International Student Congress

ISC 2017

May 25th – May 27th, 2017

Graz, Austria

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Welcome to Graz!

ENJOY THE

ISC 2017
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Thank you

The members of the ISC organizing committee would like to take the opportunity to say ‘thank you’ to all the professors and experts who supported us while planning and in the realization of this congress. We would like to thank the University Directorate of the Medical University of Graz for their support and encouragement.

We would also like to thank Mag. Gerald Auer, the whole department of marketing and communications and the department of doctoral studies for their tireless assistance and support. Not to forget, we want to express our gratitude to all the reviewers for extremely appreciated work in the reviewing process and the professor chairs for their scientific guidance along the way.

We would also like to thank all of our sponsors and donors. This event would not have been possible without your generosity.

A big thank you goes to our ambassadors all over the world, who helped spread the word and advertised this year’s International Student Congress in their home countries. We love you guys!

Thank you to all of our Helping Hands for your tireless work, strong arms and fast feet. And last but definitely not least, we would like to thank all the former members for putting so much blood, sweat and tears into this congress and without whom the ISC 2017 could not have been organized at all. Thank you for your guidance, your honest counsel and your energetic spirit. Stay awesome!

Your ISC Organizing Committee
Why a digital abstract book?

In this year’s edition, we decided not to print an abstract book as we have done in the previous years. It is not because we are lazy or ran out of time, but because we believe it is better for our environment.

As young researchers we do not only carry responsibility for humans, but also for our planet.

If we had printed this abstract book with it’s estimated 170 pages for every student attending the congress, we’d had to print 42,500 pages.

By not printing an abstract book, we do not only save a lot of paper – and therefor trees and the environment – but also space in you shelves, and luggage traveling back home.

So please don’t be upset about not having a actual book in your hands this year. Be happy about saving at least 5.3 trees’ lifes and some CO₂ since your suitcase won’t be as heavy.

Welcome to the paper-less future!

Responsible for this Abstractbook:

Irina Komarova

ISC 2017

isc@medunigraz.at
How do student congresses work?

Is this your first time at a (student) congress or conference? Or are you a pro already?

Never mind, here are some ground rules how everything works.

First of all: You are a student – and so is everybody around you. Don’t be afraid to get to know the others around you. Talk to them, get to know them, build a network. There are so many inspiring people from different cultures and countries around you. Grab this opportunity! And most of us don’t speak English as our mother tongue either, so don’t be shy, just give it a try. A nice conversation is the first step to get to know each other, to exchange knowledge and to discover new opportunities.

Here are some general guidelines to help you:

- Be on time for sessions as a visitor and arrive at least 10 minutes before your session starts, if you are presenting. Let your session chair know, you have arrived.
- Each session is guided by a student chair that introduces the presenters and ask questions to start a discussion. There is also an expert chair in each session to discuss your work with you and the audience.
- Everybody is nervous when presenting, please show some respect for those presenting and do not talk during the presentation. If you have questions, there will be time after the presentation to ask.
- At the registration you will receive a badge with your name on it. Please wear it visibly at all times.
- You will recognize the organizing team by their green ties / scarfs. Please contact them when ever you need help or information.

Guidelines for Oral Presentations:

- Your presentation time is 8 minutes + 2 minutes for questions from the judges and the participants in the audience.
• The session chairs will stop you after 8 minutes, whether you are finished or not.
• Your presentation should be done in MS PowerPoint (.ppt). We cannot guarantee that any other format will work on our computers.

Guidelines for Poster-presentations

• Your presentation time is 8 minutes + 2 minutes for questions from the judges and the participants in the audience.
• The session chairs will stop you after 8 minutes, whether you are finished or not.
• Please be aware that there are multiple sessions within one big room, so be prepared to speak loud and clearly as the noise level might be high.
## Timetable Pre-Course Day

**Pre-Course-day, Thursday 25th May**

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<th>Time</th>
<th>Location</th>
<th>Event</th>
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<td>08:00 – 09:00 am</td>
<td>Foyer HSZ</td>
<td>Registration</td>
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<tr>
<td>09:00 – 09:30 am</td>
<td>HSZ HS D</td>
<td>Opening Ceremony</td>
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<tr>
<td>09:30 – 12:00 am</td>
<td>See page 18</td>
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<tr>
<td>12:00 – 01:00 pm</td>
<td>Foyer HSZ</td>
<td>Lunch Packages</td>
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<tr>
<td>01:00 – 01:45 pm</td>
<td>HSZ HS D</td>
<td>Keynote lecture I</td>
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<tr>
<td>01:45 – 04:30 pm</td>
<td>See page 18</td>
<td>Pre-Courses Part II</td>
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<tr>
<td>05:30 – 07:30 pm</td>
<td>Main square</td>
<td>City tour</td>
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<td>08:00-11:00 pm</td>
<td>Bar Feierlaune</td>
<td>Pub Quiz</td>
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<td>Time</td>
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<td>Event Description</td>
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<tr>
<td>08:00 – 09:00 am</td>
<td>HSZ Foyer</td>
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<td>09:00 – 09:30 am</td>
<td>HSZ HS D</td>
<td>Opening Ceremony</td>
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<tr>
<td>09:30 – 10:45 am</td>
<td>HSZ HS B1</td>
<td>Session – Oral Presentations I</td>
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<td></td>
<td>HSZ SR A2</td>
<td>Cardiology</td>
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<td></td>
<td>HSZ SR B2</td>
<td>Dermatology &amp; Venerology</td>
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<td>HSZ SR C1</td>
<td>Endocrinology</td>
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<td>10:45 – 11:00 am</td>
<td>HSZ Foyer</td>
<td>Coffee &amp; Networking</td>
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<tr>
<td>11:00 – 12:15 am</td>
<td>HSZ HS D</td>
<td>Keynote lecture II: “Cancer diagnosis – from</td>
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<td>conventional morphology to molecular medicine”</td>
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<td>12:15 – 01:15 pm</td>
<td>HSZ Foyer</td>
<td>Lunch</td>
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<tr>
<td>01:15 – 02:45 pm</td>
<td>See page 25</td>
<td>Workshops</td>
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<tr>
<td>02:45 – 03:00 pm</td>
<td>HSZ Foyer</td>
<td>Coffee &amp; Networking</td>
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<tr>
<td>03:00 – 04:15 pm</td>
<td>HSZ SR B1</td>
<td>Session – Oral Presentations II</td>
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<td>HSZ SR A2</td>
<td>Molecular Biology</td>
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<td></td>
<td>HSZ SR B2</td>
<td>Public Health</td>
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<td>HSZ SR C1</td>
<td>Microbiology, Infectiology and Immunology</td>
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<tr>
<td>04:15 – 04:30 pm</td>
<td>HSZ Foyer</td>
<td>Coffee &amp; Networking</td>
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<tr>
<td>04:30 – 05:45 pm</td>
<td>HSZ HE E1</td>
<td>Session – Poster Presentations</td>
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<td>Biochemistry and Microbiology</td>
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<td>Time</td>
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<td>07:00 – 09:00 pm</td>
<td>Town Hall</td>
<td>Official Welcome at the Mayor’s Hall</td>
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<td>09:00 – open end</td>
<td>Stadtpark</td>
<td>Chill-Out with AMSA</td>
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<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:30 – 09:45 am</td>
<td>HSZ SR A2</td>
<td><strong>Oral Presentations III</strong></td>
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<td>HSZ SR B1</td>
<td>Oncology</td>
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<td>HSZ SR B2</td>
<td>Orthopedics &amp; Trauma surgery</td>
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<td>HSZ SR C1</td>
<td>Surgery</td>
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<td>09:45 – 10:00 am</td>
<td>HSZ Foyer</td>
<td>Coffee &amp; Networking</td>
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<td>10:00 – 11:15 am</td>
<td>HSZ HS D</td>
<td><strong>Keynote lecture III: “Immune regulations in experimental glomerulonephritis”</strong></td>
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<td>11:15 – 11:30 pm</td>
<td>HSZ Foyer</td>
<td>Coffee &amp; Networking</td>
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<tr>
<td>11:30 – 12:45 pm</td>
<td>HSZ SR A2</td>
<td><strong>Oral Presentations IV</strong></td>
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<td></td>
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<td>Hematology</td>
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<td></td>
<td>HSZ SR B2</td>
<td>Pediatrics &amp; Public health</td>
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<td></td>
<td>HSZ SR C1</td>
<td>Case Reports</td>
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<td>Gynecology</td>
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<tr>
<td>12:45 – 01:45 pm</td>
<td>HSZ Foyer</td>
<td>Lunch</td>
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<td>01:45 – 03:00 pm</td>
<td>HSZ HE E1</td>
<td><strong>Poster Presentations</strong></td>
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<td>Case Reports</td>
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<td>Dentistry</td>
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<td>Orthopedics &amp; Trauma surgery</td>
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<td></td>
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<td>Rheumatology, Immunology &amp; Allergology</td>
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<td>Surgery</td>
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<tr>
<td>Time</td>
<td>Location</td>
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<tr>
<td>03:00 – 03:15 pm</td>
<td>HSZ Foyer</td>
<td>Coffee &amp; Networking</td>
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<tr>
<td>03:30 – 04:30 pm</td>
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<tr>
<td>08:00 – open end</td>
<td>TamTam</td>
<td>Farewell Party</td>
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Finding your way around at the University Hospital LKH Graz

A: HSZ – The lecture hall. You will find all rooms here with the numbers “HS....”

B: Seminar-Building Kutscherwirt. You will find all rooms here with the numbers “KW...”
Pre-courses

Please note that the locations might change on short notice; please look out for information at the registration and screens regarding changes.

Sono4You – Abdominal Sonography

Location: SR KW

In this course the participants are going to learn and reinforce the practical skill of abdominal sonography. It is important for us to teach structured procedures with a highly practical component in small groups of max. 5 students. Per group, there will be two tutors of the peer-teaching-group „Sono4you“ helping the attendees to reach the learning target.

How to form a winning team (how we won the Austrian “great place to work” award 2017)

Location: HSZ B1

Topics that will be discussed during the precourse’s sessions are:

It’s not about dominating, it’s about leading! (General principles of leading)

From disaster to top-capacity: the case “team santé obereapotheke, Villach” (How to develop a high-performance-team)
Exercise-zone for participants: What to do in this very situation? Which reaction could be suitable? Which general pattern matches my character? Make your own experiences...

Conclusions, Discussion and feedback

Medication related problems – an opportunity for interdisciplinary cooperation

Location: HSZ A2

During the first part participants will learn about current issues regarding Medication Management and Medication Safety and how to address them.

Topics will include drug-drug Interactions, Medication Reconciliation/Review, Role of a Clinical Pharmacist etc...

In the interactive session tools to evaluate the medication of a patient as well as case studies regarding medication related problems will be discussed.

The second part will deal with the importance of proper counselling, how to build up a good counselling interview and to support adherence:

Participants will learn about a structured flow for information gathering, strengthening patient’s trust in the therapy, avoiding medication errors, communication to relatives and other healthcare professionals etc. Moreover, real life scenarios will be shared and discussed. Cases will be distributed and both discussed as counselled in small/short roleplays.
Gravitational Physiology, Aging and Medicine

Location: HSZ E2

In this pre-course aspects related to spaceflight physiology, aging and medicine will be presented. The pre-course will start with a group activity where participants will be given a problem oriented learning/task (deals with spaceflight, aging and medicine). Each group will tackle a different theme related to the problem oriented learning task. This will be followed by a lecture in which Prof Goswami (20 min) and Prof Roessler (20 min) will clarify these aspects discussed above and share their expertise with the students. In addition, two students who have worked in this area as medical students- and are currently doctors -will present their results and their research (10 min each).

Finally, this pre-course will end with hands-on experiments in which the students will use different devices to monitor perturbation induce changes in several physiological parameters. These include measurements of continuous blood pressure and hemodynamic responses, ECG, Flow Mediated Dilatation measurements, pulse wave analysis, cerebral blood flow measurements as well as assessment of cardio-postural measurements. Perturbations such as sit to stand test, mental arithmetic, hyperventilation, isometric handgrip, etc. will be used.
Newborn Life Support: A structured approach to the assessment and management of the newborn during the first minutes of its life

Location: Centre for medical simulation and training

About 10% of new-borns require some medical assistance after birth. In this workshop, participants will learn structured assessment of newly born infants and performance of life-saving procedures through hands-on simulator training.
Discover the world – meet our partner congresses:
Keynote Lectures

Keynote I:

“Shaping the future of soft tissue sarcoma care”

Speaker: Univ.-Prof. Dr. med. univ. Andreas Leithner, Head of the Department of Orthopedics and Trauma Surgery, Medical University of Graz, Graz, Austria

Time: Thursday, 25th May, 2017; 01:00 am – 01:45 am

Location: HS D

Keynote II:

“Cancer diagnosis – from conventional morphology to molecular medicine”

Speaker: Univ.-Doz. Dr. med. Cord Langner, Institute of Pathology, Medical University of Graz, Graz, Austria

Time: Friday, 26th May, 2017; 11:00 am – 12:15 am

Location: HS D
Keynote III:

“Immune regulations in experimental glomerulonephritis”

Speaker: Assoz.-Prof. Priv.-Doz. Dr. med. univ. Kathrin Eller, Department of Nephrology, Medical University of Graz, Graz, Austria

Time: Saturday, 27th May, 2017; 10:00 am – 11:15 am

Location: HS D

Workshops

Hyperbaric medicine – the use of compression chamber

Location: HSZ, SR C1

The medical university of Graz was one of the first institutions in Europe to establish a compression chamber. Even today Graz is one of two hospitals in Austria, which can perform hyperbaric medicine in this way. The compression chamber is not only used for decompression, but also for therapy of life-threatening infections like gangrene, tuberculosis or for curing of intoxications. In this workshop you will be able to visit the compression chamber at the hospital of Graz and hear about the most important facts of hyperbaric medicine.

Basics in Plastic Surgery

Location: SR KW
Participants will learn the fundamental skills of plastic surgery at an early career stage in a supportive environment. There is a balanced mix of practical and theoretical material taught on the course with demonstrations and soft tissue models for practise. The course provides you with the confidence required to perform the basic skill required in plastic surgery

**Structured cardio-pulmonary assessment for beginners**

**Location:** Centre for medical simulation and training

Assessing patients’ cardiopulmonary status at their bedside is a key skill for nurses and physicians. Even paramedics’ daily work could benefit from structured training of cardiopulmonary evaluation of chronically or even critically ill patients. This simulation-based assessment training addresses to everyone approaching cardiopulmonary evaluation without any prior knowledge, but is also useful for those wishing to update their expertise in the field of cardiopulmonary assessment.

**Pain management – Problem based learning**

**Location:** HSZ, SR E2

Patients with chronic pain are a challenge for clinicians as well as GPs. And there are a lot of cases when acute pain transforms into chronic pain. We will learn different ways how to manage patients with a chronic pain syndrome. The workshop will use examples from real cases for you to learn how to care for them. If you have an
example of a pain patient in your family, friends or from an internship, please prepare to tell the group about it, we will then try to design a pain management for that case.

Blue Pill, green pill, white pill and inhaler?! – Medication Therapy Management and Brown Bag Review

Location: HSZ, SR A2

Since October 2016 every patient taking more than three medications has the right for a medication plan by German law. Especially geriatric patients with complex polymedications will benefit a lot from a structured review of all medication as a whole; an additional task of genuine pharmaceutical nature community pharmacists can and need to be more involved to optimise medication therapies and take care of detailed interaction management for the public. This decreases missed drug interactions, lowers related hospitalisation, decreases health expenses by inappropriate medications and fosters adherence. Focussing on German Initiatives as examples participants will learn the different breakdowns of Brown Bag Reviews, the importance of interprofessional communication and the process of a Medication Therapy Management with real life examples.

Getting ready for the nightshift - X-ray interpretation for young doctors

Location: HörsaalRadiologie
When starting your career in medicine, it won’t be long until your first nightshift. It’s going to be just you and the patient in the emergency room. Are you going to wake up your on-call doctor at 4am just to ask him about that chest X-ray you ordered? In this workshop we will go through cases based on X-ray pictures that are very common in the nightshift. It is going to be an interactive workshop that teaches you how to tell emergencies (that do require to wake your superior) from more harmless situations.
Psychosomatic Medicine and Health of Medical Students

Location: HSZ, SR B2

Physical, psychological (emotional) and social factors influence health and disease. In this workshop we will talk about the concept of psychosomatic medicine based on case reports and how it affects the daily clinical routine and the health care system.

More than a challenge: Advanced airway management procedures under emergency conditions

Location: Centre for medical simulation and training

Securing the airway is crucial in emergency management. Special technical and communicative skills are needed to identify and treat respiratory problems immediately. This simulation-based workshops imparts current guidelines for emergency airway management including failed intubation procedures and emergency surgical cricothyrotomy.

Common zoonoses in Central Europe from a veterinary point of view

Location: HSZ, SR C2

Based on various case studies we will treat the following topics: fundamental knowledge on zoonoses, most common zoonoses in Central Europe, means of transmission, preventive measures, symptoms in (domestic) animals and humans.

Scientific Writing and Publication
Location: HSZ,SR B1

Your academic career includes different aspects of scientific writing and presentation. In this workshop, you will learn how to write an abstract and how to choose the right journal for the final publication. The programme additionally includes the viewpoint of the reviewer, regarding both abstract evaluation and peer review of the submitted manuscript.
**Intraosseus access in critically ill patients**

**Location:** Centre for medical simulation and training

Vascular access is a key in managing medical emergency situations. Although establishing peripheral venous access is a basic procedure, it might be challenging under emergency conditions. This workshop provides an understanding of indications and contraindications of alternative vascular access techniques and equips participants with the skills needed to use different intraosseus access devices to save patients’ lives.
Social Programme

City Tour

When: Thursday, 25th May; 5:30 – 7:30pm

Where: Starting at the Main Square

World heritage and Cultural Capital. Graz has many faces: Renaissance residence and student city. Romantic arcaded courtyards, bustling squares, medieval alleys, southern charm. A panorama of old and new. From the clocktower with its unusual hands to the island made of glass and steel. From the emperor’s mausoleum to the “Kunsthaus” – the “friendly alien”. Have a sensuous experience of a captivating city.

Don’t forget to sign up for it during the first congress day.

Pubquiz

When: Thursday, May 25th, 8:00 p.m.

Where: Feierlaune, Harrachgasse 22, 8010 Graz (Basement)

Have you ever had the pleasure of attending a pubquiz? Here is your chance! Come unprepared and convinced that you and your colleagues are able to answer the weirdest questions! Besides a fun thing to do, this is a great chance to get to know your colleagues from other countries!
Welcome Reception in the Mayor’s Hall

When: Friday, May 26th, 7:00 p.m.

Where: We meet at Main square (Hauptplatz)

First built during the Renaissance in 1550 the original town hall was a simple three-storey building with hardly any ornaments at all and a prison inside. In 1803 the town hall was torn down and replaced by the building that has been standing next to Main square until nowadays. We will be welcomed by an official member of the city council and there will be the opportunity to ask questions about the city and the county Styria. Afterwards there will be a bread-roll buffet with Styrian wine for whoever would fancy one! Make sure you wear your traditional dresses from your home country.
Chill-Out in the Stadtpark

When: After the Mayor’s Hall event
Where: Stadtpark, just follow us after the Mayor’s Welcome

One of our newest traditions when it comes to the ISC. Our dear colleagues from the AMSA (Austrian Medical Student Association) will invite us for a nice Chill-Out in the Stadtpark. There will be (non-)alcoholic drinks, music, dance and the opportunity to get to know your colleagues on more casual level. Come, enjoy summer nights in Graz with us and find out what “Burning Mozart” is!

ISC Farewell Party

When: Saturday, 27th May, 2017; 8:00 pm – open end
Where: TamTam, Keesgasse 3, 8010 Graz

There is one party location in Graz, where every student has been to sooner or later - the TamTam. So make sure you do not miss our legendary Farewell Party and enjoy some of the free drinks with us and your new friends from the congress before it is finally time to say Goodbye.
Finding your way around: Graz
Good to know

Emergency numbers

122: Fire brigade

133: Police

144: Paramedics

112: International Emergency Number

Public Transportation

www.gvb.at

We recommend you to get a 3-Day-ticket for € 11,80, which pays off whenever you do more than 5 single trips through Graz. You can purchase the 3-Day-Ticket inside the Trams at the ticket machines (but not inside the busses!!), at the tourist information or at the train station. There is no student discount!

Public Bikes:

There is the possibility to register online for the use of public bikes. If you want to rent a bike, visit www.grazbike.at

Tourist information

Herrengasse 16, 8010 Graz,

https://www.graztourismus.at
About the Medical University of Graz

A young university with a long standing tradition

As early as 1863 much emphasis was laid on medical research and the education of new physicians, both of which proved to be very successful. In January 2004, the former Faculty of Medicine was replaced by an autonomous university. The core competences of the Medical University of Graz are high-standard training and education, research at an international level and continuous improvement of top-quality medicine. Additionally, the orientation toward the bio-psycho-social model is one of the main concerns of the university.

Education of international reputation

According to the bio-psycho-social model, patients and their ailments are the main focus and tended to by specialists. In the field of education the Medical University of Graz breaks new grounds due to a new curriculum for medicine that was introduced in 2002. Students start their education with a practical training and medical knowledge will be taught in different specialized modules. For the students this means practical experience at a very early stage of their studies, many seminars and small study groups. Furthermore, emphasis is laid on both medical knowledge and social competence and Medical University of Graz. In the fall of 2004, the program “Nursing
Science” was introduced. It is the only one in Austria and accounts for all the new needs and challenges in health care.

**Tradition of successful and internationally renowned research**

The Medical University of Graz has a long tradition of successful and internationally renowned research, which is obvious by the fact that three Nobel Prize winners have conducted research in its institutes and clinics:

- **Fritz Pregl, Nobel Prize in Chemistry (1923)**
- **Julius Wagner von Jauregg, Nobel Prize in Medicine (1927)**
- **Otto Loewi, Nobel Prize in Medicine (1936)**

We at the Medical University of Graz also focus on the utilization of research results. Next to providing medical education and first-class medical treatment, research is the core task and competence of the medical schools. It provides the basis for all progress in medicine, be it by exploring physiological processes and decoding genes and their functions, or by developing new operation techniques and testing new ingredients for pharmaceutical products. The Medical University of Graz is highly committed to scientific medical research and has been throughout its long history. In its university clinics and pre-clinical institutes and centers, researchers employ state-of-the-art scientific methods to search for answers and new approaches, thus contributing continuously to the progress in medicine and biotechnology.
About Graz

Graz has a long and eventful history. The tracks of first buildings and fortresses date back to the early stone age. The Celts, who lived not only in Gallia (like Asterix) but also in the region of today's Austria, left their traces in Graz too. You can find them, for instance, in the small forest directly behind the University Hospital, the Leechwald. During the time of the Roman Empire the area of Graz was a busy area for agriculture; the antique city Flavia Solva near the city of Leibnitz, south of Graz is witness of it. They even found a Roman villa underneath the airport of Graz.

The word Graz originates from the Slavic word Gradec, meaning "small fortress". This fortress, which was built on the hill in the city center, the Schlossberg, didn't remain small for long. For nearly 300 years Graz was the residence of the Habsburgs, the Austrian Imperial dynasty. In the time of the war against the Ottomans, the fortress was captured for the last time in history, as the next great enemy who tried to occupy the city, Napoleon, was never able to do so. Graz remains the only city that the ingenious general from Corsica could never conquer. He got so furious; he forced the Austrian Emperor to let him destroy the city without fight. No sooner said than done, the fortress as blown up and half of the Schlossberg with it. The only other two buildings that survived the destruction, apart from some residues of the fortress, were the clock tower (Uhrturm) and the bell tower ("Liesl").
A second good reason to visit Graz is the exceptional living quality. According to an inquiry, 92% of the citizens are very satisfied with living in the city. This is quite a high number, don't you think? Maybe it’s because of the many parks, the forests inside and outside the city or its manageable size (300,000 inhabitants on 127.6 km²) which you can easily discover by public transportation and by bicycle. Perhaps it’s the southern flair (Graz is known as the Austrian city with the most Italian flair) in the small alleys of the city center, with its hidden places where you can just drop inside a bar or a café for a drink or a cup of coffee, read a good book, watch the scenery and enjoy life. Moreover, let's not forget the friendly citizens of Graz. They, too, are the reason why so many just love to visit or, even, stay forever.

The rooftop landscape of Graz, which you can look at from every elevated spot around the city center, has been a UNESCO world's cultural heritage since 1999. In 2003, the city was given the honor of being “Cultural Capital of Europe.

Whether you are interested in architecture or the fine arts, there are numerous options you can choose from: the opera house, the many theaters, the museums, open air and indoor concert venues and our castle in the district of Eggenberg are all sports worth visiting. During summertime the street artists of “La Strada” fill the streets with a special atmosphere while the “Jazz Summer” brings great artists to town.

As Graz is a university city, there is a large number of students living here. Where there are students, there are bars and parties. In the “Uni Quarter” along and around
Elisabethstraße the bars are lined up for your choice, and the “Bermuda Triangle” in the city center got its name from one or the other getting lost there until the break of dawn. As our 40,000 students are not only partying but also studying, they can do so at 4 universities, 2 universities of applied sciences and 2 pedagogical colleges.

A lot of famous people were born in Graz or lived here. Leopold Auenbrugger, whom you may know as the inventor of medical percussion, Hans Gross, the founder of criminology (yes, he kind of invented CSI), emperors of the Habsburgs dynasty, Arnold Schwarzenegger, Nicola Tesla, Otto Loewi, Erwin Schrödinger, Nicolaus Hanoncourt, Karlheinz Böhm, and so on.
Scientific Section
Abstracts

Please note: The organizing committee of the ISC 2017 is not responsible for the following abstracts. The abstracts have been copied from the uploads in conftool. The authors of the abstracts are responsible for content and possible spelling mistakes.

Dermatology & Venerology - oral

Time: Friday, 26/May/2017:
9:30am - 10:45am

Location: A2 - HSZ

Vascular tumors of the skin – a clinico-pathological study

Ljubica Bakić¹, Anastasia Milić¹, Martina Bosić¹,², Dimitrije Brašanac¹,²

¹Faculty of Medicine, University of Belgrade; ²Institute of Pathology, Serbia

Introduction: Vascular tumors are proliferations of endothelial cells. Their nature is most often benign with angiosarcoma being the most common malignant form.

Aim: Presentation of clinical and pathological characteristics of vascular tumors of the skin.

Materials and methods: Skin tumors of vascular origin were analyzed from the database at Institute of Pathology in Belgrade in a 15-year period. A total of 1279 cases were included in the study. Clinical and histological characteristics were analyzed.

Results: Median age of patients was 41 years. Patients with malignant tumors were the eldest (med 69 years) and also had the largest tumors (p<0.001). Vascular tumors were more prevalent in males (53.1%). Clinical history was longer in females (med 48 months) compared to males (p=0.002). Most common histopathological diagnosis in females was cherry angioma and in males pyogenic granuloma (p<0.001). Malignant and intermediate tumors were more frequent in males (p=0.002). Tumors were most often localized on the head and neck region (36.7%).
Most of the malignant tumors (84.6%) were localized in the same region (p<0.001). 58.8% of the tumors were asymptomatic with growth being the most common reported symptom. Asymptomatic lesions had twice as long clinical history (med 48 months) compared to symptomatic ones (p<0.001). 53.8% of malignant tumors were removed incorrectly compared to 9.5% of benign (p<0.001). Incorrect excisions were made in younger patients (med 17.5 years).

Discussion: Our study showed that malignant tumors are more common in elder patients, males and most often localized on the head and neck region.

