorica, Pediatric Clinic Podgorica, General Hospital Bar and Specialistic Veterinary Laboratory Podgorica.

Results:

The number of patients with kala-azar in the period 2000-2008 was 37. Most of the patients live in Podgorica and Bar and have been mostly reported during May and June. Children had higher incidence of kala-azar from adults (56,75% / 43,24%) and the majority of children were 1 to 5 years old. Male sex was predominant when compared to female sex (62,16% / 37,83%). In the period 2006-2008 there were 120 infected dogs, the majority from Podgorica.

Conclusion:

This study presented epidemiological characteristics of kala-azar in Montenegro. A large number of infected dogs suggests that the number of infected people is larger than has been really registered. The majority of patients and the majority of infected dogs are from Podgorica, suggesting the possibility of the spread of endemic focus of kala-azar.

Key words: kala-azar, epidemiology, Montenegro, dogs, patients.

URINE CULTURE GROWTH IN PATIENTS OF A TERTIARY-CARE HOSPITAL IN PAKISTAN

(Oral presentation)

Field of medicine: **Infectious disease**
Author(s): **NAUMAN KHAN, Hina Ahmed, Rizwan Khan, Fareeha Khan, Syed Anas Hussain**
Country: **Pakistan**
Faculty: **Dow Medical College**

Introduction: Nosocomial UTI's are a major problem today. It is crucial to constantly review and modify treatment guidelines based on microorganism prevalence and antimicrobial drug sensitivity.

Aim: To determine the frequency and variety of microorganisms growing in positive urine cultures taken from patients of Civil Hospital Karachi and their susceptibility to various antimicrobial agents.

Material and methodology: A retrospective analysis of all positive urine samples sent for culture and sensitivity from patients of Civil Hospital Karachi during a period of one year from January 2009 to January 2010.

Results: Out of 823 positive samples, majority were from female patients(58.8% compared to 41.2%). The most frequent uropathogen was found to be E.coli(64.9%) followed by klebsiella(16.4%), pseudomonas(8.5%), Candida(6.3%), enterobacter(1.5%), staphylococcus aureus(1.5%), proteus mirabilis(0.7%) and proteus vulgaris(0.2%). The most commonly afflicted age group was found to be 20-29 years(21.7%), followed by the age group 0-9 years(16%). The drug sensitivities for E. coli were found to be 91.4%, 70.2%, 59.58, 85.6%, 73.3%, and 60.5% for imipenem, amplicillin, ceftazidime, nitrofurantoin, gentamicin, and cotrimoxazole respectively. Klebsiella spp. demonstrated high resistance against ciprofloxacin(46.7%) and ofloxacin(41.5%). Pseudomonas also showed high resistance against ciprofloxacin(62.2%), ceftazidime(62.5%) and ofloxacin(53.1%). Candidal growth in cultures was more prevalent in females(69.2%).

Conclusion: A higher prevalence of UTIs was found in females. Many E.coli strains are becoming increasingly resistant to drugs like ciprofloxacin and ofloxacin. Imipenem and nitrofurantoin were found to have greater efficacy against most organisms. The resistance pattern of microorganisms appears to be changing and antibiotic guidelines may need to be reviewed.

Key words: UTI, infection, antimicrobial, drug sensitivity, urine culture

MOLECULAR ANALYSIS OF HLA ALLELE FREQUENCIES IN TRANSYLVANIA

(Oral presentation)

Field of medicine: **Immunology**
Author(s): **ALINA LAVINIA ZIMBRU, Flavia Maria Vonica**
Supervisor(s): **Lucia Dican**
Country: **Romania**
Faculty: **General Medicine Cluj-Napoca**

Introduction:

The human leukocyte antigens (HLA) are the most important alloantigens in determining the compatibility of tissue grafts and haemopoeitic cells.

Aim:

To analyze the polymorphism of HLA-A, -B, -and -DRB1 alleles in North-Western Romanians.

Material and methodology:

264 patients currently awaiting kidney transplants from our transplantation unit have been A, -B, - DR typed polymerase chain reaction (PCR) with the sequence-specific primer method by low resolution Olerup SSP® kits. DNA was extracted from whole blood using innuPREP Blood DNA Mini Kit. The application of DNA based procedures has increased the accuracy of HLA typing and lead to the identification of serologically undetected alleles and of many subtypes of serological specificities.

Results:

13 different HLA-A, 34 -B and 18 -DR alleles were observed among the patients. Fourth HLA-A alleles of a total of 460 had frequencies higher than 10% (A*02, A*01, A*24, A*03) and then are characteristic of Central European. Among 508 HLA-B alleles, B*35, B*18, B*51, B*44, B*08, B*07, B*27 were the most frequent alleles in the studied population. We have investigated the distribution of HLA class II alleles for the HLA-DRB1 loci. Among the 18 alleles at HLA-DR locus, the most prevalent five alleles included DRB1*11 (11%), DRB1*13 (7%), DRB1*16 (5%), DRB1*03 (5%), DRB1*01 (5%).

Conclusion:

This study can be used to aid clinicians to know the HLA alleles frequencies of patients on the cadaveric kidney transplant waiting list and to establish probabilities of finding compatible donors.

Key words: HLA, PCR

CAROTID DOPPLER ULTRASONOGRAPHY AFTER DETECTING CALCIFICATIONS ON A PANORAMIC RADIOGRAPH

(Oral presentation)

Field of medicine: **Dentistry**
Author(s): **MILA KOVAČEVIĆ**
Supervisor(s): **Asist. Mr Sc. Stom. Ivan Šarčev**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Stroke is the third leading cause of death, after cardiovascular diseases and cancer. 60% of all strokes are the result of atheromatous plaque existing in carotid bifurcation. Calcification which occurs in the evolution of atheromatous plaque can be detected on panoramic radiographs which are used in diagnostic of dental diseases. Extent of luminal stenosis and the risk of stroke is determined best by carotid Doppler ultrasonography.

Aim:

Aim of this study was to confirme the existance of atheromatous plaque in carotid bifurcation in patients with calcifications detected on their panoramic radiographs, by using Doppler ultrasonography.

Material and methodology:

Patients came to Clinic of Dentistry of Vojvodina, for dental care. Panoramic radiographs obtained during dental examination revealed the presence of calcifications located in the region of carotid bifurcation. Patients were reffered to their physicians. As the part of cerebrovascular assessment, carotid Doppler ultrasonography was performed.

Results:

Carotid atherosclerosis was diagnosed in all 3, neurologically asimptomatic patients. In Patient 1, 64-year-old man, 30% stenosis was found bilaterally; in Patient 2, 59-year-old woman, 25% stenosis was found on the right side; in Patient 3, 45-year-old man, 55% stenosis was found on the right side, and 50% on the left side; after that, adequate therapy and regular check-ups were ordered.

Conclusion:

Doppler ultrasonography confirmed the existance of atheromatous plaque in carotid bifurcation in patients with calcifications detected on their panoramic radiographs.

Key words: Doppler ultrasonography, panoramic radiography, stroke, calcification, carotid artery.

THE IMPACT OF FEAR OF DENTAL PROCEDURES ON THE ORAL HEALTH OF ADOLESCENTS

(Oral presentation)

Field of medicine: **Dentistry**
Author(s): **MARIJA MILETIC, Tanja Nikolic**
Supervisor(s): **Dr Ass. Zoraida Milojkovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Pristina**

Introduction:

Fear is an emotional reaction to consciously recognize the real dangers that threaten the biological, psychological and social integrity of a manSource of real danger, with fear as the accompanying emotion often comes from experience.Present fear of dental procedures, many people will recognize,regardless of gender,social status,age occupation.Fear of the dentist became a major health problem,both in Serbia and in other countries,especially in children,because it has consequences later in life.

Aim:

This investigaton examines the impact of fear on oral health of adolescents and in their behavior during various dental procedures.Assessment of fear in order to be more than two components – congenitive and physiological.

Material and methodology:

The study included 60 adolescents of both sexes.Patients were divided into three groups:group I – dental examination,group II – orthodontic therapy,group III – dental examination and repair superficial caries.Group III subjects went through three visits:the I – introduction to the patient, in the second – the removal of soft deposits,III – rehabilitation of caries.State of oral health values analyzed using DMFT index,presence of gingivitis and orthodontic anomalies.Cognitive caracteristic of fear was analyzed using a questionnaire that adolescents meet independently before first intervention.Physiological component (look and complexion) were evaluated using clinical monitoring.

Results:

The analysis and statistical processing of the data showed that children with elevated fear had DMFT index increased and the entire oral health is threatened.

Conclusion:

Dental treatment has a major impact on oral health of children and therefore the quality of life and its dimensions (speech,nutrition,appearance,social relations).

Key words: Fear,adolescents,dental treatment,oral health

TOOTH WHITENING, YES OR NO?

(Oral presentation)

Field of medicine: **Dentistry**
Author(s): **ĐORĐE BLANUŠA, Ivan Mladenovic**
Supervisor(s): **Doc. Dr Vladimir Matvijenko, Mr. Dr Tatjana Savić Stanković**
Country: **Serbia**
Faculty: **Faculty Of Medicine Kosovska Mitrovica**

Introduction: Tooth whitening is a method in cosmetic dentistry that aims to change the color of teeth to a brighter hue.

Aim: The aim of study was to examine the teeth sensitivity before and after tooth whitening; to evaluate the effect of two different concentration of carbamide- peroxide on human enamel microhardness; to compare the impact of daily drinks on treated and untreated tooth surfaces

Material and methodology: This examination included 3 phases. In the first phase, we had 20 patients when we performed ZOOM technique of ambulant bleaching. Before and after the treatment we checked their teeth sensitivity by electrical and thermal test. In the second phase, we used 10 extracted teeth divided in two groups. Each tooth was sectioned in 2 halves in apical direction (control and experimental half). Following the instructions by manufacturer, we performed home bleaching (10% carbamide peroxide) on the experimental halves in the first group of teeth, and ambulant bleaching (35% carbamide peroxide) was performed on the experimental halves in the second group. During that time, control halves were exposed to artificial saliva. After the treatment, both groups were exposed to artificial saliva for 21 days. We conducted microhardness testing periodically in both groups. In the third phase, we used the same extracted teeth when we exposed the teeth in colored drinks for 10 minutes, 4 days in a row, and after that we did discoloration test

Results: Electrical and thermal test showed that all patients had teeth hypersensitivity after the treatment. The next phase of research indicates a statistically significant difference in microhardness of dental enamel after ambulant technique. Discoloration test showed that the bleached tooth surfaces were more affected to discolorations than untreated surfaces

Conclusion: Tooth whitening should not be exaggerated. Advices by dentists, special attention by patients and proper use of teeth whitening products are essential, so all the risks could be reduced to a minimum

Key words: tooth whitening, sensitivity, microhardness, discoloration

E-TEST ANTIBIOTIC SUSCEPTIBILITY OF STAPHYLOCOCCUS AUREUS STRAINS ISOLATED FROM HOSPITAL ACQUIRED INFECTIONS OF IMAM KHOMEINI HOSPITAL, ILAM, IRAN

(Poster presentation)

Field of medicine: **Microbiology**
Author(s): **PANAHI J, Havasian M R, Pakzad I, Sadeghifard N, Ghafouryan S , Hossainzadegan H,Azizi Jalilian F**
Supervisor(s): **Hassan Hosseinzadegan (PhD)**
Country: **Iran**
Faculty: **Ilam University Of Medical Sciences.**

Introduction:

Staphylococcus aureus is one of the most important pathogens of human beings all over the world and all ages.The epidemiology and resistance pattern of this bacterium is not clear in Ilam hospitals, capital of Ilam province, Iran.

Aim:

the study of epidemiology and resistance pattern of this bacterium in ilam hospitals, capital of Ilam province, Iran.

Material and methodology:

The antimicrobial pattern of S.aureus strains isolated from health-care – associated infections of different hospitalization wards including surgery and ICU have been investigated at the Ilam Hospitals. Bacteria isolated from different samples in the microbiology laboratory of Ilam University of. Medical sciences strains identified under standard techniques.

Results:

A total of 30 S.aureus isolates were isolated from Urinary (12; 40%), wound (10; 33.3%) lung (5; 16.6%), and burn (3; 10%) infections. All of the isolates were susceptible to vancomycin and linezolide and 10% of strains were methicillin resistant. Resistance percent for other drugs were as follow: piperacillin /tazobactam 4(13.3%), ceftriaxone 11(36.3%), amoxicillin 13(43.4%), amikacin (3.3%), ceftazidime 2(6.6%), tobramycin 3(9.9%), tetracycline 11(36.3%), gentamicin 3(9.9%).five isolate having MICs≥1.5 μg/ml against vancomycin.

Conclusion:

Although about 10 % our isolates were resistant to methicillin, and 100% were susceptible to vancomycin and linezolide, but in some of the isolates we encountered a rise in MICs against vancomycin. This point emphasizes the implementation of related control measures in hospitals for further control of treatment resistant infections.

Key words: Staphylococcus aureus, Antimicrobial Susceptibility, MRSA, Health-care-Associated Infections.

INHIBITORY EFFECT OF ETHANOL EXTRACT OF QUERCUS COCCIFERA FRUIT (JAFT) ON CANDIDA ALBICANS IN VITRO

(Poster presentation)

Field of medicine: **Microbiology**
Author(s): **HAVASIAN M R, Panahi j**
Supervisor(s): **Pakzad I**
Country: **Iran**
Faculty: **Paramedicine Ilam**

Introduction:

One of the most prevalence vaginal infection in human is candidiasis. candida albicans: important agent for vaginal candidiasis in women. A alternative way for treatment of bacterial infection is herbal therapy.

Aim:

The study aim is to evaluate inhibition of ethanol extract of co cases Quercus coccifera on Candida.

Material and methodology:

Alcoholic extraction was carried out AND inhibition effect of this extract on Candida albicans in sabro_dextrose agar by agar diffusion and disc diffusion methods mic , mfc of herbal extract was done in mueller hinton broth by Microdilution Method.

Results:

In disk diffusion method 10mg/ml (250 µgr/disk) and 80mg/ml (2mg/disk) had minimum and maximum inhibition zone respectively.In agar diffusion method,10mg/ml(350 µgr/well) and 80mg/ml (2.8mg/well) had minimum and maximum inhibition zone respectively.The MIC and MFC was 40mg/ml , 50mg/ml respectively.

Conclusion:

Alcoholic extract of Quercus coccifera fruit has antifungal effect this matter completly conformity with tradition medicine of western province of iran it can use for candidiasis therapy.

Key words: Candidia , MIC , MFC , Fungal

THE GREAT ACCIDENTS IN MICROBIOLOGY

(Poster presentation)

Field of medicine: **Microbiology**
Author(s): **HITOVA, D. G., Todorov A. A. , Ivanov K. T. , Gencheva D. Y. , Nguen D. D. , Todorova M. P. , Dimitrova B. I. , Yovkova N. , Vencheva S. , Ivanova T. Y. , Mitkova Y. A. , Atanasova R. , Stoyanov V. R.**
Supervisor(s): **Edreva, V. B.**
Country: **Bulgaria**
Faculty: **Faculty Of Medicine Pleven**

Introduction:

Many microbiological discoveries that have immense significance for medicine and humankind have happened by chance.

Aim:

The aim of the current research is to enlighten the history of microbiology, where accidental but incredible important discoveries are hidden.

Material and methodology:

We present facts obtained from numerous scientific studies about the history of microbiology. All of the data is reliable and authentic

Results:

We put accent on 3 great discoveries done by 3 great microbiologists and their contribution to microbiology, medicine and humankind: 1. Robert Koch and the discovery of solid media 2. Alexander Flemming and the discovery of penicillin 3. Alexandre Yersin and isolation of plague's agent.

Conclusion:

Every day we encounter routine methods, remedies, and inventions, which were achieved by many years of hard work, a sprinkle of chance and a little bit of accident. "Chance favors only the prepared mind."- Louis Pasteur

Key words:

microbiological discoveries, history, accident

ADHERENCE AND OTHER PREDICTORS OF SUCCESSFUL THERAPY OF CHRONIC HEPATITIS WITH PEGYLATED INTERFERON PLUS RIBAVIRIN

(Poster presentation)

Field of medicine: **Infectious diseases**
Author(s): **ĐURĐINA RADENKOVIĆ**
Supervisior(s): **ass. dr Tomislav Preveden**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

It is estimated that currently in world there are 170 million people infected by Hepatitis C Virus, meaning that 2-3% of world population lives with chronic hepatitis C infection.

The aim:

The aim of this study is to prove that good adherence, younger age, female gender, lower BMI, lower grade of fibrosis and genotype 2 and 3 are good predictors of successful therapy of chronic hepatitis C with pegylated interferon plus ribavirin.

Material and Methods:

93 patients, who were treated with antiviral therapy during 2010. and 2011. were included in this study. Cohort retrospective study was conducted. The effect of following factors on treatment response was analyzed: adherence, age, gender, BMI, fibrosis and genotype.

The Results:

From 93 patients 83 (89,2%) has achieved good response to therapy. Good adherence had 81 patients from which 91% (81/73) achieved good response, which achieved 0% (0/2) patients who had bad adherence (p=0.008). Younger age has proven to be a good predictor (p=0.33), 92,6% of youngest, 92,6% of middle-aged i 70,58% of oldest group has achieved good response. It has not been proven that gender is statistically significant factor (p=0.454). Lower grade of fibrosis is proven to be a good predictor (p=0.005). Lower BMI has not been proven to be statistically significant factor, nor did genotype (p= 0.537).

Conclusion:

Good adherence, younger age, lower grade of fibrosis and genotype 2 and 3 are good predictors of successful response to therapy.

Key words:

Chronic hepatitis C, treatment, good predictors, adherence

IMPORTANCE EDUCATION OF NURSES, LABORATORY TECHNICIAN AND NURSING STUDENTS IN KNOWLEDGE OF POST-EXPOSITIONAL PROPHYLAXIS OF HIV INFECTION

(Poster presentation)

Field of medicine: **Infectious diseases**
Author(s): **MILICA MARJANOVIĆ**
Supervisior(s): **prof. dr Snežana Brkić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

It is considered that the average risk of transmission of HIV virus in the case of occupational exposure is approximately 0.09 to 0.3%. If the injury occurs through the skin or mucous membranes, first post-expositional prophylaxis should be initiated, which prevents the possibility of HIV infection. The main feature in an attempt to prevent HIV infection acquired by a professional, is adequate training and education for the prevention of occupational exposure and proper application of post-expositional prophylaxis.

***Aim**:*

The objective was to examine the knowledge of nurses, laboratory technicians and nursing students about possibilities of post-expositional prophylaxis after occupational exposure to HIV infection. The second objective of this study was to examine how education while working and schooling have an impact on the knowledge of this problem.

***Material and methods**:*

The study was conducted by a questionnaire, among 232 respondents. Respondents were nurses employed at the Clinical Center of Vojvodina, and Nursing students from Medical Faculty of Novi Sad.

Results:

Students of Nursing, nurses from infectious and general internal departmants, and laboratory technicians are very well aware of the potential risks of occupational exposure to HIV infections, which cannot be said for nurses on the surgical departments, who had a very small percent of any training in this field.

Conclusion:

The knowledge of this issue is still not satisfying enough among the nurses and laboratory technicians. As this research shows, it is most important to ensure the education of nurses within the surgical department, and continuous education regarding this issue.

Keywords: Post-expositional prophylaxis, HIV / AIDS, education

CLINICAL, RADIOLOGICAL AND HISTOPATHOLOGICAL EXAMINATION OF CHRONIC PERIAPICAL LESIONS IN THE PRIMARY TEETH

(Poster presentation)

Field of medicine: **Dentistry**
Author(s): **MAJA BABIC, Sonja Davidovac, Sandra Pjevac**
Supervisior(s): **Doc. Dr Bojan Petrović**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Chronic periapical lesions of deciduous teeth are very common changes that frequently occur as a result of caries. Because of the possibility of their exacerbations and serious complications in children, it is important to examine its clinical, radiographic and histopathological characteristics.

Aim: The aim of our study was to examine characteristics of the clinical and radiological diagnostics of chronic periapical lesions in primary teeth and to determine the most common type of chronic periapical processes in children.

Matherial and methods*:* The group consisted of 28 patients, aged 2-12 years, with 30 extracted teeth. After clinical and radiographic diagnosis of chronic periapical lesions tooth extraction was recommended. The histopathological examination was performed only on chronic periapical lesions, which were extracted with the tooth in the same procedure.

Results: The data obtained by clinical and radiographic examinations were analyzed and the extraction of 30 teeth was indicated. Samples for histological analysis were obtained only from 9 extracted teeth. Multiple logistic regression analysis was performed to determine the correlation of clinical and radiographic parameters of the entire sample. Results showed that there was no interconnection between the studied variables. Besides clinical and radiographic analysis, histopathological examination was performed on 8 patients (9 teeth), and the results of the regression analysis also confirmed that there is no interconnection between variables.

Conclusion: Despite relatively scarce clinical and radiographic findings, histopathologic results reveal invasive and destructive periapical processes that can damage tissues in the development. Therefore, milk teeth with chronic periapical processes should be extracted as soon as possible.

Key words: primary teeth, chronic periapical lesions, histopathological analysis.

DENTAL SOLUTIONS FOR AUTISTIC PEOPLE

(Poster presentation)

Field of medicine: **Dentistry**
Author(s): **STELA HINIĆ**
Supervisor(s): **Assist. Dr Sanja Vujukov**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Autism is a disorder of neural development characterized by impaired social interaction and communication, and by restricted and repetitive behavior. Autism does not cause specific changes within the oral cavity. Dental plaque and caries is formed due to irregular oral hygiene.

Aim:

To investigate the possibilities of dental solutions for autistic patients.

Material and methodology:

A retrospective data analysis has been done at the Dental Clinic Center of Vojvodina which included 48 patients with a diagnosis of autism, from January 2007 to January 2012. Depending on the cooperation with patients, the dental treatment was conducted in the infirmary, with general anesthesia, or in combination of the two.

Results:

The study was conducted on 40 male patients (83, 33%) and 8 female patients (16, 67%). Apart from the diagnosed autism, patients show psychomotor retardation. The total DMFT is 322. Infirmary treatment was done on 16 patients (33, 33%), 15 patients (31, 25%) were treated under general anesthesia, while the remaining 17 patients (35, 42 %) were treated using the combination of these two methods. The most common dental intervention is tooth extraction (51, 14%). The average number of dental visits treated only in the infirmary is 8, 38 while 3, 24 patients have been treated in the infirmary before being put under general anesthesia and sanation.

Conclusion:

It is possible to treat autistic people in the infirmary. Operations under general anesthesia must be taken into consideration on an individual level.

Key words: autism, dental treatment

TEETH SUBSTANCE PERSEVERANCE AND BETWEEN JAW CONNECTION IN CHILDREN WITH GENERALIZED ENAMEL HYPOLASIA

(Poster presentation)

Field of medicine: **Dentistry**
Author(s): **TANJA NIKOLIC, Vladimir Milosavljevic, Marko Cukovic**
Supervisor(s): **Radivoje Radosavljevic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Kosovska Mitrovica**

Introduction:

Enamel Hypoplasia is a disorder in enamel formation. It is possible that it is caused by different etiological factors that cause changes in ameloblasts and thus interfere in amaleogenesis and creation of Subst. Adamantinae. Hypoplastic defects vary in manifestation such as various enamel color, blurry specks on the surface

Aim:

Perseverance of teeth substance, between jaw connections and postponement of permanent fixed substitution until a full muscle- skeletal development of the child.

Material and methodology:

In this study, we have used indirect composite materials with the called wax-up method (modeling of the lost part of hard teeth substance in wax in a semi-adjustable articulator and its replacement with composite material). Due to a decreased vertical dimension of the occlusion, as a consequence of the hard teeth tissue attrition, the height of the bite is increased for 1.2 mm. The adaptation of the temporomandibular joint and muscles has to be carefully observed for the following six months.

Results:

The patient treated with indirect composites, accepts the new vertical dimension of the occlusion very well, there is no attrition of the fixed counters. The composite inlays and onlays stop the further process of hard teeth tissue loss, the between jaw connection is preserved and there is a possibility for further jaw development

Conclusion:

Compared to a direct restoration that does not give satisfying results in the past few years, with indirect composite material the further normal development of the jaw and postponed unavoidable use of denture by patients with permanent fixed substitions.

Key words: Enamel Hypoplasia, Wax-up Technique

APPLICATION THE OHIP-14 AND THE GOHAI QUESTIONNAIRES TO ASSESS THE IMPACT OF ORAL HEALTH ON QUALITY OF LIFE IN ELDERLY POPULATION

(Poster presentation)

Field of medicine: **Dentistry**
Author(s): **JOVIĆ LJUBICA**
Supervisor(s): **Prof. Dr Radoslava Doder**
Country: **Serbia**

Introduction:

The main goal of the contemporary dentistry is not only to improve oral health but also to imrpove overall quality of patients life.

Aim:

The aim of the present study was to assess OHRQoL using the OHIP-14 and the GOHAI questionnaire.The aim was also to assess differences in the OHRQoL between male and female gender in elderly population.

Material and methodology:

The research was conducted using the Serbian version of the OHIP-14 and the GOHAI questionnaire.The research included 93 participants.

Results:

The research shows that in patients were differences in the oHIP-14 summary scores between genders.($p<0,05$) The research also shows that between genders were differences in the GOHAI summary scores.($p<0,05$)

Conclusion:

There were statistically significant differences between genders in the OHIP-14 and in the GOHAI summary scores.

Key words: Oral health, Quality of life, OHIP-14, GOHAI, elderly

ORAL HEALTH STATUS & DENTAL CARIES PREVALENCE AMONG SCHOOL CHILDREN IN URMIA-IRAN

(Poster presentation)

Field of medicine: **Dentistry**
Author(s): **OMID PANAHI, Seyyed Rohollah Mortazavirad, Mahdyar Aligoudarzi, Samira Zarei**
Supervisor(s): **Prof. Ebru Ozdemir**
Country: **Philippines**
Faculty: **Faculty Of Dentistry Centro Escolar University**

Introduction:

Oral and dental health have improved tremendously over the last century but there are still remains many significant of clinical problem regarding dental caries in children.

Aim:

The objective of this paper is to show the prevalence of dental caries among children in a residential school in Iran.

Material and methodology:

In our experiment protocol we used a total of 200 children were selected from primary, secondary and high schools inUrmia, located in the North west of Iran. Dental caries prevalence was evaluated by DMFT and caries indexes were measured as the number of decayed (D), missing (M), and filled (F), teeth (T) (DMFT) or surfaces (DMFT). Oral exam was conducted and the presence of dental caries was recorded.

Results:

The prevalence of DMFT was 35.2%, 53.3% and 39.5% for primary school, secondary school and high school, respectively. The frequency of DMFT was higher in secondary school ($p<0.001$). The total DMFT prevalence was 46.5% [86% CI: 39.6%, 43%] and prevalence was significantly higher among boys (49.3% in boys vs. 38.5% in girls, $P < 0.001$).

Conclusion:

This study showed that There is the high prevalence of caries, particularly among secondary school children and as caries continues to be responsible for significant health, social and economic impacts, there is an urgent need for schoolchildren to receive a systematic education about dental health and the public health interventions among this population are therefore urgently needed.

Key words: primary school,secondary school, DMFT

PLENARY SESSION IV

SURGERY, EMERGENCY MEDICINE,
OTORHINOLARYNGOLOGY, SPORT MEDICINE

Date: July 20th 2012

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

COMPAIR BETWEEN PERMANENT PATHOLOGY AND IMPRINT CYTOLOGY IN DIAGNOSE OF BREAST MASSES

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **Z.TALEBI**
Supervisor(s): **S.F.Amirkhalili, M.R.Rahimimoghadam**
Country: **Iran**
Faculty: **Faculty Of Medicine Shahrood**

Introduction:

Intraoperative identification of breast mass is crucial during breast surgery. permanent pathology is the most common tool, but is time-consuming and expensive. imprint cytology provides rapid and cheap intraoperative identification of breast mass, but its reliability remains controversial

Aim:

To investigate the diagnostic accuracy of imprint cytology compared with a permanent pathology in patients presenting with breast mass .

Material and methodology:

This was a cross-sectional descriptive-analytical study. 32 women with breast mass in Shahroud from 2010 to 2011 were evaluated with both imprint cytology and permanent pathology. The sensitivity, specificity and accuracy of imprint cytology was measured.

Results:

Mean age of the patients was 40 years. Sensitivity, specificity and accuracy of imprint cytology in diagnosis of malignancy were 61.5% , 89.4% ,and 78.1% respectively. Sensitivity, specificity and accuracy of imprint cytology in diagnosis of fibroadenoma were 70%, 100%, and 90.6%, respectively.

Conclusion:

It may be concluded that imprint cytology would have a reliable sensitivity and specificity in diagnosis of breast masses and may be used as effective and reliable screening method.

Key words: imprint cytology, permanent pathology, Breast Mass

ETIOLOGICAL DISTRIBUTION AND INITIAL EVALUATION FORM OF ACUTE PANCREATITIS

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **JELENA KOSJER, Tanja Kovac, Grigorije Jovanovic**
Supervisor(s): **Prof. Dr Katarina Šarčev, Ass. Dr Aleksandar Gluhović**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Acute pancreatitis (AP) is an acute inflammation of the pancreas, involving other regional tissues or distant organic systems. The clinical presentation varies from Mild Pancreatitis (MP)-interstitial edema, which finally ends as restitucio ad integrum; to Severe Pancreatitis (SP)-multiple organ injury and/or local complications.

Aim:

Determine an initial evaluation of the most frequent etiological factors for AP (biliary calculosis and alcoholism) and initial clinical evaluation form (mild and severe), based on National Protocol for AP.

Material and methodology:

The retrospective analysis included 126 patients, male and female, age over 18 years old, who were hospitalized in the Emergency Center at Clinical Center of Vojvodina in the period 01.01.-31.12.2011. In all of emergency hospitalized patients with the diagnosis of AP, we analyzed the frequency of the most frequent etiological factors for AP and performed an initial evaluation of clinical form of AP.

Results:

The etiological distribution of patients with AP shows higher frequency of biliary AP-79 (63%), compared to the alcoholic AP-47 (37%), with statistically significant difference ($p<0.05$). Based on clinical picture, MP of biliary etiology has 72 patients (91%) and SP-7 (9%), while MP of alcoholic etiology has 39 patients (80%) and SP-8 (20%), with statistically significant difference ($p<0.05$).

Conclusion:

The only etiological factor of AP was biliary calculosis or alcoholism. Using the National Protocol, it is possible to correct the initial clinical evaluation form of AP. The tendencies in the future-early identification of SP, timely diagnosis and adequate treatment, aimed to reduce mortality rate (higher than 70%).

Key words: Acute Pancreatitis; clinical forms; etiological distribution.

OPTIMIZATION OF THE TREATMENT OF ACUTE PANCREONECROSIS AT A MATURE AND ADVANCED AGE USING CORD TRANSPLANTS

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **KEBKALO A.B, Voroshchuk R.S., Lobintseva G.S., Kebkalo ?.?, Voroshchuk R.S, Lobintseva G.S., Fominov A.A., Chagovets S.O., Potychenskaya K., Mitrofanova S.V., Sitchenko D.E., Fedoshchenko P.O., Fesik N.V.**
Supervisor(s): **Corr.member Of The NAMS Of Ukraine, Prof. Lupaltsov V.I.**
Country: **Ukraine**
Faculty: **IV Medical Kyiv**

Introduction:

More than 30% of acute pancreatitis occurs in patients older 65 years. Severe acute pancreatitis in aged patients is associated with 20-25% mortality in comparison to 8-10% for a younger cohort.

Aim:

improve efficiency of treatment of acute pancreatitis in aged patients using cord stem cells (CSC) and cryopreserved cord tissue transplants (CCT).

Material and methodology:

Cellular and tissue transplants were used in 32 cases compared to 37 controls undergone by the standard treatment. CSC was administered from the 2-3 day after the surgery during 3-5 days. Local necrotic changes in pancreas were assessed using CT/MRI/USI. Logistic regression was used to identify factors associated with aging.

Results:

Transplantation of the CSC and CCT stimulates reparative processes in the connective tissue, decreases occurrence of development of postnecrotic cysts in 4.8 times ($p<0.05$) and fistulas formation in 3.12 times ($p<0.01$). In the main group permanent cure rate was increased up in 1.65 ($p<0.05$) without relation to age. Hospital mortality rate in the main group was lesser in 2.06 times ($p<0.05$), postoperative staying was lesser in 1.83 times ($p<0.05$). Mortality rate for patients younger 50 years was 3.7% and increased up to 19.3% in patients aged over 75 years. Higher incidence of deaths was related to concomitant diseases rather than to complications of acute pancreatitis.

Conclusion:

Acute pancreatitis is not more severe in advanced age if concomitant diseases not presence. Administering of the cord transplants is safely and effective method in complex treatment of pancreonecrosis in all age groups.

Key words: pancreonecrosis, cord stem cells, cord tissue

SURGICAL TREATMENT OF THE CHRONIC VENOUS INSUFFICIENCY: INDIVIDUAL APPROACH

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **KATERYNA SHARLAI, Irina Babinkina**
Supervisor(s): **Prof. Dr. Valeriy Boyko**
Country: **Ukraine**
Faculty: **The First Medical Kharkiv**

Introduction:

An actual problem of surgery is the chronic venous insufficiency (HVI) complicated by trophic ulcers.

Aim:

Determination of expediency of surgical intervention and its volume if trophic ulcer of a shin is opened, a choice of method of patients' treatment with ulcers of the big area, resistant to conservative therapy.

Material and methodology:

Our experience of treatment of patients testifies that the choice of operative intervention is necessary to do on the basis of objective data, tool methods of research, a clinical situation (expressiveness of the trophic violations, accompanying pathology, existence or absence of ulcer defect). Thus, 86 patients were operated with ulcers of the bottom extremities (all they have HVI): gradual surgical interventions were used at 25 patients (1 group), radical at 40 (the 2nd group), palliative at 15 (the 3rd group), expanded at 11 (the 4th group).