WOUND HEALING ACTIVITIES FROM GEL FORMULA OF OPUNTIA LITTORALIS EXTRACT IN VITRO AND IN VIVO STUDIES

Ruli Aulia¹, Arief Budiyanto²

¹Faculty of Medicine Gadjah Mada University, Indonesia; ²Department of Dermatology and Venereology, Faculty of Medicine Gadjah Mada University, Indonesia

The extract of Opuntia sp. is used in folk medicine for wound-healing. However, unformulated crude extract is not applicable. Opuntia littoralis extract formulated on gel formula is easily applied and has a potency to accelerate the regeneration of open wounds.

To prepare gel formulation from O.littoralis water extract and evaluate its open wound healing activities on cultured fibroblast cells and animal model.

O.littoralis were extracted and formulated in 1% and 2.5% gel formula. The formulas were evaluated for phytochemicals, organoleptic, homogenity, pH, dispersive capacity and adhesive power parameters. Proliferation activity of O.littoralis water extract were performed on cultured fibroblast cells with MTT method. Twenty-four Rattus novergicus were treated with O.littoralis gel, hyaluronic-acid and control gel. Wound scar size was measured every day while histopathologic examinations were conducted on the 2-4-8 days after skin incision. Histopathologic parameters observed were epithelialization, leukocytes density, angiogenesis, collagen density, basement-membrane formation, and VEGF expression.

O.littoralis water extracts contains 0.0042% flavonoid, 11.12% pectin, 9.9mg/100grams vitamin C, and 4.045mg/kilograms vitamin E. Gel characteristics test showed that gel of O.littoralis has standard physical gel feature. MTT test revealed that O.littoralis water extract at 2.5% concentration increases fibroblast proliferation significantly (p<0.05) using one-way ANOVA post hoc Games Howell. O.littoralis gel with concentration of 2.5% was able to accelerate wound scar healing based on macroscopic observation and has wound regeneration activity based on histopathologic parameters calculation.

Opuntia littoralis gel has standard gel characteristics has and possess wound healing activities based on in vitro and in vivo evaluation.
The Topical Activated Carbon Gel As A New Potential Material to Prevent Green Tobacco Sickness (GTS) Among Tobacco Farmworkers

LidyaPertiwiSuhandoko, NuzulaFikrinNabila, SitiErmawati, PutuTopanBagaskara

Faculty of Medicine Universitas Airlangga, Indonesia

Background: Green Tobacco Sickness (GTS) is a disease that occurs in tobacco farmworkers because of nicotine intoxication through skin contact with the tobacco leaves. GTS incidences are high; in Brazil 2013 there are 107 incidences among 130 group sample. GTS symptoms are dizziness, headaches and nausea or vomiting, and usually can occur more severely and require emergency care. Current GTS preventing methods are not effective enough. Therefore, a new effectively cheap material is needed to reduce GTS incidence.

Methods: Literature review methods; selection including all of the keywords and other related terms. Sources of data obtained (Randomized Control Trial, Systematic Review-Meta Analysis and conclusions of research) with level of evidence-based hierarchy between 1A to 2C. Earlier publication and original research were highly regarded and descriptive analysis is performed and a new idea is synthesized.

Results: The activated carbon gel is proven capable in absorbing nicotine; produced from various raw materials that contain much carbon, using steam activation method and then broken down into smaller sized powder and formulated into a gel form, using Hydroxypropyl methylcellulose and carbomer as a base gel, methyl paraben as a preservative, and propylene glycol as a solvent. Through topical administration before wearing gloves and used without gloves on the skin surface, this method has the opportunity as an innovation in prevention GTS effectively.

Conclusion: Activated carbon gel is effective to prevent GTS by preventing nicotine enter the skin and result in increasing the safety and productivity in the agro industrial field of tobacco farmworkers.

Awareness of sexually transmitted diseases in vulnerable groups

Madalina Mihaela Dumitru

Carol Davila University of Medicine and Pharmacy, Romania

Background: Sexually transmitted diseases could be considered a scourge of the modern world. Strong industrialization, changing lifestyles, increasing living standards have contributed surprisingly and paradoxically to the increase in the number of sexually transmitted diseases.

Method: This study was performed on a group of 747 people; The method includes the use of primary data obtained through a survey, quantitative and qualitative data processed adequately for this research
Results: Of all the respondents, 83% were aged between 18-45 years and 84% of these are women, 76.4% from urban areas, 34.8% were living with spouse/partner and 32.7% with parents, 68% Christians, 59% Romanian and 35% Roma. Sexual education represents an important topic of discussion in family for 91.8% and 43.5% feel embarrassed when talking about this topic and 92.8% say it is important to introduce sexual education in schools. The most popular of these STDs are: HIV, Syphilis, Hepatitis B and C and HPV virus infection. Very few have heard about: trichomonas vaginalis, Chlamydia or urinary tract infections. 96.5% believe that STDs are transmitted only through sexual contact, and 25.3% say that if one washes, one is less exposed. 36.3% say that condoms provide 100% protection and 10% of the group practice commercial sex, 12.6% admit to having had a sexually transmitted disease.

Conclusions: The general trend is towards sexually openness so it is imperative to be aware of the risks to which young people are exposed and at the same time to create programs to provide appropriate information on all aspects.

CROSS SECTIONAL STUDY OF THE SIGNIFICANCE OF SURVIVIN EXPRESSION IN PRIMARY CUTANEOUS MELANOMA

Sanja Milutinovic

Faculty of Medicine MMA University of Defense in Belgrade, Serbia

Introduction: Survivin belongs to the inhibitor of apoptosis protein family. It is expressed in tumors of various types, including melanoma.

The Aim: Examination of correlation between local tumor survivin expression and serum concentration with histopathological and clinical parameters in melanoma patients.

Patients and Methods: The level of survivin expression was determined immunocytochemically in the tumor tissue and with ELISA test in the serum of 84 melanoma patients aged from 25 to 78 years. Patients were diagnosed at the Institute for Pathology and Institute for Medical Research at Military Medical Academy, Belgrade, Serbia.

Results: The intensity of survivin expression was significantly higher in tumor tissue of III clinical and IV histological stage, as well as in patients with ulcers, vascular invasion and metastases. Pronounced pleomorphism of tumor cells, mitotic index greater than six, the tumor thickness of 4-5 mm (Breslow), IV and V stage of invasion (Clark) and lymphatic spread of tumor was associated with increased survivin expression. Patients with extremely low levels of tumor survivin expression had increased serum survivin concentration.

Discussion: Local survivin expression in tumor tissue and its serum concentration significantly correlate with clinical and histopathological parameters of melanoma. They are significantly higher in melanoma patients than in persons with benign pigment lesions. The patients with the lowest intensity of tissue expression had
significantly higher serum level than those with intensive local tissue expression. It indicates that even smallest melanoma lesion, without signs of local survivin expression had significant capacity for further growth and disease spreading.

**Endocrinology - oral**

*Location:* B2 - HSZ

**Time:**

Friday, 26/May/2017:

9:30am - 10:45am

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**The principles of clinical application of ultra long acting basal insulin in patients with diabetes mellitus type 2**

*Sarkhan Hesenli*

Azerbaijan Medical University, Azerbaijan

Introduction. Diabetes mellitus type 2, a disease of the endocrine system resulting in absolute or relative insulin deficiency is observed with a chronic increase in blood glucose. Diabetes, especially type 2 diabetes is increasing dramatically every year, 382 million people worldwide suffer from diabetes. Nowadays, there are urgent problems have not been solved yet relating insulinotherapy. In this work we aimed to evaluate the effectiveness of treatment within insulin Lantus (Glargin) and Tresiba (Degludec) and the clinical performance characterization during 3 months of treatment in patients.

**Materials & Methods.** Research was conducted on 30 patients. 14 patients with insulin Glargin, 16 patients with insulin Degludec were treated during the study including 18 men and 12 women. The average age of the patients involved in the study is 55.

Glargin is injected at the same time every day for 3 months, however, Degludec is injected every day, for the first month of 3 months period and in the last 2 months injecting every other day.

**Results.** In the treatment of patient with insulin glargin there is highlighted decrease in the level of glycohemoglobin. Average percentage of glycohemoglobin of 14 patient treated with glargin was 8.1% changing to 6.9% after 3 months therapy. The same result was observed within insulin degludec showing 1.3% decrease from 8% to 6.7% of glycohemoglobin.
Conclusion Positive results were obtained in patients treated with the medication of both generation. However, treatment with Degludec in terms of glycemic control and improving the quality of lifestyle of patients results were even more pronounced.

**ADIPOCYTOKINES’ PROFILE IN ELITE ATHLETES WITH DIFFERENT BODY COMPOSITION: A COMPARISON OF VOLLEYBALL AND WATER POLO PLAYERS**

Mirjana Arsenijević¹, Stefan Bošković¹, Ivo Božović¹, Ivana Babić¹, Bojana Babić¹, Deana Bezbradica¹, Marina Đelić¹²

¹School of Medicine, University of Belgrade, Serbia; ²Institute of Physiology “Rihard Burijan”, School of Medicine, University of Belgrade, Serbia

Background: Adipose tissue is regarded as an active endocrine organ that producing variety of bioactive peptides, known as adipocytokines. So far, no studies have investigated the variability of these hormones in elite athletes and how they are regulated in elite athletes with different body composition.

The Aim: The purpose of study was to investigate the adipocytokines’ profile in elite athletes with different body composition and its relation to the healthy controls.

Material and Methods: A total of 29 elite athletes (volleyball and water polo players) and 14 untrained individuals volunteered to participate in this study. Anthropometric variables, including body fat percentage (BF%) and waist circumference (WC) were measured, whilst body mass index (BMI) and waist to hip ratio (WHR) were calculated. Blood samples were taken in order to determine levels of the various hormones (leptin, adiponectin, visfatin) with an enzyme linked immunosorbent assay (ELISA) kits according to manufacturer’s instructions.

Results: The anthropometric parameters related to overweight (BMI, BF%, WC, WHR) were significantly lower (all, p<0.05) in volleyball compared to water polo players and untrained individuals. In volleyball players, leptin concentrations were also significantly lower (p<0.05) whilst adiponectin and visfatin concentrations were significantly higher (p<0.05) compared to untrained individuals, as well as to water polo players. No significant difference was found in the serum leptin, adiponectin and plasma visfatin concentrations among water polo players and untrained individuals.

Discussion: These results demonstrate that prolonged physical activity is coupled with specific anthropometric, hormonal and metabolic adaptations which are dependent on athlete’s body compositions.
Frequency of congenital hypothyroidism in Hormozgan province of I.R.I since September 2010 to February 2012

Abdolmajid Nazemi, Yaghoob Hamedi, Aida Gholami, Ali Rashidi, Mahdyie Eslami

Hormozgan University of Medical Sciences, Iran, Islamic Republic of

Introduction: Congenital hypothyroidism, defined as thyroid hormone deficiency at birth, is one of the most common preventable causes of mental retardation.

Aim: This study was conducted to investigate the frequency of hypothyroidism in the Hormozgan province.

Materials and Methods: This study is a cross sectional investigation conducted prospectively on 45799 live births from September 2010 to February 2012 in the Hormozgan province, IRI, who participated in congenital hypothyroidism screening. According to a national protocol, blood samples were taken from the heels of the newborns 3-7 days after their birth. Neonatal TSH values less than 5mIU / L were considered as normal; TSH values greater than or equal to 5mIU / L were considered as suspicious and immediate report was made to the Focal Point of the baby's birth place.

Results: Out of 45799 infants in the initial study, Blood TSH was ≥5mIU / L in 1241 infants (2.7%). Of these 1241 infants, 1159 cases (93.3%) had TSH between 5-9.9 mIU / L, 39 infants (3.1%) between 10-19.9 mIU / L, and 43 infants (3.46%) ≥20 mIU / L. The incidence of congenital hypothyroidism in the province was estimated at 1/715 live births. The mean TSH of 64 infants suffering from congenital hypothyroidism was reported 36.8 ± 34 mIU / L (10-100). The mean age of the infants at the time of admission for second sampling was 7.5 ± 6.5 (3-30) days.

Discussion: In view of the high incidence of congenital hypothyroidism in the Hormozgan province, the continuation and strengthening of the neonatal screening program appears indispensable.

controlled prospective trial "OXIDATIVE HOMEOSTASIS IN CHILDREN WITH TYPE 1 DIABETES"

Tatiana Shevchenko, Liza Korniiko, Katerina Gerasymchuk

Bogomoletz National medical university, Ukraine

Introduction. According to recent materials, special importance in the mechanisms of angiopathy appearance in type 1 diabetes (T1D) is given to oxidative stress, which develops as a result of antioxidant system deficiency and overproduction of free radicals.

Aim: to find out changes in oxidative homeostasis system in children with T1D.
Materials and Methods. To study oxidative homeostasis we determined malondialdehyde (MDA) as the end product of lipid peroxidation (LPO), catalase, superoxide dismutase (SOD) and glutathione as the main intracellular antioxidants. We used spectrophotometry. Also we examined 33 children with T1D at the age of 11 to 17 years (14,67±0,36). The control group consisted of 13 children without T1D. The duration of the study - three months. In statistical analysis we used software SPSS15.0.

Research results. Evaluation of LPO shown in children of the main group compared with control group in 6 times higher content of MDA - 4,31±0,74 mkmol /l and 0,68±0,07 mkmol /l, p <0,05. Analysis of the antioxidant protection of children in the main group compared with the control showed a significant decrease, in 2 times (p <0,05): SOD 3,65±1, conventional units (CU) and 8,4±1,6 CU, glutathione 0,46±0,11 mmol /l and 1,31±0,31 mmol /l (almost 2 times less) and catalase in plasma 4,45±0,65mkat /l and 10,97±2,11 mkat /l.

Discussion. The results of LPO indicators and antioxidant defence may indicate an imbalance between the production of free radicals and antioxidant system work, which is the main condition for the development of oxidative stress and angiopathy in children with T1D.

Frequency and risk factors of dyslipidemia among children with type 1 diabetes mellitus – a retrospective study.

Barbara Majewska¹, Justyna Pietrzyk¹, Anna Ramotowska²

¹Student Scientific Assosiation of Paediatric Diabetes of Warsaw Medical University, Poland; ²Department of Paediatrics, Medical University of Warsaw

Introduction: The mortality and morbidity of cardiovascular diseases (CVD) are markedly increased in diabetic individuals compared with the non-diabetic population. Moreover, type 1 diabetes mellitus (T1D) is probably independent risk factor of lipid profile disorders. Insulin deficiency leads to increased lipolysis and decreased activity of lipoprotein lipase, promoting hypertriglyceridemia and following atherogenesis. Management of lipid abnormalities plays a key role in reducing further complications of the disease.

Aim: The aim of this study was identification of risk factors and assessment of frequency of dyslipidemia in children with T1D.

Materials and methods: We identified lipids disorders in 89 diabetic children (49 boys, 4-17 years) in the mean age 11.0±3.9 years, duration of T1D over a 1 year (mean time 4,52±3.07 yrs), followed at the Pediatric Diabetes Clinical Unit. Children with co-existing metabolic disorders were excluded.

Results: 26% of patients had abnormal concentration of at least one of the lipids fraction: LDL (15% of patients), total cholesterol (22,5%), triglycerides (3%). Poorly controlled patients, expressed as HbA1c levels, had significantly higher concentrations of triglicerides (p= 0,0211). Hypertriglyceridermia was statistically
more frequent in children > 13 yrs (p=0.0478) and in subjects with higher BMI (p= 0.0357). Additionally, girls have 16% higher average level of LDL than boys. No correlation was found between age, diabetes duration and concentration of HDL, total cholesterol or LDL.

Conclusion: Inadequate control of diabetes, pubertal age and female sex are risk factors of hyperlipidemia. We should also pay attention to modifying factors (diet, weight) of diabetic children to prevent CVD.

**Cardiology - oral**

*Location: B1 - HSZ*

*Time:*

Friday, 26/May/2017:

9:30am - 10:45am

**Gender differences in right ventricular function of athlete’s heart**

Alexandra Doronina, Attila Kovacs, Balint Lakatos, Istvan Edes, Zoltan Kantor, Annamaria Kosztin, Marton Tokodi, Bela Merkely

Heart and Vascular Center of Semmelweis University

Longitudinal shortening is considered to be the most important motion determining right ventricular (RV) function. However, the radial direction („bellows“ effect) can gain particular importance in certain conditions. Our aim was to quantify the longitudinal and the radial components of RV performance using three-dimensional (3D) echocardiography and assess their relative contribution to RV function in normal subjects versus elite female and male athletes.

Fourteen female and 15 male elite athletes competing in sport disciplines of combined exercise nature, and 14 age-matched healthy female volunteers were enrolled. Beyond conventional echocardiographic protocol, full volume datasets were acquired using multi-beat reconstruction from 4 or 6 cardiac cycles. Using dedicated software for RV 3D and speckle tracking analysis (4D RV-Function 2), 3D beutel model was created and exported volume-by-volume throughout the cardiac cycle. Beside end-diastolic (EDV) volume and total ejection fraction (TEF), we quantified longitudinal (LEF) and radial ejection fraction (REF) by decomposing the motion of each vertex of the reconstructed 3D beutel model along three orthogonal axes and omitting the other two directions.

EDV was higher in both athlete group compared to controls (female athletes vs male athletes vs controls; 98±25 vs 91±21 vs 68±26mL, ANOVA p<0.05). TEF was higher in female athletes compared to both groups (63±3 vs 48±3 vs 53±3%, p<0.05). LEF and tricuspid annular plane systolic excursion (TAPSE, conventional measure of RV longitudinal function) were similar. REF/TEF ratio was significantly higher in female
athletes compared to both male athletes and controls (54±8 vs 47±11 vs 45±10%, p<0.05).
Current results suggest that there are considerable gender differences in terms of right ventricular function of athlete’s heart. The increased ejection fraction of female athletes is attributable to the supernormal radial motion of the RV.

NEW THERAPY IN EARLY REGRESSION OF VENTRICULAR REMODELING IN SPONTANEOUSLY HYPERTENSIVE RATS

David Fernandez-Morales¹, Jose Juan Gomez de Diego², Maria Angeles Aller-Reyero³, Begoña Quintana-Villamandos⁴

¹Medical Faculty, Complutense University Madrid, Spain; ²Cardiology Department, Clinico San Carlos Hospital, Madrid, Spain; ³Surgery Department, Complutense University Madrid, Spain; ⁴Anesthesiology Department, Hospital General Universitario Gregorio Marañón. Pharmacology Department, Complutense University Madrid, Spain

Introduction. Dronedarone is an antiarrhythmic agent that was recently approved for the treatment of atrial fibrillation. However, its effect on treatment of left ventricular hypertrophy (LVH) has not been reported. We tested the hypothesis that short-term administration of dronedarone induces regression of LVH in spontaneously hypertensive rats (SHR).

Aim. To proof that dronedarone produces a positive effect on LVH.

Materials and Methods. Ten-month- old male SHR were treated with vehicle (SHR) or dronedarone (SHR-D). Age-matched, vehicle-treated male Wistar-Kyoto (WKY) rats served as controls. After 14 days, left ventricular morphology was assessed using M-mode echocardiography (left ventricular mass index [LVMI]). All procedures were approved by the Ethics Committee of Hospital General Universitario Gregorio Marañón, Madrid, Spain.

Results and Discussion. Systolic blood pressure (SBP) was higher in untreated SHR than in WKY controls. Dronedarone lowered SBP in treated SHR-D with respect to untreated SHR. Heart rate was higher in WKY and SHR than in treated SHR. The LVMI was lower in SHR-D than in SHR. Interestingly, there were no significant differences in LVMI between SHR-D and WKY.

Conclusion: Dronedarone produces regression of LVH in the SHR.

Acknowledgements. This study was supported by a grant FIS 13/01261, Fondos Feder, Spain, and Ministry of Education Student Grant 13145829
Calibrating cardiac output measurement of electrical cardiometry with transthoracic echocardiography

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¹Department of Anesthesiology, General Intensive Care and Pain Control, Medical University of Vienna, Austria; ²Department of Anesthesiology, University of California, San Diego, USA

BACKGROUND: Electrical Cardiometry (EC) is a non-invasive, safe and easy to use method for continuous measurement of cardiac output (CO). EC derives heart rate and stroke volume (SV) by measuring changes of thoracic impedance over the cardiac cycle. However in published research its accuracy is controversial. Recently a calibration with transthoracic echocardiography (TTE) has been proposed to improve the EC-measurements by including the area of the left ventricular outflow tract (LVOT) in a new formula:

$$ SVEC\_modified = 2.2 \cdot LVOT\_area^{(0.705)} \cdot SV\_EC^{(0.388)} \cdot Weight^{(0.21)} $$

AIM: The aim of the study was to validate the published formula in a mixed population undergoing routine echocardiography for a variety of indications.

PATIENTS AND METHODS: The SV was measured in 105 patients simultaneously by EC (ICON® monitor; Osypka Medical, Inc.) and TTE. The data from EC and TTE was compared and analyzed by calculating correlation coefficients and mean percentage errors by Bland-Altman analysis.

RESULTS: There is no statistically significant correlation between the absolute SV-values measured by EC and TTE ($r=0.003; p=0.972$) with a mean percentage error of 71.57%. And only a weak correlation by including the LVOT-area ($r = 0.266; p = 0.006$) with a mean percentage error of 56.26%.

DISCUSSION: The new formula improves the correlation between the measurements of CO by ICON®-Monitor and TTE. However the correlation is still not high enough to be clinically acceptable.

Neurohormonal peculiarities of acute non-Q-wave myocardial infarction (MI) formation depending on gender

MASHKUR ABDULHAMID ISA, Svitlana Grechko

BUKOVINIAN STATE MEDICAL UNIVERSITY, Ukraine

Introduction: Coronary heart disease(CHD) is a leading cause of death globally. As the leading cause of myocardial ischemia is atherosclerosis, differences in risk factor distribution between sexes could explain this phenomenon, particularly, why men develop acute MI earlier than women.
Aim: To determine several neurohumoral peculiarities of acute non-Q-wave myocardial infarction formation depending on sex.

Method: 43 patients (32% male and 67% female) with mean age of 57 years having non-Q-wave MI were observed in order to study the neuro-humoral factors of ischemic cardiac disease (ICD) destabilization.

Blood lipids level was studied using the Paragon electrophoresis Manual device. Thyroid hormone levels – thyroxine (T3), triiodothyronine (T4), thyrotrophin (TTH), and cortifan as well as estradiol, progesterone and testosterone levels were measured using a radioimmune analyzer.

Results: Initial Total serum cholesterol level (TSC) - 6.51mmol/l and Triglycerides (TG) level – 2.17mmol/l.

Lipid haemostasis disorders were more expressed in male patients than in females with respect to TSC: 6.71mmol/l and 6.47mmol/l (p>0.5), TG: 2.85 and 1.81mmol/l (p>0.2) respectively.

Initial levels of high density lipoproteins (HDL) - 40.7%, low-density lipoproteins (LDL) – 26.5+1.5% and chylomicrons – 0.68+0.11%.

The lipid fraction, HDL was higher in male patients than in females; 38.1+2.9% and 29.4+2.2% (p<0.02), respectively, whereas the LDL level was relatively lower: 22.1+1.9% and 26.8+1.4% (p<0.05) respectively.

In general patients with non-Q-wave MI had mean thyroid secretion levels as follows; T3 - 1.61mmol/l and T4 – 120.1mmol/l. Males had a decreased level compared to the females: T3 - 1.53mmol/l and 1.72mmol/l (p>0.5) respectively; T4 - 75.3mmol/l and 131.4mmol/l (p<0.005) respectively. An increase in the level of TTH to 104.3 IU/l was observed. The mean level of cortisol was 404.3nmol/l, Estradiol - 0.05mmol/l, progesteron - 1.52 and testosterone was 2.84mmol/l.

Conclusion: Changes in the blood lipid spectrum of non-Q-wave MI patients is closely connected with hormonal disorders and participates in ICD destabilization.

MRI indications, results and long-term follow-up in patients after MRI compatible pacemaker implantation

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Introduction: Only in recent years the European Union approved MRI conditional pacemakers and MRI conditional ICDs (implantable cardioverter defibrillators). Before most patients with CIEDs (Cardiovascular implanted electronic devices) did
not have the possibility to undergo MRI due to a high risk of complications and strict precautions during the examination.

Aim: This survey covers indications and results of MRI examinations as well as long-term follow-ups of patients with MRI conditional CIED.

Patients and Methods: This study included 39 patients with MRI conditional CIED which underwent MRI examinations at the Department of Radiology at the University Hospital of Graz between September 2011 and June 2015. Relevant data regarding pacemakers and MRI examinations were collected and analyzed. Furthermore, we performed a written survey among these patients concerning the MRI exam. In addition, overall quality of life and Duke Activity Status Index with MRI-pacemakers were tested.

Results: We were unable to detect any dysfunction of cardiac pacemakers caused by MRI. Artefacts occurred in seven MRI examinations, but these did not interfere interpretation of those examinations. 17 out of 23 patients did not notice a difference between MRI examination with or without MRI conditional pacemaker.

Discussion: According to this study, the performance of MRI conditional pacemakers remained unchanged during the MRI examination. However, near location of the pacemaker pocket can promote the occurrence of artefacts and might disturb the interpretation of the images. A right-sided implantation of cardiac pacemakers due to the possibility of cardiac MRI should be preferred.

Neurology - oral

Time: Friday, 26/May/2017:
9:30am - 10:45am

Location: C1 - HSZ

Morningness-Eveningness assessment in Yerevan State Medical University (YSMU) students

Magda Osipyan

Yerevan State Medical University , Armenia

Introduction: Circadian system is hierarchically organized with the Suprachiasmatic Nucleus at the top of the hierarchy. It coordinates all peripheral oscillators, creating coherent rhythms at organismal level. At the molecular level this oscillations are based on networks of transcriptional-translational autoregulated feedback loops performed by so called Clock genes. Usually the feedback loop takes 24 hours, but certain gene polymorphisms lead to the change in this duration. People with shorter free-running circadian periods are morning chronotypes and people with long ones - evening chronotypes. Assessment of individual chronotype is important for improving
daytime performance of individuals by matching sleep schedules to circadian biology.

Aim: The aim of current study to evaluate chronotypes of 425 students of YSMU.

Methods: The information was collected from 425 students (19±4 old) with help of the Horne & Östberg's Morningness-Eveningness questionnaire (MEQ) (adopted and standardized for Armenian population). The standard MEQ consists of 19 multiple-choice questions.

Results and Discussion. MEQ test divides cluster into 5 categories: Definitely Morning Type(DMT), Moderate Morning Type(MMT), Neither Type(NT), Moderate Evening Type(MET) and Definitely Evening Type(DET). As a result of our study, we observed that most of the students (264(62,12%)) were NT. Therefore they easily get up earlier ad go bed later than usually. DET (7 (1,65%)) and MET(44(10,35%)) Had clearly delayed sleep phase. Advance sleep phase is common for the rest of students. (104 (24,47%)) MMT and (6 (1,41%)) DMT.

Conclusion: Taking into account number of morning chronotype students, university schedule influence on chronotype requires further examination.

Nitric oxide involvement in the protective effects of atorvastatin on morphine analgesic tolerance in male mice

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The development of morphine-induced antinociceptive tolerance limits its therapeutic efficacy in pain management. Atorvastatin, or competitive inhibitor of 3-hydroxy-methyl-glutaryl coenzyme A (HMG-CoA) reductase, is mainstay agent in hypercholesterolemia treatment. Beyond the cholesterol-lowering activity, exploration of neuroprotective properties of this statin indicates its potential benefit in central nervous disorders. The aim of the present study was to assess the effects of atorvastatin in development and expression of morphine-induced analgesic tolerance in male mice and probable involvement of nitric oxide. Chronic and acute treatment with atorvastatin 10 and 20 mg/kg, respectively, could alleviate morphine tolerance in development and expression phases. Chronic co-administration of nitric oxide synthase (NOS) inhibitors including L-NAME (non selective NOS inhibitor; 2 mg/kg),
aminoguanidine (selective inducible NOS inhibitor; 50 mg/kg) and 7-NI (selective neuronal NOS inhibitor; 15 mg/kg) with atorvastatin blocked the protective effect of atorvastatin in tolerance reversal. Moreover, reversing the atorvastatin effect was also observed in acute simultaneous treatment of L-NAME (5 mg/kg) and aminoguanidine (100 mg/kg) with atorvastatin. Co-treatment of guanylyl cyclase inhibitor, ODQ (chronic dose: 10 mg/kg and acute dose: 20 mg/kg) was associated with prevention of atorvastatin anti-tolerance properties. Our results revealed that the atorvastatin modulating role in morphine antinociceptive tolerance is mediated at least in part via nitric oxide in animal pain models of hot plate and tail flick.

Epidemiologic, Clinical and Radiologic Characteristics and Predictors of Outcome in Patients with Cerebral Venous Sinus Thrombosis; a Retrospective Study

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Background: Cerebral Venous Sinus Thrombosis (CVST) is an important type of stroke in young adults especially women.

Aim: We investigated characteristics and predictors of outcome of CVST in Shiraz, Iran.

Patients and Method: In a retrospective study, we included all adult patients admitted in Namazi Hospital, Shiraz, Iran during 2013-2015 with diagnosis of CVST. Demographic, radiologic and clinical findings, risk factors and outcome were obtained from medical records. Chi square and linear regression tests were used for data analysis.

Results: Among 81 patients, 63 (78%) were female. The mean age was 37.2±10.5. Thirty-nine percent presented with intracranial hemorrhage and 30% with venous infarction on initial brain imaging. Transverse and superior sagittal sinuses were the most common involved locations, respectively. Most frequent presentations included headache (90%), papilledema (33.8%), seizure (31.3%) and focal neurologic deficit (27.5%). The major risk factor was oral contraceptive pill consumption (45.6%). CNS and ENT infections accounted for 11.1% of all causes. Fifty-two patients (65%) had good outcome on discharge defined as Modified Rankin Scale=0-2. Five patients (6.2%) expired due to CVST complications within hospital course. Coexistence of hemorrhage and infarction (p=0.001), coma (p=0.013) and decreased alertness (GCS=9-14) (p=0.001) were predictors of poor outcome and headache (p=0.003) was the predictor of good outcome.

Discussion: In comparison to other centers, we had higher incidence and mortality rate of CVST. CVST patients with hemorrhage, infarction, decreased alertness and
Coma on admission are susceptible to death and functional dependence. CVST should be diagnosed and treated early to prevent further complications and poor outcome.

**Retrospective study of high estrogen receptor expression of glial tumor cells causes gender-independent survival benefits in glioblastoma patients**

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¹Institute of Pathology, Klinikum rechts der Isar, Germany; ²Department of Neurosurgery, Klinikum rechts der Isar, Germany

Glioblastoma multiforme (GBM) is the most common and most malignant primary brain tumor with a median overall survival of 15 months. The incidence of GBM in the USA is 3.19 in 100000 person-years. Men are affected 1.6 times more often than women. The reason for this gender-specific predominance is still unclear. This gender advantage appears also in patients after traumatic brain injury, resulting from reactive astrocytes and the expression of estrogen receptor and aromatase. We analysed 50 tissue samples of GBM patients with immunohistochemistry. High estrogen receptor expression was associated with better survival, no gender difference appeared. Kaplan-Meier analyses were used. In previous studies it was shown that the effect of estradiol treatment leads to better survival. The further purpose of this study was to examine the expression of estrogen receptor in glioblastoma cells and the sensitivity against chemotherapy. We treated the cell line LN229 with estradiol, in several dosing regimens and measured the cell proliferation with MTT assay. After the treatment we added temozolomide and tested again with MTT survival assay, expecting the higher proliferation rate in the treated group to lead to higher sensitivity against temozolomide and higher apoptotic activity. Chemotherapy, in combination with estradiol and also radiation, may be beneficial in the treatment of glioblastoma and will have to be examined in further studies.

**The effects of glucose on convulsive behavior induced by lindane in rats**

Daniel Škrijelj, NemanjaUseinović, BožoKnežević

University of Belgrade, School of Medicine, Serbia

Introduction: Hyperglycemia is one of the main features of diabetes mellitus. Lindane induces generalized convulsive seizures in rats. Previous studies have shown that patients with type 1 diabetes are at an increased risk of developing epilepsy. Moreover, high plasma glucose levels were associated with uncontrolled seizures in patients with status epilepticus.

The Aim: The aim of this study was to determine the effects of acute hyperglycemia on rats' susceptibility to lindane proconvulsive effects.
Materials and Methods: Total of 12 Wistar albino rats were divided in two groups. Experimental group was treated with 2 mg/kg of 50% glucose (i.p.), while control received saline (0.9% NaCl, i.p.). Hereupon, both groups were treated with lindane (subconvulsive dose of 4 mg/kg, i.p.). Evaluation of the convulsive behavior was done during the 30 min of observation period upon lindane administration.

Results: Incidence of the convulsions in experimental group was higher than incidence in control group, but statistical significance was not attained (p>0.05). On the other hand, latency period was significantly higher in experimental than in control group (p<0.05). The same holds true for intensity of the convulsions (p<0.05).

Discussion: Our experiments showed higher intensity and shorter latency time to lindane convulsions in rats receiving glucose. Similarly to our results, hyperglycemia level modified the outcome of brain injury in the kainite model of seizure induction, while aggravated the consequences of epileptic seizures on the permeability of the blood–brain barrier.

Results of this work demonstrated that administration of glucose potentiated proconvulsive effects of lindane.

Public Health - oral

Location: A2 - HSZ

Time:

Friday, 26/May/2017:
3:00pm - 4:15pm

Awareness of global health challenges among young medical professionals

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Introduction

Global health becomes one of the leading medical fields. Improving healthcare quality on a global scale is relevant to enhancing quality of medical care locally.

Aim

The aim of the study was to assess awareness about global health topics among young medical professionals.

Methods
It was a cross-sectional survey study. Data was collected via social media channels and post-event newsletters aimed at young medical professionals. The study group included 123 subjects from 28 countries. Apart from rating knowledge, survey included subjective assessment of urgency of global health issues.

**Results**

65% of respondents stated that they were familiar with global health topic. Most of them knew it from the Internet (45%), university (44%) or literature (19%). Only 27% answered that global health topics are included in obligatory courses at universities. However, 78% agreed that such classes should be included in the programme. Most important challenges chosen by respondents were fighting antimicrobial resistance and non-communicable diseases. Only 4 topics out of 22 were rated as equally urgent on a global and local scale: climate change, health workforce shortage, digital health, mental disorders and travel accidents.

**Discussion**

There are definite disproportions in assessment of healthcare challenges urgency on local and global scale, which shows the need of cooperation in order to improve quality of global medical care. On the other hand, rating certain topics e.g. antimicrobial resistance as less urgent locally may indicate poor level of awareness of the topic. Education about global health is both needed and awaited by young medics.

**Learning styles and academic performance among medical students university of khartoum 2016 - 2017**

**Mohammed Al-Mojtaba - Mahdy Abdelrahman**

University of Khartoum - Faculty of Medicine, Sudan

Study skills refers to the student’s knowledge of appropriate study strategies and methods and the ability to manage time and other resources to meet the demands of the academic tasks. One part of this knowledge are the learning styles, Learning style is a habitual and unique behavior to acquire knowledge, skills, and feedback through study or experience, and it is thought to be linked to academic performance. The learning style model used in this research was the VARK (Visual, Auditory, Reader/writer and Kinesthetic) model.

The purposes of this study were to assess the relationship between learning styles and academic performance among medical students university of Khartoum, and too determine the relationship between learning style and academic performance of the students by gender.

This is a descriptive cross sectional facility based study conducted on medical students of the University of Khartoum of all classes from second to sixth grades of both genders except those who refused to participate or were not available at the time of data collection. A systemic random sample of 100 students was obtained.
The findings indicate that majority of the students are of the auditory learning style (35%) followed by Kinesthetic learning style (22%) and the least preferred learning style is the visual learning style. There is no significant difference in learning style preference among male and female students and among high and low academic achievement groups.

**Study of Related Causes of Discontinuance and Continuance Rate of Pregnancy Prevention Methods among Women referring to Urmia Shohada health center in 2014-15**

**RasoolGhareaghaji, SomayehGhasemzadeh, YasaminPouladi, OzraKahorian, BabakChoubianzali**

Student Research Committee, Urmia University of Medical Sciences, Urmia, Iran

Introduction: From maturity to menopause, women are constantly worried about concerns associated with pregnancy and unwanted pregnancy the only choices for them is abstinence from sex or use of pregnancy prevention methods. Success depends on proper implementation of its contraceptive methods. Stop using contraceptive methods has contributed to unwanted pregnancies and also the high level of stopping and changing the methods of prevention can lead to unwanted pregnancies, abortions and thus threatening the health of mothers and infants and it could damage society. this study was carried out with the aim of determining the continuance rate rate of Pregnancy Prevention Methods among Women referring to Urmia Shohada health center.

Methods: This was a cross-sectional study that was conducted between the years 93-94. Accordingly 134 person were sampling random. The data collected via a questionnaire consisted of demographic and effective agents of changing pregnancy prevention methods , plannig pregnancy, unwanted pregnancy, worrying about the ineffectiveness of the method and other methods to cut . The data collected was analyzed by statistical software spss version 20 and using Coplan- Mayer statistic method, Chi-squared test, and variance analysis test and p <0.05 was considered statistically significant.

Results: Pregnancy prevention methods were most prevalent in the 15-24 years old age group and the use of pregnancy prevention methods did not increase by the two reasons of age and unwillingness to pregnancy. In this study, the use of OCP with 39/6 % was the highest and the use of injection methods with 4/3% was the lowest. The study showed that there is not a relationship between level of education , awareness and unwanted pregnancy in women with discontinuance of pregnancy prevention methods. In this study there was a correlation between the number of pregnancies with discontinuance of pregnancy prevention methods (p=0.009) and women who were unwilling to pregnancy were more likely to continue using of pregnancy prevention methods. (p=0.001)

Discussion: Although family planning and contraceptives are widely free available for families, according to the results, not only education programs regarding family
planning before starting each pregnancy prevention method to women is recommended, but a complete incentive consultation about these methods is essential.

**Knowledge, attitude and practice regarding smoking among medical students in Pakistan. (Qualitative Research)**

**Barkat Ali Babar**

University of Eastern Finland, Finland

The main aim of this study was to assess the knowledge, attitude and practice regarding smoking among medical students in Pakistan. A cross-sectional survey was conducted at Khawaja Muhammad Safdar Medical College (KMSMC) of Sialkot city of Pakistan in December 2015 by using a self-administered questionnaire containing 36 questions. There were 306 respondents out of 500 students, giving a response rate of 61%.

Although all the medical students had good knowledge about the harmful effects associated with smoking, smoking prevalence had an ascending trend among medical students as the students were promoted from pre-clinical year (12.7%) to clinical year (23.3%) of medical course. As the students were promoted from lower to higher professional year, participation in anti-smoking campaigns were also declined. More than 90% of medical students thought that if medical students or physicians smoke it will convey a negative message to their patients as well as to the public. Male medical students were more than 5 times likely to smoke (34.2%) as compared to female medical students (6.2%). Out of total sample, very few students (1.6%) thought that smoking is beneficial during examination period for coping with anxiety and stress of examination.

In nutshell, the contents of the medical school’s curriculum were not sufficient to let medical students to abstain from tobacco usage. There should be inclusion of subjects and compulsory training in medical curriculum which can improve their roles as a physician in near future to deal with their smoking patients. Participation of medical students in anti-smoking campaigns should be made compulsory during academics.

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

**LIDICE ALVAREZ MIÑO, ANDRES CAMILO TRUJILLO MONTES, ROBINSON TABOADA MONTOYA, ALEXANDER SALAZAR**

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

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

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

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

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

**Parental attitudes towards vaccines in Poland**

**Paulina Bankiewicz, Małgorzata Kozłowska-Wojciechowska, Anna Dworakowska**

Medical University of Warsaw, Poland

Introduction: The vaccination coverage level of children in Poland is high, but the number of unvaccinated children has been rising by 15-20% per year since 2009.

Aim of study: The aim of the study was the examination of parents’ attitudes toward the vaccination of children, parents’ opinions on the safety of vaccination, the reasons for taking compulsory and recommended vaccinations and the sources of information about vaccines. Furthermore, we undertook an attempt to identify factors which could affect parents’ decision-making process regarding the realization of vaccination.

Materials and methods: The study was conducted by the in-depth interview at community health center during the vaccination visit.

Results:
Parents mostly have positive opinions about vaccines, as well as negative ones.
Parents have higher trust to compulsory vaccines compared to recommended ones.
Most parents consider vaccines to be safe.
Parents believe that if vaccination is not mandatory, it is unnecessary and they decide to avoid additional costs and the risk of recommended vaccines. Parents are above all afraid of the risk of adverse reactions. The Internet is the main source of information about vaccines both reliable as well as unconfirmed.

Conclusions:
Despite the decision about vaccines, parents are full of concerns, doubts and common beliefs. Every doubt about vaccination should be dispelled during each vaccination visit. There is a need for parents’ education about recommended vaccines. There is a need to encourage health care providers to solicit questions about vaccines, to establish a trusting relationship, and to provide appropriate education to parents.

Microbiology, Infectiology and Immunology - oral

Time: Friday, 26/May/2017:
3:00pm - 4:15pm

Location: B2 - HSZ

The expression of Interferon-γ and Indoleamine 2, 3-Dioxygenase is associated with the disease activity of Systemic Lupus Erythematosus

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Golestan University of Medical Sciences, Iran, Islamic Republic of

Introduction: Indoleamine 2, 3-dioxygenase (IDO) is a tryptophan catabolizing enzyme which is involved in immune regulation and autoimmune disorders such as Systemic Lupus Erythematosus (SLE). Interferon-gamma (IFN-γ) is an inflammatory cytokine which is the major inducer of IDO expression.

Aim: Here, we evaluated the level of IFN-γ and IDO among SLE patients in correlation with the severity of SLE.

Patients and Methods: Fifty-three SLE patients and 35 age matched healthy donors were enrolled in this study. Systemic Lupus Erythematosus Disease Activity Index (SLEDAI) was used to calculate the disease activity. Real-time RT-PCR and ELISA were used to evaluate the gene expression of IDO and IFN-γ plasma concentration, respectively.
Results: We showed that IDO-1, IDO-2 and IFN-γ were overexpressed among SLE patients significantly (P<0.0001). There were significant positive correlations between IFN-γ with the expression of IDO-1(r = 0.722, P < 0.0001) and IDO-2(r = 0.682, P < 0.0001). There were also positive correlations between SLEDAI scores with IDO-1 (r = 0.675, P < 0.0001), IDO-2 (r = 0.727, P < 0.0001) and IFN-γ(r = 0.907, P < 0.0001).

Discussion: IDO expression and IFN-γ level could be introduced as helpful biomarkers for the determination of disease severity in SLE patients.

Stethoscope membranes as a source of hospital acquired infections

Stefan Boskovic, Ivo Bozovic, Mirjana Arsenijevic, Branislava Savic

UNIVERSITY OF BELGRADE - FACULTY OF MEDICINE, Serbia

Background: During examination of patients the stethoscope membrane can be contaminated with skin microorganisms. If the stethoscopes are not disinfected, they can become a source of nosocomial infections.

The aim: Identify microorganisms on stethoscope membranes and compare the results between primary health care center “Savski venac” and tertiary health care center “Clinical center of Serbia”.

Material and methods: Swabs were taken from 40 primary care physicians in the primary care center and 60 internal medicine specialists from the Clinical center of Serbia. Blood agar and dextrose broth were used to grow bacteria and identification was based on microscopic, cultural and biochemical characteristics. Antimicrobial susceptibility was tested using disc diffusion on Mueller-Hinton agar.

Results: Thirty two (80%) of primary care physicians never clean their stethoscope and 8 (20%) do it once a day compared to 36 (60%) doctors from the tertiary care center who never clean their stethoscope and 24 (40%) who do it once a day. There was no statistical difference in contamination between stethoscopes depending on the cleaning regime. The isolates belong to genera Staphylococcus, Bacillus, Streptococcus, Enterococcus, Corynebacterium, Acinetobacter and Proteus. The resistance to methicillin of staphylococci in primary care was 11.4% and multidrug resistance was 5.7% and on tertiary level methicillin resistance was 37.1% and multidrug resistance was 40.2%.

Discussion: Our results do not differ from other researches and this is one of the first papers concerning primary care. Stethoscopes should be disinfected before examining each patient and further education of physicians on the subject is needed.

Investigation of Carbapenemases Genes among Clinical Providencia stuartii strains isolated in Targu Mures, Romania

Nicola Di Nardo, Edit Székely
University of Medicine and Pharmacy of Targu Mures, Romania

Introduction: Providencia stuartii has the potential to cause nosocomial infections. Like other members of the Enterobacteriaceae family, may produce different types of β-lactamases that provide resistance to several β-lactam antibiotics.

Aim: The current study investigates the presence of carbapenemase encoding genes among clinical P. stuartii species isolated in Mures County Emergency Clinical Hospital of Targu-Mures, Romania.

Methods: Incidence and resistance data related to P. stuartii isolated between January 2009 and September 2016 were collected from the laboratory database. Further analyses were performed on P. stuartii strains with suspected carbapenemase production. For these strains multiplex PCR was performed for genes blaNDM, blaKPC, blaOXA-48-like, blaVIM, blalMP, blaSPM, and blaGIM.

Results: 224 P. stuartii non-duplicate strains were isolated during the studied period. Their occurrence gradually increased over the years from 4 isolates in 2009 to over 70 isolates in 2015. Most of the strains were isolated from patients treated at the intensive care unit (N=191, 85%). The isolates were recovered from lower respiratory tract specimens (N=121), blood (N=30), urine (N=28) and others. Carbapenem non-susceptible P. stuartii was first isolated in April 2016. A total of 9 carbapenemase producer strains have been identified since then, all these harboured blaNDM gene.

Discussion: An increasing occurrence of P. stuartii was observed during the years in our hospital, suggesting a selection of a successful nosocomial pathogen. The acquisition of carbapenemase genes by these strains is especially worrisome, due to the fact that Providencia species are also intrinsically resistant to colistin, an antibiotic used for the treatment of carbapenemase producer Enterobacteriaceae.

Rapid and Affordable Bacteria Infection Detection based on Deterministic Lateral Displacement

Thorig Salafi

National University of Singapore, Singapore

The conventional technique to detect bacterial infection through bacteria culture is time consuming as it takes at least 20 hours for the bacteria colony to appear. Therefore, more rapid and affordable way to detect infection to reduce the risk of sepsis is needed. Microfluidics deterministic lateral displacement (DLD) has been widely used to separate microparticle. Here, we designed a DLD device to separate bacteria from blood cells with triangle I-shaped pillar array for bacterial infection detection tool.

Microfluidics DLD with triangle I-shaped pillar array with the gap size of 10um is fabricated through photolithography. The particle tracer of 1.5 to 3um and subsequently red blood cells (RBC) and E coli bacteria were flowed on the DLD and
the critical diameter of the cells were determined. Next, both RBC and bacteria were separated and analysed for the separation efficiency and throughput.

In DLD with triangle I-shaped pillar, the red blood cells have critical diameter of $3.95\pm0.08\mu m$, which is distinct from the bacteria’s critical diameter of $1.677\pm0.34\mu m$. This difference in critical diameter can be used to isolate bacteria from blood as they move to different output channels. The separation of bacteria from blood shows the separation efficiency of $88.46\pm1.78\%$ and the throughput of separation can reach up to $100\mu L/min$ with the separation time of only 10 minutes for $1mL$ of sample blood. Therefore, microfluidics DLD with triangle I-shaped pillar is able to isolate bacteria from RBC with high speed and efficiency, which has huge potential for next-generation infection detection tool.

**Seroepidemiological Investigation of Entrovirus71 in individuals referring to the clinics of Imam Khomeini Hospital, 2014-2015.**

**Mahsa Javadi**

Tehran university of medical science-School of public health, Islamic Republic of Iran

Introduction: Enterovirus 71 (EV71) is an agent responsible for a large number of outbreaks around the world. The major symptoms vary from dermal lesions to neurological diseases. Increasing importance of the virus in causing neurological diseases -especially polio like paralysis- was a motivation for scientists to improve their knowledge about virus circulation among nations. With reference to previous studies, the prevalence and circulation of the virus is best determined by investigation of neutralizing antibody presence in serum. Since there was no seroepidemiological data about EV71 in Iran, this study would be the first in this case.

Aim: To find Neutralizing antibody against EV71 in serum of healthy individuals based on neutralization test (NT).

Materials and Methods: 547 serum samples collected from individuals aged from under 6 months to over 31 years old in both sexes were examined by NT test in cell culture to find neutralizing antibody against EV71. Then some positive samples were put under full titration to determine their exact titer.

Results: Among 547 samples, 310 ones (56.6%) were neutralizing antibody positive for EV71. Neutralizing antibody presence increased with age (p<0.001) and there were also meaningful relation between sex and antibody presence (p=0.009).

Conclusion: Our results demonstrates an obvious but limited circulation of EV71 in Iran. Supplementary researches should be made, regarding to ability of the virus in causing neurological diseases, notably the risk of “EV71 polio like paralysis outbreak” after worldwide eradication of polio virus.
THE DOSE DEPENDANT EFFECT OF ANTIPSYCHOTICS ON CONCENTRATION OF CORTICOSTERONE AND PROLACTIN IN THE SERUM OF RATS PERINATALLY TREATED WITH PHENCYCLIDINE

Tamara Cuckovic, Vladimir Gluhovic

University of Belgrade, School of Medicine, Serbia

Introduction: Numerous health disorders are associated with antipsychotic treatment such as hyperprolactinemia and disfunction of hypothalamo-pituitary-adrenal axis. Perinatal use of phencyclidine (PCP) is one of the animal models of schizophrenia.

Aim: The aim of this study was to examine the dose dependant effects of antipsychotics on prolactin and corticosterone concentrations in the serum of rats perinatally treated with phencyclidine.

Materials and Methods: Ten groups of animals were subcutaneous treated on 2nd, 6th, 9th and 12th postnatal day with PCP (10mg /kg) or NaCl (0.9% saline). From the PN35, two NaCl and PCP groups started receiving haloperidol (NaCl-H1,NaCl-H2,PCP-H1,PCP-H2) in appropriate doses (1 mg/kg/day and 3 mg/kg/day) and two PCP and NaCl groups started receiving clozapine (NaCl-C1,NaCl-C2,PCP-C1,PCP-C2) in appropriate doses (20mg/kg/day and 30mg/kg/day).The remaining NaCl (control) and PCP group received drinking water. Animals were sacrificed on PN100 and the concentrations of prolactin and corticosterone were determined with ELISA kits.

Results: Higher doses of haloperidol caused an increase in prolactin levels in NaCl-H2 and PCP-H2 groups, while clozapine had no effect. Lower doses of haloperidol caused a decrease in serum corticosterone level (PCP-H1). Lower doses of clozapine caused an increase in corticosterone level (PCP-C1), while higher doses caused a decrease in corticosterone level (PCP-C2).

Conclusion: Higher doses of haloperidol caused a significant increase in prolactin level in animals treated with NaCl and PCP while lower doses caused a significant decrease of corticosterone concentration in PCP-H1 group compared to PCP. A dosage effect for clozapine is observed only in serum corticosterone concentration in rats perinatally treated with PCP.
sMICA potential role in cancer and autoimmunity: NK cell activation via MICA-NKG2D receptor signaling. In vitro study.

Ekaterina Shulenina\textsuperscript{1,2}, Elena Lyssuk\textsuperscript{2}, Sergey Larin\textsuperscript{2}

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Introduction. NKG2D is an activating receptor expressed on NK and CD8 T cells. Its ligand MICA is absent on most of the body cells but is upregulated by cellular stress e.g. infections or malignant transformation. When expressed, MICA activates NK cells via MICA- NKG2D signaling leading to cell apoptosis. However, epithelial tumors secretes a soluble MICA (sMICA) which overstimulates NKG2D and suppress NK cells. sMICA was also found in some autoimmune diseases and was associated with longer remission and better prognosis.

Aim. To evaluate the effects of sMICA on NK cell activation.

Materials and methods. NK cells were isolated from the blood of 9 healthy volunteers; NK cells were incubated for 30 min with sMICA 5, 1 and 0.1 µg/ml. Activation markers level CD69 and CD314 was assessed by flow cytometry. Control group included not-exposed NK cells. Mann-Whitney and Kruskal — Wallis tests were used for statistical analysis.

Results. We found that an incubation with 5 µg/ml sMICA results in a significant upregulation of NKG2D (CD314) (p<0.05). NKG2D expression was modified respectively when incubated with 0, 1 and 5 µg/ml sMICA (p=0.0183). There was no significant difference in CD69 level comparing to the controls.

Discussion. sMICA stimulates NKG2D+ lymphocytes and play an important role in cancer immunosurveillance and autoimmune pathology. Moderate NKG2D stimulation enhances NK activation, however an overstimulation of NKG2D results in decrease cell activity. We showed that 5 µg/ml sMICA upregulates NKG2D in NK cells to promote their activity and increase an immune response.
Integrin α11β1 mediates cell-matrix interactions in synovial fibroblasts during RA

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¹Institute of Experimental Musculoskeletal Medicine, Germany; ²Department of Biomedicine and Centre for Cancer Biomarkers, University of Bergen, Norway

Background:
Integrins play a key role in mediating cell-matrix interactions also in diseases as in rheumatoid arthritis where adhesion of synovial fibroblasts (SF) to cartilage components results in cartilage degradation and joint destruction. In this context, integrin α11β1 (ITGA11) is of special interest, because it is mainly expressed in cellular adhesive structures and its role in regulating cartilage degradation due to altered interactions of synovial fibroblasts with ECM components is still unknown.

Methods:
First, different extracellular matrix substrates and their influence on ITGA11 expression and its subcellular location were investigated using WB and immunofluorescence. We analysed isolated SF of ITGA11-/- mice in functional studies such as cell spreading assay, migration assay and ECIS to identify differences in migration, cell formation and adhesion. Furthermore we used live cell imaging to observe the migration differences between wt and ITGA11-/- SF. To investigate, if ITGA2 expression levels were affected by the loss of integrin α11β1, we performed WB and immunohistochemistry.

Results:
In comparison to wt SF ITGA11-/- SF showed a modified cytoskeleton arrangement, an increased cell shape volume, an altered coating-dependent migration rate and adhesion capacity. In addition, we detected a reduced migration rate and diminished spreading behaviour of the ITGA11-/- SF in the live cell imaging studies compared to wt SF. Interestingly, ITGA11 deficiency resulted only in a slight increase of ITGA2 as show by WB experiments.

Conclusion:
Integrin α11β1 plays a role in cell adhesion and migration, and is also involved in regulating cytoskeleton rearrangements in SF.
Decellularized extracellular matrix (ECM) derived biomaterial reduces infarct size after ischemia-reperfusion injury in ex vivo rat heart

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University of Szeged, Hungary

Introduction: New therapeutic approaches are needed to prevent myocardial ischemia-reperfusion injury. Injectable biomaterial-based treatments have shown therapeutic potential in preclinical models for myocardial infarction (MI). Application of decellularized myocardial extracellular matrix (ECM) hydrogels in chronic animal models have demonstrated their potential as a post-MI therapy. Here we investigate the acute effect of the ECM on isolated rat hearts.

Methods: ECM solution was prepared from a bovine heart by decellularization via agitation of the heart with 1% SDS followed by digestion with pepsin. Lyophilized powder was then dissolved in Krebs solution (6mg/ml) for intracoronary injection. 48 Wistar rats were randomized to control (Krebs) or treatment (ECM). Two protocols were made, in both, isolated hearts were perfused for 15 minutes into a retrograde Langendorff system, then underwent 30 minutes global ischemia, followed by 120 minutes reperfusion. In the first protocol treatment (2ml) was given prior to ischemia. In the second, treatment was given at the 25th minute of ischemia. The infarct size was measured using Triphenyltetrazolium chloride staining.