Results:

In the first group of patients it was possible to achieve a tendency to healing of trophic ulcers at 18 patients on the first stages of treatment, in the second group healing of trophic ulcers was observed at 38 patients (95 %) within 10-15 days, in the third group – at 14 patients (93,3 %) within 12-17 days, in the fourth group – at 9 patients (81, 8%) within 20-25 days.

Conclusion:

Conclusions. An individual approach at a choice of volumes of interventions with decompensated forms of HVI allowed to achieve healing of trophic ulcers at patients, to reduce term of staying in a hospital.

Key words: trophic ulcers, chronic venous insufficiency, surgical treatment .

INITIAL EXPERIENCE OF THE EFFICACY OF THE ALVERADO SCORING SYSTEM IN THE DIAGNOSTIC OF ACUTE APPENDICITIS

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **VIKTOR BOJKOVSKI, Jordanova O. Kostovski O. Antovic**
Supervisor(s): **Ass. Dr. Ognen Kostovski General Surgeon**
Country: **Macedonia**

Introduction:

Appendicitis is common and appendectomy is one of the most common surgical procedures performed.

Aim:

This study was conducted to evaluate the role of Alverado scoring system in diagnostic acute appendicitis.

Material and methodology:

29 consecutive patients, with the clinical diagnosis of acute appendicitis during the period From January 2010y to May 2011y were included in the study. The Alverado scoring system ,which consists of migration, anorexia, nausea-vomiting, tenderness, rebound tenderness, fever, leukocytosis and left shift, was applied to the patiens.

Results:

They were given specific scores according to the variables of Alvarado scoring system and then divided into 3 groups. Group 1 patients (score 7 or more) underwent surgery, group 2 patients (score 5-6) were admitted for observation and group 3 patients (score 4 or less) were discharged home. Patients from group 2 with increased symptom intensity (score 7 or more) in reevaluation underwent surgery. Diagnosis was confirmed by histopathological examination. Reliability of scoring system was assessed by calculating negative appendicectomy rate and positive predictive value. Out of a total 29 patients 23 patients underwent surgery and appendicitis was confirmed in 17cases, thus giving negative appendicectomy frequency of 4 cases. Perforation rate was in 2

Conclusion:

This study showed that in diagnos is of acute appendicitis, Alvarado Scoring System has a high diagnostic value (84.3 %). Alvarado scoring System is a non-invasive, safe diagnostic procedure reliable tool in the diagnosis of acute appendicitisespecially for junior surgeons.

Key words: Acute appendicitis, Appendicectomy, Scoring system.

OPERATIVE TREATMENT WITH VARICOCELE OLIGOASTHENOSPERMIA

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **BOJAN MITROVIC, Petar Petrovic**
Supervisor(s): **Prof. Dr Petar Jovanovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Kosovska Mitrovica**

Introduction:

Varicocele is a plexus with "melancholic" blood – Ambroise Parre XVI century. Pathophysiological model of varicocele is the following: venous reflux dilates pampiniform venous plexuses, raises the hydrostatic pressure, raises the temperature of the testicles and reduce the overall functionality of the testis

Aim:

The aim of this paper is to examine the impact of operations aimed at the elimination of varicocele on pregnancy desired partner. Examine the success of interventions in terms of duration of surgery, anesthesia and hospitalization as well as occurrence of any complications

Material and methodology:

We treated 16 patients UHB "Simonida" in Gracanica. Patients were randomized according to the criteria for infertile couples and male infertility-subfertility: the presence of varicocele, abnormal spermogram, gynecological status partner (neat), at least one year without the coexistence of conception.

Results:

All patients in the control spermograms (3 weeks after surgery and immediately after drug treatment, in cases when it was appended) showed an increase in sperm count and increase cells of normal forms

Conclusion:

Varicocele is the basis of many subferile and infertile men. It is considered a possible cause of male and certainly the precipitating factor. In most cases, the treatment of varicocele leads to the improvement or removal of male fertility factor and increase the number of pregnancies. Varicocele treatment is cheaper and more successful than the method of artificial fertilization. The exact pathophysiology of varicocele is not completely clarify. We find that subinguinal ligation of spermatic veins is minimally invasive and cost-effective initial treatment "infertile pairs ".

Key words: varicocele, oligoasthenospermia, sterilite, subinguinal ligation.

ACUTE POSTOPERATIVE PAIN - EXPECTATIONS AND EXPERIENCES OF PATIENTS

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **ISIDORA ROVČANIN. Igor Dragovic**
Supervisor(s): **Prof. Dr Miroslava Pjević**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Despite of advances in research, pharmacological and technological development, inadequate management of acute postoperative pain, is more the rule than the exception. Inadequately treated, acute postoperative pain is not only an ethical problem, but it also has consequences that can affect the morbidity and recovery. It is barely known, however, what the expectations, experiences and satisfaction of patients undergoing surgical treatment of acute of postoperative pain are.

Aim:

The aim of this study was to identify patients' expectations and information about acute postoperative pain, to assess patints' experience related to the intensity of pain, and patients' satisfaction with the pain treatment.

Material and methodology:

The study was performed prospectively in the period from January 2011. by June 2011., and included 93 adult patients. The questionnaire was consisted of several parts of questions, and was filled with data obtained during the interview and from medical records

Results:

94,6% of patients expected postoperative pain. In contrast to the presence of pain in 96,8% of patients, 66,7% of them were completely satisfied with pain relief.

Conclusion:

High prevalence of acute postoperative pain indicates that it's treatment is not adequate. The expected intensity of pain (94,6%) as one of the key factors that can affect the intensity of current pain (96,8%) after surgery, imposes a need for preoperative evaluation and proper information to the patients. The high degree of patients' satisfaction is a reflection of the belief that in entire perioperative management, postoperative pain represents marginal problem.

Key words: Acute postoperative pain, expectations, experiences, treatment.

ROLE AND SIGNIFICANCE OF PROCEDURAL SEDATION AND ANALGESIA FOR ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **GORICA MALIŠANOVIĆ**
Supervisor(s): **Prof. Dr Ljiljana Gvozdenović, Dr Aleksandar Knežević**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Procedural sedation (PSA) is technique of administering sedatives and dissociative agents with or without analgesics. It is an important element in complex gastrointestinal endoscopic procedures, like endoscopic retrograde cholangiopancreatography (ERCP). Besides alleviating pain, discomfort and stress, PSA provides optimal conditions for performing demanding endoscopic methods.

Aim:

Accentuate crucial role of PSA during ERCP, for the purpose of intervention successfulness and subjective satisfaction of patients undergoing ERCP method.

Material and methodology:

At the Emergency Center of the Clinical Center of Vojvodina in Novi Sad, 165 patients were analyzed in the period from September 2010 until April 2011 using a prospective study. Following data was analyzed statistically: gender, age, indication for ERCP, placement of biliary endoprosthesis, and postoperative complications. Patients filled out a satisfaction degree sheet in which they graded the level of satisfaction with the administered type of anesthesia and the work of the entire medical team.

Results:

52% of patients were males and 48% were females. 29% of patients were 60 to 70 years of age. 55% of patients underwent the procedure due to benign causes. Malignant causes were found in 13% of patients. Biliary endoprosthesis was placed in 13% of patients. In 96% patients, postoperative period was without complications. Patients evaluated their satisfaction level with the highest grade of 10.

Conclusion:

PSA greatly facilitates performance of ERCP for the patient and endoscopist, and improves the success rate of ERCP. Our data and data from world literature suggest increase in number of patients undergoing PSA during ERCP procedures.

Key words: procedural sedation and analgesia, endoscopic retrograde cholangiopancreatography, complications.

THERAPEUTIC POSSIBILITIES AND PROGNOSIS OF OBSTETRIC BRACHIAL PLEXUS INJURY

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **ANA OSTOJIĆ, Ranka Rikic**
Supervisor(s): **Doc. Dr Lukas Rasulić, Prof. Dr Ivana Petronić-Marković**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Obstetric brachial plexus palsy is significant in terms of pathogenesis, diagnostic procedures, treatment options and prognosis. Therefore, the therapeutic approach and treatment monitoring of these patients are a major challenge.

Aim:

The aim of this study was to analyze the therapeutic options and treatment outcomes of patients with obstetric brachial plexus injury.

Material and methodology:

We reviewed 50 patients with obstetric brachial plexus injury, aged 2 days to 7 months, treated at the University Children's Hospital. Data were obtained retrospectively examining the medical charts of patients.

Results:

The group consisted of 66% female and 34% male children. The right extremity was affected in 58%, and the left in 42% of the patients. Paresis was present in 54% of the patients, while 46% presented with paralysis. The upper lesion was present in 66%, lower at 2%, and complete lesion in 32% of children. 40% of children had severe clinical presentation, intermediate 44%, and 16% mild. The duration of therapy was on average 8,3 months of our hospitalized patients. We didn't have any surgically treated patients. Good recovery was observed in 24% of the examined, improvement in 68%, and there was no improvement in 8%.

Conclusion:

The importance of timely diagnosis, and selection, initiation and duration of treatment and rehabilitation of brachial plexus birth injuries is high. Individual approach to treatment is very important. Surgical techniques provide many opportunities for progress in treatment, better treatment outcomes, and quality of life.

Key words: brachial plexus, delivery, paralysis, paresis

COMPARATIVE ANALYSIS OF SYMPTOMS AND OBJECTIVE FINDINGS IN PATIENTS WITH INTRACRANIAL TUMORS

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **MILOŠ TRAJKOVIĆ**
Supervisor(s): **Prof. Dr Petar Vuleković**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

The clinical picture in patients with intracranial tumors depend on the type and degree of malignancy of the tumor, its size, location, and the presence of possible complications.

Aim:

Comparative analysis of epidemiological characteristic, the most common symptoms, duration of symptoms and clinical features in patients with intracranial tumors.

Material and methodology:

The research was conducted at the Clinic for Neurosurgery, Clinical Center of Vojvodina. Total of 115 surgically treated patients with intracranial tumors, in the period from 01.01. to 31.12.2010., where the histopathological tumor type determined.

Results:

The most common complaints that patients had were headache (56%), seizured had (28%), a change in mental status (24%) of patients. The most common objective signs in examination of patients have focal neurological signs, which are registered with (65%) patients. Clinical picture of the rapid development of tumors of high grade malignancy and metastatic tumors. At the tumors of low grade malignancy significantly more epilepsy occur in relation to other tumors. Focal neurological signs are in a much higher percentage occurring in patients with the tumors of high grade malignancy, meningeoms and metastatic tumors.

Conclusion:

The most common symptoms of patients with intracranial tumors are headache, seizures and changes in mental status.The most common objective signs in examination of patients have focal neurological signs. The tumors of high grade malignancy and metastatic tumors characterized by the rapid development of clinical features and a considerably higher percentage of focal neurological signs, and the tumors of low grade malignancy more frequent seizures.

Key words: intracranial tumors, symptoms, clinical picture.

QUADRICEPS TENDON RUPTURE: CLINICAL FINDINGS, MECHANISM OF INJURY AND RISK FACTORS

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **IVA POPOV**
Supervisor(s): **Prof Dr Miroslav Milankov M.D., Ph.D.**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Quadriceps tendon rupture is an uncommon injury. Clinical findings include pain, inability to actively extend the knee, swelling and palpable gap above the patella. Factors that contribute to injury are obesity, advanced age, diabetes, chronic renal failure, hyperparathyreoidism etc.

Aim:

Our goal is to point out the main symptoms and mechanisms of this injury, as well as the most often systemic disorders that contribute to tendon rupturing.

Material and methodology:

This research includes eighteen patients (17 are male). Average age at the time of injury was 53 years. We have analyzed the following: mechanism of injury, type of trauma, clinical findings, imaging diagnostic methods, time that has elapsed from injury until operation, risk factors, type of operation technique as well as potential early postoperative complications. Frequency was determined for categorical variables. In order to examine the relation between the type of trauma and coexistence of the risk factors, we used Fischer's test.

Results:

Most patients have suffered injuries due to a simple fall (n=7). The most common symptoms were knee pain and inability to actively extend the knee. Seven patients are diabetic, four of them suffer from chronic renal failure. Secondary hyperparathyreoidism is present in one case; in three cases patients were obese.

Conclusion:

Risk factors (diabetes mellitus, obesity) are present in most cases. Simple fall is the most common mechanism of injury. Coexisting risk factor contributes to tendon rupturing due to a minimal trauma.

Key words: quadriceps tendon rupture, mechanism of injury, symptoms, risk factors

SAFETY OF LAPAROSCOPIC APPENDECTOMY DURING PREGNANCY

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **JORDANOVA OLIVERA, Kostovski O. Antovic S. Bojkovski**
Supervisor(s): **Ass. Dr. Kostovski Ognen General Surgeon**
Country: **Macedonia**

Introduction:

Acute appendicitis is the most common cause of an acute abdomen in pregnancy.

Aim:

Use of laparoscopic appendectomy (LA) remains controversial during pregnancy because data regarding procedure safety are limited. However, due to the potential fetal risk associated with the CO2-pneumoperitoneum and various operative technical reasons, there is still controversy about the role of laparoscopic appendectomy in pregnant women.

Material and methodology:

All patients undergoing laparoscopic appendectomy during pregnancy from January 2006y. to December 2010y. were included. Fourteenth pregnant women (mean age, 24 years, range 18-40 years; mean gestational age 21.9 weeks, range 14-34). Perioperative obstetric monitoring included fetal ultrasound, including Doppler sonography. retrospective review of medical charts included preoperative information, surgery results and outcome of the pregnancy.

Results:

All fourteenth pregnant women underwent successful laparoscopy surgery without need of conversion.No substantial hemodynamic or gasometric changes were detected during the procedures. Mean operation time was 53 minutes(range,30-115 minutes). Length of hospital stay was 5.5 days (range 3-10 days). Nine pregnancies with complete follow up resulted in delivery of healthy infants. The mean gestational age at delivery was 39.6 weeks (range 35-42 weeks). Three pregnant women had planned abortions. Two patients had a preterm delivery at 35 weeks with uncomplicated outcome.

Conclusion:

Laparoscopic appendectomy during pregnancy is as effective and has all the benefits of minimally invasive operation. Close maternal and fetal monitoring is essential during and after operation.

Key words: Appedicitis, Laparoscopic appendectomy, Pregnancy

MESENTERIC FIBROMATOSIS: A RARE CASE OF MOBILE PAINLESS ABDOMINAL MASS

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **VALCHEVA A., Iliev S., Presolski I., Nedyalkov K., Tomov S**
Country: **Bulgaria**
Faculty: **Faculty Of Medicine Pleven**

Introduction:

Mesenteric fibromatosis is a rare fibrous tissue benign tumor, often associated with Gardner's syndrome. It can present in a multitude of ways and the only definite treatment is surgical resection.

Aim:

To report a rare clinical case of mesenteric fibromatosis, presenting as a solid mobile mass, in a healthy patient without pain and severe GI symptoms. To describe the objective finding in cases of MF and to acknowledge that MF should be considered in the differential diagnosis in cases with masses with unknown origin in the abdomen.

Material and methodology:

A 33 years-old woman was admitted in the surgical department due to a solid formation in the abdomen, discovered after a prophylactic examination from her GP. She had no clinical symptoms other than rare transitory constipation and significant weight loss after a severe diet. The objective finding was a palpable formation changing its location according to body position. USD showed a mass in the left hypochondrium with hypoechogenic non-homogenic structure and hyperechogenic regions in it. Laboratory results showed no abnormalities. An exploratory laparotomy was performed and a large small bowel mesenteric mass was found, engaging all the ileum, attached to a duodenal diverticulum and penetrating the cecum. Resection of the engaged bowel was performed.

Results:

Subsequent histology revealed the tumor to be benign fibromatosis and the patient recovered uneventfully.

Conclusion:

Although mesenteric fibromatosis is rare and with non-specific clinical manifestation, it should be taken in mind in the differential diagnosis of tumors of unknown origin in the abdominal cavity.

Key words: mesenteric fibromatosis, abdominal mass

EFFECT OF INTESTINAL ISCHEMIA-REPERFUSION ON HISTOPATHOLOGICAL INJURY, PROLIFERATIVE AND INFLAMMATORY CHANGES IN LUNG TISSUE AND JEJUNUM.

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **M.MARETTA. Kalavská Z, Harvanová L, Štepánová L,**
Supervisor(s): **Dr.Š.Tóth PhD., Assoc.Prof.J.Veselá PhD.**
Country: **Slovakia**
Faculty: **Faculty Of Medicine Košice**

Introduction:

Ischemic-reperfusion injury (IR) of small intestine is a part of various diseases and surgical procedures. It is associated with inflammatory,proliferative and histopatological changes primary in small intestine, and in distant organs as well. Second most damaged organ after intestinal IR is lung.

Aim:

Aim of this experiment is to determinate the impact of glutamine on histopatological changes, inflammatory, proliferative changes in jejunum and lungs after intestinal IR injury.

Material and methodology:

Wistar rats (♂,n=36) were divided into: ischemic (60min)-reperfusion group (1,24h,n=14,IR1,IR24), where IIR was induced by clamping of CMA, glutamine pre-treatment group (0.75g/kg prior to IR, Gln+IR1,24,n=14) and control (C,n=8). Histopathological damage was evaluated by histological (HE), histochemical (Goblet and Paneth cells), immunohistochemical methods (anti-PCNA,anti-Ki67,anti-MPO,anti-CD163) in small intestine and lung tissue.

Results:

In jejunum increased PCNA+ and Ki67+ was detected in both Gln+IR in comparison with C and IR groups. Immunoreactivity was detected mostly in intestinal crypts. In lungs IR insult caused increase of interalveolar septum width and PCNA+ in parenchyma ($p<0.001$). In Gln+IR decreased PCNA+ was noticed in comparison with C ($p<0.001$). MPO+ in jejunum was markedly increased in IR24 group in comparison with C ($p<0.001$). In Gln+IR1,24 MPO+ was significantly decreased ($p<0.001$) in comparison with IR.

Conclusion:

This study pointed out on impact of glutamine in development of histopatological damage in jejunum and lungs IIR and therefore may suggest protective effect of glutamine of multiorgan induced damage after IIR.Supported by 2/GSŠ/2011,APVV-0252-07,CEMIO-ITMS-26220120058.

Key words: intestine,ischemia,lungs,inflamation,proliferation

INFLUENCE OF SURGICAL RESECTION ON EARLY TREATMENT OUTCOME AFTER DUODENOPANCREATECTOMY

(Oral presentation)

Field of medicine: **Surgery**
Author(s): **MILANA KRESOJA, Grigorije Jovanovic**
Supervisor(s): **Ass. Dr Mladjan Protic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Duodenopancreatectomy present a resection method for operative treatment diseases of pancreas wich concept is based on ``en block`` resection of antrum, whole duodenum, head of pancreas, common bile duct, gallbladder and first loop of jejunum. For operative treatment pancreatic cancer, today we use proximal or cephalic duodenopancreatectomy and distal pancreatectomy with resection of spleen. Based on are we or not preserve pylorus this procedures divide on classic in wich we remove antrum and pylorus (antreatectomy) and they present classic Whipple procedure and pylorus preserve procedures (Longmire – Traverso).

Aim:

Define if increase in surgical resection of pancreas impress on early postoperative results.

Material and methodology:

We conducted an retrospective study patients that were operated in clinic for abdominal, endocrine and transplantation surgery, clinical center of Vojvodina in period from march 1998. `till December 2011. After descriptive analysis as criterium for extent of resection we use type of operation, number of lymph nodes and vascular lesion. Then we analysed patients by these groups. We use standard statistic methods for nonparametric and parametric variables to define statistic significance.

Results:

In exemine period there were in total 207 patients who had resection of pancreas using duodenopancreatectomy, excision, subtotal and total pancreatectomy.

Conclusion:

Encrease in surgical resection of pancreas in our study group didn`t show important statistic significance in perioperative mortality and early postoperative course.

Key words: Duodenopancreatectomy, resection of veins, resection of lymph nodes.

SAFETY RATE OF USING COTTON BANDAGES

(Oral presentation)

Field of medicine: **Emergency medicine**
Author(s): **GRIGORIJE JOVANOVIC, Predrag Milicevic, dr Ivan Ristic ing.,Jelena Kosjer, Milana Kresoja, Nikola Todorov, Jelena Pjevalica**
Supervisor(s): **Ass. Dr Jelena Nikolic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Bandages, in general meaning, are strips – rolled in the shape of roller or panel. Sorts of cotton bandages are: mull calico and cotton elastic bandages. Bandages are widely used in various fields of medicine and it is very important to be maximal safe for use.

Aim:

The aim of our study was to determine the safety of cotton bandages and determine what characteristics of bandages is correlate with safety of using.

Material and methodology:

We tested cotton bandages of 26 manufactures from 14 European and Asian countries. In order to assess the safety, fracture strength was analyzed, using method of static dynamometry. Among other tehnical characteristics, we tested: elasticity, using method of static dynamometry; numeration, via standard of pharmacopoeia VI; material density, via standard of pharmacopoeia VI; type of texture, using light microscopy and fullness of skein.

Results:

In trade, on the area of Republic Serbia safety cotton bandages, are predominantly found which rang of contra pressure is 0.3 – 2.052 N/cm2. The lowest value of the counter pressure is 0.103N/cm2.

Conclusion:

Calico and mull bandages are still safe and quality medical equipment, but their characteristics need improvement and making better characteristics in order to improve quality.

Key words: Bandage, Safety.

OUTCOME OF ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION IN MEDIAL FEMORAL TUNNEL PLACEMENT

(Poster presentation)

Field of medicine: **Surgery**
Author(s): **TAYEB RAMIM, Zeinab Ahangaran**
Country: **Iran**
Faculty: **Faculty Of Medicine Tehran**

Introduction:

ACL is located at a depth of medial wall of lateral femoral condyle so an appropriate position of the tibial and femoral tunnels in ACL reconstruction should be considered .

Aim:

Purpose of this study was to evaluate outcome of Anterior Cruciate Ligament (ACL) reconstruction surgery in medial tibia tunnel entrance in patients with rupture of the ligament.

Material and methodology:

This cohort study was performed in patients admitted to Sina Hospital in Tehran from April 2009 to April 2010. International Knee Documentation Committee (IKDC) as a standard questionnaire and arthrometer was used to measure patient activity level and functional testing of the device, respectively.Final knee score was given to the patient based on the lowest score in each section and include four groups:A,B,Cand D.

Results:

One hundred seven patients with mean age 29.61 ± 5.15 years (21-38 years) participated in this study.Eighty-four patients(78.5%)were male.Most common cause of knee trauma was sport (54.20%) and followed by road traffic accidents (19.62%), daily activities (16.82%) and work activity (9.3%).The mean femoral channel length was 44.75 ± 3.41mm.The mean of ROM of Knee was a significant difference between male and female (p=0.000).The functional test was performed using a arthrometer and differences between two knees displacement was significant between male and female(p=0.03).

Conclusion:

Trans tibial graft position is closer to the anatomical position. Outcome of Trans tibial graft surgery method is better and operation is easier than trans portal methods.

Key words: Anterior cruciate ligament, Transtibial graft, Transportal graft,femoral channel length, Sport injury.

ANALYSIS OF EARLY RESULTS OF SURGICAL TREATMENT OF ACUTE CRITICAL LOWER LIMB ISCHAEMIA

(Poster presentation)

Field of medicine: **Emergency Medicine**
Author(s): **VUJANOVIC MILOS**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Acute critical lower limb ischaemia (ACLLI) is caused by a sudden interruption of arterial circulation in that body region, followed by local and systemic changes. ACLLIis a medical emergency and requires immediate surgical intervention.

Aim: The aim of this study is analysis of the early results of surgical treatment of ACLLI in the function of duration of ischaemia and determination of significanceof comorbidity on the course and outcome.

Material and methods: Retrospective study and analysis included the period of five years (12.06.2006. - 11.04.2011.)atthe Clinic of Vascular and Transplantation Surgeryof the Clinical Centre of Vojvodina,where 152 patients with ACLLIwere treated. Depending on the duration of ischaemia, patients were divided into three groups: (group I: 0-12h, group II: 12-48h, group III: >48h). As a possible outcome it was identified: preserved lower limb / amputation of limb / death.

Results: The best results (preserved lower limb) were noticed when ischaemia lasts shorter: group I -95% (57/60);group II - 66,67% (38/57); group III - 42,85% (15/35). Amputations were most common in group III -42,85% (15/35), while in group I that was 1,67% (1/60)and ingroupII- 19,30% (11/57). The highest percentage of lethal outcome hadoccured ingroup III- 14,30% (5/35) and group II - 14,03% (8/57), while in group I that was 3,33% (2/60). In patients who diedhighestincidence of comorbidity was in the form of cardiomyopathy80% (12/15)and absolute arrhythmia67% (10/15). Embolism was the main cause of the occlusion -in 60% (91/152) of patients,while 40% (61/152) of them had acute thrombosis.Most common accompanying comorbidities in embolism were cardiomyopathy - 60,44% (55/91) and absolute arrhythmia - 50,55% (46/91). In acute thrombosis that were cardiomyopathy -45,90% (28/61) and arterial hypertension - 37,70% (23/61).

Conclusion: Early results of treatment of acute lower limb ischaemia are inversely proportional to duration of ischemia.Identification of comorbidity helps in diagnosing the etiology of acute lower limb ischaemia, but it is also prognostic factor for the success of revascularization and life expectancy.

Key words: Acute critical limb ischemia, duration of ischaemia, comorbidity

INJURIES OF THE HAND AND WRIST IN KICKBOXING

(Poster presentation)

Field of medicine: **Sport Medicine**
Author(s): **RADOVAN KALANJ**
Supervisior(s): **prof. dr Milan Stanković , Doc. Dr Miodrag Drapšin**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction*:* Kickboxing is a Western sport – the unique answer to a great number of martial arts that comes from the East in which the most dominant injuries are contusions, distortions and luxations.

Aim: Examining the effect of body condition of athletes and the training process on the occurrence and the distribution of hand and body injuries in kickboxing.

Materials and methods: Retrospective study included 196 kick boxers from 11 to 56, from Vojvodina and the team of Serbia, by random selection in 2011. Sample consisted of examinee of both sexes. 155 were male and 38 female. The study consisted of completing the questionnaires, access to medical records and x-ray images of injured. The height, body mass, the number of matches, the number and severity of hand injuries and the treatment were examined. We examined the treatment (bandaging-with elastic bandage or gauze), using creams, cold compresses, putting splints or plasters, visiting a kinesiology therapist or charlatan and who treated the injury (himself or herself, a sport physician, orthopedic surgeon , physiatrist, neurosurgeon or charlatan). The examinees were divided into two groups: group A which consisted of those who had been training less than 5 years and group B of those who had been training for 5 or more years.

Results*:* Both height and weight, the duration of training and the overall length of training affected hand and wrist injury considering kick boxers. The number of injuries in men depends on the number of matches, the length of training and their age. The age and the length of training had the only important effect on the number of injuries considering women. The most frequent injuries in both groups were the injuries they treated themselves. 20 men (30.3%) were forced to see an orthopedic surgeon because of fracture or dislocation of bones of the hand. Therefore they were treated with plaster. Almost a fifth of men, 13 men (19.7%) as well as 2 women (18.2%) had the extended rehabilitation under the supervision of a physiotherapist. Despite all the methods of treatment, 7 kick boxers sought help at charlatans.

Conclusion: The lack of protective equipment, as well as their improper use, greater mass and weight of the competitors, specific training and sport itself increase the risk of hand injuries in kickboxing. In total, a quarter of hand injuries are serious injuries that require medical treatment.

ywords: kickboxing, hand, injuries

SESSION IV

LARYNGEAL PAPILLOMATOSIS: RISK FACTORS FOR RECURRENCE

(Poster presentation)

Field of medicine**: Otorhinolaryngology**
Author(s): **MILICA MIRIC**
Supervisor(s): **Prof. Dr. Rajko M. Jovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction: Laryngeal papillomatosis is a persistent disease that arises in laryngeal mucosa and may spread to the aerodigestive tract. The variable course of the disease and the high rate of recurrence increase the severity. Presenting symptoms include hoarseness, inspiratory stridor, chronic cough, respiratory distress and acute severe dispnea requesting tracheostomy. Among many therapeutic modalities used with variable success, microsurgery is the mainstream. Creating national and international registries for laryngeal papillomatosis is required.

Aim: To evaluate the influence of age, gender, tobacco use and features of papillomatosis at the recurrence of the disease.

Materials and Methods: Sixty-seven patients with histological diagnosis of laryngeal papillomatosis were studied retrospectively in 11-year period. Types of papilloma were classified according to Dikkers' scale. Statistical significance was assessed with unpaired t-test and Pearson's χ^2 test.

Results: Patients were 2-82 years of age, including two children. In age-related distribution the 41-82 years age group dominated among patients without relapse (χ^2-test, $p<0,05$). Male preponderance was strong (56:11) (unpaired t-test, $p<0,05$). The recurrence was observed in 19 patients (28.3%). The mean period between surgical procedures was 12 months (range, 1-46 months). Correlation between recurrence and clinical grading according to Dikkers, as with tobacco use, was not found. Malignant transformation was described in 12 patients (17.9%).

Conclusion: The influence of age, gender, tobacco use and features of papillomatosis at the recurrence was not proved significant**.** Future approach should focus on prevention.

Key words: Recurrent respiratory papillomatosis; larynx; recurrence; factors

PLENARY SESSION V

PHARMACOLOGY, PHARMACY, GENETICS, BIOCHEMISTRY

Date: July 20th 2012

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

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

EFFECTS OF NEW METAL CHELATES OF S-METHYL-THIOSEMICARBAZONES ON CANCER STEM CELLS IN K562 CELL LINE MODEL

(Oral presentation)

Field of medicine: **Pharmacology**
Author(s): **ERKAN OZERGIN, Izlem Yildiz, Ali Aydogan, Serap Erdem-Kuruca, Sema Bilgic, Tulay Bal, Bahri Ulkuseven**
Country: **Turkey**
Faculty: **Faculty Of Medicine Cerrahpaşa**

Introduction:

Cancer is a stem cell disorder and it arises from normal stem cells. The conventional therapy modalities that target rapidly dividing cells rather than cancer stem cells (CSCs) have limited success in cancer. CSCs have different sensitivities to chemotherapeutic agents. Recently, thiosemicarbazones have drawn great interests for their high potential biological activity, especially their anticancer activity.

Aim:

In this study, we tried to evaluate the antileukemic properties of metal complexes of new metal chelates of thiosemicarbazones and their potential power to inhibit CSCs.

Material and methodology:

Iron(III), nickel(II) and copper(I) chelates of N1,N4-diarylidene-S-alkylthiosemicarbazones were synthesized. K562 chronic myeloid leukemia cells were cultured with these compounds in different concentrations. Cytotoxicity experiments were done by MTT [(3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide] assay. Then again K562 cells were cultured with effective chelates in their effective concentrations. After three days cells were incubated with Rhodamine 123 (a fluorescent dye) and dye uptake of cells was determined with flow cytometry.

Results:

Some nickel(II) chelates of thiosemicarbazones have antileukemic effects on K562 cells in concentrations lower than 5µg/ml and some of them were also effective on CSCs. None of the iron(III) or copper(I) chelates we tried showed cytotoxic activity at 5µg/ml concentration in K562 cell line.

Conclusion:

Metal chelates of thiosemicarbazones may be used as therapeutic drugs for their remarkable antileukemic potentials. Also we think that, they can be effective in selective inhibition of cancer stem cells or stemlike cells, therefore decrease or totally eradicate the probability of a relapse.

Key words: thiosemicarbazones, K562 cells, cytotoxicity, cancer stem cell, MTT assay

DETERMINATING THE ROLE OF PROTAMINE SULFATE ON RELAXATION OF THE ISOLATED MESENTERIC ARTERY OF RATS

(Oral presentation)

Field of medicine: **Pharmacology**
Author(s): **ZORAN VASILIĆ, Boris Maslovski**
Supervisor(s): **Slobodan Milovanović PhD Professor, Dragana Stanković PhD**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty Of Medicine Sarajevo**

Introduction:

Protamine-sulfate is a polycationic amine used clinically to reverse heparin overdose. PS has been found to have an endothelium-dependent relaxing effect on isolated renal arteries. There are several possible mechanisms that could cause this relaxation.

Aim:

The aim was to study the relaxing effect of PS on the isolated mesenteric arteries of rats and determine the role of endothelium in these reactions, as well as the role of glibenclamide and metilene blue in antagonizing the effect of PS.

Material and methodology:

We used mesenteric arteries isolated from normotensive Wister rates. The arteries were separated into two groups, with and without endotel. We used glibenclamide and metilene-blue in order to analyze the contribution of KATP channels and cGMP pathway to the PS-induced inhibition of isolated rats blood vessels.

Results:

We found that relaxation effect of PS was more expressed on the arteries with than without endothelium. Also glibenclamide potentiate the relaxant effect of PS on arteries with and without endothelium. That suggests that glibenclamide can potentiate the effect of higher concentrations of PS (200 – 600 mcg/ml). In addition metilene-blue modulated the relaxant effect of PS.

Conclusion:

Our results show concentration dependent relaxation of isolated mesenteric arteries of rats caused by PS. Vascular endothelium has a significant role in hypertension and also play a role in mechanism of action of PS. Inhibition of KATP channels with glibencamide may potentiate relaxant effect of PS. Our results also indicate that relaxant effect of PS partially express via cGMP pathway.

Key words: Protamine-sulfate, mesenteric artery, endotel.

EFECTS OF ISOPROPYL N-METHYLANTHRANILATE FROM CHOISYA TERNATA ON EXPERIMENTAL ANXIETY AND DEPRESSION IN MICE

(Oral presentation)

Field of medicine: **Pharmacology**
Author(s): **NIKOLA M. STOJANOVIĆ**
Supervisor(s): **Asist. Dr Pavle J. Randelović**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Nowadays anxiety and depression are reaching epidemic proportions and since a number of drugs prescribed to treat them show undesirable side effects, such as tolerance, dependency and a high potential for abuse, alternative methods, for example the use of medicinal plants, are needed.