Results: A significant reduction in the infract size was observed in both protocols receiving ECM in comparison to control. Infract size reduction was measured in the post-ischemia protocol from 24.5± 1.8% to 14.5± 3.8%, p<0.05, in the pre-ischemia protocol from 20.2± 1.6% to 14.0± 2.0%, p<0.05.

Conclusion: We demonstrate that injection of decellularized myocardial ECM significantly reduces the infract size after ischemia-reperfusion injury in isolated hearts. Furthermore we demonstrated that this acute cardioprotection occurs when ECM is introduced pre or post ischemia.

Eukaryotic initiation factors might contribute to Alzheimer's disease pathogenesis

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Background/Aims
Alzheimer’s disease (AD) is characterized by the accumulation of misfolded proteins, amyloid β forming plaques and TAU in form of neurofibrillary tangles. It is hypothesised that these pathologic protein aggregates are caused by dysregulation in translational steps of protein synthesis. One rate limiting step of protein synthesis is translation initiation regulated by eukaryotic initiation factors (eIFs). eIFs are tightly linked to the mammalian target of Rapamycin (mTOR)/PI3K/AKT signaling pathway. Little is known about the contribution of eIFs in the pathogenesis of AD.

Methods
eIF expression was analysed on protein (immunoblot) and mRNA level (qRT-PCR) in grey and white matter tissues of frontal and temporal cortical regions. All post-mortem brain samples were neuropathologically analyzed regarding their BRAAK &BRAAK, CERAD and NIA stages. Samples without any neuropathological signs of neurodegeneration served as controls.

Results
In frontal white matter, p-P70S6K, p-mTOR and p-GSK3 displayed elevated levels in AD samples. We found increased phosphorylation of AKT in grey matter of temporal as well as frontal cortical regions. p-eIF2α as well as eIF3D were upregulated in grey matter of frontal cortical regions. It seems that eIF4G is downregulated only in higher BRAAK & BRAAK stages in temporal cortical grey matter. For eIF4E similar tendencies were found in frontal white matter regions.

Conclusion
Dysregulation of various eIF subunits in cortical regions suggests eIFs as potential novel contributors to AD pathogenesis. Increased activation of the mTOR/PI3K/AKT signaling pathway underlines the involvement of eIFs in AD.

Protective effect of Salvia Officinalis against Streptozocin-induced damage to pancreatic beta cells; a stereological study

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Background: Diabetes mellitus (DM) is caused by inadequate production of insulin. Salvia officinalis L. (Salvia) has anti-hyperglycemic, anti-inflammatory and anti-oxidant effects.
Aim: In this study, we investigated the anti-hyperglycemic and protective effects of salvia in Streptozocin (STZ)-induced pancreatic injury in rat models.

Methods: Forty eight male Sprague-Dawley rats were randomly divided into four groups: C1, diabetic rats with no treatment, C2, non-diabetic rats with no treatment, E1, diabetic group treated with 200 mg/kg of the salvia extract, E2, diabetic group treated with 400 mg/kg of the salvia extract. All groups received a single dose of STZ on day 7 except C2. Pancreas volume and shrinkage, volume density of the pancreatic islets, numerical density and volume of the beta cells were measured by using histomorphometrical and stereological methods. Kruskal wallis and Mann-Whitney U tests were used and P-value<0.05 was considered significant.

Results: Based on our results, blood sugar (BS) in salvia treated groups were lower in comparison to C1. Also volume densities and total number of islets and beta cells in E1 and E2 groups were higher than C1 but lower than C2. Volume densities of islets and beta cells and total number of beta cells in E1 were significantly 0.69, 2.74 and 1.88 higher than C1 group (P≤0.02). Volume densities of islets and beta cells in E2 group were significantly increased by 1.52 and 1.87 in comparison to C1 (P≤0.05).

Conclusion: We concluded that reduction in BS and shrinkage protect beta cells and islets in STZ-induced diabetic rats.

Varia - oral

Time: Location: C1 - HSZ

Friday, 26/May/2017:
3:00pm - 4:15pm

Results of contrast enhanced magnetic resonance angiography (MRA) of the hand and a retrospective evaluation.

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Introduction

Intraarterial digital subtraction angiography (IA-DSA) persists as the gold standard. Nevertheless there are disadvantages as radiation dose and complications during
the catheter procedure. MRA is increasingly used to answer the clinical questions regarding vascular disorders of the hand.

**Aim**

This survey describes and evaluates the different techniques of MRA examinations over the years to optimize the protocol.

**Patients and Methods**

Between 2009 and 2016 MR angiography of the hand was performed in 115 patients. Conventional MRA was done with a separate evaluation of the contrast-arrival time. TWIST-MRA was conducted without timing-sequence.

**Results**

High-performance 3-Tesla-MR imaging gradient systems and high-quality receiver coils allow the acquisition of arterial-phase images following intravenous administration of contrast agents. Early venous overlay was seen in patients with tissue loss and/or inflammation as well as in patients with arterio-venous malformations. The differentiation between vasospastic disorders, e.g. Raynaud’s disease, and other vaso-occlusive conditions requires invariably the use of vasodilators. The high-temporal resolution of the TWIST-sequence mainly avoids the early venous-overlay and allows more precise diagnoses. MRA seems to be adequate to plan further therapy.

With our protocol vessel segments with fresh occlusions often show thrombus in the vessel lumen.

**Discussion**

Because of the variability of the anatomy of the vessels the differentiation between chronic occlusions and primary agenesis is sometimes difficult. To demonstrate the origin of the emboli or high-grade stenosis prior to the hand vascularisation, the MR angiography of the upstream vessels is recommended.

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**THE INFLUENCE OF DEHYDROEPIANDROSTERONE ON RAT BEHAVIOR IN THE ACTIVE AVOIDANCE TEST**

IvoBozovic, FilipBabic, StefanBoskovic, MirjanaArsenijevic, TamaraPopovic, JankoSamardzic

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Dehidroepiandrosteron (DHEA) is a neurosteroid which is synthesized from cholesterol in the central nervous system (CNS). Concentration of DHEA is getting lower through the years, and it is known that senility is a predisposing factor for appearance of learning and memory disorders. Neurosteroids affect through many different receptors in CNS.

We sought to investigate the behavioral characterization of DHEA effects in the process of learning, in the active avoidance test on rats.
In the experiment, the substances used are: neurosteroid dehydroepiandrosterone (DHEA), bicuculline as an antagonist and dimethyl sulfoxide (DMSO) as the solvent, and the active avoidance test was used.

During the testing, it has been shown that DHEA significantly increases the number of successful attempts of active avoiding the aversive stimuli. The dose which accelerates the avoidance is 10 mg/kg. Bicuculline has abolished the effects of DHEA and therefore showed that these effects could be at least partially mediated by specific GABAA receptor.

Our results clearly demonstrate that DHEA achieved significant effects in the CNS, improving learning and memory in rats. These effects are most likely to be achieved through GABAA receptors.
COMPARING OF QUALITY OF LIFE IN PATIENTS WITH MAJOR DEPRESSION WITH NORMAL INDIVIDUALS IN NUSHIN SHAHR CITY

Somayeh Ghasemzadeh, Yasamin Pouladi, Babak Choubianzali, Ozra Kahorian, Rasool Dr. Ghareaghaji

Student Research Committee, Urmia University of Medical Sciences, Urmia, Iran

Background: According to the WHO in a quarter of the families there is at least one person with mental disorders, all over the world these people in addition to emotional and physical support, need to have the same quality of life like normal individuals. Among these people, patients with major depression have a significant contribution. This study aimed at comparing the quality of life in patients with major depression with normal individuals living in Nushin shahr city.

Methods & Materials: This analytic-descriptive cross-sectional setting in 1395 was done from 40 patients with MD in Nushin shahr city, who has been certified psychiatrist and medical records. For comparing of quality of life in these patients with normal individuals, a control group who were selected among relatives of patients and health care workers, were assessed by using the public health assessment (SF-36) questionnaire. The data collected was analyzed, using statistical software spss version 20 and using ANOVA, chi-square test and Kaplan-Meier, and p < 0.05 was considered statistically significant.

Results: Based on our findings in this study, by comparing the quality of life in patients with major depression and control group, was observed that the condition of patients in the domains of physical functioning (0.001 > P), body pain (0.001 > P), general health (0.001 > P), social functioning (0.001 > P) and mental health (0.001 > P) is undesirable. Also emotional problems in patients who were married or single have better condition in compared with divorced one.(p=0.01, p=0.02)

Conclusion: According to the effect of major depression on the quality of life, it seems that for the aim of improving the quality of patients life, we need additional support in the form of educational and counseling sessions, improving the quality of social support and frequent follow-up of physical health status.
Health Behaviour and Cardiovascular Risk in Bipolar Disorder: A prospective observational study with 2 groups

Riccarda Hartleb¹, Andreas Schwerdtfeger², René Pilz¹, Susanne A. Bengesser⁴, Armin Birner¹, Nina Dalkner¹, Frederike T. Fellendorf¹, Robert Queissner¹, Martina Platzer¹, Eva Z. Reininghaus¹

¹Department of Psychiatry, Medical University of Graz, Austria; ²Department of Health Psychology and Applied Diagnostics, University of Wuppertal, Germany

Patients with bipolar disorder tend to have a poorer health relevant behaviour than people without a mental illness. In literature, poor health behaviour is associated with higher risk for cardiovascular diseases.

The aim of this study was to combine these health relevant behaviours and determine whether euthymic bipolar patients differ from healthy controls in terms of health relevant behaviour and cardiovascular risk. It was also examined whether health behaviour is associated with the number of manic/depressive episodes in bipolar disorder.

Data were collected within the BIPFAT-study at the University Clinic for Psychiatry in Graz. A sample of 175 euthymic bipolar patients and 78 healthy controls were included. Health behaviour consisted of body-mass-index (BMI), waist-to-hip-ratio (WHR), physical activity and nicotine, alcohol and drug abuse. Framingham risk score was used to identify the cardiovascular 10-year risk. Results revealed that euthymic bipolar patients showed a poorer health behaviour in context of a higher BMI and WHR, higher nicotine dependence and a higher prevalence of alcohol and drug dependence. Moreover, bipolar patients showed higher cardiovascular risk compared to healthy controls. However no difference could be found between bipolar-I and bipolar-II disorder in cardiovascular risk. Regression analyses yielded a link between WHR and cardiovascular risk in bipolar patients. Nicotine dependence showed a tendency to be associated with the number of manic/hypomanic episodes. Due to the results physical health should be noted in bipolar disorder. Health behaviour should be supported to prevent cardiovascular risk in bipolar patients.

Bio-fabrication of Au Nanoparticles for Pharmaceutical Applications, a green approach for drug delivery

Milad Alimohammadi

Mazandaran university of medical science, Iran, Islamic Republic of

Biofabrication by using fungi is an exciting recent interest to develop an eco-friendly production of metallic nanoparticles for pharmaceutical applications. This study aimed to synthesize and characterize Au nanoparticles by using Penicillium talaromycose. Au nanoparticle has shown anti-inflammatory and anti-parasite effect.
in different article. Using Au nanoparticle as a new vehicle for drug delivery has been still discovering.

The fungus Penicillium talaromyce was grown in fluid czapek dox broth on shaker at 28 °C and 200 rpm for ten days. Then the supernatant was separated from the mycelia to convert AuCl4 solution into Nano-Gold particles. After 24 hours, synthesized gold nanoparticles were characterized by using UV-Visible Spectroscope, Zeta potential, SEM (Scanning Electron Microscopy), AFM and FT-IR (Fourier transformed infrared spectroscopy). In addition Au nanoparticle can be loaded with different drug with positive charge when they become together.

The UV-Visible Spectroscopy analysis revealed a Plasmon bond peak around 560nm suggesting formation of nanoparticles. The SEM, AFM and PCS showed that the gold nanoparticles were formed fairly uniform with spherical shape and good monodispersity with the average diameter under 100nm. Besides, a negative zeta potential were found for nanoparticles indicating their stability in solution. The FT-IR spectra revealed the presence of different functional groups to gold nanoparticles which were present in the fungal extract. The potency of Au nanoparticle with different drugs are still investigating.

Biochemistry and Microbiology - poster

Time: Friday, 26/May/2017: 4:30pm - 5:45pm

Location: E1 - HSZ

Simultaneous determination trace levels of vitamin C and folic acid in urine samples by Ultrasound-assisted dispersive liquid-liquid microextraction

AtefehZadabdollah1, NargesChamkouri2, AkbarAkbari3

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Introduction: Ultrasound-assisted dispersive liquid-liquid microextraction (UA-DLLME) was proposed for simultaneous determination of trace levels of vitamin C and folic acid in the human urine samples.

Materials and methods: High performance liquid chromatography (HPLC) coupled UA-DLLME method was employed to analysis the vitamin C and folic content of extraxtants. The influence affecting factors on the UA-DLLME such as type and
volume of the extraction solvent and disperser solvent, pH, ionic strength and temperature of sample solution, sonication condition were investigated and optimized. To demonstrate the analytical performance, figures of merits of the proposed method in urine spiked with vitamin C and folic acid were investigated.

Results: To demonstrate the analytical performance, figures of merits of the proposed method in urine spiked with vitamin C and folic acid were investigated. The limits of detection (LOD) of vitamin C and folic acid in urine was ranged from 1.69 to 2.05 ng mL−1, respectively. The extraction recovery for the spiked real samples was in the range of 94.3 % and 98.2% and the RSDs were between 3.8% - 5.2%.

Discussion: As the result, the UA-DLLME–HPLC was successfully applied for the simultaneous determination trace levels of vitamin C and folic acid in human urine samples.

EFFECT OF GOAT MILK KEFIR AND SOY MILK KEFIR ON IL-6 IN DIABETES MELLITUS WISTAR MICE MODELS INDUCED BY STREPTOZOTOCIN AND NECOTINAMIDE

Agatha Swasti Ayuning Tyas

Universitas Gadjah Mada, Indonesia

Hyperglycemia in Diabetes Mellitus (DM) is an important factor in cellular and vascular damage, that is caused by accumulation of Reactive Oxygen Species (ROS). Oxidative stress increases the expression of proinflammatory factors IL-6 as one of many signs of endothelial disfunction. Genistein in soy milk has a high immunomodulator potential. Goat milk contains amino acids which have antioxidative potential. Fermented kefir has an anti-inflammatory activity which believed will also contribute in potentiating goat milk and soy milk. This study is a quasi experimental posttest-only research to 30 Wistar mices. This study compared the levels of IL-6 between healthy Wistar mice group (G1) and 4 DM Wistar mice with intervention and grouped as follows: mice without treatment (G2), mice treated with 100% goat milk kefir (G3), mice treated with combination of 50% goat milk kefir and 50% soy milk kefir (G4), and mice treated with 100% soy milk kefir (G5). DM animal models were induced with Streptozotocin & Necotinamide to achieve hyperglycemic condition. IL-6 was analyzed by enzyme linked sandwich ELISA.

Results: The level of IL-6 in DM untreated control group (G2) showed a significant difference from the group treated with combination of 50% goat milk kefir and 50% soy milk kefir (G3) (p=0.006) and the group treated with 100% soy milk kefir (G5) (p=0.009).

Conclusion: Combination of 50 % goat milk kefir and 50% soy milk kefir and administration of 100% soy milk kefir alone can control the level of IL-6 remained low in DM Wistar mice induced with streptozocin and nicotinamide.
Autism and the microbiome.

Marta Misztal, Agnieszka Radosława Radzka, Urszula Fałkowska, Kamil Jakub Bałabuszek, Anna Maria Mroczek

Medical University in Lublin, Poland

Introduction: We do not know the exact cause of autism spectrum disorder (ASD), but there are many theories about it. Some scientists have reported abnormalities in the microbiome as well as diseases of the digestive system amongst individuals with autism.

Aim: The aim of study is to find the differences in microbiome populations between ASD- and non-ASD children.

Material and methods: Data used in the review are findings in 8 articles published between 2005 and 2013 all related to the assessment of microbiota in individuals with autism.

Results: Two of the studies found higher levels of Clostridium spp. in stool samples from ASD children in comparison with the control group but, according to Finegold, Clostridium spp. was more frequently found in the control group. Three studies found a larger amount of probiotic Bifidobacterium in the control group. One study discovered the greater presence of the species: Desulfovibrio, Lactobacillus and Bacillus in the microbiome of ASD children. Kang described the diminished presence of Prevotella and Coprococcus spp. in the control group. One study did not find any differences between the microbiome of the ASD group and that of the control group but some children with ASD produced abnormal results.

Discussion: In most cases the bacterial flora of ASD children differed from the control group. Perhaps if subsequent, more precise studies are able to confirm the relationship between autism and the type of microbiome, it will be possible to use probiotic therapy or fecal microbiota transplantation for the treatment of ASD.

Relationship between carbapenem resistance and colistin usage: the last turn in the resistance spiral

Hajnalka Toth

University of Debrecen, Hungary

Carbapenem and colistin consumption is increasing at the University of Debrecen. Earlier, we demonstrated an association between carbapenem consumption and resistance. The study aim was to investigate the effect of carbapenem resistance on colistin consumption and resistance.

The period analysed was between 2007 to 2016, as colistin usage started in January, 2007; earlier colistin was never used. Target bacteria were Acinetobacter baumannii and Pseudomonas aeruginosa; these showed the highest carbapenem resistance. Antibiotic consumption was described using defined daily dose per 100 bed-days (DDD). Antibiotic resistance was represented by incidence density of
infections caused by resistant bacteria per 1000 bed-days (ID). These time-series were analysed using vector autoregression models.

Imipenem resistance increased steadily throughout the study period (0.1-0.94 and 0.37-0.69 twelve-month means ID for A. baumannii and P. aeruginosa, respectively). Colistin consumption increased in parallel with increasing carbapenem resistance (0.03-1.56 twelve-month means DDD), lagging behind incidence of imipenem resistant P. aeruginosa by three months, while effect of carbapenem resistant A. baumannii on colistin consumption was instantaneous. In the model including both species, effect of A. baumannii was more marked. Colistin resistance occurred primarily in A. baumannii, increasing from 0.0 ID (twelve-month mean) in 2007 to 0.02 in 2016. However, relationship between colistin consumption and colistin resistance was not demonstrable in time-series analysis.

In summary, carbapenem resistance was shown to provoke increasing colistin usage. This relationship was more marked with A. baumannii, where carbapenem resistance cause more clinical concern. This demonstrates that if resistance is extensive, overusing last-resort drugs may become unavoidable.

**Synthesis and analysis of triazolyl acetophenone hydrazone derivatives**

*Leila Dehestani*

Mazandaran University of Medical Sciences, Iran, Islamic Republic of

Epilepsy is one of the most frequent and important neurologic disorders that affects approximately 1–2% of the world’s population. In this research, according to loreclezole structure, the triazolyl acetophenone hydrazone derivatives were designed with adding hydrazone group, and their anticonvulsant activities were evaluated with PTZ method.

**Materials & Methods:** In order to prepare intermediate compound 1-(2,4-dichlorophenyl)-2-(1H-1,2,4-triazol-1-yl)ethanone (2), trichloroacetophenone was reacted with 4-aminotriazole in 2-propanol under reflux to afford aminotriazolium derivative. The latter compound was deaminated under acid catalysis after adding sodium nitrite to yield 2. In the next step, the reaction of 1-(2,4-dichlorophenyl)-2-(1H-1,2,4-triazol-1-yl)ethanone with benzohydrazide and its derivatives including 4-chlorobenzohydrazide, 4-hydroxybenzohydrazide, and 4-methylbenzohydrazide, phenyl hydrazinium chloride and its derivatives including 4-chlorophenylhydrazinium chloride, 2-chlorophenylhydrazinium chloride and 4-fluorophenylhydrazinium chloride and isoniazide afforded final compounds.

For in vivo experiments, female NMRI mice (20-30 g, n=4-6) were used and different doses of the compounds (20, 50, 100 and 300 mg/Kg) were administered i.p to each group of animals. In pentylentetrazole (PTZ) test, 30 min after the administration of the compounds, PTZ (100 mg/kg, i.p) was administered. The number of death following tonic-clonic seizures was noted.
The results of PTZ test revealed that all compounds at the dose of 300 mg/kg showed 13-100% protection against PTZ. Among them, compound 7 and intermediate 2 showed 38% and 70% protection at the dose of 100 mg/kg. Interestingly the substance number 3 with indole structure showed best result among all substance in 20 mg/kg dose showed 72 percent protection in result.

Cardiology - poster

Time: Location: E1 - HSZ

Friday, 26/May/2017:

4:30pm - 5:45pm

Spontaneously hypertensive rat is a model of heart disease

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Introduction: Left ventricular hypertrophy (LVH) is a manifestation of cardiovascular target organ damage in patients with arterial hypertension. Asymmetric dimethylarginine (ADMA) has been proved to be a novel cardiovascular risk factor for development of LVH. Spontaneously hypertensive rats (SHR) is an experimental model of primary arterial hypertension and left ventricular hypertrophy.

Aim: The present study was designed to investigated ADMA heart concentration and dimethylarginine dimethylaminohydrolase (DDAH) activity in SHR.

Material and Methods: Adult male spontaneously hypertensive rats (SHR = 4) and male Wistar Kyoto rats (WKY = 4, normotensive controls) were used in this study. Left ventricle was removed to study ADMA and SDMA (symmetric dimethylarginine) concentration, and DDAH activity. All the data were expressed as mean ± SEM. Comparisons between groups were made by Student’s t-test for independent samples. P< 0.05 was considered significant.
Results and discussion: SHR showed higher systolic blood pressure than WKY, but the same heart rate. SHR displayed a significant increase in ADMA concentration and a decreased DDAH activity compared to WKY.

Conclusion: The present results suggest that ADMA concentrations in left ventricle and DDAH activity may play a role in the pathogenesis (left ventricular hypertrophy) in SHR.

Acknowledgements: This work was supported by a grant from FIS 13/01261, Fondos Feder and Ministry of Education Grant for Students 13145829

**Association between Midday Napping(siesta) Duration and the Risk of Cardiovascular Disease (CVD)**

**Pui Gaik Kuan**

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Introduction: Siesta has been associated on both increase and decrease in risk of CVD by the characteristic including average nap duration and frequency of nap in a week in several epidemiological studies. Gender may be manipulate the association between napping and CVD occurrence.

Aims: To study the association between napping duration and development of the risk of CVD.

Patient and Methods: 125 individuals ranged from 40-75 years old are participated and asked to complete a questionnaire related to their lifestyles, medical history and about their napping habit. Individuals who previously had stroke, heart disease and cancer, and night shift workers are excluded. Individuals are being separated according to gender, subdivided into short and long napping duration group. Interview, physical examination and laboratory tests were carried out during the annual follow up to assess the development of risk of CVD for 4 years.

Results: Cardiovascular events in long napping duration (LND) group were higher compared to short napping duration (SND) group. LND group has developed more risk factor which increase the risk of CVD.

Discussions: LND is associated with cardiovascular event among both men and women. Duration of nap is associated with the risk of CVD.

Tanabe et al. shows that the increase risk of CVD among nap takers are due to acute raise in blood pressure and prothrombotic effects that observed after napping. In my study imply that these effects were seen in long nap takers.

Conclusion: The development of risk of CVD is associated with napping duration.
Long term follow-up of congenital heart defects: our experiences with tetralogy of Fallot

Luca Katalin Kuthi¹, Ida Hegedűs¹, Krisztina Kadar²

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Introduction: Congenital heart defects occur in 1% of live births. Follow-up of these patients has great importance not just in childhood but in adulthood as well.

Aims: In this study we aimed to determine the evolution of the clinical status in long term follow-up of tetralogy of Fallot and the cases that require spacial imaging tests (MRI).

Materials and methods: 16 patients (6 female, 10 male, mean age: 36.6±15 years) suffering from tetralogy of Fallot were selected. We evaluated the patients’ clinical status, the types of performed surgeries and the number and indication of MRI tests.

Results: In 15 out of 16 cases the tetralogy of Fallot was treated by surgical intervention. In 9 cases complete intracardiac repair, in 6 cases palliative surgery was performed. The elapsed time from surgery was 32.2±10.6 years. In the last echocardiography, the size of the right ventricle was 38.2±7.3 mm, the tricuspid annular plane systolic excursion was 19.5±2.5 mm, and the systolic pressure of the right ventricle was 36.6±21 Hgmm. Pulmonary regurgitation was found in 8 cases: 3 mild, 4 moderate and 1 severe. Based on the NYHA classification 7 patients were in class I. and 5 patients were in class II. During the follow-up we lost 4 patients, and no MRI tests were performed.

Conclusion: Based on the long term follow-up, satisfying results could be expected even in this severe complex disease, however, to correctly evaluate the function of the right ventricle it is necessary to perform an MRI.

Literally Heartless – A Case Series Review on Total Artificial Heart Implantation

Ines Kovačić

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Total artificial heart (TAH) is a pneumatically driven pulsatile system used for orthotopic replacement of the native ventricles as a bridge to cardiac transplant in cases of irreversible biventricular heart failure.

The aim of this presentation was to bring the basics of TAH technology closer to medical students through case series of published case reports in the literature.
Case reports of patients who underwent TAH implantation were chosen randomly while searching through PubMed Database.

First case is a 61-year old male with acute decompensated heart failure. He required TAH implantation and received a heart transplant a few months later.

Second case is a 74-year old male with infiltrative cardiomyopathy caused by amyloidosis. He underwent left ventricular assist device implantation, but was later switched to TAH.

Third case is a 14-year old male with dilated cardiomyopathy and severe biventricular heart failure. TAH implantation was performed even though patient’s body surface area was less than the minimal recommended value. Eleven days later he underwent successful transplantation.

Fourth case report presents a 17-year old male with heart failure due to congenitally corrected transposition of great arteries. The decision was made to proceed with TAH implantation. He received a heart transplant five months later.

In conclusion, TAH is a highly sophisticated technology used in treating growing number of patients with severe heart failure who are ineligible for heart transplantation. Moreover, TAH is feasible even in patients with structurally abnormal hearts or in those whose body surface area was thought to be beyond recommended values.

The effect of ethnicity on the risk of venous thromboembolism

Alexander Sanders

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Our research looks at the differences in incidence of VTE and recurrent VTE in Whites, Asians and Afro-Caribbeans in the multicultural population of Birmingham, United Kingdom. It is a retrospective study of all patients that have been admitted to Birmingham City Hospital with a diagnosis of VTE and who have then had a recurrent admission with the same diagnosis in the last five years. A multivariate analysis using logistic regression has been carried out to analyse the risks for the recurrence of VTE among the different ethnicities. There are considerable differences in the risk of deep vein thrombosis and pulmonary embolism among people of different ethnicities. This is the case for idiopathic as well as secondary venous thromboembolism. There are also ethnic differences in the incidence of recurrent venous thromboembolism.
Study the levels of serum alkaline phosphatase in patients who involved with Acrodermatitis entropathica disease in Razi hospital from 2002 to 2012.

Ahmadalrahel, hasansirafi, mirhadiazzjalali, farshadfarnaqi

Tehran university of medical seince

Acrodermatitis Entropathica (AE) is rare hereditary disorder caused by impaired absorption of zinc from the gastrointestinal tract. It is characterized by acral and periorificial dermatitis, alopecia and diarrhea. Symptoms usually begin on weaning from breast or formula feeding.

Alkaline phosphatase is an enzyme that is responsible for the removal of phosphate groups from various molecules, such as alkaloids, nucleotides and proteins.

Methods and materials: In this Cross Sectional study 35 patients in Razi Skin center in Tehran between 1380 to 1390 enrolled. With check list information.

Results: From the total of 35 patients 19 were male and 16 were female. 18 were less than the 3rd percentile, 18 their parents were consanguineous (1st and 2nd cousins), 91.4 % of patients had periorificial lesions, 4 patients had (brother or sister) died with similar cutaneous manifestations and without a diagnosis, 17 patients had diarrhea, 24 patients had alopecia, the level of serum zinc at presentation was between 18 to 75 µgr/dl, alkaline phosphatase level was 118 to 735 IU and Perleche was the most common sign of relapse.

Conclusion: This study indicated that the levels of serum alkaline phosphatase in 14 patients were lower than normal, 12 patients were low limit normal range and 9 were normal. More studies with bigger sample are needed to use alkaline phosphatase level for diagnosis of Acrodermatitis entropathica.

A new secondary reaction of corthicotherapy – dermatoporosis. A clinical study

Mihai-Emmanuel Becica, Ovidiu Simion Cotoi, Silviu Horia Morariu, Răzvan Mares, Mihail Alexandru Badea

University of Medicine and Pharmacy of Tirgu Mureș, Romania
Introduction: Cutaneous side effects of corticotherapy are multiple. Dermatoporosis is a term that characterizes cutaneous chronic failure by reducing protective function (shell) because of atrophy. Corticosteroids can induce secondary dermatoporosis by inhibiting the secretion of collagen.

Aim: We present the casuistry series of patients from the Dermatology Clinic of the Mures County Hospital, being under long-term treatment with cortisone for autoimmune/inflammatory dermatosis.

Materials: We analyzed clinical series of 5 patients on corticosteroid therapy for autoimmune or inflammatory diseases (pemphigus vulgaris, bullous pemphigoid, psoriasis vulgaris).

Results: Skin type changes dermatoporosis occurred on average a year corticosteroid therapy, and a dose approximately 20 mg / day, 4 patients were on therapy with prednisone. One of the patients developed skin lesions after long applying a super potent dermatocorticoid (clobetasol propionate 0,1%) for a period of four years. 4 patients (80%) were women. All patients received local treatment with hyaluronic acid, sunscreen SPF 50 + and they were advised to avoid local trauma. All patients developed lesions on the forearms. Therapeutic response was favorable in all cases.

Discussion: Most cases of dermatoporosis are seen elderly and are due to chronic sun exposure.

Because of the ability of corticosteroids to inhibit collagen synthesis, prolonged cortisone therapy can lead to secondary dermatoporosis. Lesions are represented by atrophy, purpura, stellate scars, ulcers, skin dissecting hematoma. Discerning use of corticosteroid and knowledge of this side effect results in reduced risk for and conduct effective therapeutics.

HHV-8 subtype is possibly correlated with disease evolution in patients with classic form of Kaposi sarcoma. An observation based on a case series of patients

Mihai-Emmanuel Becica, Ovidiu Simion Cotoi, Silviu Horia Morariu, Răzvan Mares, Mihail Alexandru Badea

University of Medicine and Pharmacy of Tîrgu Mureș, Romania

Introduction: Kaposi's sarcoma is a malignant tumor of blood vessel's endothelial tissue. It is caused by herpes virus 8 and is divided into 4 categories: classical (Mediterranean), iatrogenic, endemic (African), associated with AIDS. The classical form is characterized by long evolution, stationary, appearance of the elderly in the Mediterranean.

Aim: We present a series of case studies patients in the Dermatology Clinic of the Mures County Hospital Kaposi sarcoma - classical form.

Patients and Methods: We analyzed 9 patients with Kaposi’s sarcoma - classical form of clinically and evolutionary.
Results: We noticed that the extension of lesions, their shape and the evolution does not correlate with immune status, associated pathology nor with patients age. We noticed limited disease with long evolution and relatively recent onset with extensive form of the disease.

Discussion: Although it has been described since 1872 by the Hungarian dermatologist, Moritz Kaposi, only in 1994 Chang and Moore highlighted by PCR HHV-8 in Kaposi's sarcoma lesions.

There are described several subtypes of herpes virus 8, each characterized by a different clinical course of the disease. Also, the geographic distribution is different for these subtypes. In Europe predominate subtypes A and C. A subtype was associated in several studies with a much faster and more extensive lesions while subtype C is slowly evolving. Viral subtype identification of HHV-8 in Kaposi's sarcoma Mediterranean, would be useful in choosing therapy given that this procedure varies from simple local therapy (cryotherapy, electrocautery, application of caustics) to cytostatic therapy.

**Elucidation of the Apoptotic Effect caused by Dimethylacrylshikonin in Melanoma Cells**

**Alexander Stallinger**

Medical University Graz, Austria

Introduction:
Cancer is one of the most common causes of death in developed countries. Among skin cancers, malignant melanoma are responsible for 79% of all deaths. Therefore, new approaches and therapeutics for melanoma treatment are needed. A possible new drug to treat melanoma is dimethylacrylshikonin (DMAS), which has shown promising effects in preliminary cell culture experiments.

Aim:
Determination of the mechanism behind DMAS induced apoptosis in melanoma cells

Material & Methods:
The IC50 concentrations of five melanoma cell lines with different tumour stage and mutation profiles were determined by EZ4U proliferation assay. Apoptosis was examined with Annexin-Sytox staining as well as Caspase 3 and 9 assays. To show potential cell cycle arrests, cell cycle analysis were performed. To specify the effects of DMAS on melanoma cells, intracellular molecular targets of DMAS were investigated via RT-qPCR and Western Blots.

Results:
DMAS presented a time dependent apoptotic effect on tested melanoma cells. Additionally, DMAS treated melanoma cell lines faced a G2 cell cycle arrest. Furthermore, DMAS treated cells showed altered gene expression levels in important apoptosis pathways. The apoptotic effect was exclusive for melanoma cell
lines, as DMAS did not show any cytotoxic or apoptotic effects on fibroblasts in preliminary experiments.

Discussion:
Melanoma mortality rates are still increasing. Therefore, the development of new therapeutic anti-cancer strategies is still a very important research objective. High efficiency and low concentration lead to the fact that DMAS might be a promising anti-cancer drug with respect to melanoma.

The impact of work experience in macroscopic diagnostics of skin lesions.

Anastasia Dragica Milić¹, Ljubica Bakić¹, Martina Bosić¹,²

¹Faculty of Medicine, University of Belgrade; ²Institute of Pathology, Serbia

1.1 Title
The impact of work experience in macroscopic diagnostics of skin lesions.

1.2. Abstract
The right macroscopic diagnosis of skin lesions may help to improve further steps in choosing the most suitable pathological diagnostics.

Comparing the impact of work experience in making the right macroscopic diagnosis of skin lesions.

The analysis of 158 skin biopsies was conducted in a three month period at the Institute of Pathology, School of Medicine, University in Belgrade. Senior Pathologist, Fellow, Senior and Junior Residents , each gave their individual macroscopic diagnosis, which was compared to the histopathological diagnosis.

Results
There was moderate agreement between microscopic and macroscopic diagnosis for all raters with different levels of work experience. It has been observed that the Junior Residents macroscopic diagnoses least correlate with the right histopathological diagnoses ($p<0.001$, $\kappa=0.463$ and $p<0.001$ $\kappa=0.521$). Fellows' expected accuracy of macroscopic diagnosis was the best with a score of $\kappa=0.067$ ($p<0.001$). Senior Resident showed expected accuracy of $\kappa=0.528$, Senior Pathologist of $\kappa=0.544$ ($p<0.001$). However, we noticed that only the Senior Pathologist had an observed accuracy of 100% for macroscopically diagnosing the two most frequent showing malignancies (basocelullar and squamous carcinoma).

Discussion
In our knowledge, there is no published study on this subject. Similar studies were conducted in surgical fields, comparing different stages of experience with surgical outcomes that mostly show a correlation. We found that in the dermatopathological field there is no such gradual improvement shown, because macroscopic diagnoses are usually less done with the years of work.
Neurology - poster

Time: Friday, 26/May/2017: 4:30pm - 5:45pm

Location: E1 - HSZ

Preliminary studies on ibotenic acid induced amygdala lesion as a model for autism

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Introduction: Autism is characterized by a typical triade of abnormal social interaction, communication deficits and repetitive behavior. There is no integral model of autism, but amygdala is proposed to be one of several neural regions that are abnormal in autism.

Aim: The aim of current study was to observe Ibotenic acid (IBA) induced amygdala lesion considered as a model for autism.

Methods: Experiments were performed on rats on the 7th day of their postnatal development under hypothermic anesthesia. The animals were divided into 3 groups: the absolutely intact pups; 0.9%NaCl bilateral amygdala damaged animals; 3mg0.3ml IBA bilateral amygdala damaged ones. Follow-up of behavioral changes has been done on the 30th day and 60th day of postnatal development with help of Y maze. Concentration of MCP-1, as the most relevant marker of autism, was measured in cerebrospinal fluid (CSF) by ELISA.

Results and Discussion: IBA rats that were assessed at the 30th day of the amygdala lesion showed the worst alteration compared to all the other groups. At the same time their behavior may be considered as close to repetitive behavior which is typical of autistic animals. At the later stages the operated animals show tendency to recovery, proving significant contribution of plastic mechanisms to compensation of behavioral deficits. Coming to changes in MCP-1 level in CSF of rats, data showed the tendency to increase, which added a value to process inflammation in pathogenesis of autism.

Conclusion: Preliminary data brought to mind that ibotenic acid induced amygdala lesion activated inflammation, which leads to behavioral changes similar to autism.
EVALUATION OF CEREBROVASCULAR INSULT TYPES AND THEIR LOCALIZATION IN WOMEN, AS A RISK FACTOR OF THIS DISORDER

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BACKGROUND: The aim of our study was to present and analyze the distribution of cerebrovascular insult types and their localization in women, as a risk factor of this disorder.

METHODS: In our study we evaluated 990 patients that suffered a cerebrovascular insult and were treated at Special Hospital for Cerebrovascular disorders “Saint Sava” in Belgrade. All patients were divided into two groups due to the presence of hemorrhagic or ischemic stroke.

RESULTS: Among 990 patients with acute stroke, we found 116 (11.7%) patients with intracebral hemorrhage. Among them 78 were women (67%) and 38 (33%) men. Among the intracerebral hemorrhage in women, we found that the most frequent ICH occurs in the lobar region (56%), than in the basal ganglia (37%), thalamus (15%), cerebellum (5%), and brainstem (3%). Among the women who were hospitalized 43 (55%) died, and 35 (45%) were discharged for further rehabilitation or home care. Patients with ischemic stroke 874 (88.3%) were divided into two groups: with hypertension 533 (61%) and without hypertension 341 (39%).

CONCLUSIONS: It should be stated that women with specific types of cerebrovascular insult as well as their localization are at higher risk for bad prognosis. This study suggests that appropriate diagnostics in appropriate time should be done, because patients with hypertension have more frequent ICH.

Experiment: "Social behaviour in rats with underdevelopment of the brain"

Paulina Patrycja Nowak

Institute of Zoology, Jagiellonian University, Poland

The described experiment was about interrupting different stages of neurogenesis in prenatal period and provoking different degrees of brain dysplasia which can lead to changes in social and exploratory behaviour.

To provoke brain dysplasia of different degrees, pregnant Wistar rats were treated with a single 1.0 Gy dose of gamma rays during specific stages of pregnancy: days 13, 15, 17 or 19. Male offspring (groups: E13s, E15s, E17s and E19s, respectively to the time of prenatal irradiation) were separated and later involved in Social Interaction Test, where some categories like active social interaction, aggressive, avoiding, exploratory and stress behaviour were evaluated in quantitative way.
The results obtained in Social Interaction Test suggest that E17s was the most active socially and at the same time showed the lowest level of anxiety and aggression during social interaction with a rat partner. The earliest irradiated groups like E13s and E15s showed significantly highest level of anxiety. It is important to mention that the avoiding behaviour was the category with the greatest diversification between all of groups. As a part of the exploratory behaviour there is a tendency which indicates that the later irradiation causes the lower level of expressed exploration.

These results allow to draw conclusions that interruption of neurogenesis of different stages can lead to incorrect development of brain structures related to specific modification of social behaviour described in previously mentioned categories.

**Transverse Myelitis in Dengue Fever**

**Pui Gaik Kuan**

First Moscow State Medical University, Russian Federation

Introduction: Dengue, the second most common mosquito-borne disease affecting human beings. It's common in South-East Asia, transmitted by Aedes mosquito. WHO advocated guidelines in year 2009 about considered neurological manifestation in clinical case classification for severe dengue. Neurological involvement in dengue fever is increasingly reported nowadays.

Aim: To raise the awareness of public on dengue fever may induce neurological disorder

Case report: 23 years old male was transferred to neurology department from medical ward due to development of paraplegia with sensory level at T5-T6 and urinary retention. Before the transferred, he was presented with backache, myalgia, headache and fever up to 40C with biphasic pattern. Thrombocytopenia and raised in serum IgM level to dengue virus were noticed. Spinal MRI was normal. He was diagnosed as transverse myelitis associated with dengue fever and being treated symptomatically. 2 weeks after discharged, his legs and spinchteric function returned to normal as well as the thromboocyte level was increase to 170,000/cubic mm. 2 month follow up, he was remained well.

Discussion: In this case, the high fever that not more than a week with transient decrease in thrombocytes level and positive IgM with high IgG titer to dengue shown that he had a dengue fever, whereas the development of paraplegia and urinary retention shows the present of neurological manifestation in the patient. Without significance changes on spinal MRI, patient neurological signs can be explained by autoimmune or direct invasion by viruses.

Conclusion: Neurological involvement in dengue fever has been increasingly reported.
Platelet-Rich Plasma (PRP) is the new method for Back Pain due to Prolapsed Intervertebral Disc (PIVD)

Min Jiun Chung

First Moscow State Medical University, Russian Federation

Introduction:
Back pain causes by prolapsed vertebral disc is a major public issue often treated by surgery or epidural steroid and opioids injection. PRP is an autologous origin which has minimal safety issue that use to treat discogenic low back pain patients.

Aim:
To investigate the efficacy of PRP as a management method for PIVD patients.

Patients and Methods:
25 patients with chronic prolapsed intervertebral disc with complaint of back pain were injected 10ml of PRP into epidural space using interlaminar approach guided by ultrasound. These patients were evaluated after 1 hour, 2 weeks, 1 month and 6 months by Visual Analogue Scale (VAS), Lasegue Test (LT), Modified Oswestry Low Back Disability Questionnaire (MOLBDQ) and MRI. Complete neurological physical examination was also conducted during evaluation.

Result:
Patients show positive improvement in the VSA, LT and MOLBDQ scores after 6 months time. Patients show no complication. MRI does not shows significant change during 6 months.

Discussions:
This study result is consider consistent with the studies done by Akeda et al., and Rohan Bhatia et al., respectively. Both of their studies show improvement of VAS score in 3 months and 6 months time.

Considering the high concentration of growth factors presence in PRP, this would helps in the disc healing process.

Conclusion:
In short, PRP would be a novel therapeutic method in treating chronic PIVD patients.
ADOLESCENTS’ AND WOMEN’S KNOWLEDGE OF THE HUMAN PAPILLOMA VIRUS, CERVICAL CANCER AND HPV VACCINE AND ITS ROLE IN PREVENTING CERVICAL CANCER

Andrew WEILM Semulimi

Makerere university, Uganda

INTRODUCTION

Human Papilloma Virus (HPV) is a carcinogenic virus that accounts for 70% of the cervical cancers. In Uganda, cervical cancer is the leading cancer and cause of cancer death among females aged 15 to 44 years. The immunisation coverage was at 48% in 2016, which is low and below the target. The focus of the study which is to assess the knowledge of adolescents and women on HPV and cervical cancer and the influence this knowledge has had on the acceptability of the HPV vaccine.

METHODOLOGY

Literature review of the published works in journals, WHO and Ministry of Health of Uganda database. The data was analysed using thematic analysis.

RESULTS

A study among adolescents in Western Uganda revealed a low knowledge score with 17.6% of the 670 participants being knowledgeable about HPV. Another study in Lusaka, Zambia revealed that of the 319 women, 96.8% had heard about cancer of which 74.7% knew about cervical cancer. Of the 74.7%, 73.3% believed it to be preventable. 98% wanted their children vaccinated 47.4% would pay something for the HPV vaccine. A survey done in Finland revealed that 70.7% of the adolescents who had knowledge of Sexually Transmitted Diseases would resist the vaccine and 45.4% would accept it.

CONCLUSION

The knowledge levels in Uganda are still low as compared to other countries. There is need to increase sensitization on the role of HPV vaccine in preventing cervical cancer.
Effects of gold nanoparticles functionalized with Albumin on colon cancer migration capacity

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Introduction. Gold nanoparticles (GNPs) have demonstrated their ability to be proficient photothermal agents. Moreover, it has been demonstrated that their functionalization with Albumin (Alb) may provide selectivity of thermal destruction due to the overexpression of its receptors in epithelial-derived cancer types. However, the effects of Alb-GNPs administration on long term cell migration is still not elucidated.

Aim. We aimed to evaluate the effects of GNPs-Alb administration on long term migration of colon cancer cells

Materials and Methods.

Synthesis and functionalization of GNPs with human serum albumin was performed. Complete characterization of the newly designed construct was performed (FTIR, UV-VIS, AFM, Raman Spectroscopy). Ca Co2 cell line was used for testing. Exposure to the nanomaterial was performed using different concentrations (50, 25, 175µg/mL) and a special migration assay was used (Mililuapore), with flow cytometric evaluation. Moreover, conventional and fluorescence evaluation of effects after 2 day exposure was performed.

Results. Our results show no significant morphologic or migratory effects for 17.5 and 25 µg/mL. However, high concentrations of nanomaterial have the tendency to promote cell migration and may promote metastasis formation.

Discussion.

Our results demonstrate the need for reevaluation of long term effects of nanomaterials. A proper balance between the need for efficacy and the need for reducing pro-metastatic effects should be maintained.

Monte Carlo calculation of photoneutrons source in the Elekta SL75/25 Linear accelerator

asra sadat talebi, Payman Hejazi

Semnan University of Medical Sciences, Iran, Islamic Republic of

Introduction: However, medical linear accelerators (Linac) with high energy photon beams (E > 10 MV) have clinically advantages in radiotherapy, including low skin dose, low damage to soft tissue, etc. But, unwanted particles such as photoneutrons
are produced. This particle arises from photonuclear interactions of high energy photon beams with high-Z materials which are located in the beam path. Photoneutrons have a high linear energy transfer and radiobiological effectiveness. Therefore, they are the most significant particle in the dosimetry of treatments and deliver an undesirable dose to patients and staffs. Aim: The aim of this study is the determination of the components contribution in photoneutron production from Elekta SL75/25 Linac. Materials and Methods: The actual geometry of Linac was simulated in great detail by using MCNPX MC code version 2.6.0. Then, the contribution of components of an Elekta SL75/25 Linac operating in 18MV photon beam is calculated in 15x15 cm2 field size by MPN card. Results: Based on our results, the contribution of Linac components in photoneutron production was target 17%, primary collimator 50%, secondary collimators 31%, flattening filter 0.7% and the remaining components (shielding, back scattering plate, etc.) 1.3%. Conclusion: Most of the photoneutrons are produced in the target and primary collimators (67%). Flattening filter was made from steel. So, dose not contribute to the photoneutron production. The other components contribute 33% of the total production. It is expected that the results of this study will be of interest to the Linac manufacturers.
ITIH5 promoter methylation in circulating tumor cells enriched from peripheral blood of lung adenocarcinoma patients

Jacqueline Truskaller1, Verena Tiran1, Joerg Lindenmann2, Luka Brcic3, Marija Balic1, Nadia Dandachi1

1Division of Oncology, Department of Internal Medicine, Medical University of Graz, A-8036 Graz, Austria; 2Division of Thoracic and Hyperbaric Surgery, Medical University of Graz, A-8036 Graz Austria; 3Institute of Pathology, Medical University of Graz, A-8036 Graz Austria

Background: Despite advances in diagnosis and treatment, lung cancer remains a fatal disease with a dismal 5-year overall survival rate of less than 15%. Circulating tumor cells (CTCs) provide a dynamic real-time assessment of molecular tumor characteristics beyond the primary tumor. Methylation alterations are frequent hallmarks in tumors. Loss of ITIH5 (Inter-α-trypsin inhibitor heavy chain) expression through promoter hypomethylation is associated with malignant progression and unfavourable outcome.

Aim: The aim of this study was to examine the methylation status of ITIH5 in CTCs enriched from patients with lung adenocarcinoma and in mononucleated blood cells (MNCS) of healthy controls (HCO).

Methods: A total of 40 patients and 30 HCO were included in this study. CTCs were enriched using a size-based microfilter. The methylation status of the ITIH5 promoter was identified in 34/40 patients with Pyrosequencing using the Pyrornark Q48.

Results: Using a size-based enrichment platform we identified CTCs as nucleated CK+/CD45− cells in 17/40 patients (42.5%) with a median of 0 cells (range 0-33 cells). A cut-off value for positive ITIH5 methylation was calculated from blood enriched from 12 HCO. Using this established cut-off value, ITIH5 methylation of enriched CTCs was detected in 13/34 patients (38%) and in 0/30 (0%) of healthy control samples.

Discussion: This study shows the feasibility of a size-based microfilter to enrich and analyse ITIH5 promoter methylation of CTCs from peripheral blood of lung adenocarcinoma patients. These initial results provide important basis for future studies on the methylation status of enriched CTCs.

Use of red blood cells transfusion in children with acute leukemia

Jure Colnaric, Janez Jazbec

University Medical Centre Ljubljana, Slovenia

INTRODUCTION
Transfusion guidelines for pediatric patients with malignancy are scarce and transfusion guidelines policy commonly varies among different centers. We wanted to review the use of RBC and platelet transfusion at our pediatric department and compare our strategy to guidelines and to relevant published articles.

METHODS
Observation charts and electronic records for all patients with acute lymphoblastic leukemia (ALL) at our Pediatric Department of Hematology and Oncology over a 24-month period were analyzed retrospectively.

RESULTS
Mean hemoglobin (Hb) at which RBC products were given was 80 g/L (n=205). 70% of RBC products were given to asymptomatic patients. However, transfusion volume in this group of patients was smaller (13mL/kg) than in symptomatic patients (16mL/kg)

CONCLUSIONS
Considering the results of our study, our opinion stands for critical use of transfusion, which should be prescribed on individual basis. We believe a manner of accurate clinical observation concomitantly with laboratory values interpretation would be a useful clinical approach of transfusion supportive care for pediatric cancer patients.

Pathology & Pathophysiology - poster

Time: Location: E1 - HSZ

Friday, 26/May/2017:

4:30pm - 5:45pm

The effect of Lanreotide treatment on neuroendocrine cell line P-STS in vitro and in vivo

Miriam Öttl, Nassim Ghaftari Tabrizi-Wizsy

Medical University of Graz, Austria

Background: Neuroendocrine tumours derive from the diffuse neuroendocrine system of the gastrointestinal tract. As these tumours are often unresectable and able to metastasize, the development of drugs for its chemical treatment is important. Lanreotide, being a somatostatin analog, is known to ameliorate symptoms due to hormone release by neuroendocrine tumour cells. Many studies indicate that it reduces the secretion of growth hormone (GH) and Insulin-like growth factor 1 (IGF-1) as well as the tumour volume.
Aims: The aim of this study is to analyse this impact on neuroendocrine tumour tissue in vivo.

Materials and methods: The gastrointestinal neuroendocrine cell line P-STS was the subject of the study. Cells were treated with 20nM Lanreotide in vitro and in vivo in the chicken chorioallantoic membrane (CAM) assay.

Results: P-STS cells grow well on the highly vascularized membrane of the chicken embryo and form small neoplasms. During the growing process, the cells were treated with Lanreotide. As a result a reduction in tumour size compared to the control group is expected but yet to be evaluated. Additional experiments are carried out to demonstrate an impact of Lanreotide treatment at gene level.

Examining the effects of adipose tissue application on wound healing using split skin grafts and the chick chorioallantoic membrane as a model organism

Christian Daniel Huber, Theresa Hirschböck, Alexandru Tuca, Christian Smolle, Raimund Winter

Medical University Graz, Austria

Introduction: Chronic wounds are a major issue in clinical routine. In addition to storing triglycerides as an energy source, adipocytes have been shown to play a key role in the mediation of fibroblast migration and proliferation, and the formation of extracellular matrix proteins during acute wound healing.

Aim: Obtaining valid data suggesting the beneficial effects of fat tissue application on the wound healing process.

Methods and Material: Chick chorioallantoic membrane (CAM) assays were used as an in vivo model. Split skin grafts were punched out to obtain comparable onplants which were then treated with a needle respectively LASER to simulate the wound, then autologous lipoaspirat was applied. After incubation the CAM was cut out around the onplants and embedded in paraffin. The tissue sections were stained with hematoxylin and eosin. Immunohistochemical staining was performed with the mitotic marker Ki-67.

Results: First observations suggest the induction of angiogenesis in the area of the wound treated with lipoaspirat, mitosis within the damaged skin can also be detected. However, the results cannot be validated at this time of the study.

Discussion: Validation of adipose tissue application being beneficial to the wound healing process would further back its application for regenerative treatment in plastic surgery and provide data for the field of cell therapy.
Investigation of the effects of platelet-rich plasma on wound healing in split-thickness skin grafts using CAM-Assay

Theresa Maxian, Frederike Reischies, Theresa Hirschböck, Kurt Schicho, Raimund Winter

Medical University of Graz, Austria

Introduction:
A complex interplay between keratinocytes, fibroblasts and other cell types is necessary for successful wound healing. The healing response is initiated and directed by growth factors or cytokines. Platelet-rich plasma (PRP) is very rich in cytokines, which regulate cellular activities and functions critical during the healing cascade, thus PRP has attracted interest as a clinical treatment in wound healing and other relevant medical fields.

Aim:
This study aims to examine the beneficial effects of PRP on the healing process of a simulated wound by using chicken chorioallantoic membrane (CAM) as an in vivo model.

Material + Methods:
A needle respectively LASER punctured the skin grafts to simulate skin damage. The PRP was applied at 30°C to the induced wound. To investigate the effects of PRP, the punched out onplants were transferred onto chicken chorioallantoic membrane (CAM). After 72 hours of incubation, the xenografts were harvested, photo documented and embedded in paraffin. Subsequently, the xenografts were stained with hematoxylin and eosin. Immunohistochemically staining for Ki-67 is planned to investigate the mitosis rate in the PRP treated grafts.

Expected results:
Prior studies claim that PRP treatment accelerates cell proliferation and reepithelization. The split-thickness skin grafts grow well on the CAM and the tissue remains intact. Moreover, we find neoangiogenesis in the tissue and we will present our results of immunohistochemically staining.

Discussion:
Further insight into the beneficial use of PRP, equally as its limitations, can help develop new strategies for clinical problems as chronic skin damages or the treatment of burns.
Effect of hyperbaric oxygen therapy (HBOT) as adjuvant therapy for treatment of trophic changes and ulcers as advancement of peripheral vascular disease (PVD)

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Introduction
Peripheral vascular disease (PVD) may cause damage of affected tissue, as a result of decreased blood flow and therefore decreased oxygenation. Often, it is the result of diabetes mellitus. Most often legs and feet are affected, progressing even to ulcers. Hyperbaric oxygen therapy (HBOT) may contribute to better oxygenation leading to revascularization and recovery of surrounding tissue.

Aim
This study was designed to examine whether HBOT actually contributes to recovery of tissue affected by PVD.

Patients and Methods
Prospective, monoclinical study on 20 patients (age ranging from 45 to 89: 14 male, 6 female) referred to the Center for Hyperbaric Medicine after PVD progressed to trophic changes or ulcers, was conducted. Patients were subject to 2.2 atmospheres (ATM) with 100% oxygen for 15 sessions, each lasting 60 minutes (in those 60 minutes - 10 minutes for compression and decompression each). All other treatment was continued as before introducing HBOT. Ulcers were monitored using Wagner-Meggitt’s classification. “Verbal scale of Pain” and intermittent claudication were tracked. Descriptive statistics (non-numerical data), and student t-test and ANOVA (numerical data) were used for data analysis.