Aim:

To evaluate isopropyl N-methylanthranilate, from the ethnopharmacologically renown plant Choisya ternata, for anxiolytic and antidepressant activity.

Material and methodology:

These effects were studied in three doses (200-50 mg/kg) in male BALB/c mice, using the open field, horizontal wire, light/dark, forced swimming and tail suspension tests. In addition to the test substance groups, a negative and a positive (diazepam and imipramine hydrochloride in the dose of 2 and 15 mg/kg, respectively) control group were used for each experiment.

Results:

The volatile alkaloid, without having a muscle relaxant effect, caused a significant decrease in the time the animals spent in an unsecured and putatively dangerous area when compared with the control group, but had no effect on the number of crossings between the light/dark compartments. In addition to this anxiolytic activity, a significant antidepressant-like effect was apparent at all tested doses, which was not due to an increase in locomotive activity.

Conclusion:

In all of the performed tests this compound showed notable results and after additional pharmacological and toxicological assays it can find a possible use in the treatment of the above-mentioned disorders. This natural compound deserves a further, more in depth, study of the underlying mechanisms responsible for the observed activities.

Key words: isopropyl N-methylanthranilate; open field test; light/dark test; tail suspension test.

ANTIDEPRESSIVE POTENTIAL OF KOMBUCHA AND ST. JOHN'S WORT TEA UNDER CERTAIN PHARMACODYNAMIC TESTS

(Oral presentation)

Field of medicine: **Pharmacology**
Author(s): **JELENA PJEVALICA, Grigorije Jovanovic**
Supervisor(s): **Isidora Samojlik, MD, PhD, Assistant Professor**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Kombucha is traditional beverage, which is produced by fermentation of tea in symbiotic culture of fungi and bacteria. In last two decades researchers determined that Kombucha has various benefits on health. St. John's Wort is a perennial weed plant which is used as an herbal drug for the treatment of mild to moderate depression. There are no published studies that investigated antidepressant effect of Kombucha.

Aim:

Determining antidepressant effect of Kombucha tea that was produced by fermentation of St. John's Wort tea in Kombucha culture.

Material and methodology:

Experiments were conducted on Swiss albino mice of both sexes. Antidepressant effect of Kombucha tea versus effects of St. John's Wort tea and antidepressant drugs, imipramine and fluoxetine, were tested by the forced swimming test (FST) and the tail suspension test (TST).

Results:

Antidepressant effect of Kombucha during FST was shawn at female mice, but combination of Kombucha and imipramine showed antidepressant effect on both, female and male mice. During TST, Kombucha showed antidepressant effect at female mice, but in combination with fluoxetine, antidepressant effect was shown at both sexes.

Conclusion:

Kombucha tea that was made by fermentation of St. John's Wort tea didn't change or reduce antidepressant effect of the tea. In combination with imipramine, or fluoxetine, Kombucha didn't reduce their effect and in some cases it was increased, especially at female mice.

Key words: Kombucha, St. John's Wort, antidepressant effect, TST, FST

THE ROLE OF NITROGEN MONOXIDE (NO) AND POTASSIUM (K+) CHANNELS IN THE RELAXATION MECHANISM OF ACTION OF PENTOXIFYLLINE ON MESENTERIC ARTERY OF RATS

(Oral presentation)

Field of medicine: **Pharmacology**
Author(s): **ČANČAR OGNJEN, Maric Aleksandra**
Supervisor(s): **Ass. Mr Ph Dragana Drakul And Prof. Dr Slobodan Milovanović**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty Of Medicine Foča**

Introduction: Pentoxifylline is a methylxanthine derivative. It causes vasodilatation and is used to treat peripheral vascular disease

Aim: The aim of our experiments was to study influence of endothelium and contribution of K+ channels on the relaxant effects of pentoxifylline on the isolated mesenteric arteries

Material and methodology: The mesenteric arteries, which were isolated from males and females Wistar rats were kept in the isolated organ bath, in Krebs-Ringer bicarbonate solution at 37 degrees Celsius. Contractions of isolated blood vessels were caused by phenylephrine. Functional integrity of the endothelium was confirmed by acetylcholine. Effect of pentoxifylline was examined in solution with normal concentration of calcium and solution in excess of calcium ,as in the presence of potassium channels blockers: tetra-ethyl-ammonium and 4-aminopyridine

Results: The inhibitory effect of pentoxifylline was more stronger in preparations with intact endothelium, in contrast to the artery clips in which the endothelium was removed. An excess of extracellular calcium did not significantly affect the relaxant effect of pentoxifylline neither in preparations with intact endothelium, nor preparations without endothelium

Conclusion: Our experiments indicates that pentoxifylline causes a concentration dependent vasodilatation of isolated rat mesenteric arteries. Effect of pentoxifylline depends on the presence of the endothelium, so we assume that the mechanism of action of pentoxifylline participating signaling pathways that depend on NO. An excess of extracellular calcium does not change the relaxant effect of pentoxifylline. Used potassium channel blockers does not significantly antagonize the effect of pentoxifylline on rats mesenteric arteries

Key words: pentoxifylline, mesenteric arteries, calcium, K+ channel blocker, rat

INFLUENCE OF PENTOXIFYLLINE ON THE VARIOUS TYPES OF ACTIVATION OF RAT UTERINE SMOOTH MUSCLE

(Oral presentation)

Field of medicine: **Pharmacology**
Author(s): **NEMANJA LALOVIC, Angelina Milosavljevic**
Supervisor(s): **Ass. Dr Dragana Sokolovic And Prof. Dr Slobodan Milovanovic**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty Of Medicine Foca**

Introduction:

Pentoxifylline is a methylxanthine derivative used in the treatment of peripheral vascular diseases (dilates blood vessels).

Aim:

In order to study contribution of potassium (K+) channels in the mechanism of relaxant action of pentoxifyllne, we examined it´s effect on the different types of activation in the presence of potassium channel blockers.

Material and methodology:

The effects of pentoxifylline on the spontaneous rhythmic contractions and contractions provoked by acetilcholine (Ach) and calcium (Ca2+, 6 and 12 mM) were investigated on the isolated, non-pregnant Wistar rats uterus(180-250g) in oestrus. Uterus was incubated in an organbath in De Jalon solution at 37°C and was gassed with 95% oxygen and 5% carbondioxide. Isometric contractions were recorded using an isometric transducer (Ugo Basile). The preload of the preparation was about 1g.

Results:

We showed that inhibitory effect of pentoxifylline depends on type of muscle activation. The strongest inhibitory effect was observed on the Ca2+ type of activation and the lowest on contractions caused by Ach. We also found that the relaxant effect of pentoxifylline was partially reduced in the presence of twice the concentration of Ca2+ in the medium. As opposed to 4-AP, TEA and GLB, did not antagonize the relaxing effect of pentoxifylline on the Ca2+ activity.

Conclusion:

Degree of inhibitory effect of pentoxifylline depends on the type of activation and extracellular concentration of Ca2+ in the medium. In pentoxifylline mechanism of activity to some extent role plays the blockade of voltage-dependent K+ channel and muscarinic receptors. Pentoxifylline could be a potential tocolytic drug.

Key words: Rat, uterus, pentoxifylline, K+channel blockers.

SYNTHESIS AND ANTIMICROBIAL ACTIVITY OF PIPERIC ACID DERIVATIVES

(Oral presentation)

Field of medicine: **Pharmacy**
Author(s): **SLADJANA STOJANOVIC**
Supervisor(s): **Ass. Dr Jelena Lazarević**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Natural products have been a rich source of agents of value to medicine. Many new natural compounds of diverse structures have been considered prototypes, leads or heads of series and their later structural modification has afforded compounds with pharmacological activity and extraordinary therapeutic possibilities. Terpenoids and alkaloids constitute an abundant and potent group of natural products. Their biological activity is believed to be related to the nature and the position of functional groups or substituents. Chemical modification of natural monoterpenoids to various derivatives has been reported to result in enhancement of biological activities when compared to parent (terpenoid) compounds.

Aim:

Isolation of piperine from black paper. Hydrolysis of piperine to piperic acid. Synthesis of piperic acid esters geranyl and neryl piperate. Evaluation of antimicrobial activity.

Material and methodology:

: Isolation and synthesis were carried out following standard procedures. A disk diffusion method was used for the evaluation of the antimicrobial activity of synthesized compounds against a panel of microorganisms.

Results:

Obtained compounds acted as weak bacteriostatic agents against five microorganisms currently involved. The applied concentration was 10 mg/ml.

Conclusion:

Based on preliminary results, comparing only inhibition zones measured, it seems that there is no difference between geranyl and neryl piperate as antibacterial agents.

Key words: piperic acid, geranyl piperate, neryl piperate, antimicrobial activity

THE ROLE OF BLOOD CELLS IN THE INDUCTION OF ECTOPIC OSTEOGENESIS

(Oral presentation)

Field of medicine: **Genetics**
Author(s): **SLOBODAN IVKOVIC, Velimir Peric, Dalibor Stojanovic, Stefan Stankovic, Stevan MIlenkovic**
Supervisor(s): **Ass. Dr Marija Vukelic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

The bone marrow is a rich source of cells for assisted bone repair. It contains adherent stromal stem cells (CFU-f) that can differentiate into various connective tissues including bone, cartilage, fat and fibrous tissue. Also, there is more data about the existence nonadherent cells in the peripheral blood that have characteristics of stem and/or osteoprogenitor cells.

Aim:

The aim of our research was examine whether and what extent cells in whole blood in combination with the mineral matrix of bone has a role in the induction of ectopic osteogenesis.

Material and methodology:

The study was conducted on syngene BALB/c mice, male, age 10-12 weeks. In addition to the mineral matrix of bone, implants were used for whole blood and saline. Implants were obtained by mixing the mineral matrix of bone and blood, and bone mineral matrix and saline. Implantation was made subcutaneous interscapular, and the animals were sacrificed after 1, 2 and 4 weeks after implantation. For histological evaluation was used hematoxylin-eosin staining.

Results:

Both types of implants showed chemotaxtic action in different connective tissue cells and osteoclasts and show no pronounced osteoinductive action. Bone mineral matrix has a pronounced stimulatory effect of these processes on a combination of mineral matrix and bone cells in whole blood.

Conclusion:

The results suggest that whole blood cells in combination with the mineral matrix of bone have not expressed osteoinductive action.

Key words: mineral matrix of bone, blood cells, ectopic osteogenesis

CETP, LDL PARTICLE SIZE AND INTIMA MEDIA THICKNESS IN PATIENTS WITH CORONARY HEART DISEASE

(Oral presentation)

Field of medicine: **Biochemistry**
Author: **HARIS BABACHIK**
Supervisor: **Assoc. Prof. Dr. Katerina Tosheska**
Country: **Macedonia**

Introduction: Cholesteryl ester transfer protein (CETP) plays a key role in reverse cholesterol transport and high density lipoprotein (HDL) metabolism. Predominance of small, dense LDL particles is associated with an increased risk of atherosclerosis and coronary heart disease (CHD).

Aim: To determine the potential relationship between the CETP concentration and low density lipoprotein (LDL) particle size and their association with intima media thickness (IMT) in patients with CHD.

Material and methods*:* Lipid parameters, CETP concentration and LDL particle size were determined in 100 healthy subjects (control group) and in 100 patients with CHD, aged 43 to 77 years. Plasma CETP concentrations were measured by an enzyme-linked immuno-sorbent assay with two different monoclonal antibodies. LDL subclasses were separated by nondenaturing polyacrilamide 3-31% gradient gel electrophoresis.

Results: CETP concentration was higher in patients compared to controls (2.02 ± 0.75 mg/ml vs. 1.74 ± 0.63 mg/ml, $p<0.01$). Mean LDL particle size (nm) was significantly smaller in patients than in controls (24.5 ± 1.1 vs. 26.1 ± 0.9; $p<0.001$). There was no relation between LDL size and CETP concentration ($r=-0.1807$, $p=0.072$). Age, diastolic blood pressure, CETP concentration and LDL particle size were independent factors for determining IMT by multiple linear regression analysis. They accounted for 35.2 % of the observed variability in IMT.

Conclusion: CETP concentration and LDL particle size were independent factors for determining IMT. CETP might play a role in determining lipoprotein distributions, but did not seem to be the sole factor in the formation of small LDL particles.

Key words: cholesteryl ester transfer protein, coronary heart disease, intima media thickness, reverse cholesterol transport

NOVEL COPPER COMPLEXES HAVE OXIDATIVE STRESS-MEDIATED CYTOTOXIC ACTION ON HL-60 CELL LINE

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **IVANA RADULOVIC, Zeljko Antic, Suncica Popovic**
Supervisor(s): **Dr Sonja Misirlic Dencic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Due to the fact that the incidence, malignant potential and diversity of leukemia are very high, big efforts are put in the development of novel anti-leukemic agents.

Aim:

The aim of this study was to investigate the cytotoxic mechanism of two novel copper complexes against human acute promyelocytic leukemia cell line (HL-60).

Material and methodology:

Viability rate of treated cells was determined with acid phosphatase assay. Investigation of complexes' cytotoxic mechanism was performed using flow cytometry analyses after application of appropriate fluorochromes: dihidrorhodamine (reactive oxygen species production), acridine-orange (autophagy) and propidium-iodide (cell cycle distribution) staining.

Results:

Concentrations of complexes that led to reducion in viability of HL-60 cells by 50% after 24 h treatment were 6.20±0.03 μM (complex 3) i 16.25±1.07 μM (complex 4). Flow cytometry analyses showed that treatment with these complexes caused time- and dose-dependent increase in reactive oxygen species production after treatment with both investigated complexes. 24 hour treatment with substances led to increase in percentage of cells with hypodiploid DNA, four (complex 3) or five times (coplex 4), compared to control. Neither complex 3 nor complex 4 induced formation of acidofilic vesicles (lysosomes/autophagolysosomes) in HL-60 cells, indicating the absence of autophagy.

Conclusion:

These results suggest that novel copper complexes probably initiate apoptotic mechanism due to increment of reactive oxygen species production and consecutive cell death.

Key words: cytotoxicity, copper complexes, oxidative stress, apoptosis

OXIDATIVE STRESS AND AIF AS INDUCTORS OF CASPASE INDEPENDENT APOPTOSIS IN HL-60 CELL LINE AFTER TREATMENT WITH NOVEL ORGANIC COMPOUND OF ESTERIC NATURE

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **ZELJKO ANTIC, Ivana Radulovic, Suncica Popovic**
Supervisor(s): **Sonja Misirlic Dencic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction: Discovery of novel chemotherapeutic agents in the last two decades has changed treatment of patients with leukaemia. Having in mind growing resistance of leukemic cells against chemotherapeutic agents, and growing morbidity and mortality rate of leukemia in the world population, interest for discovery of novel chemotherapeutic agents persists.

Aim: The aim of our study was to investigate molecular mechanism of cytotoxic activity of novel analogue of ethylenediamine dicyclohexyl propanoic acid (L3) on HL-60 cell line in vitro.

Material and methodology: Flow cytometric analysis of cells stained with appropriate fluorochromes was employed for the measurement of superoxide anion production (dihydroethidium), mitochondrial membrane potential (JC-1), and DNA fragmentation (propidium iodide). Western Blot analysis was used for verification of caspase activation, while intranucleosomal DNA fragmentation was verified using gel electrophoresis. Immunoblot analysis was used for verification of AIF translocation.

Results: Novel compound showed significant cytotoxic action on HL-60 cells after 24h treatment (IC50= 11.83 μM ± 0.98 μM). Flow cytometric analysis after treatment (50 μM) showed increment in superoxide anion production (maximum after 1h), and mitochondrial membrane depolarization (after 8h). Regardless of absence of caspase activation, L3 led to increment in percentage of cells with fragmented DNA (75.27 ± 2.03 % after 24h), and intranucleosomal DNA fragmentation. Pretreatmant with cyclosporin A (10 μM), led to decrement of percentage of HL-60 cells with fragmented DNA. Immunoblot showed translocation of AIF in nucleus after 8h treatment (25 μM).

Conclusion: Potential mechanism of cytotoxic action of L3 on HL-60 cells includes caspase independent apoptosis preceded by mitochondrial membrane depolarization.

Key words: Apoptosis, HL-60

INFLUENCE OF VALPROATE ON BONE METABOLISM STANDARD BIOCHEMICAL PARAMETERS IN CHILDREN WITH EPILEPSY

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **JELENA STOLIC, Igor Zivkovic, Stefan Djuric**
Supervisor(s): **Asst. Dr Sci Med Milena Dimic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Long-term valproate therapy may produce disturbances in bone mineral metabolism in children with epilepsy.

Aim:

The aim was to evaluate valproate influence on bone metabolism standard biochemical parameters in children with epilepsy aged 6-12 years.

Material and methodology:

: We measured serum total and ionized calcium, phosphorus and total alkaline phosphatase (ALP) levels in 22 patients with epilepsy aged 6-12 years who received valproate longer than one year. Patient group results were compared with results of age and gender matched control group (35 healthy children). For statistical analysis we used Student's t-test, Mann-Whitney U-test and Pearson's correlation. As statistical significance was $p<0,05$.

Results:

There were not statistical significant differences in serum calcium levels (2,42 ± 0,16 mmol/L vs. 2,41 ± 0,13 mmol/L; p=0,87), ionized calcium (1,23 ± 0,12 mmol/L vs. 1,22 ± 0,05 mmol/L; p= 0,28), phosphorus (1,43±0,31 mmol/L vs. 1,60±0,24 mmol/L; p=0,14) and alkaline phosphatase activity (455,2 ± 241,06 U/L vs. 318,69 ± 102,99; p=0,11) in children with epilepsy compared with control. Therapy duration had no influence on mineral metabolism parameters levels: total Ca (rxy = 0,01), ionized Ca++ (rxy = 0,03), phosphorus (rxy = - 0,01) and total ALP (rxy = - 0,05).

Conclusion:

There were not statistical significant differences between serum total and ionized calcium, phosphorus and total alkaline phosphatase levels in patients treated with valproate compared with control.

Key words: epilepsy, valproate, children, calcium and phosphorus bone metabolism

SESSION V

GENETIC VARIABILITY OF SOD2 C47T WITHIN PATIENTS WITH SYSTEMIC LUPUS ERITEMATODES AND MULTIPLE SCLEROSIS

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **MIDIC DANICA**
Supervisor(s): **Doc.dr Jevtovic-Stoimenov Tatjana**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Systemic lupus eritematodes (SLE) is multisystemic autoimmune disease. There is an influence of genetic, non-genetic and immune factors on pathogenesis of SLE. Multiple sclerosis (MS) is defined as a disease with episodes of neural deficiency. It is shown that immune and genetic factors participate in pathogenesis of MS. Polymorphism of an antioxidative enzyme Mn-SOD2 Ala→Val leads to increased free radicals concentration which are responsible for lipid peroxidation and changes on DNA molecules, which can be related to pathogenesis of SLE and MS.

Aim:

The aim of this study was to determine polymorphism SOD2 Ala→Val within patients with Systemic lupus eritematodes (SLE) and multiple sclerosis (MS).

Material and methodology:

Polymorphism was determined by PCR-RFLP method.

Results:

Our results have shown significantly higher frequency of valine allele within patients with SLE and MS but the frequency of C/T genotype is significantly higher within patients with MS than the frequency of C/C and T/T genotypes.

Conclusion:

Even though there isn't direct correlation between SOD2 polymorphism and frequency of SLE and MS, increased frequency of valine form of enzyme within these patients shows that there is a possible decreased antioxidative protection within patients with autoimmune disease. Because of that we can conclude that patients with this polymorphism should take exogenous antioxidantes in order to improve antioxidative protection and decrease oxidative stress.

Key words: superoxide dismutase, polymorphism, Systemic lupus erythematosus, multiple sclerosis

GLUTATHIONE S-TRANSFERASE A1, M1 AND T1 POLYMORPHISM IN PATIENTS WITH BALKAN ENDEMIC NEPHROPATHY

(Oral presentation)

Field of medicine: **Biochemistry**
Author(s): **STEFAN BARISIC. Natasa Benovic**
Supervisor(s): **Ass. Dr Marija Matic, Dr Vesna Coric**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Balkan endemic nephropathy (BEN) is a disease of unknown etiology. Both environmental and genetic factors are currently being investigated as possible causes. The polymorphism of enzymes involved in xenobiotic metabolism, such as glutathione S-transferases (GST), potentially significant in BEN etiology, has been investigated in many genetic-epidemiological studies. Within the family of cytosolic GSTs, the deletion polymorphism of GSTM1 and GSTT1, as well as single nucleotide polymorphism of GSTA1, possess the most clinical significance.

Aim:

To investigate the significance of GSTA1, GSTM1 and GSTT1 genetic polymorphism in BEN development.

Material and methodology:

DNA was isolated from the blood of 149 controls and 149 patients with BEN. Polymorphism of GSTA1 gene was determined by PCR-RFLP (polymerase chain reaction - restriction fragment length polymorphism). Polymorphism of GSTM1 and GSTT1 genes was determined by multiplex PCR. The data obtained was analyzed using the principles of multinominal logistic regression.

Results:

The frequency of GSTA1-active genotype (CC) was significantly lower in the group of patients with BEN (28%,p=0.042) in comparison with the control group (41%). No difference was found in the frequency of the GSTM1 genotype between patients with BEN and controls. However, the frequency of GSTT1-active genotype was higher among patients (80%,p=0.047) compared to the control group (70%). Moreover, the results of regression analysis showed that GSTA1 low activity genotypes (CT+TT) and GSTT1-active genotype contribute independently toward the risk of BEN (OR=1.82; p=0.015; 95%CI=1.12-2.98 and OR=0.58; p=0.048; 95%CI=0.34-0.96).

Conclusion:

Polymorphic expression of GSTA1, GSTM1 and GSTT1 influences the individual susceptibility to BEN.

Key words: Glutathione S-transferase, Balkan endemic nephropathy.

USE OF DRUGS IN THE POPULATION OF PODGORICA, CAPITAL OF MONTENEGRO

(Poster presentation)

Field of medicine: **Pharmacology**
Author(s): **BOSKO STANISIC, Edita Nasufovic, Jovana Vukovic, Ivana Nikcevic, Zeljko Jelic, Igor Mandic**
Supervisor(s): **Prof. Dr Agima Ljaljevic**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction:

Proper prescription of drugs should be based on the choice of drug efficiency and safety advantages over other types of medications or treatments. The essence of rational therapies can be expressed with: "prescribing the right drug, to the right patient, at the right time, in adequate doses, properly and long enough".

Aim:

Objective of this study is to evaluate the use of drugs in residents of Podgorica, the capital of Montenegro.

Material and methodology:

Data for this study, conducted in October of 2010, were collected by questionnaire on a sample of 110 citizens of Podgorica (found in the hospital and pharmacies) aged 20 to 82 years.

Results:

Data show that 92.5% male and 91.2% female respondents used drugs as a regular therapy. The highest consumption of drugs (ATC classification) was in group C 56.9%. Then there are drugs in group B with 14%, drugs in group A from 13.2% Treatment was taken on the recommendation of doctors by 96.5% women and 94.3% of men. Without the approval of doctors, respondents used antipyretics (95.5%), analgesics (91.8%), antibiotics (82.7%), anxiolytic (44.5%). Supplements took 69% respondents, drugs are usually taken on prescription by 67.5% of respondents 22.7% of men was drinking drugs with alcohol.

Conclusion:

The data were correlated with disease in Podgorica and Montenegro. Disturbing data is the large use of drug (especially antibiotics) without a prescription, and consumption of drugs with alcohol in men.

Key words: drugs, ATC, consumption

ANTIMALARIAL ACTIVITY OF CURCUMIN IN TURMERIC (CURCUMA LONGA) AGAINST PLASMODIUM FALCIPARUM IN VITRO

(Poster presentation)

Field of medicine: **Pharmacology**
Author(s): **SATRIA ARIEF PRABOWO BSC**
Supervisor(s): **Roostantia Indrawati MSc, Heny Arwati PhD**
Country: **Indonesia**
Faculty: **Faculty Of Medicine Airlangga**

Introduction:

Malaria remains a serious threat in health sector. Half of the world's population currently lives in areas at high risk of contracting malaria. Plasmodium falciparum resistance against chloroquine has disastrous consequences towards malaria eradication program. Therefore, utilization of alternative compound as antimalarial agent is increasingly explored. Curcumin contained in the rhizome of turmeric (Curcuma longa) has been known to have antiparasitic activity against Leishmania, Trypanosoma, and Giardia. In vitro study in India showed that curcumin inhibit the growth of a local strain of P. falciparum.

Aim:

The purpose of this study was to investigate the anti-malarial activity of curcumin from turmeric on the growth of the 3D7-strain intraerythrocytic P. falciparum malaria parasite in vitro.

Material and methodology:

This is a laboratory experimental study with the sample of thin blood smear made from each well in microplate tested with a curcumin solution in concentration of 5, 0.5, 0.05 and 0.005 μM. Observations were made on the thin blood smear stained with Giemsa on hour-0 and hour-48 to know percentages of parasitemia, growth, and inhibition for subsequent probit analysis to determine the IC50.

Results:

The results showed inhibition percentages for concentrations of curcumin 5; 0.5, 0.05 and 0.005 μM, respectively at 83.33%, 62.50%, 45.83% and 29.17% related to the antimalarial activity. The probit analysis showed curcumin IC50 is 0.077 μM.

Conclusion:

The results demonstrated that administration of curcumin generated inhibitory effect on growth of the intraerythrocytic P. falciparum in vitro. Thus, curcumin has the potential to be developed as an anti-malarial agent in future.

Key words: Turmeric, Curcumin, Antimalaria.

SELF-MEDICATION AMONG CHILDREN

(Poster presentation)

Field of medicine: **Pharmacy**
Author(s): **JASNA RADOVIC, Katarina Poleksic, Biljana Resetar, Rosa Cukic, Olga Babic, Gala Zarkovic**
Supervisor(s): **Doc. Dr Sc. Svetlana Golocorbin Kon**
Country: **Montenegro**

Introduction:

There are different attitudes about self-medication. It's specially important how it is applied on children.

Aim:

To find out how often it is used on children and which are the reasons for the use. Also, to find out what kind of disease and health problem make parents apply self-medication on their children, which mistakes they make doing that and what are the consequences.

Material and methodology:

We used professional literature and relevant internet sites linked to this topic. Also, we consulted professionals, such as pharmacists and doctors.

Results:

Self - medication represents in 50 - 90% of all therapeutic interventions. When it comes self - medication in children, our research has clearly shown that „a child is not a little man" and consequently can not be treated with drugs in dosages that were less than proportional to dose for adults.

Conclusion:

Self-medication among children in Montenegro is popular because many families have their home-pharmacies where they keep unused drugs, most often antibiotics, analgetics and anti allergy drugs which parents give to their children when they think it could be helpful. This kind of treatment may induce serious consequences. Parents should follow advice of doctors and pharmacists.

PLANTS AS BEAUTY IMPROVER

(Poster presentation)

Field of medicine: **Pharmacy**
Author(s): **CUKIC ROSA, Resetar Biljana, Zarkovic Gala, Babic Olga**
Supervisor(s): **Doc. Dr Golocorbin-Kon Svetlana**
Country: **Montenegro**
Faculty: **Faculty Of Pharmacy Podgorica**

Introduction:

The plants have been used for centuries as the main ingredients of many funds for the embellishment which ladies protected their beauty and youth.

Aim:

To find out which plants and plant components are commonly used, which is still used in the service of beauty and care, as well as comparisons of preparation methods and implementation through the history and now.

Material and methodology:

Review based on data obtained from available literature.

Results:

Plants take an important place in the treatment and prophylaxis in cosmetology. They contain substances that improve the process of substances exchange in the cells of the skin, helping to combat premature aging, remove or may prevent the occurrence of skin defects. Plants of importance in cosmetics through the past and now are calendula, aloe, chamomile, lavender, witch hazel, yarrow, and many others.

Conclusion:

Plants have shown the effectiveness if they are applied as cosmetics. Substances from plants have a beneficial effect on the human body, unlike synthetic funds whose application can lead to adverse consequences.

Key words: plants, beauty, improver

APICOSMETICS - CHARACTERISTICS AND SIGNIFICANCE

(Poster presentation)

Field of medicine: **Pharmacy**
Author(s): **RESETAR BILJANA, Poleksic Katarina, Radovic Jasna, Cukic Rosa**
Supervisor(s): **Doc. Dr. Sc. Ph. Svetlana Golocorbin - Kon**
Country: **Montenegro**
Faculty: **Faculty Of Pharmacy Podgorica**

Introduction:

Apicosmetics term means a controlled use of bee products for cosmetic purpose. Apicosmetics gives the ability of a natural and friendly way of using bee products to improve the immune system and achieve harmony of body and mind, and can be used by any man with whom there was an awareness of the importance of healthier and more beautiful appearance.

Aim:

Objective of this study is to learn the importance and characteristics of apicosmetics to maintain health and beauty.

Material and methodology:

Review based on data obtained from available literature.

Results:

The fact that use of apicosmetics was present in the anchient civilizations to improve the health and appearance, confirms the effectiveness and suitableness of bee products in order to achieve the health and attractive look.

Conclusion:

The most popular bee products which are present in cosmetics are honey, beeswax, pollen, propolis and royal jelly. These products achieve natural protection. They have anti-inflammatory effect, prevent bacterial growth, have regenerative properties, and they are nontoxic and have the ability to bind moisture to itself, making it an excellent tool skin care. Using this combination we get a highly valuable and curable substances which have the energy, building blocks and vital nutrients, vitamins, minerals, ferments, hormones, bioactive substances - that feed and heal.

Key words: Apicosmetics, Bee products, Health, Beauty

IMPORTANCE OF AROMATHERAPY

(Poster presentation)

Field of medicine: **Pharmacy**
Author(s): **KATARINA POLEKSIC, Biljana Resetar, Jasna Radovic, Rosa Cukic**
Supervisor(s): **Doc. Dr Sci. Ph. Svetlana Golocorbin Kon**
Country: **Montenegro**
Faculty: **Faculty Of Pharmacy Podgorica**

Introduction:

Aromatherapy is the practice of using the natural oils extracted from flowers, bark, stems, leaves, roots or other parts of a plant to enhance psychological and physical well-being. It is used for a variety of applications, including pain relief, mood enhancement and increased cognitive function.

Aim:

The aim of this study is to learn the importance and effectiveness of aromatherapy to maintain health and beauty.

Material and methodology:

Review based on data obtained from available literature.

Results:

The ancient civilizations have used essential oils to improve health, mood and appearance, and today aromatherapy is becoming more and more popular, which confirms the effectiveness and credibility of the use of essential oils to achieve the balance and harmony of health, body and mind.

Conclusion:

Essential oils and aromatherapy can be a valuable aid in the attainment of healthy living and beauty care. Natural essential oils are an excellent addition to personal cosmetics. With the proper knowledge and the apppropriate combination of essential and vegetable oils, we can fully replace the industrial cosmetics with natural, harmless and far more efficient alternative.

Key words: Aromatherapy, Essential oils, Health, Beauty

HOUSEHOLD MEDICINES SUPPLIES - ECONOMIC AND ENVIRONMENT ISSUES

(Poster presentation)

Field of medicine: **Pharmacy**
Author(s): **MINA MINIC, Tanja Tomasevic, Jelena Perovic**
Supervisor(s): **Doc.dr.sc.Svetlana Golocorbin-Kon**
Country: **Montenegro**
Faculty: **Faculty Of Pharmacy Podgorica**

Introduction:

The role of the pharmaceutical profession on the level of the primary health care is to provide the information about the medicines, utilization method, dosage, possible side effects or interactions. Today, above already mentioned, it is necessary to inform the population on the rational use of the medicines from the household supplies, their proper maintenance and final disposal.

Aim:

The purpose was to obtain adequate insight information whether and why the population of Montenegro poses the household medicines supplies, whether the expiration date is regulary controlled, the data concerning their disposal, as well as the data on the average amount of money spent on purchase of the medicines.

Material and methodology:

In order to collect the adequate data, we conducted an anonymous survey, based on the questonnarie of 80 households, 324 examinees in 10 cities throughout Montenegro. The data were analyzed thoroughly in statistical package SPSS, Microsoft Excel and Microsoft word.

Results:

During the research we found that 85% examinees possess own household supplies, wherein the most common reason is suggested as selfmedication, 37.5% examinees buy more then half of medicines, while 81.25% dispose the expired medicines directly to the garbage.

Conclusion:

The population mostly, due to the selfmedication, fear of lack or shortage of the medicines, creates the household supplies, that represents both economic and environment issues.

Key words: Household medicines supplies, selfmedication, expiration date, economic issue, disposal.

EPIGENETICS AND GENE PHYSIOLOGY

(Poster presentation)

Field of medicine: **Pharmacy**
Author(s): **AMINA KUČEVIĆ**
Supervisor(s): **Doc. Dr Andrej Perović**
Country: **Montenegro**
Faculty: **Faculty Of Pharmacy Podgorica**

Introduction:

For more than a decade, scientists have suspected that environmental factors trigger chemical changes that influence DNA and, over time, impact human health by switching some genes on and silencing others. Epigentics is focused on gene physiology, analyzing inherited variations in gene expression, while genomics is focused on gene anatomy, analyzing gene structure. DNA methylation and histone post-translational modifications are the basic epigenetic mechanisms regulating gene activity. These two processes complement each other, creating an epigenetic network of events which regulates specific gene activity.

Aim:

The goal of the Epigenomics program is to provide reference data the entire scientific community can use to understand epigenetic regulation and how it affects health and disease. Disease prevention provides the best long-term strategy to reduce the human and economic toll of disease.

Material and methodology:

The Epigenomic program studies the epigenome in a number of diseases and conditions, including aging, athero-sclerosis, abnormal growth and development, autism, tumor development, glaucoma and asthma.