Results
Results showed healing of ulcers, increased sensation, pain reduction, and increase in claudication interval. Ten patients underwent 5 or 10 more sessions before significant improvement. One patient underwent toe amputation.

Discussion
Based on this study we can say that, if applied on time, HBOT can contribute to facilitate the healing of the consequences of the PVD. Further, larger, randomized controlled research should be conducted to reach the final conclusion.
Neuropathological alternations in rats following long-term cholesterol and aluminium rich diet

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There are contradictory results in the literature regarding the effects of hypercholesterolaemia and high aluminium intake in the pathogenesis of neurodegenerative diseases, including Alzheimer-disease (AD). In our animal model we tried to produce AD-like histological changes by giving butter- and cholesterol-rich diet (BCRD) to male Long-Evans (LE) rats.

In the present study, we investigated the effects of the long-term diet on the three months, one and two years old LE rats, respectively. The animals were fed with i) BCRD, ii) drank Al 2 (SO 4 )3-rich water or iii) received both for 46 days when animals were sacrificed, brains removed, fixed in 4% pH 7,2 buffered paraformaldehyde and embedded in paraffin wax.

Brains were cut subsequently at a thickness of 7µm in sagittal plane. The sections were mounted on glass slides then the following stains were added: haematoxylin-eosin, LFB/Nissl, Congo-red, Bielschowsky silver impregnation and p62 immunohistochemistry.

The following brain regions were investigated with special emphasis: hippocampus, amygdala, hypothalamus, thalamus, cerebral cortex, basal ganglia and brain stem structures.

We did not find any histological alternations in the three monts old, naïve animals. Cerebral amyloid angiopathy was detected with Congo-red staining in the leptomeningeal and cortical vessels. Minimal scanty diffuse granuar cytoplasmic positivity was showedd by p62-immunohistochemistry in the CA1 region of the hippocampus.

Based on these neuropathological features in our model, we suggest that further studies are warranted to identify the exact role of hypercholesterolaemia and Aluminium in the pathogenesis of AD.
THE PRODUCT OF TRIGLICERIDES AND GLUCOSE (TyG-INDEX) AS A CONFIRMATORY PARAMETER FOR INSULIN RESISTANCE IDENTIFICATION IN EMPLOYEES AT DR. SARDJITO HOSPITAL YOGYAKARTA

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Introduction: High prevalence of insulin resistance is closely correlated with high burden of metabolic syndrome and cardiovascular diseases. Insulin test is expensive and is not available in most laboratories in the undeveloped countries.

Aim: We propose to utilize the product of fasting triglycerides and glucose level (TyG) for estimating insulin resistance and compare it to homeostasis model assessment of insulin resistance (HOMA-IR) from the employee at dr. Sardjito hospital.

Patients & Method: We performed a population-based cross sectional study. The sample is employees at dr. Sardjito hospital who enrolled in general check up in 2010. Type II diabetes, kidney and liver disease, pregnancy, thyroid disease and uncomplete data were exclusion criteria from the sample. Diagnostic sensitivity, diagnostic specificity, positive predictive value and negative predictive value were calculated. The optimal TyG index for estimating insulin resistance was established using receiver operating characteristic (ROC) scatter plot analysis and Youden Index (J).

Results: A total 99 subjects, from 30-56 years were enrolled. Insulin resistance was identified in 36 subjects. The best Glucose and Triglyceride Index (TyG-Index) for diagnosis of insulin resistance was at Ln of 4.76 which showed 43% of diagnostic sensitivity and 85% of diagnostic specificity. The positive and negative predictive value were 64% and 27%.

Discussion: TyG-Index has low sensitivity and high specificity to identify insulin resistance of dr. Sardjito Hospital employees, therefore the TyG index can be valuable for insulin resistance diagnostic confirmatory tool due to its high specificity. It can be combined with other diagnostic parameter with high sensitivity and low specificity (HDL-C parameter).
COMPARATIVE ANALYSIS OF PSA LEVEL IN PATIENTS WITH LOCALLY ADVANCED PROSTATE CARCINOMA TREATED WITH HORMONAL AND RADIATION THERAPY

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Introduction: Contemporary approach in treatment of locally advanced prostate carcinoma implies combination of luteinizing hormone-releasing hormone-analogue (LHRH) and radical external beam radiation therapy (EBRT). Prostate specific antigen (PSA) is good predictor in the evaluation of response to therapy.

Aim: The aim of this analysis is to demonstrate that PSA levels are significantly reduced by application of combination of LHRH and radical EBRT in treatment of locally advanced prostate carcinoma.

Material and methods: Between 2010 and 2015, 93 patients with locally advanced prostate carcinoma were treated and followed up, in Institute of Oncology and Radiology of Serbia. The mean age of patients was 70 years. All patients had HP confirmation of adenoprostata carcinoma. EBRT with dose of 65Gy was applied. LHRH analogue were administered subcutaneously in neoadjuvant, during EBRT and adjuvant approach in total duration of 1 year. Following PSA levels was measured: initial (before starting neoadjuvant LHRH), before and after EBRT.

Results: Mean PSA levels were: initial 43.25 ng/ml (range, 8,76-202 ng/ml); before EBRT 2,74 ng/ml (range, 0,01-27 ng/ml); after EBRT 0,59 ng/ml (range, 0-11,6 ng/ml). Acute side effects of EBRT were registered in 66,67% of patients, threrefor late side effects were registered in 34,41% of patients. Progression of disease was indentified in 16,13% of patients. Mean DFS was 28,14 months (range, 8-61 months).

Discussion: This analysis shows significant difference between mean initial PSA level and mean PSA level after EBRT. Accordingly, we found that the combination of LHRH analogue and radical EBRTis sucessfull method in treatment of locally advanced prostate carcinoma.
Comparative Evaluation of Silibinin Effect on Apoptosis in Human Breast Cancer MCF-7 cell line in vitro and in vivo

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Background: Silibinin, a natural flavonoid from the seeds of milk thistle, has been used for over 2000 years to treat a range of liver disorders, because of its strong antioxidant effects. In recent times it has been shown that silibinin has anti-cancer activities, including growth inhibition, inhibition of angiogenesis, cell cycle arrest, anti-proliferative effects, apoptosis induction and inhibition of invasion and metastasis. Due to its non-toxic character, silibinin is well tolerated and largely free of any adverse effects.

Aims: The aim was to evaluate and compare the effect of silibinin on apoptosis in human breast cancer cell line MCF-7 in vitro and in vivo.

Materials and methods: For the first time we evaluated silibinin apoptosis effect in MCF-7 cell line in vivo by CAM assay. Cancer cells were grafted onto chicken chorioallantoic membrane (CAM) and xenografts were analyzed immunohistochemically. The effect on proliferation was investigated using Ki67 antibody and apoptosis was detected via TUNEL assay. For comparison, we also performed 2D cell culture apoptosis assay with Annexin/PI with the same concentration and time exposure.

Results: In 2D cell culture, silibinin induced significant apoptosis cell death in MCF-7 cells. Flow cytometry experiments indicated 25.9 ± 1.8%, p<0.05 apoptosis by both Annexin V+ and Annexin V+PI+ evaluations and 12 ± 1.7 necrosis (only PI+) under 150 μM silibinin supplementation at 48h. CAM assay has been performed and analysis is in progress.
Eukaryotic Translation Initiation Factors trigger Non Small Cell Lung Cancer (NSCLC)

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Background/Aims:
Non small cell lung cancer (NSCLC) is the leading cause of death worldwide. Dysregulation of protein synthesis has received considerable attention as a major step during carcinogenesis. Eukaryotic initiation factors (eIFs) take a central role during ribosome assembly, the organelles where protein synthesis takes place. eIFs are linked to the MAPK and the mTOR signalling pathways, representing major targets in cancer therapy. We hypothesized that eIFs might serve as potential biomarkers in lung cancer.

Methods:
The expression of eIF and mTOR pathway members was analyzed in paired NSCLC and non-neoplastic lung tissue (NNLT) from 28 patients by qOCR and Western blotting, respectively. Additionally, paired NSCLC and NNLT samples from 200 individuals were studied by immunohistochemistry on tissue micro-arrays (TMAs). Knockdown of eIF candidates was performed in A549 lung carcinoma cell line by RNA interference.

Results:
In NSCLC mRNA levels of the eIF subunits 2α, 4A, and eIF6 were upregulated in comparison to NNLT (p<0.001). Immunoblot analysis of NSCLC revealed an upregulation of the eIF subunits p2α, 2α, 1A, 4A, 4E, 5 and 6 compared to NNLT (p<0.05). Immunohistochemistry demonstrated a higher staining intensity in neoplastic cells for the subunits eIF2α, eIF4E, eIF3H and eIF6 compared to the NNLT. Preliminary data indicate that knockdown of eIFs reduces A549 cell proliferation.

Conclusion:
Our data indicate upregulation of specific eIFs in NSCLC, suggesting their important contribution in lung carcinogenesis. A better understanding of the molecular mechanisms in pulmonary carcinogenesis is necessary for developing novel treatment strategies.
Eukaryotic Translation Initiation Factors Might Represent Novel Targets in Neuroblastoma

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Neuroblastomas are malignant tumors arising from primordial neural crest cells. 90% of all cases are diagnosed in children younger than five years and can be found in the adrenal medulla, the dorsal root ganglia or can follow the distribution of sympathetic ganglia.

Protein translation is a major step in tumor carcinogenesis and progression. The regulation of protein translation is rate limited at the initiation step regulated by eukaryotic translation initiation factors (eIFs). eIF expression was reported to be altered in different tumor entities. These factors are tightly linked to the mTOR and MAPK signaling pathways representing important targets in cancer therapy.

Neuroblastoma cell lines were analyzed regarding their eIF protein expression using immunoblot analyses. Furthermore, SH-SY5Y cells were treated with the 4EGI-1 inhibitor for 24 h and 48 h. 4EGI-1 blocks the interaction of eIF4E and eIF4G and thereby inhibits eIF4F complex formation, an essential step for translation initiation. After the treatment, expression of eIF subunits, apoptosis (YO-PRO®) and cell viability (MTT) were investigated.

Since it was reported that expression patterns of eIFs are altered in many tumor entities, we assumed that inhibition of translation initiation via 4EGI-1 may open a new targeted therapeutic approach in neuroblastoma. Immunoblots revealed that 4EGI-1 treatment does not seem to have an influence on eIF expression after 24 and 48 hours. However, it seems that 4EGI-1 might rather affect cell viability and apoptosis.

eIFs might function as conceivable target for cancer therapy which might improve neuroblastoma therapies in future. This subject needs further investigation.
Extracellular Vesicles take part in Cellular Communication of Chordoma Cells

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Chordomas are malignancies which can be located all over the spine and belong to bone tumours. The exact molecular pathogenesis is yet to be elucidated. Due to the location, the usual treatment of resection and radiation is often insufficient and leads to tumour recurrence. Extracellular vesicles (EVs) have been shown to be released by several cancer entities. EVs have the same topology as their parental cells and are capable of delivering bioactive molecules such as nucleic acids and proteins, like miRNA and growth factors. Thus they might be involved in molecular processes like oncogenic transformation, invasion, migration and angiogenesis.

We hypothesize that EVs are released by chordoma cells, play a major role in tumour progression and might be a new option for targeted therapy.

Two patient derived chordoma cell lines were cultured under normal conditions. The conditioned media, in which cells have been cultured, was processed and analysed. All used media, buffers, antibodies and fluorescent dyes have undergone preparation with the purpose of excluding the bigger part of particles and aggregates.

Analysis of conditioned chordoma media compared to plain cell culture media, in which no cells have been cultured, clearly revealed the existence of EVs. A combination of markers and fluorophores ensures the exclusions of membrane fragments or vesicles originating from cell culture media supplements.

The current data indicates that chordoma cells use EVs for extracellular communication. Further experiments aim to reveal the underlying conditions and mechanisms for EV release and the characterization of biomolecules being transported.
Preparing Patients to Undergo Surgery

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The objective was to find out risk groups of patients waiting in hospital to undergo surgery and relevant forms of support interventions. 154 patients were included (4 different surgical departments; 62 females and 92 males, mean age \([M] = 58.8\) years). We have used a semi-structured interview; The State-Trait Inventory for Cognitive and Somatic Anxiety; The Brief Cope Inventory.

50 % of the included patients expressed a fear to undergo surgery; 28 % said that they are afraid of anaesthesia, regardless of its type, and 54% expressed fears and worries about outcome of surgery. Women (\(\text{Mas} \pm \text{SDas} = 32.58\pm 8.01; \text{Mat} \pm \text{SDat} = 35.16\pm 8.97; \text{in general} \text{Ma} \pm \text{SDa} = 67.74 \pm 15.44\)) demonstrated symptoms of state and trait anxiety significantly more often than men (\(\text{Mas} \pm \text{SDas} = 28.11\pm 6.21; \text{Mat} \pm \text{SDat} = 30.29\pm 7.48; \text{in general} \text{Ma} \pm \text{SDa} = 58.40 \pm 12.74\)). The difference between genders is also reflected in the female higher need for additional information. Especially those patients who had a lower education, lived alone and had poor social support fall into a risk group. Such case we found in elderly men who live alone. They less often/less directly express their needs and emotions, and less active search for information or advice.

Our data has shown that the patients did not require the same amount of information. A distinction could be made between those who want information and those who do not want information; similarly as psychological preparation prior to surgery is not beneficial for all patients.
Does Saffron reduce the risk and severity of post-operative peritoneal adhesion in rats?

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Background: Peritoneal adhesions are one of the major complications of abdominopelvic surgeries. They can cause various morbidities, including adhesive small bowel obstruction, female infertility and chronic abdominal pain. It seems that saffron can reduce the risk of intraabdominal adhesions by its anti-inflammatory properties. The purpose of this study was to determine whether saffron inhibits intra-abdominal adhesions.

Material & methods: This experimental study consisted 45 male rats that were incised at the midline of abdomen under the local anesthesia. Bowels were abraded with dry gauze and 2.5 cc talc solution 10%w/v was injected intraperitoneally for the adhesion stimulus. Then, the rats were randomized into three groups including the control l group (no further treatment), group A (6cc normal saline was injected) and group B (250mg/kg saffron extract was injected). After three weeks, the adhesion grade was evaluated based on the Evans model. The data was then entered and analyzed by SPSS software version 16.0

Results: Statistical analyses showed that the difference in adhesion grade between the saffron group and the control group was significant (P=0.014), also the mortality rate of rats in the saffron group (6%) was notably lower than control group (46%, P=0.001). The incidence rate of adhesion was lower in saffron group (67%) than other two groups (100%) but not significant (p>0.05).

Conclusion: The use of saffron extracts can be effective to reduce adhesion grade in laparotomy surgeries in animal models. Further studies are needed for proving this assertion.

Key words: Saffron, adhesion, abdominal surgeries, rat.
Comparison of the results of early excision and grafting between children and adults: a non-randomized clinical trial

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Background
Inhere we compared postoperative outcomes after early excision and grafting between pediatric and adult patients with deep burns of less than 40% total body surface area burns (TBSA).

Methods
Data was obtained from 106 patients admitted to Ghotbodin Burn Center in Shiraz, Iran from September 2012 to September 2013. All the patients had less than 40% TBSA burn and were between 1 to 65 years old. Patients were divided into two age groups of younger than 14 years old (n=49) and older than 14 years old (n=57). This trial was registered with the Clinical Trials Registry (IRCT2014032713880N3; www.irct.ir).

Results
During a six month follow-up, the two groups did not show a significant difference in graft take, total scar score and itching score (p=0.461, p=0.363 and p=0.637, respectively). Clinically the pediatric group did show less hospital stay, however this was not statistically significant (p=0.091).

Conclusion
Better wound care and rapid surgical interventions introduced in recent years has minimized the effects of age related changes on wound healing and postoperative complications. Pediatric and adult burn patients with less than 40% of TBSA burns do not show differences regarding clinical outcomes after early excision and grafting.
Laparoscopic surgery vs open surgery in colorectal cancer

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Introduction
Laparoscopic approach towards colorectal cancer is regarded as the first choice procedure nowadays.
Our aim is to confirm this trend in Bulgaria and identify factors associated with a greater use of Laparoscopic colectomy (LC).

Aim
We reported all patients who underwent surgical treatment of colorectal tumors, between 2011 and 2016, in the University Hospital “St. Marina” Varna, Bulgaria and compared their results.

Methods
From January 2011 to November 2016, 382 patients with stage I, II, III cancer underwent surgery for colorectal cancer in a single institution. They were classified into open surgery (OC; n= 272) and laparoscopy surgery (LC; n=110). Perioperative and oncologic outcomes were compared among the groups.

Results
There was no difference in age, sex, presence of premorbid medical conditions, and blood loss between both groups.
The mean operative time for OC was 132 minutes and 145 minutes for LC. Among the patients who underwent LC, 7 (6%) required conversion to OC.
The median time to resumption of a normal diet was 5 days in OC and 3 days in LC. The median hospital stay in patients with LC was 5,3 days which was shorter than in patients with OC who stayed in average 7.6 days. There was a significant difference in postoperative surgically related complications as well as nonsurgical-related complications.

Conclusion
LC appears to have clinically and oncologically measurable advantages over OC. The advantages of LC are lower rates of surgical site infection, incomplete total mesolectal resection and shorter length of hospital stay.
Treatment alternatives for Klatskin tumors-A retrospective comparative study

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Background: Cholangiocarcinomas (CCCs) are malignancies of the biliary duct system. Klatskin tumors comprise the ones that occur at the bifurcation of the right and left hepatic duct.

Aim: To compare treatment methods for Klatskin tumors in a 4 year timeframe with those of a previous study.

Methods: In our retrospective comparative study, medical records from a total of 52 patients were divided into two groups based on their treatment and were categorized based on age and gender. The results were compared to the abovementioned previous study.

Results: In our study, 28 patients (53.8%) received surgical treatment. 18 males and 10 females, ages varying 53-83. 22 patients (75.8%) were treated palliatively (stent); 2 were inoperable; 4 were treated with choledochoduodenal/choledochojejunal anastomosis. 24 patients (46.2%) aged 55-80 were treated radiologically. External percutaneous drainage predominated, 18 of the patients (75%). External and internal drainage observed in 4; 2 underwent drainage and stent. The previous study comprised 29 patients in the span of 14 years, aged 34-76. Males predominate. 14 of the patients (48.3%) underwent tumor resection, 11 were treated palliatively and 4 were inoperable.

Discussion and conclusion: A decade separates the studies emphasized by the lack of radiological treatment in the first. Although the first study stretches over fourteen years, the time is contrasted by the limited number of cases. Males were mostly affected. We assert that curative procedures in the last decade have had a considerable decrease and palliative treatment will remain the most common option for most of the patients.
Technique and evaluation of novel medial patellofemoral ligament reconstruction method

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Introduction: Lateral patellar dislocation is a common problem among skeletally immature athletes. During injury, medial patello-femoral ligament (MPFL) is almost always ruptured. Failure of nonoperative treatment is an indication for surgical MPFL reconstruction.

Aim: The aim of this study was to introduce and evaluate results of novel MPFL reconstruction technique without patellar screw fixation.

Patients and methods: We have prospectively evaluated 22 patients (14 females and 8 males with an average age of 14.95, range: 13-16, and/or at least 2 dislocations, mean: 4.18, range 2-10, 11 left, 11 right knees). All patients were qualified, treated and controlled by the same surgeon and rehabilitated in different centers at their home places. Kujala scoring questionnaires were filled during surgery qualification and postoperatively (mean follow up: 2.65 years, range: 1.3-3.83). All patients underwent MPFL reconstruction using autologous gracilis tendon graft, transmitted through drills in the patella on its medial side in the native patellar attachment with oblique tunnels tangent to them, what allowed to fix the graft in the patella without screws with typical femoral fixation using Millagro Advance Interference screw.

Results: Mean Kujala score before surgery was: 70 (+-10.1), it improved up to 94.3 (+-4.4) postoperatively, p<0.001. Joint stabilization, knee range of motion, muscles strength and its reactivity were afterwards fully restored.

Discussion: Results of such reconstruction method (compared to the others described in the literature) place it among the most efficient, therefore MPFL reconstruction using gracilis tendon, without patellar screw fixation might be considered an alternative to other MPFL reconstruction methods.
Total hip replacement functional results in haemoarthropathy

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Introduction:
Haemoarthropathy, as joint destructive sign is observed mostly in patients with inherited bleeding disorders. Repetetive blood accumulations in hip, lead to end stage osteoarthritis. The best tratment option for that complication is total hip replacement, but due to rare cause, not many resultsof that procedure were published.

Aim:
The study was designed to assess the results of total hip arthroplasty (THA) including: functional outcomes, pain relief and complication rate in patients with haemoarthropathy due to inherited bleeding disorders (IBD).

Patients and Methods:
This study included 34 patients with IBD, who underwent primary THA between January 2010 and 2015 from anterolateral Watson-Jones approach. Clinical outcomes were evaluated with the following questinnaries: Harris Hip Score (HHS), Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), and visual analogue scale (VAS) to assess hip pain severity and patient satisfaction with the surgery. The mean follow-up time was 33.2 months (range, 10-62 months).

Results:
The mean HHS total score in the study group was 82.55 ± 9.62 (range, 78.05-90.25), with excellent results (≥90) in 14.7%, good (80-89) in 29.4%, fair (70-79) in 41.2%, and poor (≤69) in 14.7% hips. The mean WOMAC total score was 18.11 ± 16.74 (range, 3.00-29.00), the mean VAS satisfaction score was 91.91 ± 9.97 (range, 83.00-100.00).

Conclusions:
THA is safe and effective and, therefore, the most optimal form of treatment of massive degenerative changes of the hip joint in patients with IBD. The results are satisfactory for patients with bleeding disorders who had undergone THA procedures for end-stage hip joint OA.
Biomechanical analysis of Hamate hook fractures: A cadaver study

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Hamate hook fractures are rare injuries. Besides the common injury mechanism (direct impact to the hook) another theory recently attracted attention. Load during sports like climbing is supposed to be transmitted to the hook of the hamate by tightened flexor tendons. We now aimed to further investigate the pressure load on the hamate hook by a biomechanical cadaver study.

Eighteen unfixed forearms of body donators were used. After anatomical dissection of the palm, the specimen were placed in a self-designed testing device. Finger flexion was simulated by an engine pulling on the flexor tendons of the Dig. IV/V and forces were recorded by sensors. For identification of hamate hook fractures, all hands were then scanned by CT. MRI sequences were used to visualize tendon sliding under high load as well as after surgical resection of the hook, which is a commonly used procedure.

The self-designed testing device is suitable to analyze forces of the wrist/hand. No hamate hook showed a fracture after singular strain. Average pulling force was 448(182-920) Newton (D.IV) and 345(185-486) Newton (D.V) and stop criteria were tendon rupture or bony avulsion. MRI images revealed clear change in tendon sliding behavior leading to a tendon dislocation.

Hamate hook fracture did not occur after singular max. tendon contact pressure. Fractures of the hook caused by high contact pressure rather seem to result from repetitive than from singular pressure load. Tendon sliding is significantly changed after hamate hook resection.

Comparison of clinical outcomes after different surgical methods for the treatment of neurogenic heterotopic ossification

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Background:
Neurogenic heterotopic ossification is the process of bone formation in soft tissues surrounding paralyzed joints. This condition can be triggered by CNS damage. HO develops typically in the hip joint once the temporary dysfunction of the CNS passes
away and causes limitation of joint mobility and chronic pain. There are only a few methods of prevention and limited surgery methods of treating the disease.

Aim:
Study was conducted to compare the clinical effectiveness of two surgical methods: arthrodesis and total hip replacement as an innovative method of treatment.

Patients and Methods:
This study was carried out by collecting data in two time points. Prior to surgery and during the follow-up visit. In both time points full physical examination, X-ray and orthopedic scores evaluation were conducted. The Harris Hip Score (HHS) was used in first and second time point. The Self-Administered Patient Satisfaction Scale for Primary Hip and Knee Arthroplasty (HKASS), Visual Analog Scale (VAS), The Western Ontario and McMaster Universities Arthritis Index (WOMAC) and 36-Item Short Form Survey (SF-36) were used during follow-up visit.

Results: When using total hip replacement as a treatment of neurogenic heterotopic ossification vs arthrodesis we observed: better overall results in WOMAC (2.7) and SF-36 scale (1.5). However, HHS score was better when using arthrodesis (1.7) with the highest influence of pain reduction level (3.4). VAS scale (25% vs 0%)

Conclusion:
THR is a promising method for the treatment of neurogenic heterotopic ossification of the hip joint as compared to other therapeutic options.

PH IMPACT ON WOUND HEALING PROCESS: A REVIEW ARTICLE

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Introduction
Wound healing process is an important issue especially in case of surgery wards. Non-healing skin injuries result in prolonged stay in hospital, susceptibility to infection, what makes treatment process longer and often unbearable for patient. It is well known, that effectiveness of healing process depends on many factors such as: mechanics of injury, depth of wound and degree of contamination. Also some systemic comorbidities (e.g. diabetes mellitus) may affect healing. In general, wound healing depends on chemical reactions of biological active substances and physical factors such as: pH, temperature, pressure, and skin elasticity. Some studies have shown, that pH affects inflammatory reaction associated with wound healing due to secretion of tumor necrosis factor, enhancement of leucocyte activity, activation of complement and humoral immunological reactions.

Evidence Acquisition
The appropriate online databases including PubMed, Science Direct, and Corchane Liblary were searched until January 15, 2017, using free text. Only English papers were included such as systematic reviews, clinical trials, and randomized clinical trials. Included studies were categorized based on topics related to wound healing process and pH impact on that.

Results
Differences in pH have impact on healing process and its speed. TNF and complement activation are strongly correlated with pH level. It also influences macrophage migration, keratinocyte proliferation, differentiation, adhesion.

Discussion
Process of wound healing, often neglected by surgeons may have impact on overall treatment results. It is the part of treatment that could be improved. Deep understanding combined with proper usage of pH modulating factors could make them interesting tool in everyday clinical practise

Otorhinopharyngology - oral

Time: Saturday, 27/May/2017:
8:30am - 9:45am

THE ABILITY OF THE SUBJECTIVE ASSESSMENT OF NOSE BREATHING DIFFICULTIES

Milica Prtina

University of Novi Sad Medical Faculty, Serbia

Introduction: Impaired nose breathing is a subjective symptom and it often does not coincide with clinical nose findings and functional tests of breathing function.

The Aim: Determining the ability of volunteers to determine a better way of breathing through the nose and comparison of subjective and objective findings of the nose respiratory function.

Material and Methods: The study was conducted prospectively and included 30 volunteers. Each volunteer subjectively assessed nasal breathing for each half of the nose grade of 0 to 10. Nasal patency was measured by active anterior rhinomanometry in non-decongested mucosa using the Interacoustics SRE 2000 device.

Results: Statistically significant low negative correlation was found between subjective assessment and objective findings of the nose respiratory function on the
left and right sides of the nose, as well as in patients with nasal septum deviation. Comparing the subjective assessment of breathing and rinomanometric findings of those with the straight nasal septum there was no statistically significant difference. Deviated nasal septum was found in 56.7% respondents.

Conclusion: Volunteers on the basis of their subjective feeling of breathing through the nose are not able to accurately determine the way of heavier breathing. Respondents who had a normal function and straight nasal septum are also not able to objectify nose respiratory function. Rhinomanometry is objective method which makes it possible to determine the precise way of heavy breathing through the nose.

**Taste Disorders – an Uncommon Complication of Tonsillectomy. A Prospective Study.**

**Aleksandra Borovika¹, Gunta Sumeraga. MD¹,²**

¹Faculty of Medicine, Riga Stradiņš University, Latvia; ²Pauls Stradins Clinical University Hospital, Latvia

**Introduction**

Taste disturbance is an unusual complication of tonsillectomy of which there are very few reports in literature (C. Uzun et al 2003).