Results:

The identification of epigenetic marks that link experiential factors with cognitive decline, dementia and other desease could provide important clues for the treatment and prevention of a common and devastating problems.

Conclusion:

The importance of epigenetic marks as a reversible process, is becoming increasingly relevant to disease development, especially for cancer. One looks forward to the promise, still to be fully realized, of research in epigenetics, including new approaches to therapy and the development of "smart" epigenetic drugs.

Key words: DNA methylation, epigenetics, histone modification

NATURAL COLORS IN COSMETICS VS. SYNTHETIC

(Poster presentation)

Field of medicine: **Pharmacy**
Author(s): **KUCEVIC BERINA**
Supervisor(s): **Doc. Dr Golocorbin-Kon Svetlana**
Country: **Montenegro**
Faculty: **Faculty Of Pharmacy Podgorica**

Introduction:

Coloring agents in cosmetic preparations include paints, pigments and lack-pigments. Colors are natural or synthetic compounds soluble in water, alcohol, fatty oils and other solvents. They are used directly for dyeing hair, eyebrows, eyelashes, beards, mustaches and lips.

Aim:

The aim of this study is to compare natural and synthetic colors in cosmetics, and to indicate on their advantages and disadvantages.

Material and methodology:

Results from various recently research were analized in order to determine the advantages and disadvantages of widely used synthetic colors in cosmetics.

Results:

Natural colors are rarely used today, except the henna from the Lawsonia inermis plant, walnut oil extracts for toning skin and hair coloring, the aqueous extract of Roman Chamomile for hair coloring, and some plant extracts used for coloring soaps. Unfortunatelly, the natural colors are used less because of its high cost, and increasingly were replaced by cheaper, synthetic colors. Synthetic organic colors are now mostly obtained from coal tar, and there are more than 1000 of them in use.

Conclusion:

The natural colors have significant advantages over synthetic colors. They follow the biological rhythm of the skin and support its functions. Natural cosmetics don't create dependence of skin and do not reduce the intended effect as at certain synthetic cosmetic products. One of the major disadvantages of synthetic colors' use are adverse reactions that can cause even when used in small quantities.

Key words: natural colors, synthetic colors, decorative cosmetics, skin

THE USE OF RADIOPHARMACEUTICALS IN DIAGNOSTICS AND TREATMENT

(Poster presentation)

Field of medicine: **Pharmacy**
Author(s): **MARTA ROLEVSKI, Berina Kucevic**
Supervisor(s): **Doc. Dr Golocorbin-Kon Svetlana**
Country: **Montenegro**
Faculty: **Faculty Of Pharmacy Podgorica**

Introduction:

Radiopharmaceuticals are radioactive pharmaceutical preparations that are used for both diagnostic and therapeutic purposes. They consist of a radionuclid and a carrier. They are widely used in diagnostics. In the past few years the use of radiopharmaceuticals in therapy has increased due to the progress in cancer treatment with radioactively labelled antibodies.

Aim:

The aim of this study was to give a summary of the most commonly used radiopharmaceuticals in diagnostics and treatment.

Material and methodology:

Results from various recently conducted researches were analized in order to determine the advantages and faults of widely used radiopharmaceuticals in diagnostics and treatment.

Results:

Radiopharmaceuticals have found their place in oncology, endocrinology, rheumatology and cardiology. 99m Technetium has been untouchable radionuclid in diagnostics for the past few decades. Excellent physical characteristics, high quality and attainability made this radionuclid practically irreplaceable in this area of medicine. 131Iodine and 32Phosporus have been the most commonly used radiopharmaceuticals in treatment of various benign and malignant tumors.

Conclusion:

The use of radiopharmaceuticals in medicine will be present in future, probably in a larger scope than now, inspite of development of other non-radioactive methods. The reason for this statement lies in large sensibility of radioactive techniques and the possibility to monitor processes in a closed system, such as a human body, by outer detectors.

Key words: diagnostics, radiopharmaceuticals, treatment, use

THE COMPARISON OF WIDELY USED CHEMICAL PENETRATION ENHANCERS IN DERMOCOSMETIC PREPARATIONS

(Poster presentation)

Field of medicine: **Pharmacy**
Author(s): **MARTA ROLEVSKI**
Supervisor(s): **Doc. Dr Golocorbin-Kon Svetlana**
Country: **Montenegro**
Faculty: **Faculty Of Pharmacy Podgorica**

Introduction:

Chemical penetration enhancers (CPEs) are compounds that are used to enhance penetration and/or permeation of an active substance. Their purpose is to temporarely lower the barrier characteristics of the skin. This group of excipiences is widely used in dermocosmetic preparations. More than half of the dermocosmetic preparations that are available on the market contain at least one of the CPEs.

Aim:

The aim of this study was to compare the beneficial and adverse effects of the most commonly used CPEs, in order to make the selection of a suitable CPE for a dermocosmetic preparation easier.

Material and methodology:

Results from various recently conducted researches were analized in order to determine the advantages and faults of widely used CPEs in dermocosmetic preparations.

Results:

In general, there is a linear correlation between the beneficial and irritant effect of the CPEs. However, oxazolidinones, azones and biodegradable urea analogues are shown to be the best CPEs when it comes to the risk-benefit ratio. They are able to reversibly enhance penetration/permeation of both liposoluble and hydrosoluble compounds in dermocosmetic formulations, even when being used in low concentrations. In addition, they cause less irritation and local toxicity.

Conclusion:

Optimal effects in enhancing penetration and/or permeation of an active dermocosmetic ingredient can be achieved by using the proper combination of CPEs. By doing so, many side effects of the penetration and permeation enhancement can be avoided.

Key words: chemical penetration enhancers, dermocosmetic preparations

POLYMORPHISM OF APOLIPOPROTEIN E GENE IN OBESE PATIENTS IN VOJVODINA

(Poster presentation)

Field of medicine: **Genetics**
Author(s): **MILOMIR STEFANOVIC, Jovana Plavsa**
Supervisor(s): **Dr Mihajla Djan, Dr Edita Stokic**
Country: **Serbia**
Faculty: **Faculty Of Science And Mathematics Novi Sad**

Introduction:

ApoE gene is polymorphic, with three common alleles (e2, e3, e4) coding for three isoforms (E2, E3 i E4). The frequencies of apoE alleles show inter-ethnic variations.

Aim:

The aim of this study was to determine distribution of apoE gene polymorphism in group of obese patients (BMI>30) and control group in Vojvodina and to reveal relation between anthropometric and biochemical parameters (TL, HDL, LDL, cholesterol) and apoE genotypes.

Material and methodology:

ApoE genotypes analysed by restriction fragment length polymorphism of a PCR amplified apoE gene were available from 18 obese patients and 19 controls.

Results:

The calculated frequencies of the ApoE alleles 2, 3 and 4 (0.05, 0.56 and 0.39) in obese patients were significantly different comparing to controls (0.03, 0.87 and 0.1). The frequency of e3e4 genotype was significantly higher in obese patients than controls. No association was found between ApoE polymorphism and high-density lipoprotein, low-density lipoprotein, triglycerides levels. Higher level of total fats was significantly higher when compared to controls.

Conclusion:

ApoE polymorphism, particularly e4 allele, seems to influence some lipid profile abnormalities associated with obesity.

Key words: apolipoprotein E, obesity, Vojvodina

THE CYTOTOXIC EFFECT OF NOVEL RUTHENIUM-CYMENE COMPLEX ON HL-60 CELL LINE

(Poster presentation)

Field of medicine: **Biochemistry**
Author(s): **ANA TRSNJAK, Sasenka Vidicevic, Maja Jovanovic**
Supervisor(s): **Prof. Dr Ivanka Markovic, Dr Marija Dulovic**
Country: **Serbia**

Introduction:

A number of studies have demonstrated that ruthenium-based drugs display potent anti-tumor activity, with two drugs, NAMI-A and KP1019, already in clinical trials.

Aim:

The aim of this study was to investigate anti-leukaemic potential of novel Ru (II) complex with cyclohexyl analogue of ethylenediamine dipropanonic acid.

Material and methodology:

HL-60 cells were obtained from the European Collection of Animal Cell Cultures (Salisbury, U.K.).The effect of ruthenium complexes on the cell viability was assessed by acid phosphatase assay. Cellular DNA fragmentation and caspase activation were analyzed by flow cytometry using appropriate fluorescent reporter dyes.

Results:

Cell viability, determined by acid phosphatase assay, showed high cytotoxic activity of Ru (II) complex against human promyelocytic leukaemia (HL-60) cells after 24-hour exposure (IC50 value 2.46±0.5 μM). Flow cytometric analysis of PI-stained HL-60 cells demonstrated that treatment with Ru complex (5 μM) induced a substantial increase in percentage of cells with hypodiploid DNA content (67.5 ± 11.3% after 24h), thus indicating DNA fragmentation. In addition, the treatment with with Ru complex induced significant increase in activation of caspases after 24-hour treatment ($p < 0.05$).

Conclusion:

The novel ruthenium (II) arene complex show potent cytotxic effect against cells of HL-60 leukaemic cell line. The mode of action of novel Ru complex seems to involve induction of apoptosis. These data suggest that novel Ru complex is worthy of further exploration as plausible candidate for selective anti-leukaemic therapy.

Key words: HL-60, ruthenium-cymene, anti-tumor action, apoptosis

THE NEUROTOXIC EFFECT OF ALPHA-SYNUCLEIN OVER-EXPRESSION IN DIFFERENTIATED SH-SY5Y NEUROBLASTOMA CELLS

(Poster presentation)

Field of medicine: **Biochemistry**
Author(s): **SASENKA VIDICEVIC, Ana Trsnjak, Maja Jovanovic**
Supervisor(s): **Dr Marija Dulovic**
Country: **Serbia**
Faculty: **Faculty of Medicine Belgrade**

Introduction:

The pathological hallmark of Parkinson's disease is the accumulation of (a)-synuclein (ASYN) in dopaminergic neurons.

Aim:

The aim of our study was to determine mechanism of cytotoxic effect of ASYN on differentiated human neuroblastoma SH-SY5Y cell line.

Material and methodology:

All experiments were conducted in retinoic-acid differentiated SH-SY5Y human neuroblastoma cells, conditionally expressing wild type ASYN ((a)-syn+) (which was verified using immunoblot), and the control SH-SY5Y cells expressing (b)-galactosidase ((b)-gal). The cell viability was assessed using trypan blue and crystal violet assays, whereas pan-caspase activity was quantified by flow cytometry.

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 the control cells ((b)-gal). However, in the differentiating (a)-syn+ cells, the cell number was significantly lower. Differentiating (a)-syn+ showed significant increase in number of Trypan Blue-positive (dead) cells. Flow-cytometric analysis revealed increase in pan-caspase activity. To test the hypothesis that Akt activation was important for superior survival of control ((b)-gal) cells, cells were treated with blocker of the PI3-kinase (Akt upstream activator), LY294002 and selective Akt inhibitor, DEBC. Both LY294002and DEBC significantly affected viablity of differentiated (b)-gal cells, while no changes were detected in differentiated (a)-syn+ cells.

Conclusion:

It could be concluded that the ASYN over-production induces cell death in the differentiated SH-SY5Y cells. ASYN over-expression prevented the cytoprotective activation of Akt, accompanied with the increase in pan-caspase activity, pointing to caspase-dependent cell death mechanism of differentiated SH-SY5Y cells.

Key words: α-synuclein, citotoxicity, pan-caspase activation, Akt

PLENARY SESSION VI

EPIDEMIOLOGY, NURSING,
GENERAL EDUCATED SUBJECTS

Date: July 21st 2012

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

THE DOCTORS´ "BRAIN DRAIN" PHENOMENON IN ROMANIAN AND SERBIAN HEALTHCARE SYSTEMS. STUDENTS´ RESPONSE.

(Oral presentation)

Field of medicine: **Epidemiology**
Author(s): **BODEA FLAVIU, Chichinejdi Salomea, Coste Viorelia, Bura Vlad, Tarcau Paul, Pintican Gabriela**
Supervisor(s): **Dr. Ungureanu Marius**
Country: **Romania**
Faculty: **General Medicine Cluj-Napoca**

Introduction:

The current globalization tendency is also influencing the healthcare systems. The health professionals' migration, especially doctors' migration, is an important issue affecting a wide range of health systems.

Aim:

The purpose of our study was to investigate the perception of the medical students' regarding the opportunity of working abroad after graduating and the factors that influence their decision.

Material and methodology:

The study had a cross-sectional design. A 24 item questionnaire was created, asking questions about the students' willingness to work abroad and the reasons for this decision, either related to the system leaving from or the system leaving to. The questionnaire was applied to first and sixth year medical students at 6 Medical Universities in Romania and it has been approved to be applied in Serbia as well. We used SPSS 17.0 for the statistical analysis.

Results:

The questionnaire was filled by 959 students. 89.8 % of the respondents declared that they thought about practicing medicine abroad after graduating. Direct logistic regression was performed to assess the impact of a number of factors on the likelihood that respondents would report that they would go abroad to practice medicine. The full model containing all predictors was statistically significant, $\chi 2$ (3, N=704)=26.2, $p<0.001$. Data from Serbia will be anaysed until presentation.

Conclusion:

The tendency to work abroad after graduating is an attractive option for most of the respondents. Students are more likely to leave if their teachers do not manage to induce them the motivation to practice in their native healthcare system.

Key words: Brain drain, student's motivation.

ATTITUDES ABOUT QUITTING SMOKING OF MEDICAL STUDENTS IN KOSOVSKA MITROVICA

(Oral presentation)

Field of medicine: **Epidemiology**
Author(s): **VUK ANDRIJAŠEVIĆ, Ahmo Habibovic**
Supervisor(s): **Dr Momčilo Mirković**
Country: **Serbia**
Faculty: **Faculty Of Medicine Kosovska Mitrovica**

Introduction:

Attitudes play an important role in shaping behavior, in general. Cigarette smoking is the most common health risk factor, including the student population.

Aim:

The aim of this study was to determinate attitudes regarding to quitting smoking among former and current smokers medical school students in Kosovska Mitrovica and to determine is there a significant difference in attitudes between these two groups.

Material and methodology:

The research was conduct a cross-sectional study. The sample included all students who attended practical classes. As a research instruments was used questionnaire about behavior and health. To determine the significance of differences was used chi-square test, with significance of 0.05.

Results:

Most of the current and former smokers were or would be quitting smoking because of worsening their own health, current smokers believe that it takes more than a month, and the former smokers a few months. Such a situation to help both considered sport, and as an aggravating cicrumstance, the current smokers quote smoking near a person, a former continued residence in the place where other smoke. Most did not use pharmacological agents and counseling for quitting, and the most effective measure considered significantly more expensive cigarettes. The responses of current and former smokers there was not statistically significant difference.

Conclusion:

Altrough there are differences in attitudes about quitting smoking among current and former smokers it is not statistically significant. However, examination of attitudes about quitting smoking is an important step in planing health-educational interventions aimed at reducing the prevalence of this harmful habit.

Key words: attitudes, quitting smoking, medical students

THE SCIENTIFIC IMPORTANCE OF MEDICAL ENGLISH

(Oral presentation)

Field of medicine: **Epidemiology**
Author(s): **STEFAN ĐURIĆ, Jelena Stolic, Ivica Miloševic**
Supervisor(s): **Prof. Zorica Antić**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

English has emerged as an intranational and international language of medical communications; it is a prime vehicle for the transmission of information and it is a modern lingua franca.

Aim:

The aim was to determine the level of the scientific medical language the students of medicine, future doctors, are expected to have, as a precondition of their further professional development.

Material and methodology:

The study was conducted at the Faculty of Medicine in Nis and included 86 students. The students were asked to write a structured abstract and the tests were analyzed and graded in terms of grammar use, use of formal academic vocabulary, use of linking words, following the IMRAD structure and an overall impression.

Results:

The results of our study show that students need to revise their General English knowledge, particularly the use of relative pronouns, they need to enrich their scope of formal academic vocabulary and to practice more on the application of their knowledge of language in practice.

Conclusion:

Intercommunication, the participation in researching, in congresses, following new achievements are imperative in science general, and in medicine too. In realization of that aim, good knowledge of medical English is of crucial significance.

Key words: medical English, lingua franca, language of science

THE PATIENT EVALUATION OF GENERAL PRACTICE CARE IN THE CITY OF RIJEKA, CROATIA

(Oral presentation)

Field of medicine: **Epidemiology**
Author(s): **LARA IVANOVIĆ, Milena Kabalin, Vanja Vasiljev Marchesi, Morana Tomljenovic, Lovorka Bilajac, Tomislav Rukavina**
Supervisor(s): **Vanja Vasiljev Marchesi**
Country: **Croatia**
Faculty: **Faculty Of Medicine Rijeka**

Introduction:

The city of Rijeka contains 144.043 citizens and their satisfaction with general practice care is not known. The patient evaluation of general practice care is important indicator of the quality of health care and public health generally.

Aim:

The aim of this study was to evaluate patient satisfaction with general practice care of adult people of City of Rijeka, Croatia.

Material and methodology:

In this study 101 patients were examined by EUROPEP questionnaire. The questionnaire was made by EUROPEP working group and it was used in many international studies. All the examined patients were over 18 years old. The EUROPEP consists of 30 questions regarding clinical quality and the quality of organization. Clinical quality is defined by the perception and satisfaction of patients with competence, professional behaviour and the offer with different curative and preventive treatments, while organization considers satisfaction of patients with equipment, availability and link with other parts of health system.

Results:

In this study the mean age of examinees was 67 years and 86% were women. Fifty percent of the examinees had high school education and 63% have satisfying health status. The highest score was achieved within the question regarding physicians work time schedule, while the lowest score had a question regarding availability of physicians during the weekends and holydays.

Conclusion:

The results show that patients opinion of general practice care was satisfying but within some parts exists the indication for improvement.

Key words: primary health care, Rijeka, EUROPEP, evaluation

EVALUATION OF INTERNET ACCESS AND UTILISATION BY MEDICAL STUDENTS IN BELGRADE

(Oral presentation)

Field of medicine: **Epidemiology**
Author(s): **MARIJA DJORDJEVIC**
Supervisor(s): **Prof. Dr Ljiljana Markovic-Denic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Internet is worldwide network allowing communication. It has a number of applications in the field of medicine, health and medical education.

Aim:

The aim of this study was to assess internet use among medical students.

Material and methodology:

This cross-sectional study was conducted among first and sixth-year medical students. Anonymous questionnaire was used containing data about social and demographic characteristics and internet use.

Results:

A total of 638 medical students (304 first-year student and 334 sixth-year student) returned the questionnaire. About 95% of students have own computer, most of them (76.8%) in his room. Majority of the respondents (96.7%) reported experience with internet use. About three quarters of students (75.6%) use the internet every day without difference regarding year of studying ($p>0.05$). Sixth-year students use Internet significantly more hours during the week (7.8+8.7 vs. 6.0+7.2; $p=0.008$). A significantly higher percentage of sixth-year students ($p=0.02$) believes that the Internet provides a wealth of information, while first year students think ($p=0.003$) that internet can replace interpersonal communication. Significantly higher proportion of sixth-year students was using internet for general information ($p<0.001$) and for medical literature searching. More than 90% of all students, without the difference between groups, were using internet for learning purposes.

Conclusion:

The Internet facility has enabled medical students to enhance their academic excellence by providing them the latest information and access to the worldwide information.

Key words: internet use, cross-sectional study, medical students

HEALTHCARE SYSTEM IN INDIA, ACHIEVEMENT OF HEALTH RELATED MILLENIUM DEVELOPMENT GOALS IN INDIA

(Oral presentation)

Field of medicine: **Epidemiology**
Author(s): **JOSHI NISHANT**
Country: **India**
Faculty: **Faculty Of Medicine Pleven**

Introduction:

India, being a nation of 1.2 billion people faces great challenges in the provision of healthcare to its citizens. The sheer number of citizen is the major hindrance to quality provision of healthcare, combined with inefficient resource allocation. On one hand, India boasts as a strong medical tourism destination, conducting highly specialized surgeries, operative procedures on patients from richer countries all over the world, on another hand we lack basic healthcare including vaccination to a large proportion of the population.

Aim:

To present the problems faced in provision of healthcare in India, to point out varying systems of healthcare in India, and to provide information regarding the status of achievement of the healthcare related MDG's in India.

Material and methodology:

referencing to United Nations publications on MDG'S .

Results:

Apart from the western system of medicine, We have parallel systems of healthcare, Ayurveda, unani, homeopathic, and various traditional healers, keeping in mind the wide variety of ethnicity in India. As regards to MDG's, the statistics show great achievements, but still lags on the official target, and is unlikely to be met by the year 2015.

Conclusion:

There exists great diversity in India regarding healthcare allocation of resources, and there's a wide gap between the available and requirement of resources, including financial and human resources.

Key words: millennium development goals, system of healthcare, public health

MATERNAL HEALTH INDICES AND THEIR DETERMINANTS: POSSSIBLE ROLE OF COMMUNITY PARTICIPATION IN SUSTAINABLE MATERNAL HEALTH PLANNING IN URBAN SLUMS.

(Oral presentation)

Field of medicine: **Epidemiology**
Author(s): **ARMAAN AHMED, Hassan,Mazin Mohiyudheen**
Supervisor(s): **Dr.Sandeep Sachdeva**
Country: **India**

Introduction:

Pregnant women inhabiting urban slums are a 'high risk' group with limited access to health facilities. Hazardous maternal health practices are rampant in slum areas. Barriers to utilization of health services are well documented. The study examines whether hazardous maternal care practices exist in and whether there are differences in the utilisation of heath services

Aim:

Pregnant women inhabiting urban slums are a 'high risk' group with limited access to health facilities. Hazardous maternal health practices are rampant in slum areas. Barriers to utilization of health services are well documented. The study examines whether hazardous maternal care practices exist in and whether there are differences in the utilisation of heath services

Material and methodology:

: A cross sectional study was carried out in two urban slums of Aligarh city (Uttar Pradesh, India). House to house survey was conducted and 200 mothers having live births in the study period were interviewed. The outcome measures were utilization of antenatal care, natal care, postnatal care and early infant feeding practices.

Results:

: Hazardous maternal health practices were common. At least one antenatal visit was Important barriers to utilization included family tradition, financial constraints and rude behavior of health personnel in hospitals.Significant differences were noted.

Conclusion:

Barriers to utilization at local level must be identified and addressed in district level planning for health. Empowerment of slum communities as one of the stakeholders can help improve access to services and lend them a stronger voice.

Key words: slums, maternal health, hazardous delivery practices, barriers to utilization

ESTABLISHMENT AND EVALUATION OF WEB-BASED INFECTIOUS DISEASE SYNDROMIC SURVEILLANCE FOR SCHOOLCHILDREN (WIDSSS) IN TAIPEI

(Oral presentation)

Field of medicine: **Epidemiology**
Author(s): **TING-CHIA WENG, Chia-Kun Jasper Chang, Muh-Yung Yen, Ta-Chien Chan, Chwan-Chuen King**
Supervisor(s): **Chwan-Chuen King, Muh-Yung Yen**
Country: **Taiwan**
Faculty: **School Of Medicine National Taiwan University**

Introduction: An effective early outbreak detection system in school is essential for public health and social welfare. Taipei City Government implemented Taiwan's first Web-based Infectious Disease Syndromic Surveillance for Schoolchildren (WIDSSS) beginning from January 2010.

Aim: This report describes the challenges and steps involved in developing WIDSSS and the timely information it provides to improve in public health decision-making.

Material and methodology: School nurses and teachers daily reported disease syndrome and absenteeism of common pediatric infectious diseases. A case cluster was defined by three or more epidemiologically-linked cases of students within each three consecutive days. WIDSSS was evaluated for its sensitivity by comparing the epidemic curves to preexisting communicable disease surveillance system. Additional attributes including acceptability, simplicity, timeliness, and overall usefulness were also evaluated.

Results: WIDSSS involved 3675 institutions from kindergartens to colleges with 100% coverage rate under government authorities. Spikes of enterovirus severe cases had decreased from 2010. WIDSSS had identified comparable trends for influenza and enterovirus infection with those patterns through surveillance systems in Taiwan-CDC, but having the limitation owing to school closure during winter and summer vacations. Using WIDSSS in school has improved Taipei's disease control capabilities and schoolchildren health promotion.

Conclusion: This integrated service network collected timely and accurate syndromic surveillance data of schoolchildren. The real-time response system helps monitor spread of infectious diseases and epidemic policy control. WIDSSS could be widely applied to other cities of Taiwan and even adapted to cross-cultural environments for better global surveillance.

Key words: Infectious Disease, Syndromic Surveillance, School, Outbreak detection, epidemiological investigation, Taiwan

STUDENT INVOLVEMENT IS A KEY TO ANY CHANGE: EXPLANATION OF STUDENTS' OPINION ABOUT THEIR ROLE IN MEDICAL EDUCATION SYSTEM REFORM

(Oral presentation)

Field of medicine: **Nursing**
Author(s): **MAHIN NOMALI, Akram Sanagu, Leila Jouybari**
Supervisor(s): **Student Research Committee Of Golestan University Of Medical Sciences**
Country: **Iran**

Introduction:

All people believe students have right to participate in decisions about their education. when teachers are not committed to reform, it can not take place; so teacher involvement and support can be a key to any change. Understanding and commitment by students is necessary to avoid rejecting these reform.

Aim:

The aim of this study was to explain students`opinion about the role of them in medical education system reform.

Material and methodology:

In this qualitative study, semi-structured interviews were performed with 50 students of Golestan University of Medical Sciences in 2012. The data were collected by individual semi-structured interviews till data saturation achieved. At least, one open ended question were asked from all of the participants "what is the role of student in medical education system reform?". Interviews were transcribed line by line and were analyzed according to "content analysis approach".

Results:

Student involvement is a key to any change" was the main them emerged in in this study. "participation in educational decision- making, change orientation, Self-directed, having research and critical characteristic, the ability to use applied scientific knowledge, creative thinking and problem-solving ability" were the themes obtained and explain students opinion about their role in medical education system reform. Having incentive teacher, happy and dynamic environment, learning opportunities were the other crucial components for medical education system reform.

Conclusion:

By Talking with and listening to students, we can learn more about how classroom and university can be made more powerful and how improvement can be fostered.

Key words: reform, education system, medical sciences student

EXPLANATION OF EDUCATIONAL EQUITY AMONG MEDICAL SCIENCES STUDENTS: EVALUATION OF MEDICAL SCIENCES STUDENTS OPINIONS AND EXPERIENCES

(Oral presentation)

Field of medicine: **Nursing**
Author(s): **MAHIN NOMALI, Leila Mahasti Jouybari, Akram Sanagu**
Supervisor(s): **Student Research Committee Of Golestan University Of Medical Sciences**
Country: **Iran**

Introduction:

Educational equity is one of the most challenging issues in education. Creating a learning environment without stress, promoting students to excellence, justice in educational regulations, providing background to be skilled and prepared for future job are some of elements of educational equity.

Aim:

The aim of this study was to explain the educational equity from the perspective of medical sciences students.

Material and methodology:

In this qualitative study, semi-structured interviews were performed with 50 students of Golestan University of Medical Sciences in 2011.The data collected by individual semi-structured interviews till data saturation achieved. At least, two open ended questions were asked from all of the participants "what comes to your mind when I say educational equity? Do you remember any situations or conditions that you felt there is or not educational equity? Interviews were were analyzed according to "content analysis approach".

Results:

No superiority of a student over the others" was the main theme emerged in this study. "Evaluation and teaching methods of faculties" were one of common concern of the students.Students believed that every student, despite gender, ethnicity, self-confidence, academic major, appearance and social encounter has his/her own specific status and if these criteria get involve in student assessment, the educational equity will be challenged.

Conclusion:

All of the students can access to the facilities for developing, motivation to reach the goal and be capable, efficient and skilled for their future career .

Key words: Educational Equity, Medical Sciences Student, Content Analysis

EVALUATION OF QUALITY OF LIFE IN EPILEPTIC ADOLESCENTS AND DEMOGRAPHIC FACTORS IN IRAN

(Oral presentation)

Field of medicine: **Nursing**
Author(s): **MARYAM CHEHREHGOSHA, Daryadokht Masrour Roudsari,Mahnaz Seyyedolshohadayee,Fatemeh Hosseini**
Country: **Iran**

Introduction:

Epilepsy is the most common nervous disease during childhood and adolescence. Iran Epilepsy Association claims that every year 30 thousand people diagnosed with epilepsy,10 thousand of them are child and adolescent .only a few papers have studied the impact of this disease on children and adolescents.

Aim:

this study aimed at assessment of quality of life in epileptic adolescents and demographic factors

Material and methodology:

Epileptic adolescents who visited epilepsy society of Iran and specialist clinic of brain and nerves of Loghman-e-Hakim Hospital were inserted during 4 months (n=180). The necessary data were acquired through QOLIE2-AD-481 Questionnaire. Reliability of questionnaire was examined by alpha Cronbach (0/825). Results were derived via statistical analyses.

Results:

Total score of Quality of life is (43/97±11/58), highest score obtain in school performance (80/79±18/09) and lowest score obtain in attitude about epilepsy (15/65±15/76).Among studied factors, place of living (P=0/032),education of the adolescent (P=0/001), education of mother (P= 0/002), average income of the family (P=0/001), number of children in the family (P<0/001) and also classmate informing (P=0/005), affected the mean mark of quality of life of stricken individuals. Multiple regression analysis showed that number of children, youngster's education, knowledge of classmates were the most important factors influencing quality of life in epileptic youngsters.

Conclusion:

In addition to close control of disease's factors itself, the role of environmental factors and impacts of beliefs and cultures of the society should also be accurately considered in evaluation of quality of life in stricken adolescents.

Key words: Epilepsy, Quality Of Life, Adolescence, QOLIE2-AD-48

THE PERSPECTIVES OF A GROUP UNIVERSITY MEDICAL STUDENTS REGARD TO EDUCATIONAL CLIMATE AND UNIVERSITY ENVIRONMENT

(Oral presentation)

Field of medicine: **Nursing**
Author(s): **FATEMEH MEHRAVAR, Akram Sanagoo , Leila M Jouybari**
Supervisor(s): **Fatemeh Mehravar**
Country: **Iran**

Introduction:

Organizational climate is internal quality of organization according perceptions and experiences of its members and environment climate is consistent quality of educational environment which is a product of efforts, relationships, action and interactions of different groups, policy makers, faculty members, staff and university students.

Aim:

The purpose of this article was The Perspectives of a Group University Medical Students regard to Educational Climate and University Environment

Material and methodology:

In this qualitative study in 2009, using purposeful sampling, sixthly nursing, midwifery and paramedical students from different academic year and level participated in the research. The data gathered by semi-structured interviews. All of the interviews tape recorded, transcribed verbatim and analyzed according content analysis method.

Results:

The main theme was "need to change" and "changing the physical environment of University, University staffing changes, changes in some of the education law" were the sub-themes.

Conclusion:

The findings confirmed some degree of a duality of demands and educational wishes. On the other hand, none of the changes were focused on the students. The new generation shows their characteristic with narcissistic, being demanding and rely on their low capabilities.

Key words: Educational Climate, University Environment, Medical Student, Qualitative study

THE HEALING POWER OF THE HOLY QURAN IN HEALTH: RELIGIOUS BELIEFS AND BEHAVIORS OF PREGNANT MOTHERS

(Oral presentation)

Field of medicine: **Nursing**
Author(s): **SOHEYLA KALANTARY, Leila Jouybari, Akram Sanagu**
Country: **Iran**
Faculty: **Golestan Medical Science MSC Of Nursing**

Introduction:

Today, This question is now the spiritual aspects of health and how Quranic teachings and respect for the values of their clients within the health benefited.

Aim:

This study aims to explain the beliefs and behavior of pregnant women experience the healing power of the Quran to be health.

Material and methodology:

In this study show in order to explain the experience of pregnant women using the teachings of the Koran in their health and the baby with 25 pregnant women and mothers with a baby referred to health centers of Golestan in 1390 interviews semi-structured was isolated.

Results:

this study, the subjects' birth to safe, comfortable, healthy and competent children, to obtain peace "is the mother needs to be confirmed.

Conclusion:

The Holy Quran is humanity's version of community healing. The value of positive religious practices in addressing the points that are meaningful lives. Behavior such as trust in God, and the pilgrimage of hope and encouragement through the Koran can lead to positive attitudes are an inner calm.

Key words: Quran, the mother and child health, religious

RELATIONSHIP BETWEEN MORAL DISTRESS AND JOB SATISFACTION OF NURSES EMPLOYED IN HOSPITALS IN BAM IN 2011

(Oral presentation)

Field of medicine: **Nursing**
Author(s): **KALANTARY SOHEILA, Abbaszadeh Abbas, Borhani Fariba**
Country: **Iran**
Faculty: **Golestan Medical Science MSC Of Nursing**

Introduction:

Increasingly accelerated progress of biomedical knowledge and technology in recent decades, has been associated with an increased tendency to ethical issues The nurses , which they constantly in situations that require decision making. The resulting tensions, moral distress. Moral distress may lead to job dissatisfaction and burnout.

Aim:

The purpose of this study was to determine the relationship between moral distress and job satisfaction of nurses in health centers in Bam .

Material and methodology:

This study is a cross-analytical study on 140 nurses was conducted at medical centers in Bam. data using two tools including: 1. Moral distress scale (MDS) with 28 questions that measure its validity and reliability in other studies (86%), 2. Job satisfaction questionnaire with 41 questions that measure its validity and reliability in the study of nahrir etal (1389) (94%), were collected. Data analysis using descriptive statistical methods and correlation test, with spss 16

Results:

The research findings show that nurses' moral distress in 5/04 from 7 in the face of ethical problems and the Average job satisfaction of their 2/52 from 4. The significant relationship between moral distress of nurses with the job satisfaction of (P = 0.00, R = _0.586) was observed.

Conclusion:

The moral distress of nurses and its impact on job satisfaction of nurses, the managers can provide with ways to reduce moral distress in among nursing staff. Nursing administrators can create a supportive environment, to may opportunities for advancement of the nurses.

Key words:

moral distress, job satisfaction, nurses, MDS

FROM ACOMPLISHED MISS TO COMPLETED SOLDIER – DELPHA IVANIC

(Oral presentation)

Field of medicine: **History of Medicine**
Author(s): **MAJA SAVIC SEKULIC**
Supervisior(s): **prof. dr Mira Govorcin**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

In part, origin, appearance and name, Delpha Ivanic, impressive in all, made a contribution to the Serbian people, worthy of mention, for oblivion, and yet on it today has little to say and know. She was born on the March 6th 1881. in Podgorica as a daughter of Ivan Music, who is in her words the descendant of the four and a half centuries old line of Music family. The family is famous because of the hero of Kosovo and his sister Jelica, who is the subject of Uroš Predic's picture "Kosovka Devojka".

Aim:

Display pesonality and work of Delpha Ivanic.

Material and Methods:

A retrospective analysis based on the library and archives.

Results:

On the August 15th 1903. on the initiative of two women, another humanitarian association was founded – Circle of Serbian Sisters. First of all, a sense of belonging and loyalty to the Serbian people - his fatherland, a strong need to help the wounded and sick, cited Delpha to the greatest victim while working as a volunteer nurse in all wars from 1912-1918. year. If the courage "... and a terrible place to be", then it is the Delpha really was, from the fourth replacement hospital, Ljes, Skopje, moving up through Albania. In 1920. she became the first woman in Yugoslavian monarchy who received a high international recognition "Florence Nightingale Medal of Mercy".

Conclusion:

As opposed to "women who ruled the world", Delpha has served Serbia.

Key words: The Circle of Serbian Sisters, nurse, war, Serbia.

THE LIFE AND WORK, THE PRIDE OF THE SERBIAN PEOPLE

(Oral presentation)

Field of medicine: **History of Medicine**
Author(s): **IVAN ZIVKOVIC, Bojan Joksimovic, Branislav Markovic**
Supervisior(s): **Prof. Dr Veljko Maric , prof. dr Sinisa Ristic**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty Of Medicine Foca**

Introduction:

Associate professor. Borisa Starović was born in 1940. in Sarajevo. He completed classical gymnasium as one of the best students. Faculty of Medicine in his native Sarajevo enrolled in 1958. He earned a degree 1964th as one of the best students.

Professor Starović has completed his residency in general surgery with great success 1973rd The working day in the operating room he saw that the plastic surgery and hand surgery in particular is very important but by the surgeon was neglected. He enrolled in the specialization in plastic surgery at the famous prof. Dr. Vincent Arnerija, the Department of Plastic Surgery, Military Medical Academy, Belgrade finished 1976th years with great success. As a British Council scholarship and went to surgery among the most important British hands by introducing new methods of treatment of injured hand.

He became a medical doctor 1981st , and his doctorate in the field becomes the first reconstructive hand surgery in Yugoslavia. At the clinic founded by frequently visiting the world's experts in this field such as prof. Graham Lister, prof. Charles Horton, prof. Michael Poole, prof. Ian Jackson, prof. Bruce Conolly.

Results:

1997. The prof. Starović founded the Medical Department at the Academy of Science and Art of Serbian and became its first associate and then full member, and later general secretary and vice-a ANURS .. For his work, the merit of the work received a prize Sixth Aprill of Sarajevo, BIH First May day award, the Medal of the 1990 Charter of humanity Yugoslavia. November 2002. he received the Award for Lifetime Achievement Hippocrates and 2003. The Great Seal of the achievements in the profession.

Conclusion:

The three last days of his life, staying in intensive care, in the same building where he spent the last 12 years of his life, the students were with him. Then all the disbelief and sad person standing in front of the dean, a professor expecting to open the window, joked with them and waved his hand. This time it did not happen. Noble and good heart of our professors have left us 16th May 2005. year.

Keywords: Boris Starović, surgeon, academician, optimistic

IMPLEMENTATION OF ANTI-TOBACCO LAWS IN PAKISTAN

Field of medicine: **Public Health**
Author(s): **NAUMAN KHAN, Hina Ahmed, Javaid Khan, Rizwan Khan, Abdul Moid Shehzad**
Faculty: **Dow Medical College, Dow University of Health Sciences**

Introduction:

Tobacco is an increasingly serious public health issue in developing countries, being responsible for 100,000 deaths/year in Pakistan alone. Pakistan introduced its anti tobacco laws in 2002 before the introduction of FCTC. Later on some amendments were made in line with FCTC recommendations. By law, all public places are currently entirely smoke-free. This study was carried out to assess the extent of implementation of these laws in Karachi, the most populous city of Pakistan.

Methods:

A cross-sectional survey was conducted at restaurants, banks & offices, educational institutions, cigarette-selling outlets and in public service vehicles.

Results:

91 restaurants were surveyed, 70.3% did not display "No Smoking" signs. People were seen smoking in 58.2% of restaurants, while 33.0% had designated smoking areas. Survey of 99 banks and offices found "No smoking" signs displayed at only 33.3% of offices. Smoking was witnessed inside 29.0% of banks and offices. Smoking took place in 35.0% of 317 public vehicles. 240 shops surveyed showed cigarette sale to minors taking place at 92.0% of outlets. 62.2% of cigarette brands did not display any pictorial warning on their packs. Smoking was witnessed on campuses of 77% of universities and cigarettes were being sold near 94% of the universities surveyed.

Conclusions:

The study revealed poor enforcement of anti-tobacco laws in the largest city of Pakistan. Law enforcing agencies should be more active in implementing current anti-tobacco laws. Without implementation of these laws, there will not be any significant reduction in morbidity and mortality from tobacco use in Pakistan.

RARE DISEASES AND ORPHAN DRUGS - CHALLENGE FOR DOCTORS AND STUDENTS

(Poster presentation)

Field of medicine: **Epidemiology**
Author(s): **LILIYA POPOVA, George Iskrov, Tsonka Miteva, Rumen Stefanov**
Country: **Bulgaria**
Faculty: **Faculty Of Medicine Plovdiv**

Introduction:

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, as they affect up to 6% of the whole population of Europe. Most often rare diseases are chronic, severe and life-threatening. The problems of these patients are numerous and various. The Bulgarian Association for Promotion of Education and Science (BAPES) launched its first major project - the Information Centre for Rare Diseases and Orphan Drugs (ICRDOD), the first Eastern European educational and information service dedicated to patients, medical professionals and associations interested in rare diseases and orphan drugs. ICRDOD is identified as a major and reliable source of information on rare diseases in Bulgaria on the website of the European Commission.

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:

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

IMPACT OF PARENTAL SMOKING, ALCOHOL AND DRUG USE ON THE CHILDHOOD LEUKEMIA

(Poster presentation)

Field of medicine: **Epidemiology**
Author(s): **NAZANIN CHAM HEIDAR, Mir Saeed Zakeri , Sina Sadeghi Mehr, Shima Khan Ahmadi, Sharareh Barband,Sahar Tajaddini**
Supervisor(s): **Mahasti Alizade**
Country: **Iran**
Faculty: **Faculty Of Medicine Tabriz**

Introduction: Acute leukemia is the most common malignancy in childhood

Aim: The aim of this study was to document the impact of parental smoking, alcohol and drug use on the childhood leukemia.

Material and methodology: This study was conducted in Tabriz Children university-hospital. The study included 111 childhood cancer cases(<15 years of age) and their individually matched 220 control subjects. Information concerning parental smoking, alcohol consumption and use of drug and medicine was gathered by direct interview and patient medical records Packet Per Year(PPY)index for smoking was calculated using the data obtained from parents

Results: The average PPY of fathers were 169.4 and 76.5(packets) in the case and control groups, respectively ($p<0.0001$). The rate of fathers routine alcohol consumption in case group was 11.7percent compared to 1.3percent in control subjects (Odds Ratio=0.103,CI:0.029-0.371) ten percent of fathers in case group were recorded as drug users while there was no drug user in control group. None of mothers in case and control groups reported smoking, alcohol and drug use. There was no statistically significant association between consumption of medicine and the occurrence of childhood leukemia.

Conclusion: Our findings showed that the childhood acute leukemia was correlated with paternal smoking and drug use and alcohol consumption. This indicates that fathers should also be involved in maternity health care before and during pregnancy. More studies are needed to confirm the association of paternal and maternal influencing factors on the occurrence of leukemia in children to develop effective preventive strategies for maternity health care.

Key words: Acute leukemia, smoking, drugs, alcohol.

CHILDHOOD ACUTE LYMPHOBLASTIC LEUKEMIA AND TYPE OF CHILDBIRTH PROCEDURE

(Poster presentation)

Field of medicine: **Epidemiology**
Author(s): **SHIMA KHAN AHMADI , Sina Sadeghi Mehr , Mir Saeed Zakeri , Nazanin Cham Heidar , Sahar Tajaddini , Sharare Barband, Azim Rezamand**
Supervisor(s): **Mahasti Alizade**
Country: **Iran**
Faculty: **Faculty Of Medicine Tabriz**

Introduction:

Acute Lymphoblastic Leukemia (ALL) is the most common childhood malignancy. With current treatments, more than 95 percent of these children attain remission and an average of 80 percent becomes cancer free at least 5 years from diagnosis. However, some children do not respond to treatment and many patients differ greatly in their responses to their treatments.

Aim:

The aim of this study was to document the relationship between childbirth procedure and ALL occurrences.

Material and methodology:

This study was done in Tabriz Children Hospital in the 2011.Childbirth procedures were determined by a case control study by obtaining information from 97 ALL cases and 221 age- and sex- matched controls.

Results:

Analysis revealed that the ALL occurrence was 37% and 24% for vaginal delivered and cesarean delivered children, respectively. Children with vaginal delivery had notably increased risk for ALL (adjusted OR=1.85; Cl (95%) =1.14 - 3.02) compared to children with cesarean delivery.

Conclusion:

This study showed that vaginal childbirth increases the susceptibility to ALL in comparison to cesarean childbirth. More studies are however needed to make further conclusions.

Key words: Acute Lymphoblastic Leukemia, Cesarean Delivery, Vaginal Delivery

EXERCISE HABIT IN JIN-SHAN COMMUNITY

(Poster presentation)

Field of medicine: **Epidemiology**
Author(s): **TING-CHIA WENG, Jui-Hung Kao, Chung-Wen Jen, Hou-Hsuan Huang, Tsai-Feng Chen, Mo-Tung Su, Kung-Hsiang Cheng**
Supervisor(s): **Yen-Yuan Chen, Heng-Chia Pan**
Country: **Taiwan**
Faculty: **Faculty Of Medicine Taiwan**

Introduction:

Proper exercise can promote health and prevent diseases, and this issue is especially important in the aging society. Jin-Shan is a rural village in northern Taiwan, where aging is an even prominent phenomenon with14.0% of people older than 65.

Aim:

We investigated the relationships between exercise habit, motivation and chronic diseases status, and people's understanding of health promotion for mental and physical health.

Material and methodology:

We distributed 150 questionnaires interviewing the local residents of Jin-Shan community and got 143 valid questionnaires back for detailed analysis. Sampling population was randomly selected on hot gathering spots in March 2012.

Results:

AgeGroup1-24 accounted for 16%; AgeGroup 25- 64, comprised for 52%; AgeGroup 65 and older, accounted for 32%. The working population age 25-64 had the lowest rate of exercise. Age Group 65 and above have the longest mean time of exercise per week. People with diabetes had shorter duration and lower frequency of exercise comparing people with arthritis, cardiovascular diseases. Aerobic exercise was more popular among males. Females were interested in flexibility exercise. 27% of female has no habit of exercise compared to 9% among male. Dominant motivations for exercise were personal interest and companion's invitation, and having no leisure time was the main reason for not doing exercise.

Conclusion:

Our findings suggest that it is feasible to implement a Health-Promoting Project in Jin-Shan targeting to female, working population, and diabetes patients. Some physical goals and special-exercise could be designed and applied for aging population with chronic diseases.

Key words: Exercise habit, Jin-Shan community, Taiwan

SMOKING AND ALCOHOL USE AMONG THE STUDENT POPULATION IN PODGORICA

(Poster presentation)

Field of medicine: **Epidemiology**
Author(s): **EDITA NASUFOVIĆ, Boško Stanišic**
Supervisor(s): **Prof. Dr Agima Ljaljević**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction:

WHO estimates that in 2002. the 4.9 million people died because of smoking and where it is expected that by 2030. the number of deaths increased to 10 million. European health care institution estimates that there are three to five percent alcohol addicted people in whole population, while in whole adult men population there are fifteen percent of alcoholics.

Aim:

To explore the habit of smoking and alcohol consumption among college students living in the dorms in Podgorica.

Material and methodology:

The research was conducted from September to December 2011. year, by questionnaire of 113 students (59 males and 54 females) living in the dorms in Podgorica. The questionnaire consisted of 23, mainly closed questions.

Results:

64.33% of respondents had tried a cigarette, of which the majority has tried a cigarette in the period from 15-18 years. Almost 1/3 of respondents use tobacco and most of them smoke more than 20 cigarettes a day (9.17%). Alcohol had tried 90.83% students and 19.26% of them did so with 16 years. There are 13.76% of students who drink alcohol every day, and almost 2/3 of them were intoxicated once in life.

Conclusion:

Young people are most vulnerable to vices in the high school period. If 1/3 of students smokes and 1/4 of them gets drunk once a week means that we should work on enlightening of young people when it comes to their health and lives.

Key words: alcohol, smoking, students

NURSING PROCEDURES AND NURSING DIAGNOSIS IN PATIENTS WITH HIP FRACTURES

(Poster presentation)

Field of medicine: **Nursing**
Author(s): **MIRZA ORUČ, Vladimir Kunarac, Kenan Galijaševic**
Supervisor(s): **Prof Dr Sc Sahib Muminagić**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty Of Health Zenica**

Introduction:

Hip fracture in elderly is very serious condition, this problem is constantly present in medicine today. Patients with the hip fracture needs some special treatment specified by their conditions. Nursing procedures and nursing diagnosis are very important in patients rehabilitation and in prevention of postoperative complication.

Aim:

Main goal of this work is to describe most important nursing procedures and treatments in patients with hip fracture and hip replacement (endoprostetic replacement). Defining these needs we'll determine specific competencies of nurses that work with patients like this.

Material and methodology:

Materials and methods: we examined 100 patients in period from 2008 – 2011 year that has a hip replacement. Method of research is retrospective, analytic and descriptive type. Defining the questionnaire with question considered nursing procedures. These materials are collected and processed in order to gain real time picture about the nurse's role in preoperative and postoperative patient care. Description of procedures type done with the patient's is checked.

Results:

Expected results will be shown in tables, graphs and described using statistical methods relevant for this research. All the patients are divided in groups by sex, age, type of hip fracture, type of endoprostetics that has been done, presence of other diseases are noticed and patients are divided also by these groups. Nursing procedures are divided by the one done during preoperative and postoperative treatment.

Conclusion:

Conclusion will be made upon the results.

Key words: hip, nurse, replacement, nurse diagnosis, nurse treatment

GYNECOLOGY AND SCIENTIST OF WORLD RENOWN, ACADEMIC BERISLAV BERIĆ

(Poster presentation)

Field of medicine: **General educated subjects**
Author(s): **MILICA MARJANOVIĆ**
Supervisior(s): **prof. dr Aleksandra Kapamadžija**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

***Introduction**:*

The rich biography and bibliography of academic Berislav M. Beric, a gynecologist, behind which stands a lot of investment, effort, sacrifice and positive results, suggests to great experts of his profession. He conquered the world with wide scope of interest. He did not deal only with: gynecology, women's health, reproduction and family planning, sterility, adolescent gynecology, but also with demographic and populational aspects of its, the history of medicine. Through his comprehensive work, he has also taken part in the writing of 500 published works: papers, books, monographs, publications. During his career he was a member of many world recognized of societies and associations. Matica Srpska, Serbian Academy of Arts and Sciences, Academy of Sciences and Arts of Vojvodina, the Serbian Medical Society had the honor of having among its members the eminent expert. He was awarded numerous prizes and awards, confirming its successful scientific work.

The aim:

Introduction to the personality, life and work of academic Berislav M. Beric, doctor, professor, doctor of medical sciences in the field of gynecology and obstetrics.

Material and Methods:

A retrospective analysis was based on data available from literature and sources.

Conclusion:

By analyzing the character and work of academics Berislav Berića, we can conclude that this is an extraordinary doctor, the creator and man. His achievements in the field of gynecology and obstetrics, today as a signpost for many young doctors who choose this particular field of medicine.

Keywords: Berislav Beric, gynecologist - obstetrician, Clinic of Gynecology and Obstetric

THE FIRST SERBIAN WOMAN SURGEON MD NADA ĆOVIĆ – GRADIĆ

(Poster presentation)

Field of medicine: **History of Medicine**
Author(s): **ALEKSANDAR KOBILAROV**
Supervisior(s): **asist. mr sc. med. Vladimir Sakač**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

A lot of the men on the list of famous surgeon, but our Serb Nada Ćović – Gradićdare to be - the first woman surgeon.

***Aim**: /*

Materials and Methods: /

Results:

She's born in Srbobran 1885th where she finished elementary school, then enrolled in the Girls' College first, and then high school in Novi Sad.After finishing Gymnasium in 1905th she enrolled the Medical faculty in Budapest, she completed college1910thand then become the first woman who ends Surgery specialist exam in 1913th.The first gets a job at the famous II surgical clinic of Dr. Paul Kuzmika, but in 1919th returns to she's homeland, and began working in Sombor. In Sombor 1932ndshe became president of the Red Cross, she was very important personin Red Cross after World War II. In the Second World War with her surgical knowledge help to the soldier's of Red Army. She founded a Medical high–school in Sombor 1947th, and was first director of school. Until she's retirement, she worked in the School clinic, died in 1973rd and older generations remember her as a caring physician.

Conclusion:

Nada Ćović – Gradić is women with this wonderful characteristic that defines the best people of our nation, to break bad forced rules and make our society better, because it would be shame such a physician and surgeon handed over the norms of time in which she lived.

Keywords: Nada Ćović – Gradić, Sombor, surgeon

PLENARY SESSION VII

INTERNAL MEDICINE

Date: July 21st 2012

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

RELATIONSHIP BETWEEN BODY MASS INDEX (BMI) AND BLOOD GLUCOSE IN PHARMACY STUDENTS

(Oral presentacion)

Field of medicine: **Internal medicine**
Author(s): **NEVENA ANTONIJEVIĆ**
Supervisior(s): **Prof. dr Slobodan Janković**
Country: **Serbia**

Introduction :

Accelerated pace of modern life, the development of bad habits, reduced physical activity, sedentary lifestyle and time spent in front of computer are now the common features of the student lifestyle. These habits significantly affects the physical and psychological condition of students.

Aim:

Objective was to determine whether there is a link between BMI and blood glucose levels in pharmacy students.

Material and methods:

The study was conducted on 71 pharmacy students of 4th year study. Weight and height were obtained for students, and BMI (*Body Mass Index*) was calculated using the standard formula (weight in kilograms divided by height in square meters). Fasting blood samples (8-12 hours of overnight fasting) were collected, and blood glucose levels were determined using Accu-Check® Active (Roche Diagnostics GmbH). Capillary blood was obtained from a finger prick.

Results:

Pearson's correlation coefficient between these two variables was r = 0,285 (α=0,05), and even the correlation was positive it is not statistically significant.

Conclusion:

The existence of positive linear relationship between body mass index and blood glucose levels is important in predicting occurrence of some chronic diseases. It is important to keep on promoting healthy lifestyle among students no matter of their knowledge about risk factor for chronic diseases.

Key words: body mass index, fasting glucose, pharmacy students

ANEMIA IN FIRST TRIMESTER PREGNANCY. THE INCIDENCE BY DIFFERENT AGE GROUPS AND ORIGIN

(Oral presentation)

Field of medicine: **Internal medicine**
Author: **VASIES DUMITRITA**,**Tigla Alexandru Erwin**
Supervisor(s): **dr. Navolan Dan**
Country: **Romania**

Introduction:

Anemia is one important disorder in pregnancy. WHO defines anemia in pregnancy as a HB under 11mg/dl. Most commen etiology of anemia in pregnancy is iron deficiency and megaloblastic anemia.

Aim:

The purpose of this study is identifying the prevalence of anemia in pregnancy and the incidence in different age groups, the differences between rural and urban areas.

Material and methods:

We have evaluated the results of blood tests (hemoglobin, hematocrit and red blood cells) carried in the first trimester of pregnancy, from 1564 pregnant women who addressed to the Municipal Hospital Timisoara Gynecology in one year

Results:

Anemia was reported in 39% of pregnant women (621 of 1564) In rural areas the percentage of anemia was 73% (of all pregnant women in rural areas) compared to only 21% of the urban environment. In terms of the degree in anemia 1.2% have an Hb between 5-7% (rural area 0.39% - 0.91% urban areas) 17% have an Hb between 7-9mg/dl (6.3% urban and 7.52 rural) 81.4 have an Hb between 9-11mg/dl (14.9 urban and 64.9 rural) In rural areas anemia was recorded at a rate of over 65% at all ages but in urban area the highest incidence was between 25-35 years and 35-45 that is over 25%.

Conclusions:

In our study it is reported an increased prevalence of anemia in pregnancy in rural areas. Possible cause is poor information, lack of antenatal screening and not enough collaboration between obstetricians and general doctor.

Keywords: Anemia Pregnancy

ASSOCIATIONS BETWEEN RS5219 IN THE KCNJ11 GENE AND TYPE 2 DIABETES IN RUSSIAN POPULATION OF TYUMEN REGION

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **K.MURYCHEVA, L.Suplotova, L.Belchikova, V.Nosikov**
Supervisor(s): **L.Suplotova**
Country: **Russian Federation**
Faculty: **Faculty Of Medicine Tyumen**

Introduction:

Type 2 diabetes (T2D) is a chronic, complex disorder of rapidly growing importance. T2D is a quintessential multifactorial trait, where individual risk is defined by complex interplay of genetic and environmental factors. Polymorphisms in the KCNJ11 gene that encodes the ATP-sensitive potassium channel subunit Kir6.2 have recently been associated with increased susceptibility to T2D in a few populations.

Aim:

We investigated the associations of Rs5219 in KCNJ11 with Type 2 Diabetes and Insulin Sensitivity in Russian population of Tyumen region.

Material and methodology:

The presence of the Rs5219 polymorphism in the KCNJ11gene was monitored by polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) in 76 Russian T2D patients with age at onset lesser than 35 years old, and 71 control individuals. Insulin Sensitivity was quantified by Homeostatic Model Assessment (HOMA-S index).

Results:

We found that the allele Lys and genotype Lys/Lys of the KCNJ11 gene were associated with higher risk of T2D [Odds ratio (OR) = 1,36 and 2,27 (p=0.009)] in patients with age at onset before 35 years. The Glu/Glu genotype of KCNJ11 gene was associated with HOMA-S index (r=0,27, p=0,02).

Conclusion:

Therefore we propose that the rs5219 polymorphism of KCNJ11 contributes to susceptibility to Type 2 Diabetes and Insulin Sensitivity in the Russian population of Tyumen region.

Key words: type 2 diabetes, KCNJ11, genetic basis, HOMA-S index

ANEURYSM OF ABDOMINAL AORTA (AAA) AND COMMON ILIAC ARTERIES AFTER KIDNEY TRANSPLANTATION

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **VLADIMIR PRELEVIC. Danilo Radunovic**
Supervisor(s): **Marina Ratkovic, MD, PhD**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction:

With increasing numbers of renal transplant recipients, the population of patients who require aortic reconstruction surgery also increases as a result of abdominal aor tic aneurysm (AAA). During surgical repair of an AAA, concern remains about the possibility of ischemic injury to the transplanted kidney upon the cessation of aortic blood flow.

Aim:

Case report of a patient with AAA after kidney transplantation..

Material and methodology:

Clinical, laboratory and radiological examination to the patient and surgical treatment.

Results:

Male patient, 64 years, a day before hospitalization got abdominal pain and pain in lower extremities. Patient was 1,5 years on haemodialysis before cadaveric kidney transplantation in Moscow two years ago. On the day of hospitalization MSCT was preformed: AAA was confirmed, size 52 mm, suprarenally and infrarenally, and aneurism of both common iliac arteries. In laboratory examination: urea 95, creatinine 125, total serum proteins 65 , albumins 36,1 , the level of tacrolimus 8,2. The parameters of graft function was good. Bilateral aortoiliac bypass with Dacron Y prosthesis 18 × 9 mm was made on the same day. After few days spent in Central intensive care unit and stabilization of vital parameters, patient was removed to the Vascular surgery department.

Conclusion:

Patient did not require any kind of nephrological interventions during the operations and his state after both surgical interventions was stable and without complication. He is regularly controlled and his graft function is very good.

Key words: kidney transplantation,aneurysm

KIDNEY SIZE IN ENDEMIC NEPHROPATHY AND OTHER KIDNEY DISEASES

(Oral presentation)

Field of medicine: **Internal medicine**
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Supervisor(s): **Ristic Sinisa, MD**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty Of Medicine Foca**

Introduction:

Symmetric kidney decrease is one of diagnostic criteria for endemic nephropathy (EN), but it is not clear when the decrease process begins. Basic mechanism which leads to symmetric decrease in kidney size in EN is tubulointersticial fibrosis.

Aim:

In this study kidney size was examined in patients with EN, nephrosclerosis (NS), primary glomerulonephritis (GN), diabetic nephropathy (DN) as well as in control group.

Material and methodology:

104 patients with EN, 56 with GN, 55 with DN, 39 with NS and 32 healthy persons were included in the study. All the examined people are residents of endemic focusses in Bijeljina. Length, width, kidney thickness and kidney parenhim thickness were measured by ultrasound. Kidney volume was calculated using ellipsoid formula.

Results:

Kidney length and volume in patients with EN and NS were smaller than kidney length and volume in control group and in patients with GN and DN. The thinnest parenhim was discovered in patients with NS, and the thickest in patients with DN. Multivariable logistic regression has showed that belonging to a certain group, eGFR and hypertension are significantly connected with kidney length

Conclusion:

Patients with EN and NS had significantly smaller kidneys than patients with GN and DN.

Key words: Balkan endemic nephropathy, ultrasound, kidney size , diabetic nephropathy, nephrosclerosis, primary glomerulonephritis

COMPLICATIONS IN PATIENTS AFTER PAID KIDNEY TRANSPLANTATIONS

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **DANILO RADUNOVIC, Vladimir Prelevic**
Supervisor(s): **Prof. Dr Marina Ratkovic**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction:

There are thirty one patients who have undergone a living donor renal transplantation illegally purchased on the black markets in Pakistan, India or cadaveric transplantation in Moscow.

Aim:

To determine the most frequent and most important complications in patients who had paid kidney transplantation.

Material and methodology:

All data were collected retrospectively by computerized database in the time period from January 2002 to April 2012.

Results:

Among 12 patients who underwent transplantation in Pakistan one developed malaria tertiana, rupture of both EHL tendons, two developed severe bilateral pneumonia. One had spontaneous pneumothorax, one several epizodes of organ rejection and two underwent limb amputations afterwards. One of them had spontaneuos rupture of the bladder. One developed adrenocortical insufficiency and hypoparathyroidismus. One developed urethral stenosis, one systemic vasculituis after hepatitis B infection. One developed haemorrhagic syndrome with subileus. An acute rejection of the graft was noticed in 2 of 19 patients who underwent transplantation in Moscow. One patient had an aneurysmectomy with new anastmosis made during the transplantation. Seven went back from Moscow with urinary infection with Klebsiella spp. One of them developed a neurological disorder and died of coma of unknown origin.

Conclusion:

Over 50% of patients returned with complications after transplantation. Possible cause of the high incidence of complications was thought to be inadequate evaluation of the donors and recipients in the preoperative period. Many of the patients were sent to their country without any treatment of complications.

Key words: paid transplantation, third world countries, severe complications, rare diseases

BEHAVIOR OF CHILDREN WITH DIABETES

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **FEMIC JELENA, Kruscic Ana**
Supervisor(s): **Prof. Dr Agima Ljajevic**
Country: **Montenegro**
Faculty: **Faculty of Medicine Podgorica**

Introduction:

Diabetes is a genetic, immune and metabolic disorders. In children is manifested in the form of IDDM, for which the regulation is required exogenous insulin. Diabetes affects the health and behavior of these children.

Aim:

Gaining insight into the behavior of children with diabetes and impact on their everyday life.

Material and methodology:

The study was conducted using anonymous questionnaire. The study included 50 children (with parental permission). Inclusion criteria: ambulance treatment. Excluding criteria: physical disability in making contact with patients, other chronic diseases. Study was designed in four steps: first part refers to the directories, the second to nutrition, the third to physical activity, and the fourth to self-control and complications.

Results:

84% of respondents takes meals by tables of eating. Good physical activity practices 80% of respondents. Blood glucose measured three times a day 76% of respondents, but the crisis appears once a month in 53% of respondents. Despite the disease, 64% of these children recorded a great success at school.

Conclusion:

Based on research conducted among respondents (aged 0 to 16 years) with diabetes, we can conclude that their illness behavior is satisfying. It is encouraging to know that 80% of children adhere to proper nutrition and regular physical activity, which are the basis for adequate control of their disease.

Key words: diabetes, quality of life, physical disability, IDDM.

QAULITY OF LIFE IN PATIENTS WITH ASTHMA

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **ZELJKA ROGAC, Tanja Drincic,Aida Kalac**
Supervisor(s): **Prof Agima Ljaljevic**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction:

Asthma is one of the most common chronic diseases, a condition characterized by chronic airway inflammation. The impact of asthma on the quality of life of patients is considerable.

Aim:

Measurement of qality of life in patients with asthma, insight into the overall impact of the disorder on everyday life of patients.

Material and methodology:

Investigation is designed as cross-sectional study. Inclusion criteria: ambulance treatment . Exclution criteria: physical disability in making contact with patients, other hronic diseaseases. Study included 70 patients. Instrument of measurement was The Asthma Quality of Life Questionnaire (AQLQ). Study was disagned in three steps: auscultaton of lungs, spirometry and giving answers to questions related with percepcion of quality of life.

Results:

Asthmatic attacs, alergies, emotional changes can interfere with activities of daily living, which may subsequently result in significantly reduced health-related qality of life in people with asthma. Phisical disability contribute to asthma attac frequency, presens of pathologic findings on lungs, and FEV1< 60% of the predicted normal values to an quality of life of these patients. Most of them don't feel discrimination of society,but they consider environment could be more sensitive for their needs

Conclusion:

: In patients with asthma subjective perception of symptoms and signs must be considered. Asthma has impact on patiensts social roles. This study showed that the presence of pathological lung sounds and obstruction degree of the air flow in bronchial tubes measured by parameter FEV1 effects life quality.

Key words:

Asthma,quality of life,phisical disabili

DIAGNOSIS OF AUTONOMIC DYSFUNCTION IN PATIENTS WITH VASOVAGAL SYNCOPE AND ORTHOSTATIC HYPOTENSION USING CARDIOVASCULAR REFLEX TESTS

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **SLAVICA MUTAVDŽIN, Milan Radovanovic, Dušan Brkic, Mihailo Micic**
Supervisor(s): **Doc. Dr Branislav Milovanović**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Syncope represents a transient loss of consciousness and postural tone due to generalized cerebral ischemia, with spontaneous recovery. Previous researches have shown that people with syncope have more often autonomic dysfunction than healthy persons.

Aim:

Determination of the type and degree of autonomic dysfunction in patients with vasovagal syncope and orthostatic hypotension (OH).

Material and methodology:

Examined group consisted of a control group, persons with syncope and persons with syncope and OH. Patients were examined using Ewing's cardiovascular reflex tests. According to the results, autonomic dysfunction was classified as: parasympathetic, sympathetic or complete autonomic dysfunction.

Results:

Results of the blood pressure response to standing test and the deep breathing test were more often abnormal in patients with syncope and OH, than in the control group. Sympathetic function was damaged in most patients with syncope and OH (86.7%) and only in 67.2% of healthy subjects. Parasympathetic dysfunction occurred in 18.4% of patients with syncope, 40.0% of persons with syncope and OH and 6.9% of healthy subjects. Autonomic dysfunction was found in 80.0% of persons with syncope and OH. Severe autonomic dysfunction occurred most often (60.0%) in patients with syncope and OH, while it was not observed in the control group.

Conclusion:

Results show that patients with syncope have more often the damage of autonomic nervous system than healthy persons. Autonomic dysfunction occurs more often and is severer in patients with syncope and OH, than in those which have only vasovagal syncope.

Key words: syncope, orthostatic hypotension, cardiovascular reflex tests, autonomic dysfunction

OPHTHALMOLOGIC INVOLVEMENT OF ANKYLOSING SPONDYLITIS IN ROMANIAN PATIENTS

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **COJOCARI NADEJDA, Catalin Lelia, MD; Mitulescu Costin, MD**
Supervisor(s): **Assoc. Prof. Dr. Predeteanu Denisa**
Country: **Romania**
Faculty: **General Medicine Carol Davila**

Introduction:

Ankylosing spondylitis (AS) is a chronic inflammatory disease of the spinal cord and sacroiliac joints with variable involvement of peripheral joints and non-articular structures .Acute anterior uveitis occurs in as many as 30% of patients at some time during the course of ankylosing spondylitis.

Aim:

to analyze the prevalence of ocular manifestations in Romanian patients with AS . To quantify clinical conditions and laboratory values associated with acute anterior uveitis.

Material and methodology:

Patient characteristics, laboratory correlates, evolving disease states of all patients seen at the "Sf Maria" Hospital between 1 January- 31 October 2011 with AS were reviewed in this retrospective cohort study. All patients met modified New York classification criteria for AS.