**Aim**

To research a possibility of developing taste disorders as a complication of tonsillectomy among patients of Otolaryngology Clinic (OC) of Pauls Stradins Clinical University Hospital (PSCUH).

**Patients and Methods**

The study was conducted involving patients who had undergone tonsillectomy and healthy people who had not undergone tonsillectomy as a control group. All respondents were asked to fill out anonymous surveys. Testing of the sense of taste with chlorhexidine (0.025%; 0.05%), glucose (2%; 10%), citric acid (0.5%; 7.5%) and sodium chloride (0.5%; 2.5%) was also performed. The data obtained were statistically processed using IBM SPSS Statistics 22.0 software. The descriptive statistics and the measurement of agreement Kappa Coefficient were used.

**Results**

Tonsillectomy patients’ complaints about disturbed sense of taste after procedure are more likely to be connected with their previous taste perception problems rather than with tonsillectomy (Kappa=0.577, p<0.001).

In the control group some participants also reported subjective taste disturbances but additional factors, e.g. an upper respiratory infection recently, were present.

The analysis of other factors, which possibly could cause taste disorders, showed no significant difference between respondents who had taste disorders and who did not have such (p>0.05).

**Discussion**
Results of other similar studies are controversial. This study shows that taste disorders are uncommon among patients who undergo tonsillectomy in OC of PSCUH. More research is needed in this field to get more accurate statistical results.

MORPOMETRY OF THE AURICLE

Nikolina Pupovac, Nikola Anđelić

Department of Anatomy, Faculty of Medicine University of Novi Sad, Serbia

Introduction: Morphometric studies of auricle find their place in many areas, which are aesthetics, forensic medicine, anthropology, mythology, arts and acupuncture.

The Aim: The aim of this study was to determine the morphometric parameters, the form of the auricle, and to determine differences in relation to the gender and body side.

Material and Methods: The research was conducted on 60 subjects (30 males and 30 females), average age 19.10 years, without history of genetic disorders, injuries or any disease of the auricles. We photographed both auricles in all subjects and we measured nine parameters on each auricle by using a computer program Image J 1.48 v. According to the shape, we classified auricles into four groups.

Results: The average length of the auricle was 65.08 mm, and the width was 34.05 mm. The average length of the auricle above the tragus was 29.33 mm, below the tragus was 16.79 mm, while the average length of the tragus was 16.91 mm. The average length of conch was 24.71 mm while conch width was 18.51 mm. The average height of the lobule was 11.05 mm while its width was 18.71 mm. The most common form in males was oval (43.33%) and in females was triangular (40%).

Conclusion: There was no statistically significant difference in relation to the body side, but between the genders there were statistically significant differences among almost all of the parameters (except length of the auricle below tragus and lobule height). Compared to the other populations, deviations are minor.

Surgical technique determines the post-tonsillectomy hemorrhage rate

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¹Medical University of Vienna, Austria; ²University of Tuzla, Clinic for Ear, Nose and Throat, Bosnia and Herzegovina

INTRODUCTION:

Tonsillectomy is the most common surgical procedure in otorhinolaryngology. Techniques used are blunt dissection with mono-/bipolar forceps haemostasis and mono-/bipolar forceps haemostasis. The most common complication of tonsillectomy is a post-tonsillectomy bleeding.
AIM:
To analyse post-tonsillectomy haemorrhage rate, and relate it to the surgical technique.

PATIENTS AND METHODS:
All patients (children and adults) that were subjected to a tonsillectomy with from January 1, 2015 to September 1, 2016 at three centers in Bosnia and Herzegovina were included. The data about surgical technique and post-tonsillectomy haemorrhage were collected.

RESULTS:
1087 patients (864 children and 223 adults) with data concerning operative technique were identified in clinic databases. Mono-/bipolar forceps haemostasis was performed in 165 patients, whereas blunt dissection with mono-/bipolar forceps haemostasis was performed in 922 patients. The bleeding occurred in 46 patients (4.2%), 24 children (2.8%) and 22 adults (0.1%). Post-tonsillectomy hemorrhage after mono-/bipolar forceps haemostasis occurred in 1 patient (0.6%), 45 patients (4.88%) had a hemorrhage after blunt dissection with mono-/bipolar forceps haemostasis. All 46 patients with post-tonsillectomy haemorrhage were readmitted for observation, 10 children (41.67%) and 6 adults (27.27%) returned to surgery.

DISCUSSION:
Based on our results, surgical technique does in fact determine the rate of post-tonsillectomy haemorrhage, with the rate being more than eight times lower after mono-/bipolar forceps haemostasis compared to blunt dissection with mono-/bipolar forceps haemostasis. Despite of some limitations of this study, it seems that mono-/bipolar forceps haemostasis should be preferred as a tonsillectomy technique.
Hematology - oral

Time: Saturday, 27/May/2017:
11:30am - 12:45pm

Location: A2 - HSZ

Retrospective study: Expression analysis in malignant lymphomas reveals eIF impact

Julia Judith Unterluggauer¹, Christine Beham-Schmid², Heinz Sill², Peter Valentin Tomazic³, Karoline Fechter², Rudolf Schicho⁴, Peter Neumeister², Alexander Deutsch², Johannes Haybaeck¹,⁵

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Introduction
Eukaryotic translation Initiation Factors (eIFs) are crucial for the first steps of the translation process helping to load the messenger RNA (mRNA) onto the ribosome and start protein synthesis. Today it is known that they are implicated in tumorigenesis. However, data on the role of eIFs in aggressive lymphomas is limited.

Aim
We aimed to investigate whether eIFs can serve as biomarkers and/or therapeutic targets to support diagnostic precision and planning of individualized treatment strategies in patients affected by aggressive lymphomas.

Patients and Methods
We correlated eIF expression to cancer specific survival in a public available gene expression data set of an aggressive lymphoma patient cohort to test possible prognostic implications. Furthermore, we investigated eIF expression in 6 diffuse large B-cell lymphoma (DLBCL) and 2 Burkitt lymphoma (BL) cell lines in comparison to an immortalized B-cell line by Western blot analysis (16 eIFs analyzed) and eIF expression in primary DLBCL tissue samples by immunohistochemical analysis (n=20, 4 eIFs analyzed).

Results
The survival analysis revealed that 9 out of 56 analyzed eIFs significantly correlate with worse cancer specific survival (p<0.05). Increased expression for certain eIFs was observed in DLBCL- and BL-cell lines. Our immunohistochemical analysis
indicated higher eIF expression for the more aggressive nonGCB-subtype compared to the GCB-subtype of DLBCL.

Discussion

Our results highlight, as also previously shown for other cancer entities, eIFs as important players in malignant lymphomas and indicate that they should be further evaluated as potential biomarkers and/or therapeutic targets.

**Synergy between Platelet-Rich Plasma (PRP) Gel and Splitted Thickness Skin Graft (STSG) Technique in Treating Chronic Non-healing Wound Ulcer**

**Min Jiun Chung**

First Moscow State Medical University, Russian Federation

**Introduction:**

Chronic wounds, such as diabetic ulcers, are usually treated by debridement, reduction of weight bearing and vacuum dressing. Chronic wound remain unheal may eventually lead to amputation. Recently, several studies show that platelet-rich plasma (PRP) enhance wound healing and shows antibacterial effect. Thus, raise the question if PRP and Splitted Thickness Skin Graft (STSG) could have synergistic effect.

**Aims:**

To investigate the synergistic action between PRP Gel and STSG technique as treatment to chronic non-healing wound ulcer.

**Patients and Methods:**

20 patients with chronic diabetic foot were treated with STSG in addition with PRP gel. Wound bed was prepared by surgical debridement. Each STSG was harvested from upper anterior of the thighs. PRP was delivered directly before and after the application of STSG. Wound was then covered with simple staple bolster dressing. Medical review and photographs of the wound taken at the time of bolster remover and each follow-up until STSG site fully recovered.

**Results:**

The mean total time to achieve total recover of STSG site range from 15 to 20 days.

**Discussion:**

Splitted thickness skin graft (STSG) is commonly use to treat large soft-tissue defects. However, some patients may develop seroma, hematoma and infection. PRP reduce time needed for wound healing and thus reduce failure rate.

PRP enhance fibrin formation and reduce the shear-off rate of STSG, in turn increasing the success rate of the treatment.

**Conclusion:**

PRP synergy with STSG by enhance the primary healing of the wound and reduce the healing time.
Intracellular Toll-like Receptor Expression in Cord Blood Neutrophils and Monocytes Exposed to Cigarette Smoke.

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Medical University of Bialystok, Poland

Introduction
Cigarette smoking activates inflammatory cells producing local and systemic inflammation. Tobacco metabolites can cross the placenta influencing both adaptive and innate fetal immune system.

Aim
The aim was to assess whether and to what extend maternal smoking reflected by cigarette smoke-conditioned media (CSCM) influence intracellular Toll-like receptors (TLR2 and TLR4) activation on the human cord blood neutrophils and monocytes.

Materials & Methods
28 cord blood samples obtained from term, healthy newborn born from non-smokers mothers were used. Each sample was divided into 3 parts: Control group (C) - standard media, Smoke 1 - standard concentration of CSCM (S1), Smoke 2 - half of CSCM concentration (S2). To assess changes in TLR2 and TLR4 activation we used neutrophils and monocytes grown for 24 h in standard or CSCM media. TLR2/TLR4 expressions were assessed using flow cytometry.

Results
Neutrophil expressions of TLR2 in C group in comparison with S1 and S2 group were respectively: 1,7±0,8% vs. 8,4±4,5% vs. 11,0±6,3%; monocyte expressions were 1,1±0,8% vs. 5,6±2,6% vs. 6,5±3,7%.

TLR4 neutrophil expressions were 1,8±0,9% in C group vs. 12,3±9,4% in S1 group vs. 10,9±7,9% in S2 group. Monocytes TLR4 expressions were 1,3±1,0% vs. 7,1±3,1% vs. 11,6±7,0%.

In all cases C vs. CSCM p was <0,05.

Discussion
Our study showed, that while CSCM is responsible for innate monocytes/neutrophils pro-inflammatory signaling, this process is dose-dependent. Higher concentration of CSCM reduces monocytes/neutrophils TLR2 and TLR4 expression (but increasing monocytes TLR4 expression).

Our findings show that maternal smoking might have significant immunological effect on toll-like-receptor-mediated innate response pathways.
Background: Cancer is one of the biggest causes of death in the world. In 2012, WHO's data shows that happened 14,068 cases of cancer and 8,202 of them died. A total of 13.3 out of 100,000 cases are leukemia and 7 out of 100,000 people died of leukemia. Leukemia pathogenesis obtained deviation of several cellular signaling pathways, causing uncontrolled of cell growth. By making these signaling pathway as a therapeutic target, the growth of cancer cells can be suppressed. This will give a great impact on the life expectancy of leukemia patient. Isoflavones have antioxidant potential and anti-cancer properties which contains in Soybean (Glycine max).

Method: Through reviewing all of the credible scientific journal literature on the potential of isoflavone genistein in soybean as an alternative treatment of leukemia.

Result and discussion: Isoflavones have anticancer activity by inhibiting angiogenesis of the tumor cell. Genistein is an isoflavon that is mainly contained in soybean. Genistein is optimally extracted from soybeans at a temperature of 80 degree celcius with 96% ethanol. Genistein has an inhibitory effect for carcinogenesis mediated by different pathways, including NF-kB and Akt. NF-kB and Akt. Inhibition of this pathway will induce cancer cell apoptosis and reduce clonigenicity on myeloid and lymphoid leukemia cells. Genistein is also proven can reactivate the tumor suppressor genes. Genistein's half time is longer in humans, thus will provide a more potent anti-leukemia activity.

Conclusion: The isoflavones genistein in soybean have a therapeutetic potential for leukemia as it inhibits the leukemia progression through various pathways, including NF-kB and Akt.
Protein extraction from human white blood cells under influence of donor-related factors

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¹University Sarajevo School of Science and Technology, Sarajevo Medical School Faculty, Bosnia and Herzegovina, * contributed equally; ²University of Tuzla, Faculty of Science, Bosnia and Herzegovina; ³General Hospital Brčko Distrikt, Bosnia and Herzegovina

Introduction: White blood cells (WBCs) or leukocytes are part of the immune system and help us to fight infections and other diseases. This function depends on their capacity to exit the circulation and reach infected tissue. This multistep process is mediated by interactions of various proteins expressed on vessels wall and on leukocytes themselves. Lack of any of these proteins results in immunodeficiency.

Aim: The aim of our study was to optimize the best method for isolation of total proteins from leukocytes, which would allow their straightforward analysis, and to investigate the effect of test sample quality and various blood donor related factors on total protein yield.

Materials and Methods: We used blood samples of human donors of different ages, gender and blood groups, and protein isolation was proceeded with two independent protein extraction methods.

Results: The method that we followed has generated a higher total protein amount. The results showed that age, gender, blood groups and most important a storage date of blood sample may affect total amount of proteins extracted.

Discussion: For study of many immune diseases and immune functions of white blood cells, it is necessary to have a sufficient amount of total protein isolates, and based on generated results, donor-related parameters (age, gender, blood group) should be considered concerning leukocyte protein isolation.
incidentally discovered of Solid pseudo papillary pancreatic tumor in a Pregnant Woman (case report)

Dr. OUAHIBA KADJAM, Dr. MOHAMMED AMIN SERRADJ

Medical University Of ORAN, ALGERIA

Introduction: The Solid-pseudo papillary tumors (SPT) of the pancreas also called Frantz tumor is a rare pancreatic tumor accounting for 1–2% of exocrine pancreatic neoplasms. It is usually asymptomatic and discovered incidentally. It was reported as rare lesion with “low malignant potential” occurring mainly in young women between the second and third decades of life. This study was designed to define the clinicopathological characteristics of the SPT.

Background and aim: The aim of the present study is to report our experience in surgical treatment of SPT and review of the literature.

Methods: We report a rare case of a 32-year-old pregnant young woman who complaining of vague abdominal pain at 18 weeks gestation at which was incidentally discovered during abdominal ultrasonography an heterogeneous mass of the pancreatic tail, measuring 80 mm long axis confirmed by MRI (Magnetic resonance imaging), well encapsulated and limited to the pancreas, without communication with the excretory ducts. Tumor markers were negative, and the diagnosis was made by FNA & histology revealed a papillary process.

Results:
The patient was operated three months after childbirth. A spleno-caudal pancreatectomy was performed with good postoperative course. Histological examination confirmed the radio-clinical data.
The Surgery was the only curative treatment, it gives excellent results due to a high resectability rate, linked to the slow evolution and malignant potential attenuated this tumor type.

Conclusions: SPT occurs predominantly in women (82%), although it can occur in men; all age groups are affected. Complete resection is associated with long-term survival even in the presence of metastatic disease.
A pregnancy in a patient after multiple laparotomies and pelvic inflammatory disease – case report.

Maja Karina Pietrzak, Joanna Kacperczyk, Agnieszka Dobrowolska-Redo, Ewa Romejko-Wolniewicz

Warsaw Medical University, Poland

Introduction
The history of extensive surgical interventions in the childhood may be associated with numerous medical consequences in adult life. Alterations in the anatomical structures and post-operative adhesions can interfere with patient’s fertility. Every new intervention can be linked with higher risk of complications.

Case report
Presented patient required invasive surgical treatment since the early childhood as a result of the embolism in the inferior mesenteric artery and the necrosis of the colon during first months after birth. Consecutive surgeries were performed in order to restore continuity of the gastrointestinal tract until the age of 2 years old. The patient suffered also from recurrent bacterial and fungal vaginosis and was diagnosed with ovarian cyst.

Due to extended attempts to get pregnant patient was diagnosed with infertility and further procedures were performed. One of them was complicated hysterosalpingography which led to the right ovarian empyema and right oophorectomy at age of 34. Therefore, treatment with assisted reproductive technology was implemented which resulted in the single pregnancy after the first course of the in vitro fertilization.

The patient was admitted to the labor ward because of regular contractions in the 36th week of the pregnancy. During the Cesarean section massive adhesions of fascia, muscles and peritoneum were observed which required advanced surgical precision.

Discussion
Patients with the history of multiple laparotomies and complications of routine procedures should be managed by a specialist experienced in treatment of infertility and pathology of pregnancy. Cesarean section should be performed in a tertiary referral center by obstetricians with advanced surgical skills.
Abnormal placentation - placenta accreta in a patient with placenta praevia: a case report

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¹Faculty of Medicine, University of Ljubljana, Slovenia; ²Community Health Centre Medvode, Slovenia

Introduction: Placenta accreta is an obstetric condition in which the placenta invades the myometrium, obstructs its correct separation during labor and presents a potentially life-threatening maternal hemorrhage. The major risk factor for placenta accreta is placenta praevia after a prior Caesarean delivery.

Aim: To present our case of placenta praevia with the concurrent occurrence of placenta accreta and to emphasize the importance of early recognition of placenta accreta and a multidisciplinary approach to the problem.

Patient and Methods: A 29-year-old gravida 2, para 1, 36 weeks 4 days’ gestation, was admitted to the Department of Perinatology diagnosed with placenta praevia and a suspicion of placenta accreta. Her first pregnancy ended with a Caesarean delivery because of dystocia. Admission ultrasound examination could not exclude myometrium and bladder invasion; there was no apparent myometrium in between the placenta and the bladder. Cystoscopy revealed no bladder invasion by placenta.

Results: The patient underwent Caesarean section after a temporary bilateral internal iliac artery balloon occlusion was performed by interventional radiologists to prevent excessive bleeding and allow potential hysterectomy. The neonate was delivered with Apgar scores of 8 and 9. Placenta was located in the place of prior Caesarean scar, immediately bellow perimetrium, with no visible myometrium, spreading over cervix. Strong continuous stitches were made. The patient was discharged 4 days after the delivery.

Discussion: Placenta accreta is becoming increasingly common worldwide with an increasing number of prior Caesarean deliveries. Good coordination and multidisciplinary approach are essential in planning individual management.
Treatment for testicular cancer starting with radio- and chemotherapy: a case report

Laura Cristina Zaharie

University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca, Romania

Introduction: Inguinal orchiectomy is the gold-standard method of diagnosis for testicular cancer and, also, the first step in therapy. In this case, the vital risk of the metastases discovered at the patient’s first presentation was so high that it was decided to start treatment with brain radiotherapy and chemotherapy.

Case presentation: A 25-year old Caucasian man was referred to our clinic for evaluation of a left 10-cm laterocervical adenopathy. He had undergone a biopsy and the results came back positive for mixed nonseminoma testicular tumor, with a choriocarcinoma component. His thoraco-abdominal-pelvic CT scan showed multiple metastases in his lungs, retroperitoneal and pelvisubperitoneal regions. Moreover, a metastasis in right parietal lobe was found during a brain CT scan. The tumoral markers, LDH, hCG and AFT, had very high values. The therapy was initiated with brain radiotherapy and a cycle of Carboplatin, followed by four cycles of BEP chemotherapy type. Five months after diagnosis, the patient is subject to a left radical inguinal orchiectomy. Postsurgical, the patient had a PET-CT and the result was construed as a partial response. The biological markers were in normal range. The therapy was continued with four cycles of VeIP chemotherapy type and it was registered a complete response to this treatment.

Conclusion: As described elsewhere in the literature, the treatment for testicular cancer starts with orchiectomy and is followed by chemotherapy. However, this case highlights that there are situations when it is more important to start with radio- and chemotherapy than to operate the primary tumor.
The effect of knowledge, attitude and practice of mothers of asthmatic children on the severity of the disease in Khartoum asthma clinics 2016: A cross-sectional hospital based study

Ahmed Abdulgadir Noureddin, Kamil Merghani

University of Khartoum, Faculty of Medicine, Sudan

Background:
Prevention of asthma exacerbation is one of the major challenges of public health. Adequate knowledge and positive attitudes and right practices are crucial for prevention of exacerbations. However, there is paucity of data regarding these in Sudan.

Objectives:
To assess the knowledge and to identify the attitude and practice of mothers of asthmatic children regarding their use of inhalers, compliance to preventers and to measure its effect on the severity of the disease in their children.

Methodology:
A convenient sample of 100 mothers of asthmatic children was enrolled. Any mother with a child diagnosed with bronchial asthma for more than 3 months, and attending the outpatient clinic of pediatric asthma in Soba or Ahmed Gasim hospitals or the ER of Ahmed Gasim or Ibrahim Malik hospital in the period from 2nd to 31st of October 2016 could be included.

Results:
Asthma was believed to be infectious by 7%. 17% of the mothers thought asthma has immunization. 21% doesn’t accept to use the inhaler. 50% of them didn’t use the inhaler correctly. Most of the mothers (69%) doesn’t use the inhaler in mild symptoms and 53% didn’t use preventers. The severity of asthma found to be associated significantly with the attitude and practice of mothers (P<.05) and with the right use of inhalers and the use of preventers (P<.05).

Conclusion:
Sincere and sustained efforts are required to disseminate knowledge about all aspects of asthma and its management among patient and to dispel their myths and misconception associated with diseases and its therapy.
Students’ perception of school toilets with differentiation between rural and urban areas and proposed solutions for inadequate sanitary standards.

Maja Karina Pietrzak¹, Adrianna Ziółkowska¹, Marcin Banasiuk¹, Wojciech Feleszko¹, Barbara Karpieszuk², Leszek Szycman², Dorota Peretiatkowicz²

¹Warsaw Medical University, Poland; ²Growth for Knowledge

Introduction: Students’ bad perception of school toilets is often associated with dysfunctional elimination syndrome, a common medical problem among paediatrician population.

Aim: To determine students’ perception of school toilets, with comparison between students from urban and rural areas, and possible solutions for improving sanitary conditions at schools.

Patients and methods: Research was a questionnaire study conducted on 816 children aged 6-12 years and 1000 mothers of children aged 6-12 years in Poland.

Results: Thirty one percent of children assessed their school toilets negatively. Furthermore 72% of them stated that bathrooms are not always clean, 53% that there is bad odour, 52% there are no paper towels and 51% that there is no toilet paper. Children from rural areas (n=298) assessed their school bathrooms positively more often than children from urban areas (n=517) (76% vs. 66%, p=0,0014) . We want to highlight that only 62% of children used toilets whenever they needed with significant difference between pupils from rural (n=298) and urban areas (n=517) (71% vs. 56,3%, p=0,0000). Out of suggestions for improvement in school's bathrooms children chose scented soap (71%) , air-fresheners (70%) and colourful tiles (57%).

Discussion: Many students perceive their school toilets as dirty and/or do not use school toilets whenever they need which may lead to serious health consequences. What is more there is statistically important difference in school toilets’ perception between children from rural and urban areas. Furthermore propositions for school toilets’ improvements are mostly low-cost and/or easy-to-introduce and should be considered by school administration.

A prospective study has found lung ultrasound to be a highly sensitive method for detecting community acquired pneumonia in children

Anja Pintarič

University Clinical Center Maribor, Slovenia

INTRODUCTION. Community acquired pneumonia (CAP) is a common cause of pediatric morbidity. CAP can be caused by different pathogens. There is no pathognomonic sign of pneumonia and radiological diagnostics is usually needed.
Over the last years, lung ultrasound (LUS) has been investigated as a possible alternative to chest X-ray.

AIM. We assume that demographic, clinical and laboratory characteristics differ significantly between bacterial, viral and atypical pneumonia. We hypothesized that LUS is equally or more sensitive method for diagnosing CAP compared to chest X-ray.

PATIENTS AND METHODS. 117 children, hospitalized because of CAP, were included in this prospective study. We noticed presence of relevant clinical characteristics. C-reactive protein and white blood cells were determined. Microbiological investigations were performed for detection of pathogen. We performed chest X-ray and LUS in all subjects.

RESULTS. CAP was caused by Mycoplasma pneumoniae in 23,9%, viruses in 32,5% and bacteria in 43,6%. The average age of subjects with Mycoplasma was 8,1 years, considerably more compare to others. Children with bacterial CAP had more frequently fever, chest or/and abdomen pain, signs of decreased breathing and consolidation in this group (p<0,01). Children with viral pneumonia presented more common with crackles on auscultation and respiratory distress (p<0,01). Infiltrates were visible on chest X-ray in 81,2% and on LUS in 98,3% (p<0,01).

DISCUSSION AND CONCLUSION. If we consider the full range of clinical characteristics, we can quite reliably identify the etiology of the CAP. LUS was proved to be at least as sensitive method for detecting pneumonia as chest X-ray.

Supplementation of fish oil during pregnancy reduces the risk of asthma in offspring

AnnaMaria Mroczek, Kamił Jakub Balabuszek, Marta Misztal, Urszula Falkowska, Agnieszka Rosława Radzka, Halina Ph.D. Pieciewicz-Szczeńska

Student Research Circle at the Department of Epidemiology and Clinical Research Methodology, Medical University of Lublin, Poland

INTRODUCTION: The rate of asthma in the population increased dramatically in recently years. It is important to identify potential risk or protective factors of asthma, to prevent further cases growth. N-3 polyunsaturated fatty acids (n-3 PUFAs) may be a key in the prevention of allergic disease.

AIM: To describe whether fish oil consumption during pregnancy may result in reduction of childhood asthma.

MATERIALS and METHODS: Standard criteria were followed for review of the literature data. A search for English-language articles in PubMed database was performed.

RESULTS: In study published in the New England Journal of Medicine scientists discovered that children, whose mothers supplemented fish oil during pregnancy have reduced risk of persistent wheeze or asthma occurred (16.9%) vs children receiving placebo (23.7%). In 2008 scientists found out that in fish oil group
compared with the placebo the hazard rate of risk of the asthma was reduced by 63% and allergic asthma by 87%. Experts noticed that high vs. no maternal fish consumption is protective against both early and ever asthma in 7 year old children. Scientists from Australia reported that n-3 PUFA intake during pregnancy had no significant effect in reducing IgE-associated allergic disease. The same conclusion we can see in another randomized controlled trial.

CONCLUSIONS: There are discrepancies between the results, but in many publications, scientists noticed reduced risk of asthma in children, whose mother consumed fish oil during pregnancy. Consuming fish oil brings many benefits. It can be a good prevention method against allergic diseases.

Gynecology - oral

Time: Location: C1 - HSZ
Saturday, 27/May/2017:
11:30am - 12:45pm

Efficiency and safety of an intravaginal dapivirine ring for HIV prevention.

KamilJakubBałabuszek, AnnaMariaMroczek, MartaMisztal, AgnieszkaRadosławaRadzka, UrszulaFałkowska, HalinaPh.D. Piecewicz-Szczęsna

Student Research Circle at the Department of Epidemiology and Clinical Research Methodology, Medical University of Lublin, Poland; balkam@o2.pl

INTRODUCTION: The incidence of human immunodeficiency virus (HIV) infection remains very high in the world especially in Sub-Saharan Africa. HIV-prevention products controlled by women are urgently needed. Dapivirine inhibits reverse transcriptase, an enzyme that controls replication of HIV’s genetic material.

AIM: To describe efficiency and safety of an intravaginal dapivirine ring for HIV prevention.

MATERIALS AND METHODS: Standard up-to-date criteria were followed for review of the literature data. A search for English-language articles in PubMed was performed.

RESULTS: In study published in 2016 in the New England Journal of Medicine scientists discovered that the incidence of HIV-1 infection in the group with vaginal ring was lower by 27% than in the placebo group.
There was significant difference in efficiency due to age. For women who were older than 21 years of age, the efficiency of HIV-1 protection was 56% with no protection observed among participants between 18 and 21 years old.

In another study scientists reported 31% lower risk of HIV-1 acquisition in the dapivirine vaginal ring group than in the placebo. This study also showed better protection among women older than 21 years of age.

Another publication proved that the dapivirine vaginal ring was safe and well tolerated.

CONCLUSIONS: Studies show that the dapivirine vaginal ring is safe long-acting HIV prevention method. The lower efficiency among younger women may be due to physiological differences in the genital tract or lower adherence. Dapivirine vaginal ring is a good prevention method that can help women better protect themselves against acquiring HIV.