Results:

Among 293 patients with ankylosing spondylitis , 59 (20,13%) patients were assessed for ocular manifestations. Anterior Uveitis (AU) was the most common ocular association in 48/293 (16, 38%) patients. The AU was found to be recurrent in 27 (56,25%) patients. 27 (56,25%) patients with AU were found to have a history of peripheral arthritis. The frequency of uveitis differed between the sexes (19,65% of men vs 4,64% of women).HLA B27 was positive in 97,56% patients with uveitis (41/48 available). The markers of AS disease activity (CRP, VSH, Fibrinogen, BASDAI, BASFI) were not significantly increased at the time of AAU flares.

Conclusion:

The prevalence of ocular manifestations in Romanian patients with AS is lower comparable to the data in literature but their characteristics are the same.

Key words: ankylosing spondylitis, uveitis

EFFECTS OF PHYSICAL TRAINING ON RATE – PRESSURE PRODUCT IN PATIENTS IN POSTINFARCT PERIOD

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **VELIMIR PERIC, Dalibor Stojanovic, Stefan Stankovic, Stevan Milenkovic, Ivkovic Slobodan**
Supervisor(s): **Ass. Dr Viktor Stoickov**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Physical training is an integral and most important part of rahabilitation in patients with ishemic heart disease, which increases the efficiency of oxygen extraction and metabolism in skeletal muscle, thereby reducing the heart rate and increases coronary collateral blood flow. Rate – pressure product is a product od heart rate and systolic blood pressure, and correlation between this product and myocardial oxygen consumption estimates highly statistically significant.

Aim:

To evaluate the effects of physical training on rate pressure product in patients in postinfarct period.

Material and methodology:

This retrospective study included 275 patients (mean age 57.6 years) of the Institute for treatment, rehabilitation and prevention of rheumatic and heart diseases "Niska Banja". The study included 55 women and 220 men after myocardial infarction in sinus rhythm without AV blocks and branch blocks. The significance of differences for each parameter before and after a period of rehabilitation, as well as between groups of patients tested using the Student t-test.

Results:

In patients with survived myocardial infarction, after physical training treatment, there was a significant decrease in blood pressure, both systolic (143.3 ± 18.4: 128.2 ± 12.3 mmHg, $p < 0.001$) and diastolic (97.1 ± 12.4: 82.3 ± 11.5 mmHg, $p < 0.001$), heart rate (83.2 ± 15.7: 71.4 ± 12.9 / min, $p < 0.001$) and double product (12472.3 ± 1984.9: 9874.8 ± 1426.4, $p < 0.001$).

Conclusion:

There was a statistically significant difference in rate – pressure product in patients before and after physical training.

Key words: physical training, rate – pressure product, postinfarct period

ANEMIA IN FIRST TRIMESTER PREGNANCY. THE INCIDENCE BY DIFFERENT AGE GROUPS AND ORIGIN

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **VASIES DUMITRITA, Tigla Alexandru**
Supervisor(s): **Dr. Navolan Dan**
Country: **Romania**
Faculty: **General Medicine Victor Babes Timisoara**

Introduction:

Anemia is one important disorder in pregnancy. WHO defines anemia in pregnancy as a HB under 11mg/dl. Most commen etiology of anemia in pregnancy is iron deficiency and megaloblastic anemia.

Aim:

The purpose of this study is identifying the prevalence of anemia in pregnancy and the incidence in different age groups, the differences between rural and urban areas.

Material and methodology:

We have evaluated the results of blood tests (hemoglobin, hematocrit and red blood cells) carried in the first trimester of pregnancy, from 1564 pregnant women who addressed to the Municipal Hospital Timisoara in one year

Results:

Anemia was reported in 39% of pregnant women (621 of 1564) In rural areas the percentage of anemia was 73% (of all pregnant women in rural areas) compared to only 21% of the urban environment. In terms of the degree in anemia 1.2% have an Hb between 5-7% (rural area 0.39% - 0.91% urban areas) 17% have an Hb between 7-9mg/dl (6.3% urban and 7.52 rural) 81.4 have an Hb between 9-11mg/dl (14.9 urban and 64.9 rural) In rural areas anemia was recorded at a rate of over 65% at all ages but in urban area the highest incidence was between 25-35 years and 35-45 that is over 25%.

Conclusion:

In our study it is reported an increased prevalence of anemia in pregnancy in rural areas. Possible cause is poor information, lack of antenatal screening and not enough collaboration between obstetricians and general doctor.

Key words: Anemia Pregnancy

THE ROLE OF MUCINO-HISTOCHEMICAL ANALYSES FOR THE PRECISE COLORECTAL ADENOMAS DEFINITION

(Oral presentation)

Field of medicine: **Internal medicine**
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Supervisor(s): **Ass. Prof. Biljana Radovanović Dinić, MD, PhD**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Mucino-histochemical analyses of colorectal adenomas help dysplasia defnition which is the basic indicator of the malignant alteration. Mucin analyses can provide the results which support the adenoma carcinoma sequence theory.

Aim:

The aim of the study is to present histochemical characteristics of adenomas, as well as to emphasize the significance of these analyses for the precise adenomas definition.

Material and methodology:

The prospective study includes the analysis of 83 colorectal adenomas obtained by transcolonoscopic biopsy, or polypectomy in 82 patients. The biopsy samples have been coloured by hematoxylin-eosin (HE) method, and by histochemical methods PAS and HID-AB (pH=2.5) to prove mucins.

Results:

Sulphomucins are more often found in adenomas of the left colon ($p<0.001$) than in the right one ($p<0.001$). Sulphomucins are more reactive in adenomas of 10mm diameter. The reactivity of sulphomucins is in negative correlation with the degree of dysplasia in adenomas ($hi2=41.231$, $df=6$, $p=<0.001$). The reactivity of sialomucins is in negative correlation with the degree of dysplasia. There is a significant difference in the number of adenomas of different level of dysplasia ($hi2=25.743$, $df=6$, $p<0.001$).

Conclusion:

The negative correlation between the degree of dysplasia and the production of mucins indicates the significance of the degree of dysplasia in malignant potential of colorectal adenomas. A histochemical analysis of colorectum is of the importance for safer grade of dysplasia and for the presence of malignant alteration.

Key words: colorectal adenomas, mucins

EPIDEMIOLOGICAL, ENDOSCOPIC AND HISTOPATHOLOGICAL STUDY OF GASTRIC CANCER

(Oral presentation)

Field of medicine: **Internal medicine**
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Supervisor(s): **Doc. Dr Biljana Radovanovic-Dinic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

In our country, gastric cancer is the most common malignant tumor of the digestive tract. Esophagogastroduodenoscopy is the most reliable diagnostic method for detection of gastric cancer. Depending on the depth of gastric wall abstractions distinguish early and advanced gastric cancer. According to Bormann's classification of advanced cancer on the basis of endoscopic appearance divided into: vegetative, ulcerative, aphthous-infiltrative and diffuse-infiltrative. On the basis of histopathological features all cancers of the stomach according to Lauren classification divided into: diffuse, vague and adenocarcinomas.

Aim:

To evaluate the correlation of endoscopic and patohistological characteristics and their relation to the epidemioogical parameters.

Material and methodology:

This retrospective study included 68 patients who were verified during the esophagogastroduodenoscopy review gastric cancer. All biopsy samples were taken during endoscopy were analyzed at the Institute of Pathology. All results were statistically analyzed.

Results:

Most patients were older than 65 years with no significant differences in development as opposed to gender ($p = 0.848$). Dominant localization of the corpus carcinoma, with no statistically significant differences by gender.Endoscopic findings showed that the dominant vegetative cancer in men and women was ulcerative cancer, although there was no statistically significant difference ($p = 0.164$). Adenocarcinoma was predominant in both sexes, but there was no statistically significant defference ($p=0.464$).

Conclusion:

Gastric cancer is more common in men, after 65 years. Both sexes of patients regardless of their age dominated by vegetative adenocarcinoma, usually localized in the corpus.

Key words: epidemiology, endoscopy, histopathology, gastric cancer

CHANGES IN BONE MINERAL DENSITY IN PATIENTS WITH TYPE 1 DIABETES

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **STEVAN MILENKOVIC, Dalibor Stojanovic, Velimir Peric, Stefan Stankovic, Slobodan Ivkovic**
Supervisor(s): **Ass. Dr Milena Velojic-Golubovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Diabetes is a chronic hyperglycemiacondition caused by absolute or relative insulin deficiency In the course of the disease occurring metabolic changes matter building blocks of fats, proteinsand electrolytes especially calcium. Dexa machines allow early diagnosis and monitoring of minimal changes of 1%. Prolonged bad glycoregulation inducing metabolic acidosis in patient with diabetes mellitus, which may cause disturbance in calcium metabolism which may cause disturbance in calcium metabolism.

Aim:

Establish a connection of osteoporosis and DM1

Material and methodology:

The study includes 108 patients with type 1 DM, treated and controlled at the clinic for endocrinology, diabetes and metabolic diseases, Clinical center Nis. There were 50 women and 58 men, mean age 31,4 years and disease duration of 9,7 years, all treated with insulin. In the control group was 80 healthy subjects, 40 men and 40 women, mean age 33,8. The study included clinical assessment, laboratory research, hormone analysis, bone density.

Results:

All parameters were normal in control group. In the group with DM 1 values of glucose, cholesterol and triglyceride levels exceed the upper limit of normal values. The vlues of pth, estradiol, calcium, phosphorus and alcal phosphatase were lower in the experimental group ($p<0,001$). In the group of the patients with DM1 values of bone mineral density were 1.114 gr/cm2 SD 0.142.

Conclusion:

DM1 leades to significant changes in bone mineral density of patients with this form of DM. Changes in bone mineral density in correlation with gener shows a significantly greater loss in females.

Key words: bone mineral density, type 1 diabetes

MICROVOLT T-WAVE ALTERNANS IN PATIENTS WITH LEFT VENTRICULAR HYPERTROPHY

(Oral presentation)

Field of medicine: **Internal medicine**
Author(s): **G.K. ARUTYUNYAN**
Supervisor(s): **CamdMedSci, Assoc. Prof. D.A. Tsaregorodtsev, I.R. Bukiya**
Country: **Russian Federation**
Faculty: **I.M.Sechenov First Moscow State Medical University**

Introduction:

The sudden cardiac death prevalence in the US population is 1–2 cases per 1000. The identification of high risk groups is crucial for the possibility to take efficient preventive measures. Such new noninvasive risk factors, as T-wave alternation (mTWA), may provide important information on the patient's susceptibility to life threatening arrhythmias.

Aim:

To evaluate correlation between mTWA and the degree of left ventricular hypertrophy (LVH)

Material and methodology:

The study involved 22 hypertrophic cardiomyopathy (HCM) patients and 33 hypertensive heart disease (HHD) patients. All patients underwent echocardiography and 24h Holter monitoring with mTWA evaluation using modified mooving average method. The evaluation involved maximum mTWA figures in 24h (mTWAmax), mTWA figures at the heart rate of 100/min (mTWA100) and at 5.00 am (mTWA5.00)

Results:

The common group demonstrated a weak direct correlation between the thickness of ventricular septum (IVSth) and mTWAmax, as well as a weak reverse correlation between the left ventricular posterior wall thickness (LVPWth) and mTWA100. These correlation were revealed primarily in HHD patients who demonstrated correlation between mTWAmax and IVSth, between mTWA5.00 and IVSth, LVPWth, as well as between mTWA100 and LVPWth. The patients with non-obstructive HCM demonstrated significantly higher mTWA100 in comparison to the patients with obstructive HCM. The presence of higher SCD risk factors in the HCM patients (n=6) did not influenced mTWA figures.

Conclusion:

mTWA figures correlate with the degree of left ventricular hypertrophy, however the revealed correlations are weak. The causes of reverse correlation call for additional studies.

Key words: microvolt T-wave alternation, hypertrophic cardiomyopathy, left ventricular hypertrophy, modified mooving average method.

RENAL FUNCTION IN PATIENTS WITH THALASSEMIA INTERMEDIA: A CROSS-SECTIONAL STUDY

(Oral presentacion)

Field of Medicine: **Hematology/Nephrology**
Author(s): **ALI ABDULNABI MOHAMED; Dr. Khaled Musallam**
Supervisor(s): **Prof. Ali Taher**
Country: **Bahrain**

Introduction: Patients with Thalassemia Major may develop renal disease which is attributed to iron overload and chelation therapy. Data on renal function in patients with Thalassemia Intermedia (TI) is very limited.

Aim: This study was designed to evaluate kidney function in TI patients and its correlation with several disease-related parameters.

Methods: A cross-sectional study of 50 TI patients treated at the Chronic Care Center, Beirut, Lebanon. Serum ferritin (SF), non-transferrin-bound iron (NTBI), total (Hb) and fetal (HbF) hemoglobin, nucleated RBC (NRBC), platelets, serum creatinine (SCr), and urinary protein (Pr) and creatinine (Cr) levels were obtained. R2-MRI was done to determine liver iron concentration (LIC). SCr and urinary Pr/Cr ratio were correlated with demographics, disease and laboratory parameters, spleen status, and treatment received.

Results: The mean age was 27.3 ± 12.1y (range, 8-63y) with 44% being males. Fifteen patients were occasionally transfused, but none of the patients received iron chelation therapy. No patients had systemic hypertension but 28 (56%) had pulmonary hypertension and 39 (78%) were splenectomized. A total of 24 (48%) patients [mean age 23 y, 19 males] had SCr ≤0.4 mg/dl (i.e., possible glomerular hyperfiltration), and 7 (14%) patients [mean age 27 y, 3 males] had a urinary Pr/Cr ratio >500 mg/g (proteinuria). Age and male sex were positively correlated with SCr ($P<0.002$) and splenectomized patients had a significantly higher SCr than non-splenectomized patients (0.56 vs. 0.46 mg/dl, $P=0.031$). Urinary Pr/Cr ratio correlated positively with: SF ($r_s=0.2$, $P=0.048$), NTBI ($r_s=0.44$, $P=0.001$), LIC ($r_s=0.36$, $P=0.011$), and NRBC ($r_s=0.38$, $P=0.006$); yet correlated negatively with Hb ($r_s= -0.25$, $P=0.008$).

Conclusion: Glomerular hyperfiltration with proteinuria are common in TI patients not receiving iron chelation therapy, and these parameters may portend future progression of chronic kidney disease. Chronic hemolytic anemia and iron overload may play significant roles in the development of proteinuria in TI patients.Large prospective trials are needed to better understand the natural history of renal function in TI patients and to assign the optimal preventive approaches before overt renal insufficiency develops.

THE DIAGNOSTIC SIGNIFICANCE OF CAROTID INTIMA-MEDIA THICKNESS IN THE DETECTION OF THE CORONARY ARTERY DISEASE

(Oral presentacion)

Field of medicine: **Cardiology**
Author(s): **DUŠAN PETROVIĆ, Aca Ćurčić**
Supervisor(s): **Doc. Dr Siniša Stojković**
Country: **Serbia**

Introduction: The progress of the arteriosclerosis process occurs with aging and is intensively accelerated in the presence of risk factors. The measurement of intima-media thickness (IMT) is the most accesible of the reliable non-invasive ultra-sound methods for the evaluation of vascular remodelling in the process of arteriosclerosis. Selective coronary angiography is the most renowned model for the detection of morphological changes on the coronary arteries.

Aim: The objective of the survey was to establish the relation between the carotid intima-media thickness (CIMT) and the coronary artery disease (CAD) among the patients tested by coronary angiography due to suspecting the coronary artery disease.

Material and methods: Forty respondents with the angiography-diagnosed coronary disease (20 men and 20 women varying between the age of 30 and 80) were tested by the ultra-sound Dopller angiography and compared to the identical number of healthy respondents of the same gender and age structure and without risk factors in terms of the coronary disease.

Results: Statistically, the value of CIMT is significantly higher for the respondents of both sexes with the presence of CAD ($p< 0.01$). The respondents with the three-vessel coronary disease have significantly higher CIMT than the respondents with the one-vessel or two-vessel coronary disease ($p< 0.05$). Statistically, the cross sectional intima-media surface area of the a. carotis communis (CSA) is significantly larger among the respondents with CAD in comparison with the control group ($p< 0.01$).

Conclusion: The evalution of CIMT is a reliable parameter for the detection of the degree of vascular remodelling in the process of arteriosclerosis and the changes on the coronary and carotid arteries correlate to a high degree. The carotid duplex ultra-sonography can be used as an important screening method since it is non-invasive, it is used easily, and by means of it the atherosclerosis can be monitored even in the initial subclinical phase.

Key words: arteriosclerosis, CIMT, coronary angiography, CSA, ultra-sound Dopller angiography

INTESTINAL HETEROTOPIC ALLOTRANSPLATATION AND ACUTE PROLIFERATIVE, INFLAMATORY AND HISTOPATOLOGICAL CHANGES

(Oral presentation)

Field of medicine: **Cardiology**
Author(s): **MARETTA M. , Kovalčinová B.**
Supervisor(s): **Dr.Š.Tóth PhD., Dr.Z.Jonecová PhD., Assoc.Prof.J.Veselá PhD.**

Introduction: Small bowel transplantation (SBTx) is sometimes only chance of solving problems concerning life threatening conditions of small intestine. Acute tissue response of small intestine graft undergoes severe histological alternation in course of histopathological damage, proliferative and inflammatory response as well.

Aim: The aim of presented experimental study was to analyse the histopathological changes in jejunal graft tissue in first hours immediately after hetrotopic allotransplantation in rats.

Material and Methods: In experiment adult Wistar rats (♂, 250-350g, 12 donors-TxD, 12 recipients-TxR, 6 controls-C) were used. In experimental groups technique of hetrotopic allotransplantation of jejunum was performed according to protocol. The TxR rats were assigned into groups: survived 1h(Tx1/R) and 6h(Tx1/R) after transplantation. After this period samples of jejunum were obtained for histological (HE) and immunohistochemical (anti-PCNA,anti-MPO) evaluation.

Results: Determination of histopatological damage pointed out on low damage in Tx1/R and Tx6/R and its significant increase in jejunal graft samples - Tx1/D ($p<0.05$). The injury of jejunal graft wall was confirmed by significant reduction of the villous high and the thickness of the jejunal wall ($p<0.001$, resp. $p<0.01$). The higher PCNA+ was found in Tx6/D. In epithelial layer PCNA expression increased significantly ($p<0.001$: Tx6/D *vs*. Tx1/D) and were similar top those found in Tx/R and C groups. The evaluation of MPO expression pointed out on its significant ($p<0.001$) increase in Tx1/D and its decreased in Tx6/D which was comparable to recipient values ($p<0.01$) and C.

Conclusion: In our experiment we showed that jejunal hetrotopic allotransplantation is associated with massive tissue response characterised by increase of proliferation activity of jejunum, inflammatory activity and histopatological changes in all layers of small intestine. Supported by APVV-0252-07, CEMIO-ITMS-26220120058

Keywords: Jejunum, hetrotopic allotransplantation, proliferation, inflammation

CLINICAL CHARACTERISTICS AND SURVIVAL OF THE PATIENTS WITH PLASMACYTOMA

(Poster presentation)

Field of medicine: **Internal medicine**
Author(s): **GOJKOVIC NATASA**
Supervisor(s): **Mr.dr Nermin Abdic**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction:

Plasmacytoma represents the second cancer of the blood, after Non-Hodgkin lymphoma. The etiology is a malignant proliferation of B lymphocytes.

Aim:

The aim of this study is to show the incidence and prevalence of plasmacytoma in Montenegro, from January the 2007 till December the 2011, with specific review outcome of disease and surviving.

Material and methodology:

We included 47 patients, age 39 to 87 from Haematology, Intern clinic, Clinical center in Montenegro. We analyzed the frequency of occurrence of the gender, clinical stages, included kidney weakness, given therapy and outcome.

Results:

As we analyzed the gender we got 19 men (40,43%) and 28 women (59,57%). Then we analyzed clinical stages of the disease, and got 5 patients in the first stage, 8 patients in second and 34 patients in third. Analyzing included kidney weakness we got 11 patients with and 36 patients without kidney weakness. As a therapy for 12 patients we included only chemotherapy, and 35 patients we included combination of chemotherapy and radiotherapy. After given therapy 19 patients survived, and 28 patients deceased.

Conclusion:

We concluded that Montenegro has small number of patients of plasmacytoma and more often they are women. Patients usually come to see doctor in the third disease stage, which represents bad prognosis for their survival. Even if they have received combined therapy, most of the patients deceased.

Key words: plasmacytoma, B lymphocytes, chemotherapy, survival.

PERICARDIAL TAMPONADE AS FIRST SYMPTOM OF ADENOCARCINOMA PULMONIS - CASE REPORT

(Poster presentation)

Field of medicine: **Internal medicine**
Author(s): **LAMIJA POJSKIĆ, Ema Tahto**
Supervisor(s): **Alen Džubur, MD**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty Of Medicine Sarajevo**

Introduction:

Most common symptoms of adenocarcinoma pulmonis are productive cough,dyspnoea,hemoptysis,chest pain,hoarseness,weight loss,high temperature. Pericardial effusion as first symptom of malignacy pulmonum is very rare found.

Aim: /

Material and methodology: /

Results: Case Report:Male,63,smoker,was presented in Cantonal Hospital Zenica with palpitations,weakness,dyspnoea. Heart rate 160/min,blood pressure 130/80mm/Hg.Clinical examination revealed abnormal sound on lungs as wheezes and congested jugular.ECG showed low voltage in aVF,SDIII and QRS modifications. Laboratory analyses found low Fe,Hb,eritrocytes and increased urea,creatinine, AST,ALT,bilirubine.Chest X-ray revealed widened cardiac shadow with no other lung abnormalities.Ultrasound of the heart showed pericardial effusion with heart tamponade.Pericardiocentesis was performed and 800ml of hemorrhagic fluid was removed by ECHO guided needle aspiration.Cytological examination showed mesotel hyperplasia.Microbiological analysis was negative.Abdominal ultrasound showed enlarged liver,dilatated v.cava inferior and vv.hepaticae.After laboratory analyses CT was indicated.CT showed tumor mass on left lung(S1/2andS3),which obstructed bronchial branches.Lymph nodes were enlarged and pleural effusion was present in both pleural cavities.Bronchoscopy showed intramural node in left intermediate bronch, which wasn't avaliable for bronchoscopic biopsy.Biopsy under CT control was made in order to get definite diagnosis.Patohystological diagnosis was adenocarcinoma pulmonis(non microcellulare carcinoma pulmonis).Three weeks later,patient experienced second cardiac tamponade and 1500ml of hemorrhagic fluid was removed.Patient was presented to oncology department and he was administered therapy.During three months of therapy there was no significant pericardial effusion.

Conclusion: Adenocarcinoma pulmonis can be presented with pericardial effusion,another well known complication of the disease,but it is very rare that pericardial tamponade is first initial symptom of adenocarcinoma pulmonis.The ultrasound of the heart and pericardiocentesis guided to correct diagnosis.

Key words: pericardial tamponade, adenocarcinoma pulmonis

DIABETES MELLITUS AMONG BAHRAINIS WITH SICKLE CELL DISEASE

(Poster presentation)

Field of medicine: **Internal medicine**
Author(s): **ALI ABDULNABI MOHAMED**
Supervisor(s): **David Whitford**
Country: **Bahrain**
Faculty: **Faculty Of Medicine RCSI Bahrain**

Introduction:

Bahrain has a relatively high prevalence of both Diabetes Mellitus (DM) and Sickle Cell Disease (SCD). The co-prevalence between the two is unknown.

Aim:

The aims of this study is to establish the prevalence of DM among Bahrainis with SCD; to compare it with the prevalence of DM in the general population of Bahrain and in SCD patients of other countries; and to discuss the potential implications of the results.

Material and methodology:

A cross-sectional prevalence study of 376 Bahraini SCD patients admitted to Salmaniya Medical Complex (SMC) from 2003 to 2010. Laboratory data obtained include recent and abnormal values of FBS, RBS, GTT, HbA1c, HbS, HbF and Lipid profile. Diabetic status was determined based on available blood sugar measurement data. Patients with less than enough data to determine their diabetic status were excluded.

Results:

The mean age was 33.5 ± 11.2 years (range: 18-79 years) with 52% being males. 85% (n= 320) have no laboratory evidence of DM. The total prevalence of DM in the sample was 6.4% (n= 24). 2.9% (n= 11) have been previously diagnosed with DM, while 3.5% (n= 13) have DM, based on their blood sugar criteria, but have not yet been diagnosed.

Conclusion:

The prevalence of DM among Bahrainis with SCD is 6.4% which is relatively high compared to alike previous studies in different settings and populations. This finding necessitates firm screening and management strategies to early detect and control DM in Bahraini SCD patients in order to prevent the disease-related complications.

Key words: Diabetes Mellitus, Sickle Cell Disease, Bahrain

PLENARY SESSION VIII

NEUROLOGY, PSYCHIATRY, RADIOLOGY

Date: July 21st 2012

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

CELLULAR TELEPHONE USE AND BRAIN TUMORS IN PATIENTS IN SOUTH SERBIA

(Oral presentation)

Field of medicine: **Neurology**
Author(s): **MILAN BOZINOVIC**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

The use of hand-held cellular telephones might couse brain tumors! This is a very widespread belief among the general population.

Aim:

If such a risk does exists, the matter would be of considerable public health importance, given the rapid increase worldwide in the use of these devices.

Material and methodology:

We examined the use of cellular telephones in a case control study of intracranial tumors of the nervous system conducted between 2008 and 2010. we enrolled 186 patients through hospitals in Nis, Prokuplje, Leskovac, Pirot and Vranje.113 had histologicaly confirmed glioma, 51 had meningeoma, and 22 had acustic neurinoma.The 250 controls were patients admitted to the same hospitals.

Results:

As compared with never, or very rarely, having used a cellulae telephone, the relative riscs associated with a cumulative use of a cellular telephone for more than 100 hours were 0.84 for glioma (95 % confidence interval, 0.5-1.6), 0.7 for meningeoma (95 % confidence interval, 0.3-1.7), 1.7 for acoustic neurinoma (95 % confidence interval, 0.3-2.6). there was no evidence that the risk were higher among persons who used cellular telephones for 60 or more minutes per day or regularly for five or more years.

Conclusion:

These data do not support the hypothesis that the recent use of hand-held cellular telephones causes brain tumors.

Key words: cellular telephone, brain tumors, meningioma

CLINICAL FEATURES AND COURSE OF PEDIATRIC MULTIPLE SCLEROSIS

(Oral presentation)

Field of medicine: **Neurology**
Author(s): **UROS MARKOVIC, Dusan Kekic**
Supervisor(s): **Doc.dr Vesna Jancic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Multiple sclerosis (MS) is a chronic demyelinating diesease of the central nervous system that occurs between 20 and 40 years, rarely in children in 3-10% of cases. MS is characterized with two types of clinical events: relapse and progression

Aim:

To identify clinical characteristics of patients with pediatric MS; examination of correlation between neurological disability and interval between the first two attacks.

Material and methodology:

In a retrospective study, from 1986.-2011., we analyzed medical records of 52 patients. The diagnosis of MS was based on the McDonald`s diagnostic criteria.Data were analyzed by descriptive and analytical statistics. Student`s T test and Pearson`s correlation test were used

Results:

Group consists of 21 boys (40.4%) and 31 girls (59.6%) (gender ratio of 1.5-:1), mean age 14.5 ± 2.9. The mean time between first two exacerbations of disease is 2.9 ± 2.3. Relapsing-remitting course have 48 patients (92.3%), 3 (5.8%) secondary progressive form, and 1 (1.9%) is primary progressive. The most frequent initial symptoms are sensitive (50.0%), visual (44.0%) and motor (42.0%). In the group of patients with more than two attacks, the mean EDSS (extended disability status scale) is 5.46 ± 0.93, and the mean progressive index (PI) 1.1 ± 0.8.

Conclusion:

The study shows that pediatric MS occurs more often in girls than in boys, course of the disease is predominantly relapsing-remitting, the most common initial symptoms are sensory, visual and motor. There is an inverse correlation between level of disability and interval between the first and second attack

Key words: Multiple sclerosis, childhood, clinical presentation

SEVERITY OF CONVULSIONS IN HOMOCYSTEINE-TREATED RATS AFTER DEPRIVATION OF RAPID EYE MOVEMENT SLEEP

(Oral presentation)

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

Introduction:

There is a complex interaction between sleep and epilepsy: sleep disruption may facilitate a seizure and sleep disorders frequently coexist in patients with epilepsy. Rapid eye movement sleep deprivation (REMD) reduces levels of homocysteine, an excitatory neurotransmitter.

Aim:

To asses severity of behavioral manifestations of homocysteine-induced convulsions in adult rats upon REMD.

Material and methodology:

REMD was conducted by 72h plot-over-water method. Male Wistar rats were divided into groups: 1. DCH (dry control), 2.SCH (stress control, large platform) and 3.REMDH (REMD, small platform) groups receiving subconvulsive dose of homocysteine (D, L homocysteine thiolactone 5.5 mmol/kg, i.p.) and 4-6. corresponding control groups receiving 0.9% NaCl after appropriate experimental conditions. Convulsive behavior was observed during the next 90 min.

Results:

Incidence and number of convulsive episodes per rat were significantly increased, and latency time reduced in the REMDH group compared with the DCH, while the number of convulsive episodes was significantly increased also compared to the SCH group. In the REMDH group maximum intensity of convulsions was of grade 4, and in groups SCH and DCH grade 2. Animals from corresponding control groups did not show any signs of convulsive behavior.

Conclusion:

Convulsions induced by subconvulsive dose of homocysteine in adult rats were facilitated by REMD showing summation of hyperexcitability processes in epileptogenesis.

Key words: REM deprivation, convulsive behavior, homocysteine, rat

SEVERE STROKE – EPIDEMIOLOGY, COMPLICATIONS, OUTCOME

(Oral presentation)

Field of medicine: **Neurology**
Author(s): **KATARINA ANIŠIĆ, Agota Cuzdi**
Supervisor(s): **Ass. Dr Svetlana Ružička Kaloci**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Stroke is a clinical syndrome characterized by acute focal disturbance of brain function with symptoms lasting longer than 60 minutes or leading to death, due to vascular causes.

Aim:

To determine the mortality rate and disability in the short term treatment of a patient with severe forms of acute stroke, the incidence of selected complications and their impact on the outcome.

Material and methodology:

This study made a retrospective analysis of data by examining the medical records of patients with severe acute stroke who were treated at the Department of Intensive Care Clinic of Neurology in Novi Sad, from January 1, 2011 to June 30, 2011.

Results:

100 patients were included, 44 females and 56 males. The average age was 71.09 years. In patients where the scales were recorded, most of them had GCS 3-8, fifth grade of mRS, while the median NIHSS on admission was 17.2 and 14.1 at discharge. Lethal outcome was registered in 64% of patients. Complications that were observed, most often occurred bronchopneumonia, then urinary infections, diarrhea and pulmonary thromboembolism. We have noticed that the majority of patients with urinary infection as a complication died, and the death of these and other complications commonly occurred after seven days.

Conclusion:

Patients with severe forms of acute stroke have very high mortality rate, disability and functional dependence in survivors, high rate of complications that affect mortality, prolong hospitalization and hamper recovery.

Key words: acute stroke, complications, outcome

THE NEW EFFECT OF NOSCAPINE ON MORTALITY RATE IN PATIENTS WITH MASSIVE ISCHEMIC STROKE

(Oral presentation)

Field of medicine: **Neurology**
Author(s): **SHADI GHOURCHIAN, Mohammad Rezvani, Massoud Mahmoudian, Faouzya Benaissa, Mohammad Rohani, Mehdi Jalili**
Country: **Iran**
Faculty: **Medical Students' Research Center Lorestan**

Introduction:

Stroke is the third cause of death in the world but the treatment is limited to r-tPA and mechanical methods. Considering the destructive effects of bradykinin on nervous system, it seems that using Noscapine as a bradykinin antagonist may improve patients' ability. Also, by another study, Noscapine inhibits neovascularization.

Aim:

The effect of Noscapine on massive ischemic stroke was showed by a previous pilot study by our group. This quasi clinical trial study was designed to assess the result of the pilot study.

Material and methodology:

The study was performed at one of the main referral neurology centers of the capital city. Patients who had hemiparesis, homonymous hemianopia, symptoms of cortical involvement and also CT scans findings were entered to the study. To assess ability improvement, Rankin scale and Barthel index check lists were used. The patient group received Noscapine and the control group received common supportive treatments. At the end of the study, to adjust confounding variables we used logistic regression.

Results:

After one month follow up of 30 patients in each group, 16 patients in the control group and 11 patients in the case group expired (P= 0.193). Analyzing the data extracted from Rankin scale and Barthel index check lists, revealed no significant differences in the two groups

Conclusion:

Despite the absence of any significant results in our study, the reduction rate of 16% for mortality rate in Noscapine recipients is clinically remarkable and motivates future studies with larger sample sizes.

Key words: Noscapine, massive ischemic stroke, treatment, clinical trial

EFFICACY OF DIFFERENT TYPES OF FLUID THERAPY IN PATIENTS WITH SUBARACHNOID HEMORRHAGE: A PROSPECTIVE, RANDOMIZED STUDY

(Oral presentation)

Field of medicine: **Neurology**
Author(s): **ESZTER VARGA**
Supervisor(s): **Csilla Molnar MD, Peter Siro MD**
Country: **Hungary**
Faculty: **Faculty Of Medicine Debrecen**

Introduction:

Triple-H therapy (3HT; hypervolemia, hemodilution and hypertension) is often utilized to prevent and treat cerebral vasospasm after aneurysmal subarachnoid hemorrhage (aSAH), although the preferred agent is still a question under debate.

Aim:

We designed a prospective, randomized study to evaluate whether crystalloid-based (Lactated Ringer) or colloid-based (Voluven) 3HT is more effective in the treatment of cerebral vasospasm.

Material and methodology:

Hunt-Hess I-II-III patients with documented aSAH were randomized into two groups: 1) LR-group: 15-40 ml/kg Lactated Ringer daily or 2) Vv-group: standard 15 ml/kg Lactated Ringer and 15-50 ml/kg Voluven daily. Patients received additional vasoactive drug treatment when it was needed. Transcranial Doppler and NIH Stroke Scale were assessed daily. 30-day outcomes were measured with Glasgow Outcome Scale (GOS) and Barthel Index (BI). We defined the primary endpoint as the occurrence of vasospasm and the secondary endpoints as the 30-day outcomes (mortality, GOS, BI).

Results:

38 patients were randomized to the LR-group, and 34 patients were randomized to the Vv-group. No differences were detected between the two groups with respect to vasospasm. 30-day clinical follow-up assessments did not demonstrate any significant group differences neither with BI (p=0,11) nor with the 30-day mortality rate (p= 0,65). However, results of GOS were significantly better in the LR-group (p= 0,018).

Conclusion:

Based on the data in this study there is no difference between the efficacy of the crystalloid-based and the colloid-based preventive 3HT.

Key words: subarachnoid hemorrhage, triple-H therapy, vasospasm, crystalloids, colloids

THE MONTREAL COGNITIVE ASSESSMENT AS A SCREENING TOOL FOR COGNITIVE IMPAIRMENT IN ACUTE STROKE

(Oral presentation)

Field of medicine: **Neurology**
Author(s): **VLADIMIR VUKOVIĆ**
Supervisor(s): **Assistant Professor Marija Semnic MD, PhD**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Impairment of cognitive functions, which is common in acute stroke, negatively affects the outcome of the disease and often remains undiagnosed. MoCA is a newer test, developed as a brief screening for detection of mild to moderate cognitive impairment.

Aim:

To determine the existence of cognitive impairment in patients with acute stroke using MoCA, CDT and MMSE test. To examine the correlation between total MoCA, MMSE score and CDT. To determine correlation between total MoCA, MMSE score and subtest scores on the MoCA and also with localization of brain lesions detected by CT.

Material and methodology:

The study involved a group of 30 patients with acute stroke, after 8-15 days of treatment, aged 45-82 years, 8-16 years of education. The control group consisted of 30 healthy volunteers. First day of research, MMSE and CDT were administered and MoCA on the following day.

Results:

The test results between the group with acute stroke and control group, showed significant difference ($p<0.01$) with better achievements in the group of healthy subjects. Correlation analysis between the scores of MoCA, MMSE and CDT in the patients with acute stroke established a positive correlation ($r>0.74$).

Conclusion:

Presence of cognitive impairment in patients with acute stroke was determined using MoCA, MMSE and CDT. Positive correlation between MoCA, MMSE and CDT was determined in patients with acute stroke. Cortical lesions are associated with low MMSE score, while cortical atrophy is related with poorer performance on MoCA.

Key words: cognitive impairment, acute stroke, MoCA, MMSE.

GENDER DIFFERENCES IN ADOLESCENTS WITH CONDUCT DISORDER

(Oral presentation)

Field of medicine: **Psychiatry**
Author(s): **ANA KAPOR, Milica Gojkovic**
Supervisor(s): **Doc.Dr Svetlana Ivanović Kovačević,Mr Valentina Šobot**
Country: **Serbia**

Introduction:

Conduct disorder is the most common mental disorder in adolescence.It refers to patterns of behavior that violate the fundamental rights of others,social norms,or age-appropriate norms of behavior.

Aim:

Determine whether there are differences in personality traits and emotional-behavioral problems among male and female adolescents with conduct disorder.

Material and methodology:

In a clinical sample of 40 patients,22 male patients and 18 female patients with diagnosed conduct disorder,we used measures of self-assessment.The applied scale of self-assessment used is APSD, the Antisocial Process Screening Device , used to consider the existence of trait of narcissism, impulsivity and insensitivity, and the YSR-Youth Self Report scale was used to consider the existence of emotional and behavioral problems anxiety,depression attention deficit disorder, antisocial behavior, aggressiveness and suicidal tendencies. By applying the methods of descriptive statistics we determined differences between groups of male and female adolescents.

Results:

After using appropriate statistical analysis we found that there are no statistically significant differences in the degree of severity of antisocial behavioral patterns and personality traits between the genders in adolescents with conduct disorder.A significantly higher expression of attention problems was found in the female population.The features of insensitivity were more prominent than impulsivity and narcissism in both genders.

Conclusion:

There was a difference in the prevalence of psychopathological phenomena described above between boys and girls with a prevalence of 6-10% for males and 2-9% for females. A significantly higher expression of attention problems was found in the female population

Key words: Conduct disorder, gender differences, personality traits, emotional and behavioral problem

ATTITUDES OF MEDICAL STUDENTS TOWARDS PSYCHIATRIC PATIENTS

(Oral presentation)

Field of medicine: **Psychiatry**
Author(s): **VANJA HLOZAN**
Supervisor(s): **Ratomir Lisulov, MD, PhD**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Negative attitudes towards psychiatric patietns are very spread in society. Among others, physicians also have the negative attitudes.

Aim:

To examine the attitudes towards psychiatric patients among first and fifth year medical students of Medical Faculty Novi Sad and to assess the differences in attitudes caused by duration of medical education.

Material and methodology:

Data were obtained using questionnaire which consisted of 27 questions. 127 first year and 74 fifth year medical students took part in the survey. We compared the attitudes between the two groups and also of fifth year medical students which have some family member who is treated for some psychiatric disorder, with those who do not have.

Results:

Fifth year students have generally more favourable attitudes. Greatest difference was in the attitudes in areas students met during their faculty education, such as therapy and psychiatric hospitals. The difference was less and statistically insignificant in social and personal attitudes. Statistically significant differences were found between the two groups of fifth year students. The group of students with family member treated for some psychiatric disorder had less negative attitudes. They also had more stances towards psychiatric disorders, and their responses were more uniform.

Conclusion:

Although there is a positive difference between first and fifth medical students' attitudes towards psychiatric patients there is a plenty of possible improvement in their education, in order to reduce stigma. Further research should be done on attitudes towards specific mental disorders.

Key words: psychiatric patients, stigma, medical students

ANXIETY AT FAMILY MEMBERS OF DRUG ADDICTS ON METHADONE PROGRAM

(Oral presentation)

Field of medicine: **Psychiatry**
Author(s): **VLADAN MILOSEVIC, Jasmina Randjelovic**
Supervisor(s): **Doc. Dr Olivera Zikic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Long-term heroin addiction, especially with politoxicomania, carries numerous medical and social problems. The family of drug addicts is one of the most vulnerable parts of society. Because of frequent traumatic experiences and high intensity of stress, we can expect numerous physical and psychological consequences at family members.

Aim:

The aim was to determine whether are the course and consequences of drug addiction, as well as sociodemographic characteristics of drug addicts, related with the anxiety of family members (associates in treatment) during the methadone program.

Material and methodology:

The study included 46 subjects of both sexes (12 men or 26.1% and 34 women or 73.9%) who were associates in treatment of drug addicts on methadone program. In order to obtain necessary data, we used a general sociodemographic questionnaire to obtain data about associates in treatment of drug addicts and data about drug addicts and the Beck Anxiety Inventory questionnaire to measure levels of anxiety at associates in treatment. The obtained data were analyzed in SPSS 12 program.

Results:

Levels of anxiety at associates in treatment were statistically significantly associated with educational level of drug addict ($F = 10.09$, $p = 0.000$), number of abstinence and treatment attempts($F = 4.620$, $p = 0.007$) and with a history of overdose($t = 2.113$, $df = 44$, $p = 0.039$).

Conclusion:

The highest scores of anxiety had associates in treatment of drug addicts with a larger number of abstinence attempts, which have the lowest educational level and which also had overdose during the drug abusing.

Key words: Anxiety, family, drug addiction, methadone treatment

THE IMPORTANCE OF EMOTIONAL INTELLIGENCE (EIQ) TO ACHIEVE ACADEMIC SUCCESS OF PHARMACY STUDENTS

(Oral presentation)

Field of medicine: **Psychiatry**
Author(s): **DUŠAN TOMOVIĆ**
Supervisor(s): **Prof. Dr Slobodan Janković**
Country: **Serbia**
Faculty: **Faculty Of Pharmacy Kragujevac**

Introduction:

EIQ is a set of skills that should contribute to correct the assessment and expressing their emotions, and evaluate other people's emotions and their contribution to the motivation, planning and achieving goals in life. This provides the basis for further exploring what is it that makes people more pragmatic in different situations.

Aim:

To determine the level of EIQ as potential indicator of academic success, the pharmacy students with different average grades at University.

Material and methodology:

The study was conducted on 143 pharmacy students of 3rd to 5th year study. All subjects were given a general enquiry and a test of EIQ. With the help of linear correlation test determined statistical significance of the relationship of EIQ and average grades at University.

Results:

In this study rejected H0 because it was found that the linear relationship between EIQ and the average grades is strong. A number of factors ranging from time spent in learning, through emotional status and graduating from secondary school and success achieved in the same show a statistically significant relationship with average grades.

Conclusion:

EIQ is an skill that is acquired by learning and developing with age. It can't only facilitate the learning process and lead to increased academic success, but has an important role in improving creativity and flexibility in solving problems. Modern society has accepted the concept of EIQ as the main performance indicators, which could be explored and their implementation in the pharmaceutical business.

Key words: EIQ, academic success, pharmacy students.

PSYCHIATRYC ASPECTS OF DEMENTIA

(Oral presentation)

Field of medicine: **Psychiatry**
Author(s): **ALAJBEGOVIĆ JASMIN, Dedic Ajdin**
Supervisor(s): **Musić Miralem, Alić-Sinanović Lejla**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty Of Medicine Sarajevo**

Introduction:

Dementia is a clinical syndrome characterized by a global deterioration of mental functioning in its cognitive,emotional and conative aspects.

Aim:

Find interrelationship between dementia and depression,smoking,drinking alcohol and education.

Material and methodology:

The retrospective study was conducted on the Neurological clinic of the Clinical Center of University of Sarajevo from 2005 to 2010.The definitive sample included 120 patients with dementia,divided into two groups:group 1-60patients old over 65 years and group 2-60 patients old under 65 years.Data were gathered from medical history,discharge and protocol of patients.We analysed connection between depression,smoking,drinking alcohol and education with dementia.Diagnostic procedures that were analysed are:neuropshycological tests,CT,MRI.The results were analysed with standard statistical methods,using $\chi 2$ test,Student t-test and p-value. Results with $p<0,05$were considered to be statistically significant.

Results:

The avarage age of group 1 was 73,8±6,6 years(range65-94) and the group 2 was 50,9 ± 9,6 years (range 18-64). Both groups had more women(53,3%in group 1 and 58,3%in group 2). Between the two groups there were found differences statistically significant acordindg to folowing factors: smoking (13,3%in group 1 and 30%in group 2; $p<0,05$) and education level (higher in group 2; $p<0,05$). Large percentage of respondents had depression(28,3%in group 1 and 43,3%in group 2). Frequent presence of the cortical atrophy and other changes characteristic for dementia was detected using CT and MRI.

Conclusion:

Smoking is an important risk factor for early inception of dementia.There is an interactoin between depression and dementia.Identifying of the psychyatric aspects of dementia stays open for fruther research.

Key words: dementia,depressioin,smoking

THE EFFECT OF CLINICAL TRIAL PROCEDURES ON EXTERNAL VALIDITY OF ANTIDEPRESSANT STUDIES.

(Oral presentation)

Field of medicine: **Psychiatry**
Author(s): **ALEKSANDRA JANUZOVIĆ**
Supervisor(s): **Dr. Olga Živanović**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

There is an ongoing debate whether the effectiveness of antidepressants is due to action of the drug or due to placebo effect. In clinical settings, the same drug proves to be less effective than it had been in the clinical trial. There are many factors influencing the data recovered in clinical trials that are not present in the clinical settings, which make it difficult to generalize these findings to the depressed population; also making it difficult for clinicians to prescribe the correct antidepressant.

Aim:

To identify if there is a discrepancy between participants encountered in clinical trials and patients in clinical practice.

Material and methodology:

Review and comparison of current research on antidepressant clinical trials and the clinical picture of the depressed patient.

Results:

There was discrepancy between the "typical" depressed participant in the clinical trial and the depressed patient in clinical practice. Many of the potential participants were excluded which would normally be a part of the general patient population.

Conclusion:

Some of the experimental settings for antidepressants have been manipulated to favor effectiveness of the drug. The majority of the participants in the clinical trials are not representative of the depressed population, making it more difficult for clinicians to prescribe the correct antidepressant after reviewing its clinical trials.

Key words: antidepressants, clinical trials, depression, major depressive disorder

REPRODUCIBILITY OF LEUKOARAIOSIS SEGMENTATION ON FLAIR SEQUENCE MAGNETIC RESONANCE SCANS

(Oral presentation)

Field of medicine: **Radiology**
Author(s): **KATALIN NAGY**
Supervisor(s): **Olivier Heck, Gabriella HOSSU PhD.**
Country: **France**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Leukoaraiosis is a disease of the cerebral white matter in aged individuals. It shows up as an increased signal intensity on FLAIR sequences performed as part of magnetic resonance (MR) brain scans. Although the Flair sequence is the commonly used sequence for the leukoaraiosis volume estimation, it still seems to be a subjective method.

Aim:

The objective of the study was to investigate the inter-observer reproducibility of semi-automatic segmentation of leukoaraiosis on FLAIR sequence MR scans.

Material and methodology:

10 MR brain scan were analyzed with the software "Segmentation Leukoaraiose Adelahyde" from the IADI laboratory performed by two observers paralelly. The segmentation carried out by the two observer were compared and statistically analyzed.

Results:

There was a statistically significant difference ($p<0,05$) between the leukoaraiosis segmentation performed by the two observer.

Conclusion:

The leukoaraiosis segmentation on FLAIR sequence MR scans seems to be not reproducible. Thus we have to find parameters more sensitive, reproducible and efficient in order to assess and predict brain ageing. Other sequences, like diffusion tensor imaging (DTI), seem to be promising, but needs further evaluation for its utilization in a clinical practice.

Key words: leukoaraiosis, segmentation, MRI, FLAIR

MR DIAGNOSTICS OF INTRACRANIAL MENINGEOMAS

(Oral presentation)

Field of medicine: **Radiology**
Author(s): **STEFAN STANKOVIĆ, Velimir Peric, Dalibor Stojanovic, Stevan Milenkovic, Slobodan Ivkovic**

Supervisor(s): **Doc. Dr Dragan Stojanov**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

Magnetic resonance (MR) is the most important imaging method in the diagnosis of intracranial tumors.

Aim:

The aim of this study was to present the possibilites of MR in the diagnosis of meningiomas.

Material and methodology:

This retrospective study included 30 patients, mean age 53±15 years, with histologically proven intracranial meningiomas. All patients were subjected to examinations using the MR Avanto (Siemens), with magnetic field strength of 1.5T. The examination was performed by protocol that included native T1W, T2W, FLAIR and DWI sequences. After applications of paramagnetic contrast agent, contrast-enhanced T1W scans were conducted.

Results:

Histological examination showed the presence of meningotelial meningiomas in 50%, fibroblastic in 33% and cystic in 17% of patients. Most of the tumors showed on T1W the isointense (80%) and hypointense signal (20%)($p < 0.01$). On T2W and FLAIR sequences, majority of tumors showed isointense (80%) and hyperintense signal (20%)($p < 0.01$). After contrast administration, significantly intensive sign in contrast-enhanced T1W was observed in 90% of the tumors, while 10% showed moderate enhancement ($p < 0.01$). The frequency of supratentorial lesions (83.34%) was significantly higher ($p < 0.01$) compared to infratentorial (16.66%).

Conclusion:

MR features of various histological types of intracranial meningiomas are different. Intracranial meningiomas usually show isointense and hypointense signals on T1W; isointense and hyperintense ones on T2WI and FLAIR sequences. After contrast agent administration, on contrast-enhanced T1W, meningeomas show intense enhancement in signal intensity. The most common is supratentorial localisation. Half of histologically proven meningiomas were the meningothelial meningiomas.

Key words: MR imaging, meningiomas

RIGHT AND LEFT CAROTID ARTERY INTIMA-MEDIA COMPLEX THICKNESS IN ASYMPTOMATIC RESPONDENTS

(Oral presentation)

Field of medicine: **Radiology**
Author(s): **SNEZANA MILOSEVIC, Bojan Joksimovic, Zeljko Maras, Svjetlana Todorovic, Nenad Todorovic, Davor Rikic, Ivan Zivkovic**
Supervisor(s): **PhD Sinisa Ristic, Asist. Suncica Starovic Bajcetic**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty Of Medicine Foca**

Introduction:

The natural tendency of our asymmetrical constitution is known in many vascular structures as well as in some functional parametres as for exapmle arterial pressure.

Aim:

Aim of our investigation was to determine if there was a difference between carotid artery intima-media complex thickness in young asymptomatic respondents.

Material and methodology:

The intensity of atherogenesis was estimated in 38 respondents of both sexes (20 to 22 years) on the basis of their right and left carotid artery intima-media complex thickness by using color Doppler ultrasound. The investigation was carried out at the Department of ultrasound diagnostics at the University Hospital Medical Faculty Foca during March 2012. Statistical data processing was done by SPSS software statististical package applying a test for linked pairs.

Results:

Left carotid artery intima-media complex thickness was 0.063 ± 0.009 whereas right carotid artery intima-media complex thickness was 0.062 ± 0.007 and it was statistically significant at the level $p < 0.05$.

Conclusion:

The results of our investigation indicate that there is asymmetry of right and left carotid artery intima-media complex thickness in asymptomatic respondents probably as a part of general asymmetry of constitution and function of our body.

Key words: intima-media complex, ultrasound, carotid arteries, general asymmetry of constitution and function of our body.

RIGHT AND LEFT CAROTID ARTERY INTIMA-MEDIA COMPLEX THICKNESS IN ASYMPTOMATIC RESPONDENTS IN RELATION TO GENDER

(Oral presentation)

Field of medicine: **Radiology**
Author(s): **DAVOR RIKIC, Ivan Zivkovic, Bojan Joksimovic, Boris Pejic, Snezana Milosevic, Nenad Todorovic, Svjetlana Todorovic**
Supervisor(s): **PhD Sinisa Ristic, Faculty Of Medicine Foca**
Country: **Bosnia & Herzegovina**
Faculty: **Faculty Of Medicine Foca**

Introduction:

Gender is a factor that modifies the progression of atherogenesis. She can be monitored by measuring carotid artery intima-media complex thickness.

Aim:

The aim of our investigation was to determine if there were any differences between carotid artery intima-media complex thickness in relation to gender.

Material and methodology:

The intensity of atherogenesis was estimated in 38 respondents, 24 males and 14 females, (20 to 22 years) on the basis of their right and left carotid artery intima-media complex thickness by using color Doppler ultrasound. The investigation was carried out at the Department of ultrasound diagnostics at the University Hospital Medical Faculty Foca during March 2012. Statistical data processing was done by SPSS software statististical package using the T test for independent samples.

Results:

Left carotid artery intima-media complex thickness in males was 0.063 ± 0.008 cm whereas left carotid artery intima-media complex thickness in females was 0.063 ± 0.010. Right carotid artery intima-media complex thickness in males was 0.062 ± 0.007 cm whereas right carotid artery intima-media complex thickness in females was 0.061 ± 0.007 cm. Right and left carotid artery intima-media complex thickness in relation to gender shows statistically significant difference at the level $p < 0.05$.

Conclusion:

The results of our investigation indicate that there is asymmetry of right and left carotid artery intima-media complex thickness in asymptomatic respondents in relation to gender probably as a part of general asymmetry of constitution and function of our body.

Key words: intima-media complex, ultrasound, gender asymmetry, vascular age

PLENARY SESSION IX

GYNECOLOGY, PEDIATRICS

Date: July 21st 2012

ORAL PRESENTATIONS
Start time: 8:30 AM
Ceremonial Room of the Dean - Faculty of Medicine Novi Sad

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

TUMOUR SUPPRESOR TP53/P53 IN HUMAN NORMAL ENDOMETRIUM AND ENDOMETRIAL CARCINOMA

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **VLADIMIR SISOVSKY (1,2), Miroslava Telkova (3), Lucia Feketeova (2), Karina Gemzova (3,4), Gabriel Minarik (1), Tomas Szemes (1), Boris Rychly (7), Zora Lasabova (3), Lubomir Straka (5), Robert Petrovic (6), Jan Turna (1), Ludovit Danihel (2), Vanda Repiska (6)**
Supervisor(s): **Assoc. Prof. Vanda Repiska, RNDr., Ph.D. (6), Prof. Ludovit Danihel, M.D., Ph.D. (2), Prof. Jan Turna, RNDr., Ph.D. (1), Robert Petrovic, RNDr., Ph.D. (6)**
Country: **Slovakia**
Faculty: **(1) Faculty Of Natural Sciences, (2,6) Faculty Of Medicine, (3,4) Jessenius Faculty Of Medicine**

Introduction: Endometrial carcinoma (ECa) is the most common neoplasia of the female genital system. There are two basic types of ECa, type I (arises from endometrial hyperplasia, is estrogen related, with indolent behavior) and type II (atrophic endometrium, unrelated to estrogen, aggressive). The tp53 is a tumor suppressor gene encoding a DNA-binding phosphoprotein P53, 53 kDa, a transcription factor that mediates the cell's response to various kinds of genotoxic stress by preventing cell division and/or inducing DNA excise repair or apoptosis. Tp53 alterations results in an aberrant P53 with a longer half-life that accumulates in the cell.

Aim: To evaluate an association between the morphological appearance of normal endometrium and ECa, and the degree of P53 expression/accumulation and tp53 alterations.

Material and methodology: A total of 40 archived formalin-fixed and paraffin-embedded human biopsy tissue specimens with normal proliferative endometrium, endometrioid (type I) the grade G1 and G3 and serous (SC) (type II) subtype of ECa were evaluated immunohistochemically, by light microscope semiquantitatively, for the P53 expression/accumulation in nuclei of endometrial epithelial cells; and by molecular biology methods for the exons 5-8 tp53 DNA sequence alterations.

Results: The expression/accumulation of tp53/P53 was related only to aggressive (mainly SC) types of ECa. Tp53 mutations (insertions/substitutions) were detected in SC only.

Conclusion: There is none expression/accumulation of tp53/P53 in normal endometrium. The tp53/P53 expression/accumulation and tp53 mutations presence are associated with aggressive serous type of ECa. Evaluation of tp53/P53 in ECa immunohistochemically could be relevant component useful in biomedical research and clinical practice.

Key words: Endometrium. Endometrial carcinoma. Tumour suppresor tp53/P53.

COULD BACTERIAL VAGINOSIS BE POTENTIAL CAUSE OF PRETERM DELIVERY

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **IVANA RAKIĆ, Zoran Novakovic**
Supervisor(s): **Prof. Dr Mirjana Bogavac**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

Bacterial vaginosis is characterized by a disturbance of the normal vaginal flora, with a loss of H2O2-producing Lactobacillus spp. and an increase in the number of gram-variable coccobacilli (Gardnerella vaginalis), anaerobic organisms and genital mycoplasmas.

Aim:

The aim of this study was to examine whether the presence of bacterial vaginosis, determination vaginal pH and CRP can be used as biomarkers for the prediction of preterm delivery.

Material and methodology:

The study was conducted as a prospective study, included of 61 pregnant women at a gestational age ranging from 16 to 19 weeks of gestation (WG). The study group represented 20 pregnant women delivered preterm (34-36 WG), a control group of 41 pregnant women where the delivery was at term (37-42 WG).

Results:

Results indicate that 15/20 (75%) pregnant women delivered preterm had bacterial vaginosis , but 4/41 (9. 7%) women delivered at term (x2 test p< 0. 05). Positive CRP was determined in 17/20 (85%) patients with preterm delivery but in 11/41 (26. 8%) women delivered at term. At 16/20 (80%) pregnant women who had preterm delivered vaginal pH was> 4.5, while in 6/41 (14. 6%) patients who had delivery at term .

Conclusion:

Our findings indicate a significantly higher presence of bacterial vaginosis, vaginal pH> 4. 5 and positive CRP values in the early second trimester in the group of patients in whom the pregnancy was completed preterm in relation to pregnant women in whom delivery in the term.

Key words: bacterial vaginosis, vaginal pH, CRP, premature delivery.

COMPARISON OF LAPAROSCOPIC AND LAPAROTOMIC MYOMECTOMY OPERATIONS AND PERIOPERATIVE PERIOD

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **INDRE KUROPATKINAITE**
Supervisor(s): **Gediminas Mečėjus, MD**
Country: **Lithuania**
Faculty: **Faculty Of Medicine Vilnius**

Introduction:

It is videly discussed, is laparoscopic myomectomy appropriate for enucleation of myomas because of its operation time and perioperative complications.

Aim:

To compare methods of laparoscopic(LSM) and laparotomic(LM) myomectomies, perioperative period and factors, related to them.

Material and methodology:

Retrospective analysis of case histories was made. We involved women, who underwent myomectomy in 2011 by laparoscopical approach (I gr.) and in 2005 – 2007 by abdominal approach (II gr.) in Vilnius city Gyneacological department. Data for research: weight and diameter of enucleated myomas, duration of operation and postoperative period, perioperative complications (bleeding, fever, suture incontinence, hematoma). Data analized using MS Excel 2007, SPSS 19.0.

Results:

59 cases in each group. Operation time was significantly greater in I gr. (88,9±43,3 min. – I gr., 67,3±20,9 min. – II gr., $p<0,05$), but postoperative period was longer in II gr. (25,5±8,3 h.- I gr. and 118,2±68,8 h - II gr. respectively, $p<0,05$). Complications were more frequent in II gr. (I gr. – 7(11,7%), II gr. – 10(16,9%)). Hemotransfusion was made more often in II gr.(I gr. – 3(5,1%), II gr. – 8(13,6%), $p<0,05$). Miomas were greater in II gr. (6,8±1,9 in I gr. and 8,6±3,7 in II gr., $p<0,05$). Their size is related with operation time ($r=0,390$, $p<0,05$) in I gr. Myoma's weight is related only with complication rate in II gr. ($r=0,665$, $p<0,05$).

Conclusion:

The enucleation of myoma is acceptable and safe in both methods, but LSM has more advantages because of fewer perioperative complications and shorter postoperative period.

Key words: myomectomy, laparoscopy, complications, perioperative period

PLACENTA PREVIA-A THREAT TO LIFE OF THE FETUS.

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **A.M.RODIONOVA**
Country: **Russian Federation**
Faculty: **I. M. Sechenov First Moscow Medical State University.**

Introduction:

Placenta previa (from the Latin "Previa" - before life) - improper attachment of the placenta in the uterus, where it is located in the lower uterine segment (low placentation).Placenta previa is a major cause of all cases of spontaneous abortion, perinatal losses in some cases reaching 26%, due to prematurity and immaturity of the fetus. At the same time, maternal mortality is 0-0,9%.

Aim:

1. Examine the frequency of placenta previa. 2. To study the pathological processes in the placenta previa.

Material and methodology:

We have studied literature dates at more than 100 years and analyzed dates more than 40 Russian authors. We had explored epidemiology , etiology, classification factors and morphological features of placenta previa. We identified predisposing factors of placenta previa.

Results:

We have observed that the developing placenta previa with multiple births, the old pregnant women, frequent abortions, chronic intoxication, endometritis, chemical burns, scars on the uterus, submucosal leiomyoma, smoking and taking alcohol, congenital malformations and physical activity. We modified clinical classification various forms of placenta previa on the basis of physical examination. At the low location of the placenta over the internal jaws are determined only by fetal membranes, with marginal previa - fetal membranes and only the edge of the placenta, with a side-fetal membranes and placenta, in full - only the placental tissue.

Conclusion:

1. The frequency of placenta previa is less than 1% 2. Morphological signs of placenta previa are compensatory changes in the chorion, it dystrophy, myocardial, inflammation.

Key words: placenta previa, abnormal placentation

DOES GENITAL BACTERIAL INFECTION CAN BE A POSSIBLE ETHIOLOGICAL FACTOR OF PRETERM DELIVERY.

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **ZORAN NOVAKOVIĆ**
Supervisor(s): **Prof. Dr Mirjana Bogavac**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

The Etiology of preterm delivery is very complex. Last data indicate that ascending genital bacterial infection is important cause of preterm delivery.

Aim:

Goal of this prospective study was to investigate does cervical bacterial infection can be early marker of preterm delivery.

Material and methodology:

Study included 61 pregnant women between 16 and 19 week of pregnancy (WG). Study group consisted of (N 21) women delivered pre term (in 34-36 WG) and control group (N 41) women delivered in term (37-42 WG). In all pregnant women we conducted bacteriological tests of cervical smear with specific tests.

Results:

Bacterial cervical infection was statistically significant more present in study group 9/20 (45%) than in control group 3/41 (8%) (x2 test $p<0.05$). Ureaplasma was statistically significant more present in 7/20 (35%) women delivered preterm in correlation to the women delivered in term 1/41 (2.4%), (x2 test $p<0.05$). Mycoplasma was statistically significant more present in study group in 6/20 (30%) patients in correlation to the control group 1/41 (2,4%), (x2 test $p<0.05$). Chlamydia Trachomatis was found statistically significant more present in 9/20 (45%) women delivered preterm in correlation to the women delivered in term 2/41(4,8%) (x2 test $p<0.05$).

Conclusion:

Results of research indicate that cervical bacterial infection, infection caused by Chlamydia Trachomatis, Mycoplasma and Ureaplasma, are statistically significant more present in early second trimester in women delivered preterm in correlation to the women who delivered in term.

Key words: Preterm delivery, cervical bacterial infection, Chlamydia Trachomatis, Mycoplasma and Ureaplasma.

OBESITY INCIDENCE AND BMI DISTRIBUTION IN FIRST TRIMESER PREGNANCY

(Oral presentation)

Field of medicine: **Gynecology**
Author(s): **TIGLA ALEXANDRU ERWIN, Vasies Dumitrita**
Supervisor(s): **dr Navolan Dan**

Introduction:

Diet is important in pregnancy so it depends for fetal growth and favorable development of pregnancy. WHO defines obesity as BMI> 30. It is accepted that obesity during pregnancy is caused by overeating but also heredity plays an important role

Material and Methods:

We have assessed weight in the first trimester pregnancy from 2463 patients who addressed to the Municipal Hospital Timisoara in one year.

Aim:

The study want to stratify pregnant women according age and average BMI and origin.

Results*:*

16.1% had BMI> 25; 4.7% present obesity type I (BMI between 25-30); 1.33% show obesity type II (BMI between 30-35) ; 0.44% show morbidly obesity (BMI> 35). The underweight is decrease, at younger patients than 20 years 18% are underweight with a BMI below 18.5 while in women over 35 years only 4% were with underweight. Obesity (BMI> 30) increases with age with a maximum incidence at patients older than 35 years (15%). Percentage of obese pregnant women between 21 and 25 years is 5% but over 36 years the percent in triple (15%), Obese Patients from rural areas over 35 years are 19% (of all pregnant women in rural areas over 35 years) compared to only 8% of the urban environment. Number of pregnant women with morbid obesity is higher in urban (0.5%) than rural (0.3%) of all cases Number patients with normal weight (BMI between 18.5 and 25) remain relatively constant.

Conclusions*:*

Maternal Obesity, defined by a BMI > 30, is a global health problem. associated with increased risk of gestational diabetes, preeclampsia, prolonged pregnancy, the need for artificial induction of labor, cesarean delivery

Keywords*:* Pregnancy, obesity, BMI

THE IMPORTANCE OF DETERMINING THE VARIABILITY OF BLOOD PRESSURE IN CHILDREN WITH SUSPECTED ARTERIAL HYPERTENSION

(Oral presentation)

Field of medicine: **Pediatrics**
Author(s): **MILICA MLADENOV, Severovic Saska**
Supervisor(s): **Doc.dr Bojko Bjelakovic**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

The clinical significance of various parameters of blood pressure variability as an independent predictive factors for the occurrence of subclinical organ damage in children with or without arterial hypertension is still not entirely clear.

Aim:

The aim is to investigate the potential relationship between blood pressure variability and left ventricular hypertrophy in children.

Material and methodology:

The study involved sixty-six children addressed to the Department of Internal childrens diseases for further evaluation and suspected systemic arterial hypertension. All children was made 24 - hour ambulatory monitoring of pressure and echocardiography. The variability of blood pressure is measured as the standard deviation (SD) and as a true 24 - hour average pressure variability (ARV) .

Results:

27 (41%) children had not hypertension, 13 (19.6%) had ambulatory prehypertension, 6 (9%) ambulatory hypertension, 18 (27.2%) severe ambulatory hypertension and two (3%) had hypertension of white coat. In the group of children with systemic hypertension was not found statistically significant differences between the SD children without LVH and children with LVH(12.3 ± 3.1 vs 13.1 ± 3.4), $p > 0.05$ as not statistically significant difference in 24 ARV hour without children and children with left ventricular hypertrophy. (8.9 vs 9) $p > 0.05$.

Conclusion:

The parameters of blood pressure variability in children have not greater predictive value in assessing the degree of left ventricular hypertrophy in children.

Key words: arterial hypertension, hypertrophy of left ventricule,parameter ARV

CLINICAL MANIFESTATIONS AND FREQUENCY OF HERPES VIRUS INFECTIONS IN CHILDREN

(Oral presentation)

Field of medicine: **Pediatrics**
Author(s): **ALEKSANDAR MILIĆEVIĆ**
Supervisor(s): **Ass. Prof. Hristina Stamenković**
Country: **Serbia**
Faculty: **Faculty Of Medicine Nis**

Introduction:

In a large number of diseased children with a variety of clinical manifestations most common causes are viruses from Herpetoviridae family. After primary infection, IgM antibodies are being produced, and after a certain period of time after the virus had already colonised the cells IgG antibodies can be found in the system

Aim:

Aim is to analyze the presence of IgG and IgM antibodies in CMV, EBV, HSV virus in children.

Material and methodology:

By using the ELISA test we have analyzed the presence of IgM and IgG antibodies in CMV, EBV, HSV.

Results:

The ELISA test results indicate the presence of IgG antibodies in CMV in 73,5% and IgM in 16,7% of cases. By analyzing HSV antibodies it was found that 35,6% were IgG positive whereas 17,5% were IgM positive.Concerning EBV positive cases 52,2% had IgG, while 6,8 had IgM antibodies. Broken down to one patient we could see the following: 39,6% of children were positive for one virus, while 39,3% and 20,9% were positive for two and all three viruses respectively. Patients also exhibited symptoms such as allergies, bronchitis, convulsiones, herpes labialis, etc.

Conclusion:

The presence of virus from the Herpes virus family will result in a variety of clinical manifestations, depending on the immune response.. If the immune system is incapable of eliminating the virus it will continue to replicate in cells leading to immunoregulatory disorders.

Key words: antibodies, CMV, EBV, HSV, ELISA

THE ROLE OF BALLOON VALVULOPLASTY IN THE TREATMENT OF CONGENITAL AORTIC VALVE STENOSIS

(Oral presentation)

Field of medicine: **Pediatrics**
Author(s): **ANA GLIGIĆ, Mirjana Gligoric**
Supervisor(s): **Doc.dr Vojislav Parezanović**
Country: **Serbia**
Faculty: **Faculty Of Medicine Belgrade**

Introduction:

Balloon valvuloplasty in aortic valve stenosis in childhood is performed as a preoperative junctive to gain time before a possible surgical therapy.

Aim:

The aim of this study was to evaluate the results of the procedure in a retrospective survey over a time interval of 6 years.

Material and methodology:

Retrospective analysis of 50 patients with balloon valvuloplasty of the aortic valve performed between 10/2004 and 11/2010 at University Children's Hospital in Belgrade. The following parameters were evaluated before and after the procedure, as well as at the end of follow-up or before surgery: clinical status, left ventricular function, transaortic pressure gradient, degree of aortic regurgitation, freedom from re-intervention or surgery and complications. Patients from 23 days to 18 years of age with the aortic stenosis were divided into 4 groups: 8 newborns and infants (23 days-3 months), 8 infants (3 -12 months), 18 children (1-10 years) and 16 adolescents (10-18 years).

Results:

Median follow-up was 32 (3-72) months. Subsequently to dilatation, the pressure gradient decreased from 89(±21) mmHg to 48 (±15) mmHg and remained stable during follow-up. Critical aortic regurgitation rate was 33% in newborns and infants (<3 months), 12% in infants, 17% in children and 7% in adolescents. Considering re-intervention rate, 8% underwent re-dilatation and 12% surgery. Regardless of age, 88% were free from surgery 72 months after intervention.

Conclusion:

In conclusion, balloon valvuloplasty of the aortic valve has effectively postponed the need for surgery in children, whereas the greatest success was achieved in infants (< 3 months).

Key words: balloon, valvuloplasty, congenital, aortic, stenosis

STUDY OF THE ASSOCIATION BETWEEN MOTHER'S WEIGHT RELATED LIFE STYLE WITH FEEDING PRACTICES AND DIETARY INTAKE IN 3-6 YEARS OLD CHILDREN

(Oral presentation)

Field of medicine: **Pediatrics**
Author(s): **MARYAM GHOLAMALIZADEH, Saeid Doaei**
Supervisor(s): **Dr. Mohammad Hasan Entazeri**
Country: **Iran**
Faculty: **Medical University Of Isfahan**

Introduction:

Healthy eating pattern has an important role in childhood. Recent studies have shown that the mother's life style have an important role in the methods used by parents to child feeding and the child's dietary intake.

Aim:

This study aimed to investigate the association between mother's life style with feeding practices and food groups intake in 3- 6 years old children.

Material and methodology:

A cross-sectional study of 130 parents with children aged 3-6 years was carried out in 30 primary schools of Rasht, Iran in 2011. Measures included mother's life style, aspects of parental control practices and the child's diet. Weight related life style questionnaire was used to assess mother's life style. Aspects of child's feeding practices were assessed using Comprehensive Feeding Practices Questionnaire (CFPQ) after investigate of validity and reliability of questionnaire. Food Frequency Questionnaire (FFQ) was then used to assess the child's dietary intake. The role of mother's life style in predicting child feeding practices and children's diet was assessed using multiple block entry linear regression.

Results:

Mothers with higher scores of Weight related life style used more frequently encourage to balance and variety and environmental control practices than others. Moreover Children ate more grains, fruits and vegetables if their mothers had a better lifestyle and used more encourage to balance and variety and environmental control.

Conclusion:

The results showed a significant relationship between mother's life style with control practices and aspects of the child's diet.

Key words: feeding practices, life style, child, diet

VALIDATING AND INVESTIGATING RELIABILITY OF COMPREHENSIVE FEEDING PRACTICES QUESTIONNAIRE IN IRAN

(Oral presentation)

Field of medicine: **Pediatrics**
Author(s): **SAEID DOAEI, Maryam Gholamalizadeh**
Supervisor(s): **Dr. Naser Kalantari**
Country: **Iran**
Faculty: **Shahid Beheshti University Of Medical Sciences**

Introduction:

Dietary intake of preschool children may be influenced by parents, friends, media and etc. parental influence on early childhood as producer, performer and model is known as the most important factor. Having a reliable tool for the assessment of different aspect of child feeding practices can help us to understanding the cause of difference between children's food intake.

Aim:

The objective of this study was to investigate validity and reliability of Child Feeding Practices Questionnaire (CFPQ).

Material and methodology:

130 randomly selected mothers with their children aged 3-6 years participated in this study. Applied methods were: back translation, validity (content and construct) and reliability (test-retest and Internal consistency) measurement.

Results:

Content Validity Rates (CVR) of all questions was confirmed except for questions 2, 16 and 46. Those questions were excluded from questionnaire. The consistency of factors and total scores were between 0.30 to 0.72. The Intraclass correlation coefficient (ICC) was between 0.80 to 0.91 and Cronbach's Alpha for factors were between 0.71 to 0.78.

Conclusion:

In general, it could be said that the Child Feeding Practices Questionnaire is reliable and according to the result of this study, it can be used in related researches.

Key words: Validity, reliability, questionnaire, child, diet

MALNUTRITION IN NEONATAL PERIOD – CLINICAL STUDY DURING TEN YEARS PERIOD

(Oral presentation)

Field of medicine: **Pediatrics**
Author(s): **JELENA FRIČ – BASARIĆ, Milena Bjelica**
Supervisor(s): **Prof. Dr Svetlana S. Stefanović**
Country: **Serbia**
Faculty: **Faculty Of Medicine Novi Sad**

Introduction:

One of the major global issues, and the disorder which we encounter on a daily basis is malnutrition newborn. Fortunately, thanks to improved living conditions and level of health care in recent decades, the incidence of deficient nutritional state shows a steady decline, but remains an important cause of reporting parents to basic primary health care.

Aim:

The aim of our study was to determine the incidence of hospitalization, analyzed laboratory findings, association with other pathological conditions, type of diet before and during hospitalization, and treatment outcome and progression of body weight during their hospital stay.

Material and methodology:

The study included 97 term newborns discharge letters, hospitalized at the Institute for health protection of children and joungs Vojvodine, with the diagnosis, Hyponutritio neonati. The study included a ten-year period (2001. to 2011.)

Results:

The average age of infants at admission was 16 days, with average body weight of 3061 instead of 3475 grams for a given age. On admission 56.1% of infants had associated infections, mostly urinary E. Coli in 22.4%. Before admission, 77.6% infants was on a natural diet, while during hospitalization in 43.9% of cases had to be introduced supplementation.

Conclusion:

The incidence of hospitalization for failure to gain weight was 27.7%. The most common problem was unrecognized infection, with leukocytosis in the blood picture. The representation of the natural diet is correlated with the general population in our country. Average progress during hospitalization was 400 grams.

Key words: Malnutrition infant, weight, diet.

SYMPTOM MONITORING AND QUALITY OF LIFE IN CHILDREN WITH ASTHMA: SCOPE FOR SELF MANAGEMENT IN ROUTINE CAREH

(Oral presentation)

Field of medicine: **Pediatrics**
Author(s): **MAZIN MOHIYUDHEEN, Arman Ahmad**
Supervisor(s): **Dr Sandeep Sachdeva**
Country: **India**
Faculty: **Faculty Of Medicine Aligarh Muslim University**

Introduction:

Monitoring of children with asthma

Aim:

To observe correlation between parental and child reporting of change in asthma symptoms and objective parameters of lung function over time

Material and methodology:

Children (n=125) were divided into two age groups(6-10 years and 11-15 years) and were classified into intermittent,mild persistent and moderate persistent grades of severity. Parental and child reporting of QoL scores were recorded on a pretested questionnaire on the initial visit and at 4 weeks and 8 weeks. At each session, appropriate counseling regarding the disease and its primary management at home was done. The change in score from first and second followup visits was statistically correlated with changes in symptom score recorded on symptom diary, PEFR and spirometry

Results:

There was significant improvement in the subjective and objective parameters compared at the two follow up visits . The magnitude of improvement in parental global rating of QOL was similar to improvement in objective measures of pulmonary function in children 6-10 years of age while both parental and child rating correlated well with objective parameters in children 11-15 years of age. Also, symptom score emerged as a stronger predictor of acute exacerbation in than PEFR in candidate children who had breakthrough attaks

Conclusion:

Improvement in QOLscore is a sensitive measure of functional improvement in asthmatic children on treatment and may complement objective measurements. Health education has a positive impact on treatment outcome. Self monitoring of symptoms at home fosters more patient involvement and promotes better management.

Key words: asthma, symptoms,parameters,Qol,

MECONIUM STAINED AMNIOTIC FLUID TO MECONIUM ASPIRATION SYNDROME- RISK FACTORS AND SCOPE FOR PRIMARY PREVENTION.

(Oral presentation)

Field of medicine: **Pediatrics**
Author(s): **HASSAN, Mazin Mohiyudheen; Arman Ahmad**
Supervisor(s): **Dr Sandeep Sachdeva**
Country: **India**
Faculty: **Faculty Of Medicine Aligarh Muslim University**

Introduction:

To study the role of maternal and neonatal risk factors in predicting the progression of meconium stained babies to Meconium Aspiration Syndrome (MAS)

Aim:

To study the role of maternal and neonatal risk factors in predicting the progression of meconium stained babies to Meconium Aspiration Syndrome (MAS)

Material and methodology:

All babies born with meconium stained amniotic fluid (MSAF) at Jawaharlal Nehru Medical College Hospital, Aligarh from July 10 to December 10 were included in the study. Out of 171 babies with MSAF, 31 developed MAS while 141 did not. For both the groups, the case records of the babies and their mothers were retrospectively studied and compared using univariate and multiple regression analysis

Results:

The incidence of MSAF was 10% and of MAS in MSAF babies was around 1.8%.The characteristics of the babies associated with increased risk of MAS were low Apgar score at 5 minutes and presence of respiratory distress soon after birth. No significant maternal risk factor was identified

Conclusion:

The babies with MSAF are more at risk of developing MAS if they have low Apgar scores at 5 minutes and develop respiratory distress soon after birth. Standard delivery guidelines, meticulous resuscitation at birth and vigilant monitoring of distressed babies immediately following birth may bring down the incidence of MAS

Key words: Meconium Stained Amniotic Fluid, Meconium Aspiration Syndrome, Predicto

PLACENTA ABRUPTION-A METHOD OF CHILDBIRTH COMPLETION AND PERINATAL OUTCOME

(Poster presentation)

Field of medicine: **Gynecology**
Author(s): **SAŠKA SEVEROVIĆ, Milica Mladenov**
Supervisor(s): **Asist. Dr Predrag Vukomanović**
Country: **Serbia**

Introduction:

Any partial or complete separation of normally inserted placenta before the third stage of labor was premature abruption (abruptio placentae praecox insertio normalitas).

Aim:

To evaluate the incidence of placental abruption in Gynecology and Obstetrics, Clinical Center Nis.

Material and methodology:

Retrospective analysis, conducted at the Clinic of Gynecology and Obstetrics, Clinical Center Niš, included the interval from 2007. to 2011.

Results:

At the Clinic of Gynecology and Obstetrics, Clinical Center Niš during five years was carried out 15 828 births. The number of labors compicated by placenta abruption was 60. In 80% of pregnant women, with verified placenta abruption, delivery was completed with Caesarean section, and 20% by vaginal labor. Of the total number of preterm births complicated with placenta abruption 84.84% was finished with Caesarean section and 15.15% with vaginal labor. Of the 27 term delivery 74.07% was completed with Caesarean section and 25.03% vaginal labor.

Conclusion:

Placenta abruption is a serious and difficult obstetric accident which endangers life and health of both mother and newborn.

Key words: placenta abruption, Cesarean section, childbirth

INCIDENCE OF THE NEONATAL MORTALITY IN THE INFANT MORTALITY IN MONTENEGRO (2000-2009.)

(Poster presentation)

Field of medicine: **Gynecology**
Author(s): **MIRELA BEKAN**
Supervisor(s): **Vesna Čolaković Popović**
Country: **Montenegro**
Faculty: **Faculty Of Medicine Podgorica**

Introduction:

Neonatal mortality represents the number of children under 28 days of life who die,divided by the number of live births in that year. Infant mortality refers to the number of deaths of infants under one year old in given year

Aim:

An overview of trends of neonatal mortality and infant mortality in Montenegro (2000-2009.) .Also,we paid attention on the incidence of neonatal mortality rate in the infant mortality rate in our country.

Material and methodology:

Retrospective study covered the period between 2000 and 2009.Data resource: Statistical annuals of the Republic Statistic Agency-MONSTAT

Results:

In the past 10 years the number of live births was 82 323. An estimated 584 babies died in the first 28 days of life and 798 babies died in the first year.Neonatal mortality rate(NMR) was reduced from 7,51 deaths per 1000 live births to 3,93 or 47,67%. Infant mortality rate(IMR) was halved,from 11,10 deaths per 1000 live births to 5,66 or 49,00%. An incidence of neonatal mortality rate in infant mortality was 73,4% (declined by 3,75%). Out of total number of died new-borns, 121 or 20,71% died in the first 24 hours and 433 or 74,1% died in the first week of life or during early neonatal period.

Conclusion:

Between 2000 and 2009,an incidence of NMR in IMR has declined. Neonatal mortality in the analized period decreased by 47,67% .

Key words: neonatal mortality, infant mortality, incidence

WORKSHOPS
IMSCNS 2012

WORKSHOPS

THE PRESENT AND THE FUTURE OF CARDIOVASCULAR SURGERY

Time: *July 20th 2012, 11:30 AM*
Supervisor: *professor Pavle Kovacević, MD, PhD*
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

DELIVERY, SURGICAL COMPLETION OF DELIVERY AND CESAREAN SECTION

Time: *July 20th 2012, 11:00 AM*
Supervisors: *professor Tihomir Vejnović, MD, PhD; professor Mirjana Bogavac, MD, PhD; assistant professor Đorđe Petrović, MD; assistant professor Nenad Ćetković, MD*
Student demonstrators: *Zoran Novaković, Sanja Popin, Ivana Rakić*
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.

MINIMALLY INVASIVE APPROACH TO BILIARY CALCULOSIS

Time: *July 21st 2012, 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.

RADIOTHERAPY WORKSHOP

Time: *July 20th and 21st 2012, 11:30 AM*
Supervisor : *professor Marko Erak, MD, PhD*
Workshop will conduct: *assistant Branislav Đuran,MD; Dušanka Tešanović, MD*
Place: *Institute of Oncology Vojvodine – Department of Radiotherapy, Sremska Kamenica*

Radioterapy workshop is designed specifically for the participants who wish to be informed about this specific topic.

Radiotherapy is one of the major treatment options in cancer management. In every day clinical oncology practice, almost two-third of solid cancers are being treated by radiotherapy. Radiotherapy combined with surgical and medical disciplines improve treatment outcome better than surgery or radiotherapy alone.

Workshop including lectures and practical presentation.

List of topics:
1. Introduction to Radiotherapy
4. Basic radiobiology
5. Types of radiotherapy treatment
3. What is brachytherapy?
6. Steps of 3D conformal Radiotherapy
7. Complications of radiotherapy
8. Future prospects of radiotherapy
9. Follow up of cancer patient receiving radiotherapy

WORKSHOPS

PHARMACOTHERAPEUTICAL APPROACH IN THE TREATMENT OF CERTAIN DISEASES AND CONDITIONS

Time: *July 20th 2012, 11:00 AM*
Supervisor: *professor Aleksandar Rasković MD, Ph.D*
Place: *Faculty of Medicine, Department for Pharmacology*

Management of heart failure
DY was 78 years of age and had had a large anterior myocardial infarction 3 years ago. Echocardiography revealed marked left ventricular systolic dysfunction with reduced ejection fraction. He presented with several symptoms, including fatigue, and decreased exercise ability, shortness of breath and peripheral oedema. Examination demonstrated cardiomegaly, a raised jugular venous pressure and crackles in the lungs.
1. Of the signs and symptoms steted, what was the main direct consequence of a reduced cardiac output?
2. Digoxin, a ß-adrenoceptor antagonist and dobutamine were consider as initial therapy for DY and were rejected. Would any of these treatments have been appropriate?
3. What were the choices of diuretic open to you in treating DY?
4. Potassium loss produced by diuretics may lead to hypokalaemia, which should be avoided in patients with heart failure, particularly those taking digoxin. What is an effective way of reducing urinary K loss?
5. DY was then started on an ACE inhibitor. What are the precautionary measures that shoud be taken in starting this new medication and how would its effectiveness be assessed?
6. After 4 weeks of treatment with the ACE inhibitor and a diuretic, DY´s symptoms were much improved. However, he developed a cough, which became intolerable. What is thought to be the reason for the cough and what alternative therapy could be given to avoid this?

Management of hypertension
A 60-year-old man with non-insulin-dependent diabetes. His plasma lipid levels were normal and his blood pressure, checked three times over a perid of weeks, was 175/110 mmHg. He had no evidence of fluid retention. His doctor prescribed propranolol, but the blood pressure was not fully controlled. Which of the following combinations would have been appropriate to prescribe to lower his blood pressure?

a) hydrochlorothiazide plus propranolol
b) furosemide plus atenolol
c) amiloride plus ramipril
d) amlodipine plus atenolol

Following several months of treatment with your chosen regimen, his blood pressure

was still 165/100 mmHg and he then suffered a small myocardial infarction.
a) What changes in his therapy would you consider?
Management of diabetes mellitus

What are the correct statements?
a) glibenclamide is the drug of choice when there is no residual insulin secretion
b) sulphonylureas should be administered in conjugation with a dietary regimen, particularly in obese people
c) glibenclamide can cause hypoglycaemia, partcularly in the elderly, and should be used very cautiously in this age group
d) hyperglycaemia results from uncontrolled glucose output from the liver and reduced uptake of glucose into muscle and other tissues
e) metformin and glibenclamide cannot be taken together
f) untreated diabetes during pregnancy results in increased intrauterine and perinatal

FOOD LABELING – PUBLIC HEALTH ISSUE

Time: *July 21st 2012, 11:00 AM*
Supervisor: *professor Ljiljana Trajković - Pavlović,MD,PhD; assistant Dragana Balać,MD; assistant Radmila Velicki,MD -Department of Hygiene*
Place: *Pharmacy, Classroom 1*

Almost all countries (regardless the level of income) are experiencing overnutrition and obesity although with great variations between and within countries. Having in mind that mortality rate increases with the degree of overweight – expressed by BMI (body mass index) – health authorities of many countries/regions developed strategic plans for modifying obesogenic enenvironment in order to modify eating behaviours. European Strategy on Nutrition, Overweight and Obesity and related health issues stressed the need for consumers to have access to clear, consistent and evidence-based information when deciding which food to buy. Nutrition labelling is an established way for information to be passed to consumers supporting health conscious decision making in relation to food purchases. There is a wide agreement in Europe today that the effectiveness of the nutrition labelling can be strengthened as a communicational channel with consumers to support their ability to choose a balanced diet.

The students of this workshop will be introduced to the importance of understanding nutrition and health claims on food labels, mostly on items declared as food or food supplements for weigth reduction. Special attention will be paid on European Union scientifically based approach for creating truthful and fully understandable food labels for consumers.

Participants of the workshop will have an opportunity to learn and apply internationaly recognised methods for measuring anthropometric properties and physical activity level in order to calculate BMI and daily energy requirements.

WORKSHOPS

THE AIRWAY AND INTRAVENOUS ACCESS WORKSHOP

Time: *July 20th and 21st 2012, 11:00 AM*
Supervisor: *assistant Ana Uram-Benka, MD and Izabella Fabri, MD*
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.

HANDS ON DENTAL IMPLANTOLOGY

Time: *July 21st 2012, 11:00 AM*
Supervisor: *Siniša Mirković, professor of Oral Surgery and Dental implantology*
Place: *Clinic of dentistry, Clinical Centre of Vojvodina Novi Sad*

The purpose of this workshop is to show dentistry students components and techniques necessary to complete the surgical and restorative stages of implant cases. The workshop involves a combination of lectures, demonstrations and hands-on workshops utilising the complete range of hand and mechanical instrumentation to install implants on their own on implant models.

EMERGENCY MEDICINE: "STAYIN' ALIVE"

Time: *July 20th and 21st 2012, 11:00 AM*
Lecturers: *Miloš Vujanović, MD, Miloš Kovačević, MD*
Supervisor: *professor Vladan Popović, MD, Ph.D, - Head of the Chair of Emergency Medicine of the Faculty of Medicine Novi Sad, Serbia*
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 pre-hospital 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.

INVOLUNTARY MOVEMENTS

Time: *July 21st 2012, 11:00 AM*
Supervisor: *Aleksandar Ješić, MD*
Place: *Ceremonial room of the dean, Faculty of Medicine*

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.

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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 .

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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.

At our conference at the University Medical Center of Groningen we offer a stimulating venue for student research exchange and give students the opportunity to broaden their social scientific network.

Our scientific programme includes a variety of student research from all over the world, presented in poster, oral or plenary form to an international and professional audience. Along with the student sessions there will be fascinating keynote lectures and hands-on workshops.

In addition to the extensive and rigorous scientific programme, we also offer an elaborate social programme. At several parties and dinners you can get to know other participants and the ISCOMS crew.

Website: **www.iscoms.org**

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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 17th to the 20th of September 2012 and its theme is: "Implantation and Transplantation - Trends in Organ Substitution".

Visit us at: **www.esc-berlin.com.**

YES Meeting - The Young European Scientist Meeting

The YES - Young European Scientist - Meeting is an international conference in Porto, Portugal and its major purpose is to provide biomedical students all over the world a global platform of scientific and cultural exchange.

Now in its 7th edition, YES Meeting will allow you to learn about top discoveries in Micro & Nanoparticles, Borders of Counsciousness, Diabetes, Plastic & Reconstructive Surgery, Reproductive Medicine, train your diagnostic and practical skills in workshops, such as "Is Dr. House a Surgeon?", "Basic Life Support", "Laporoscopy" or "Invasive Hemodynamic Evaluation" and experience all there is to discover about Porto with a diverse social programme. The main stage in the conference is taken by the biomedical projects developed by students, presented to a renowned Scientific Committee 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 science, between 14-16th September 2012! For further information, please visit us on **www.yesmeeting.org** or **http://www.facebook.com/YESMeeting**.

YES MEETING
YOUNG EUROPEAN SCIENTIST MEETING

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MEDICALIS - International Congress for Medical Students & Young Health Professionals

Taking place in the beautiful city of Cluj-Napoca, Romania, The International Congress for Medical Students and Young Health Professionals, MEDICALIS has reached it's 14th Edition. MEDICALIS is one of the best international congresses in Romania with participants from 4 continents.

Divided into five sections: Medical, Surgical and Fundamental Sciences, Public Health and Poster, with two challenging competitions, Clinical Cases and Anatomy Contest, this congress has a diverse scientific program that will satisfy even the most exigent participant.

Medicalis aims to connect the students with the medical world by encouraging them to do research and write scientific papers and by providing them with the latest news in as many medical fields as possible.

For more information, please visit **www.medicalis.ro**, contact us at contact@medicalis.ro or follow us on Facebook and interact with the rest of our participants.

Medicalis

International Congress for Medical Students and Young Doctors

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ISMCK - International Students' Medical Congress Košice

International Student Medical Congress Košice 2012 is writing it´s 4th chapter. The aim of ISMCK´12 is to strengthen the international network for scientific collaboration as well as linking of different nations and cultures. We invite all young scientists working in the fields of medicine, public health, dentistry, pharmacology and biomedical sciences.

ISMCK`12 offers students and PhD students an opportunity to present their research projects and to exchange ideas on topics through oral or poster presentations in categories: Basic Science, Dentistry, Clinical Medicine, Public Health, PhD students' works and Pharmacology. You are more than welcome to share here your scientific and non scientific ideas, subjects and opinions. Registration deadline is extended till 15th March 2012! On behalf of Organizing Committee, we are looking forward to meet you in Košice!

You can find more at **www.ismck.com**

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ICHAMS - International Conference for Healthcare and Medical Students

The second annual ICHAMS conference will take place in Dublin on Friday 2nd and Saturday 3rd of November 2012, at The Royal College of Surgeons in Ireland (RCSI).

A student led conference, supported by the RCSI faculty office, it seeks to provide an opportunity for medical and healthcare students to develop their research skills and expand their network in an international setting.

Mission:

To provide healthcare students the opportunity to present their research findings in an international setting with structured feedback.

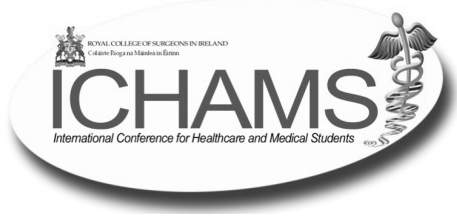
To provide career information on specific research topics and / or countries.

To promote interactions among healthcare students from different countries and exchange of research knowledge and experiences.

To promote and encourage innovative thinking by exposing students to current cutting edge research topics.

To 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 submissions! Further information at **www.ichams.org**



FRIENDS & PARTNERS

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**

FRIENDS & PARTNERS

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'11 which welcomed over 500 students from 37 countries.

AIMSC - Ain Shams International Medical Students' Congress

AIMSC is Ainshams International Medical Students' Congress, a congress that have been held by Ainshams Universitysince February 1992 by the late professor Ali Kalifa, one of the recognized professors that we had in our University.

Over the past 19 Februarys of the past 19 years, medical students and young doctors from around the globe have gathered in Cairo to take part in a most exquisite and utterly unique event. Our continuous and maturing ability to host a largely competitive and intellectually rich scientific program alongside offering you 5 star hotel ,accommodation, transportation and social outings, all makes our congress package like no other.

Ain Shams International Medical Students' Congress

FRIENDS & PARTNERS

ISC - International Students' and Young Scientists' Congress

One of the largest youth scientific forums in Ukraine and Eastern Europe. This year Congress is dedicated to the 150-th anniversary of the Chairman of Clinical Society of Medical Students, the first head of the Department of Nervous Diseases of the Imperial St. Volodymyr University Professor Michael Lapinskyi.

We are very glad to note that the level of scientific forum is rising every year, and it attracts the attention of an increasing number of young researchers. Last year over 950 students and young doctors from 15 countries (Azerbaijan, Belarus, Bulgaria, Cameroon, Georgia, Iran, Kenya, Lithuania, Macedonia, Nigeria, Poland, Russia, Uganda, USA, Ukraine) took part in the Congress and presented the results of their researches at 32 sessions, mastered new practical skills at 8 workshops and attended scientific lectures of the famous foreign professors.

Information and registration are available at the website:
www.nmusic.org.ua

YOUTH OF TOURISM Serbia

"Youth of Tourism" in Novi Sad were established 04.21.2011. at the Faculty of Sciences - Department of Tourism and Hotel Management.

The idea of the association is to gather all enthusiasts, amateurs and professionals in the tourism industry who wish to primarily demonstrate the love of Serbia at its best and leave the guests in the memory of a wonderful memory of a country with a big heart.

The target audience is not only young people from home and abroad, but also experienced people and professionals from various fields, particularly tourism who want to beautify and improve the quality of tourism that our country provides.

Their goals and objectives "Youth of Tourism" exercise:

- Organizing meetings, tours and professional activities
- Educating young people through lectures, workshops, etc..
- By organizing into teams - management, agency business, rural, urban and nautical tourism
- Promoting the tourist offer of Serbia
- Connecting and working together with similar associations
- The implementation of tourism projects and ideas
- Cooperation with institutions in tourism

IMSCNS 2012 Post Congress Tour

Date: July 22nd 2012 **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 regions cultural and architectural heritage to the visitors.

Starting the trip in the morning, our first stop is Subotica, the most northern city in Serbia, where we arrive around 11:30 AM. Subotica is a town with rich history and beautiful edifices, dating back to 14th century. Local guides will introduce us to the city with its breathtaking architecture and the most laid-back lifestyle in Serbia. **www.visitsubotica.rs**

Later on we visit "Majkin salaš", a typical resort and restaurant for the province of Vojvodina. The group will have the pleasure of enjoying characteristic cuisine accompanied by music. (The price includes the meal and a welcome drink.) **www.majkinsalas.rs**

Around 17:30 we proceed to Sombor, another fine example of a beautiful and relaxed small town with magnificent architecture. Sombor boasts numerous museum and extraordinarily-kept parks and gardens throughout the entire city. **www.visitsombor.org**

Following the tour of Sombor, we move to "Café De Sol", a local water-side resort, where we have dinner and a relaxing evening with swimming options (bring your swimming suit!). We dine at 20:30. This way, our guests are acquainted to the life of leisure people in Vojvodina tend to lead. (The price includes the meal and 4 drinks.) **www.cafedesol.org**

The post congress tour ends with entertainment programme adapted to all guests. We leave Café De Sol at 1 o'clock past midnight. We arrive at the Faculty of Medicine in the late night hours.

ABOUT

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.

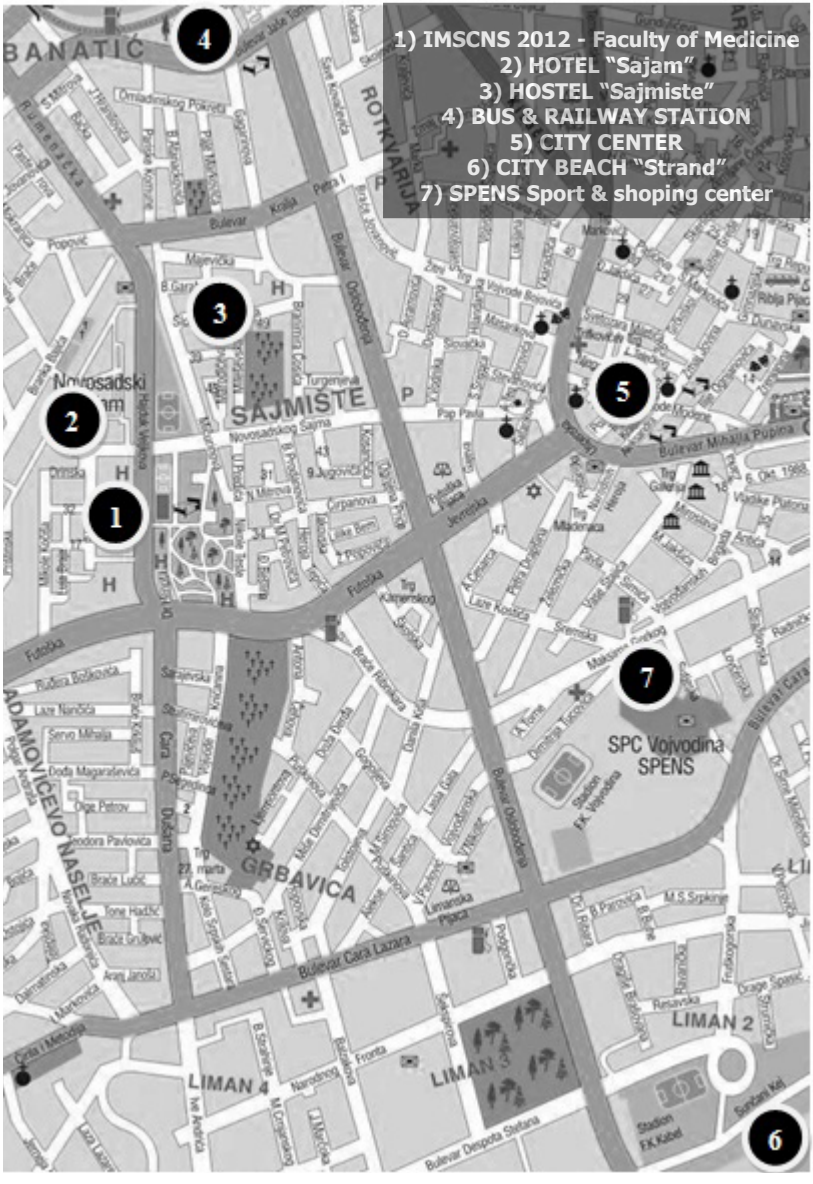
The city was founded at the end of the 17th century as a vital bridgehead of the Petrovaradin fortress,one of the most beutiful and biggest fortresses in Central Europe, which was being built for about 100 years with the purpose to defend Austria from Turks and known as "The Gibraltar on the Danube".

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.

CITY MAP


1) IMSCNS 2012 - Faculty of Medicine
2) HOTEL "Sajam"
3) HOSTEL "Sajmiste"
4) BUS & RAILWAY STATION
5) CITY CENTER
6) CITY BEACH "Strand"
7) SPENS Sport & shoping center
BANATIĆ
ROTKVARIJA
SAJMIŠTE
Novosadski sajam
ADAMOVIĆEVO NASELJE
GRBAVICA
SPC Vojvodina SPENS
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LIMAN 3
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Jevrejska
Bulevar Mihajla Pupina
Bulevar Despota Stefana

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