Socio-economic factors that stand at the basis of effectuating abortion on demand in Romania

Madalina Mihaela Dumitru, Gabriela Chirea

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Background: The determination of socio-economic factors standing at the basis of the decision of effectuating abortion on demand, amongst general population and amongst Romany female population of Romania.

Material and methods: - descriptive transversal epidemiological study.

830 women responded to a questionnaire regarding the material used the last time in the case of pregnancy interruption.

- the identification of societal determinants of the decision of abortion;
- the analysis of the relation between the decision of abortion and the economic conditions at the level of woman's sexual education.

Results: About half of the interviewed women are aged between 17 and 39 years old. Of these 870 women, 75 % come from urban environment, the rest of 25 % coming from country side. The majority pertain to Romani minority. Almost 70 % of them live with their husband or partner and the rest live alone. Only 33 % are married and almost a half have never been married.

26 % of the questioned women have acquired higher education, 11 % of these are employed in the state sector, 18 % in the private sector, with concern for the rest of the women, these not working at all.

Conclusions: Almost 70 % of women have made a single pregnancy interruption on demand, while 16 % of the total of questioned women have made 3 or more abortions. The most majority of the women aged between 20 and 21 invoked as
main reason for the pregnancy interruption the lifestyle change, precarious economic situation.
Changes in placental blood circulation in pregnant women suffering from chronic venous disease.

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Introduction: Venous insufficiency is a risk factor for alterations in waveforms in the uterine and umbilical arteries, which associated with the development of placental insufficiency.

Aim: Investigation of placental blood circulation in the maternal-placental blood system, and in the fetoplacental system in women with chronic venous insufficiency.

Methods: We assessed parameters of Doppler velocimetry of umbilical and uterine arteries in a group of women with chronic venous insufficiency (n = 74). Healthy pregnant women have made the control group (n=30). An outcome assessed was development of placental insufficiency.

Results: The maximum blood flow rate in the umbilical vein was 9.3 cm/s, mean blood flow rate in the maternal inferior vena cava 20.1 cm/s. In the fetuses, the mean blood flow in the venous duct was 21.9 cm/s. The blood flow rate in the venous duct during atrial contractions was 9.9 cm/s ($\chi^2=16.26; p=0.0001$). The study revealed correlation between the severity of pathological damage of veins with the degree of placental insufficiency.

Discussion: Changes in placental blood circulation and abnormal uterine artery waveforms more likely occur in pregnant women with CVD at classes C2-C3 of CEAP classification. It may lead to placental insufficiency development and result in increase of perinatal morbidity.

Low birth weight among babies delivered in Omdurman maternity hospital: Proportion and risk factors, a matched case control study

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BACKGROUND: Low birth weight is a major predictor of child mortality and morbidity.

The OBJECTIVES of this study were to determine the proportion and risk factors of low birth weight.

METHODS: A matched case control study was conducted in Omdurman maternity hospital in Sudan. The study population was all babies delivered in August 2016 excluding stillborns, multiple births and babies with insufficient data. All low birth weight babies were selected using total coverage sampling as cases, and matched
on babies’ sex with randomly selected normal birth weight controls. The sample size was 350 babies; 175 cases and 175 controls. Data was collected from hospital records and six factors were tested: mother age, parity, gravidity, mode of delivery, hypertension and diabetes mellitus.

RESULTS: The proportion of low birth weight was 10.8. Bivariate analysis identified that younger mother age (p = .03) and hypertension (p = .02) were significantly associated with low birth weight while other factors were found statistically insignificant. Multivariable conditional logistic regression revealed that hypertension - when adjusted for maternal age- increases the risk for low birth weight almost three times (Adjusted OR = 2.98, 95%CI: 1.23 - 7.22, p = .02).

CONCLUSION: We found that the proportion of low birth weight is 10.8 and hypertension is an independent risk factor for low birth weight. The proportion of low birth weight can be reduced if hypertension is controlled by providing simple measures like proper antenatal care and health education for pregnant women.

**Relationship between Uterine Artery Doppler Sonography and Hemoglobin Concentration with Pregnancy Outcomes in Preeclamptic Women**

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Background and objective
Epidemiologic studies have shown a relationship between different levels of maternal hemoglobin and abnormal Doppler sonography with adverse pregnancy related outcomes. In this study we evaluated the relation between Doppler sonography of the uterine artery, hemoglobin levels and pregnancy outcomes in women with preeclampsia and healthy women.

Methods
Fifty women with preeclampsia and 50 healthy pregnant women who referred to our medical care center from 2013 to 2014 were included in the study. In both groups Doppler sonography of the uterine artery was done and hemoglobin concentration was measured in the third trimester of pregnancy (28-40 weeks). We also compared women in the case group based on their severity of preeclampsia.

Results
Twenty nine patients (51%) with preeclampsia and 17 patients (34%) from the control group had abnormal Doppler findings. In women with abnormal Doppler
findings birth weights were lower compared to the women who had normal sonography findings in the both case and control groups (p=0.024 and p=0.008, respectively), furthermore the gestational age in birth time was also lower in these patients (p=0.044 and p=0.012, respectively). The average hemoglobin concentration was not statistically different among groups, furthermore abnormal Doppler findings did not have a significant relationship with the mean concentration of hemoglobin in both groups.

Conclusion
Abnormal Doppler of the uterine artery is associated with low birth weights and premature births and the coexistence of preeclampsia is associated with an added adverse outcome.

Influence of mother’s infection caused by Klebsiella pneumoniae on spleen’s condition of posterity: experimental study.

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Introduction. The immune system rapidly develops in prenatal and postnatal period. Different mother’s infections can lead to disturbances in immune organs of newborns in their future life.

Aim. To evaluate the influence of mother’s infection caused by Klebsiella pneumoniae on spleen’s condition of posterity in different periods of postnatal ontogenesis.

Material and methods. Experimental study was conducted on 20 rats which were born from Klebsiella pneumoniae infected mothers. According to age periods animals were divided in 4 groups: puberty, mature adult, middle age and senescence. Control group consisted of 5 rats which were born from healthy mothers after physiological pregnancy. Spleens were removed and examined using histological and morphometric methods. Density of T- and B-lymphocytes, area of T- and B-zones in spleen’s lymphoid follicles were measured.

Results. Our study showed reduction of T- and B-lymphocytes density in all groups in comparison with control animals. Besides, area of T- and B-zones was decreased in first, third and forth groups but increase in second one. The density of T- and B-lymphocytes was minimal in first group that may be connected with negative influence of the mother’s infection. Maximal index of cell density in T-zone was in third group but in B-zone – in second group. We didn’t find out any statistically significant differences in cell density between indices in third and fourth groups.

Conclusion. We guess that mother’s infection caused by Klebsiella pneumoniae leads to negative effects on spleen of rat’s posterity and probably can due to immune dysfunction in future life.
late post-traumatic right diaphragmatic hernia revealed by sub occlusion (case report).

Dr. MOHAMMED AMIN SERRADJ, Dr. OUAHIBA KADJAM

Medical University Of ORAN, ALGERIA

Introduction: The post-traumatic diaphragmatic hernia is a particular lesion trauma that may go unnoticed. The diagnosis is then made on the occasion of a complication. The left diaphragmatic cupola is the most frequently affected. Diaphragmatic lesions (LD) straight post-traumatic are rare. In this interesting case we report our experience in surgical treatment of the post-traumatic right diaphragmatic hernia revealed by sub occlusion after 10 years of a closed chest trauma and review of the literature.

Methods: We report the case of a 74-year old patient with medical history of Stroke, hemiplegic for 2 years who was admitted in emergency for acute intestinal sub occlusion & respiratory distress. A history of a violent blunt thoraco-abdominal traumatism resulting from a traffic accident ten years before was noted. The diagnosis was made by the chest x-ray & the thoraco-abdominal CT. The patient was scheduled for surgical operation by posterolateral thoracotomy line through the 7th intercostal space.

Results: The exploration has objectified the presence intra thoracic of the whole liver and gallbladder attracting the duodenum. The banks alongside suture is done by sutures non-absorbable thread reinforced by a resorbable prosthesis. The operation ended with a chest tube. The postoperative chest radiograph shows good lung recoil.

Conclusions: Right diaphragmatic hernia is terrible sequelae after thoracoabdominal trauma. An unrecognized rupture can be very late, 50 years after the trauma.
Femoral neck stress fracture in a male athlete: a case report

Jure Colnaric, Gregor Makovec

University Medical Centre Ljubljana, Slovenia

INTRODUCTION Stress fractures are a problem in various populations including runners and military trainees. Although metatarsals and tibia are the most commonly affected sites, an estimated 1% of stress fractures occur at the femoral neck. Early diagnosis can be difficult as both the symptoms of insidious onset exertional groin or anterior thigh pain and the early signs of mild pain at the extremes of hip motion are non-specific and subtle. Failure to diagnose femoral neck stress fractures may lead to avascular necrosis of the femoral head and the need for a hip replacement in otherwise healthy young individuals.

CASE REPORT A 32-year old male personal trainer who competed regularly in marathon competitions presented to our hospital with groin pain after having completed a half marathon race. He experienced exertional groin pain in the past two weeks during training and had a medical history of ischial stress fracture. He was diagnosed with a displaced femoral neck fracture which was treated by dynamic hip screw (DHS) osteosynthesis.

CONCLUSION Symptoms and signs of early femoral neck stress fracture are non-specific and subtle, therefore a clinical suspicion should be maintained in all athletes. This case supports the importance of radiographic evaluation of a patient with hip and groin pain. If the patient presented at the first sign of hip discomfort, the fracture may have been prevented. In summary, this case report emphasizes the importance of early evaluation and treatment of exercise-related hip pain and of proper exercise progression.

A rare case of limited infarction of the small bowel associated with myocardial infarction in a 30 year old male

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Infarction is tissue death caused by a reduction/stoppage in blood flow due to artery blockages, mechanical compression, rupture, or vasoconstriction. In this article we discuss the peculiar aspects of multiple organ infarction.

A 30 year old male patient was admitted to the Institute of Cardiovascular Diseases on the Coronary Intensive Care Unit, with chest pain associated with syncope episodes and mild abdominal pain. The echocardiography showed there were thrombus engaged in his coronary arteries. He began treatment, but the pain was persistent. An abdominal CT scan was performed with intravenous contrast agent,
but it revealed no abnormalities. After 3 days he was transferred to the department of General Surgery with signs of bowel obstruction, facies dolorosa, paleness of the skin and specific fetid halitosis. The rectal examination showed no abnormalities, but the abdominal echography revealed edematous, dilated small bowel with no peristaltic movement. An exploratory laparotomy was performed and we found a partial jejunal ischemia, approximately 1 meter in length, starting from 60-70 cm from the duodenojejunal flexure. We proceeded with the resection of the necrotic part, followed by an end-to-end anastomosis. All this time the patient was treated with low molecular weight heparin. After discharge he was redirected to cardiology for further investigation in order to identify the etiology of the hypercoagulability status.

This case report shows us the importance of timely diagnosis and cooperation between different specialties to solve a not so common course of events.

Severe postpartum hemorrhage: a case report

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Introduction: Postpartum hemorrhage (PPH) is an obstetrical emergency and a major cause of maternal morbidity worldwide. Uterine atony, delivery-related trauma, retained placenta and coagulopathies present the main causes of PPH.

Aim: To present the case of severe PPH and to emphasize the importance of a timely diagnosis and treatment.

Patient and methods: A 28-year-old primigravida, at 40 weeks’ gestation vaginally delivered a healthy neonate. Shortly after, the placenta was delivered and since it was not intact upon inspection, a manual removal was performed. Despite administering uterotonic agents and tranexamic acid and inserting a Foley catheter in the uterus, 7 hours after delivery an estimated 2200mL of blood were lost. Fresh frozen plasma was administered and a decision for a transfer to a tertiary care centre for potential uterine artery embolisation was made. They did not decide to perform the procedure as the bleeding stopped. Concentrated erythrocytes were administered and an endometrial abrasion was performed resulting in additional debris. The patient was discharged 8 days after delivery.

Results: Day 33 after delivery she was brought to emergency department because of abundant vaginal bleeding. Upon speculum examination we found coagula and placental tissue. Abdominal ultrasound examination showed hyperechogenic reflections in the uterus. Another endometrial abrasion was performed and the histopathology of acquired tissue revealed retained products of conception and infection.

Discussion: In our case gradual systematic approach was successful in treating PPH and preserving the patient’s fertility. A close cooperation between experts in different fields is of critical importance for postpartum period.
EFFECT OF 1% PHENYTOIN GEL ON HEALING OF GINGIVAL WOUNDS & PAIN RELIEF AFTER FLAP SURGERY

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Hormozgan University of Medical Sciences, Iran, Islamic Republic of

Introduction: One of the major complications of periodontal surgery is ulceration and post-surgery pain. Positive effects of topical phenytoin have been reported to accelerate periodontal wound healing and decrease the post-surgery pain.

Aim: Effect of phenytoin gel on the periodontal wound healing and periodontal flap post-surgery pain.

Materials and Method: This is a random, clinical study. A total of 60 systemically healthy, non-pregnant, and non-smoker patients with periodontal disease in two symmetrical areas were selected as sample. The modified widman flap was performed. One area was considered the control in each patient. The periodontal pocket was filled with normal saline (solution B) prior to the stitching. The pocket on the other side was filled with phenytoin 1% solution (solution A). The patients were clinically visited after 10 days, one month, and 3 months. The pain was assessed in both areas and finally analyzed.

Results: After one month, a significant difference was found between the buccal probe and lingual depths. It was greater in Group A which was mainly associated with the effect of phenytoin gel on gingival hyperplasia. After three months, the buccal probe was still deeper in Group A. No dramatic difference was found in lingual probe in both groups. Buccal and lingual probe depth was alternatively reducing in follow up visits. Pain was reported less in surgery day, one-month, and three-month revisions in Group A compared to Group B.

Discussion: Topical phenytoin 1% suspension was not dramatically effective in wound healing and reduction of pocket depth. It was, however, effective in reducing post-surgery pain.
ORAL SURGERY TREATMENT OF PATIENTS WITH RARE GENETIC DISEASES FROM CRANIOSYNOSTOSIS GROUP – CLINICAL CASES FROM DEPARTMENT OF ORAL SURGERY, MEDICAL UNIVERSITY OF ŁÓDŹ

Aleksandra Grabiec

Medical University of Łódź, Poland

Introduction: limited access to dental care is a common problem for patients with rare genetic diseases and their carers. Moreover, specialists have difficulties with recognizing craniosynostosis shortly after child birth. This is a source of stress for the patient, leads to delayed examination and implementation of proper treatment. Oral health condition of these patients is poor because of marginalization by general practitioners.

Aim: to show aspects of surgical treatment of patients with craniosynostosis according to clinical cases from Department of Oral Surgery, Medical University of Łódź.

Patients and methods: patients with craniosynostosis of the Department of Oral Surgery, Medical University of Łódź: 40 years old patient with Crouzon syndrome, 13 years old patient with Apert syndrome. The research shows a detailed surgical treatment of patients with craniosynostosis with aetiology and syndromes (Crouzon syndrome, Apert syndrome).

Results: Mechanisms that cause craniosynostosis defects are connected with synostosis of palatal sutures as well as sutures around maxilla and delayed growth of the cranial base. Specific treatment procedures in these cases depend on factors connected with the patient, dentist and expectations from clinics that provide the treatment.

Conclusions: in case of patients with rare genetic diseases there is often one way to succeed if oral surgery treatment is provided under general anaesthesia. The team of pediatricians, oral surgeons, maxillofacial surgeons, ophthalmologists and neurosurgeons take care of the patient with craniosynostosis from the earliest age in order to guarantee comfort of life. A holistic approach and interdisciplinary cooperation between professionals will result in successful treatment.
Dentistry and Gastroenterology- bridging the gap : a cross-sectional study in Pakistan

Ibrahim Warsi, Abdur Rasheed, Javeria Ahmed, Hafiz Emmad, Anjum Younus, Ambrina Qureshi, Rimsha Hashmi

Dow University of Health Sciences, Pakistan

INTRODUCTION:
Upper Gastrointestinal (GI) diseases are known to be presented with multiple general and oral symptoms. It is a common observation that oral health is usually neglected among these patients and it could pose more complications in their disease status.

AIM:
To assess oral health in presence of gastric maladies and its oral health related quality of life (HR-QoL).

PATIENT & METHODS:
Seven hundred patients from diverse socio-demographic background were included in a cross-sectional study from two major cities, Karachi and Islamabad. A structured proforma was pretested and used to record socio-demographics, gastric symptoms/diseases, oral health status (oral lesions/mucosal conditions, oral submucosal fibrosis (OSF) and dental caries) and oral health impact profile (OHIP-14) of study participants.

RESULTS:
The GI symptoms demonstrate that mostly patients have abdominal pain, hematemesis and GI bleeding (21.6%, 12.9% and 10.3% respectively). About 70% oral-mucosal conditions were developed as a result of GI symptoms among those higher frequency reported include: oral ulceration (58.4%), xerostomia (42.1%) and gingivitis (39.4%). Using Chi-square, high associations were drawn between “Oral lesions/mucosal conditions” and “GI symptoms”: heart burn/regurgitation (p=0.037) & GI bleeding (p<0.001).

OSF around 56% and overall dental caries status was also high (DMFT mean = 6.12).

DISCUSSION:
It is evident that gastric maladies produce an array of oral manifestations that compromise not only patient’s oral health but also affects health related quality of life, thus it is essential that a gastroenterologist should work in close liaison with a dentist in order to provide quality care to patients.
Modulation of the immune response in the oral cavity in atopic disease

Ludmila Kryvenko, Amir Shaker Tarawneh, Rozana Nazaryan, Vitaliy Gargin

Kharkiv National Medical University, Ukraine

Many aspects of asthma, allergic rhinitis and atopic dermatitis remain unexplored including their clinical manifestations in oral cavity.

The aim of our study was to determine the effect of nitric oxide synthase in the inflammatory process of soft tissues in the oral cavity of experimental animals in the modulation of atopic disease.

We modeled atopic process in young animals (rabbits). Obtained specimens of oral cavity were examined histologically and immunohistochemistry was performed. Histological investigation of slides realized in detection that atopic modeling process is implemented by complex of pathological changes of oral mucosa with the presence of intraepithelial lymphocytes, eosinophils, focal erosive lesions, signs of proliferation of the basal cell layer, moderate development of papillomatous changes. Such histological picture can be interpreted as the development of inflammatory, degenerative, dyscirculatory process. It was found that such changes are accompanied by disturbance of nitric oxide synthase metabolism. The last is characterized by increased activity of inducible nitric oxide synthase more than twice, increased the activity of endothelial nitric oxide synthase in the extravascular space.

Inflammatory infiltrate is represented by B-lymphocytes, activated macrophages, eosinophils in the lamina propria and epithelium that is indicated by a sharp increasing in the immunoreactivity of CD23 and CD20 in atopic process.

The obtained results can be used as a basis for the development of preventive measures in patients with atopic diseases, based on the correction of disturbance of nitric oxide metabolism.
Orthopedics & Trauma Surgery - poster

*Time:*

Saturday, 27/May/2017:

1:45pm - 3:00pm

Differences in clinical outcomes when using Watson-Jones and Mini Invasive Anterior Supine Intermuscular approach in Total Hip Arthroplasty

Łukasz Pulik, Piotr Stępiński, Paweł Legosz, Andrzej Kotela, Sylwia Sarzynska, Paweł Niewczas

The Infant Jesus Clinical Hospital, Department of Orthpaedics and Traumatology, Warsaw, Poland

Background: Less invasive surgical techniques have evolved over the last decade in the field of hip joint replacements. For surgeons, the benefits of a shorter incision must outweigh the added technical difficulty from reduced visualization. There are many publications which compare effectiveness of conventional Watson-Jones (WJ) and mini invasive Anterior Supine Intermuscular (ASI) approach, but unfortunately it is still not clear which one of these two have better impact on postoperative functional results. Therefore, we decided to perform our own studies based on patients from Infant Jesus Orthopedic Clinic.

Methods: We examined 534 patients after Total Hip Replacement performed with two different approaches: Anterior Supine Intermuscular (N=250) and anterolateral Watson-Jones (N=284) in our Clinic. The average follow up was 2.57 years. To compare treatment results we evaluated: X-ray, physical examination results, The Harris Hip Score, Patient Satisfaction Scale for Primary Hip and Knee Arthroplasty and Visual Analog Scale of pain.

Results: We observed statistically significant (p>0.05) better results in ASI vs. WJ in Patient Satisfaction Scale for Primary Hip and Knee Arthroplasty- HKASS (1.1), The Harris Hip Score- HHS (1.1) and Visual Analog Scale of pain- VAS(1.6).

Conclusions: Our study shows better functional results in the group of Anterior Supine Intermuscular vs. Watson-Johnes approach. Furthermore the level of pain is significantly lower in ASI group. The difference between groups may result from operational technique as well as other factors, that haven't been taken into account.
Our treatment experience and outcomes of osteomyelitis in children

Dina Azimovna Saginova, Elyarbek Rozmatzhanovich Tashmetov, Ibrahim Farhaduly Rustambek, Maksim Aleksandrovich Em

Karaganda State Medical University, Kazakhstan

Although chronic osteomyelitis is seldom conditions in children, there are a lot of unresolved questions in treatment.

The aim of the study was to evaluate the outcomes of the treatment in children with chronic osteomyelitis.

A totally 15 children who were diagnosed between 2011-2016. Bacteriological examination was taken with the determination of culture and sensitivity test preoperatively. Depending on clinical features patient were treated systemic antibiotic therapy with an extensive debridement surgery, ultrasound cavitation, VAC therapy postoperatively, bone defect was full filled with biodegradable nanomaterials (PerOssal) as antibiotic delivery system, which can be loaded with different antibiotics depending from the antibiotic sensitivity test. It was analyzed based on clinical outcomes, by determination leukocyte count and blood sedimentation rate, wound and bone healing by X-ray in 1-year follow-up.

Mean patient age was 12.4 years (range 7-16). Localizations: femur 4(26.7%), tibia 5(33.3%), humerus 5(33.3%), metatarsal I (6.7%). Staphylococcus aureus was isolated in 12, st.epidermis in 1, ps. aruginosae in 1, st. haemolyticus in 1. Only 3 patient need a VAC therapy, for two patient we loaded biodegradable pellets with antibiotics into the bone defect. At last follow-up, clinical and laboratory results had normalized, primary wound and bone had healed in 13 patient. 2 patient have developed recurrent infection after several month of treatment, but refresher course of treatment reduced clinical signs.

Using combination of systemic antibiotic therapy with active surgical tactics as surgical debridement, ultrasound cavitation , VAC therapy, antibiotic loaded biodegradable pellets allow shorten the time of hospitalization and treatment.
Elongated acromion – a case report and review of the literature

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¹Medical University of Warsaw, Poland; ²Orthopedic and Sport’s Medicine Scientific Club in Carolina Medical Center in Warsaw

Background
An elongated acromion process has been described as covering the superior and lateral aspects of the humeral head and extending to the level of the surgical neck. It is considered to be an extremely rare congenital anomaly of scapula, occurring as isolated defects with minor diagnostic value. Only three cases of patients presenting such a malformation have been reported so far.

Case Report
The patient, 21-year-old woman presented complaining about a limited movement of upper limbs, which has been present since birth. Prior, at the age of 11, without any basic radiological tests, she had undergone bilateral excision of both pectoral major and latissimus dorsi muscles, obtaining no improvement in movement. Physical examination revealed restricted abduction, flexion, scarce internal and external rotation in both glenohumeral joints. On palpation, bone limitations covering humeral heads were noticed – RTG showed bilateral elongation of acromion processes. The patient underwent two surgical resections of acromion processes which, in combination with physiotherapy, resulted in transient although significant improvement in range of movement in glenohumeral joints. Nevertheless, after 11-years follow-up, the patient rejected further surgical treatment, what aggravated her condition.

Conclusion
Review of the literature revealed that elongated acromion is an extremely uncommon phenomenon. Reported case describes this congenital scapular malformation and treatment with 11-years long follow-up. In this case, the patient was misdiagnosed with muscular contracture what led to unnecessary surgery. It is of the utmost importance to take into consideration such a pathology and prevent patients from being misdiagnosed.
CONTINUOUS PASSIVE MOTION (CPM) THERAPY IN COMPLEX RESTORATIVE TREATMENT OF LOW EXTREMITIES’ PATHOLOGY IN CHILDREN WITH CEREBRAL PALSY (CP)

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The problem of CP attracts medical society`s attention last years. An injury of central nervous system leads to different disorders that make complex recovery impossible. Rehabilitation of such patients needs to be complex and modern.

The aim: to present the results of comparison retrospective analysis of CPM - therapy in rehabilitation of low extremities` pathology in children with CP using domestic device “Legtronic-2” for automatic passive movements.

Materials and Methods. In Sytenko Institute of Spine and Joint Pathology, Ukraine, were treated 37 children (from 5 to 16 years) who had reconstructive operative treatment of hip and knee joints (HJ&KJ) and following immobilization. Before operative treatment the level of motor activity according to Gross Motor Function Classification System (GMFCS) was on I level in 21,6% (8 children), on III - 29,7 % (11) and on IV - 16,2% (6). The first, experimental, group includes 16 patients who performed CPM-therapy of HJ&KJ using ”Legtronic-2”. The second, control, group includes 21 patients who had standard rehabilitation.

The results. The results of two groups were compared. It was developed significant decrease in pain, neurotrophic and miotonic syndromes, increases range of motion in the experimental group. In addition, parents note children`s positive reaction during rehabilitation in the experimental group.

Conclusion. The results of comparison retrospective analysis approve easier rehabilitation of children with spastic syndrome. Also it leads to shortering the rehabilitation`s terms at 31% in the experimental group. This information allows to recommend the developed device «Legtronic-2» for wide pediatric clinical use.

Deployment of 3-D printers in pre-op planing for a patient with musculoskeletal deformities of right forearm.

Jakub Robert Okrój¹, Michał Drwięga²

¹Medical University of Warsaw, Poland; ²Carolina Medical Center

Background: 3-D technology becomes more and more popular in medicine. Thanks to CT scans, we are able to elaborate data and print bones models for better preoperative
preparation. Moreover, it allow us to design necessary equipment such as imlants or uniqe tools.

Case report:
In 2014, 8 year old girl was diagnosed with musculoskeletal deformities of right forearm. Deformities involved both radius and ulna. In two years malformation got exacerbated. The patient suffered from the limited range of movement with lack of supination. CT scans were performed. Malformed bones models were designed and printed by 3-D printer. Doctors conducted manual preoperative plannig using printed bones. Later, the team used computer program to analise and visualize effects of their modiffiactions. Having that knowledge, uniqe implants and instruments were desinged and virtual surgery was performer. The whole procedure has been worked out step by step, each difficult moment of surgery was trained. That reduced operation time and risk of setbacks. Surgery was performed in June 2016. After six months of supervision, patient is in a good condition, the range of movement of the right forearm is slightly limited in comparison to left forearm and movements are painless. In RTG scan bones are completely rebuilt.

Conclusions:
Technology development, reduction of manufacturing costs and common access to 3-D printers suport standard procedures more and more. It enable us to personalize tools and implants due to non-standard operations, prepare more precise surgery and decrease level of complications.

Rheumatology, Immunology & Allergology - poster

Time:

Saturday, 27/May/2017:

1:45pm - 3:00pm

Developing a cancer immunogene therapy approach for aggressive squamous cell carcinoma in recessive dystrophic epidermolysis bullosa

MelanieKienzl1, VictoriaM. Leb-Reichl1, AngelikaStöcklinger2, BirgitTockner1, SophieKitzmüller1, GabrieleBrachtl3, NadjaZaborsky4, IrisK. Gratz2, JohannW. Bauer1, JuliaReichelt1, ChristinaGruber1, JosefinaPiñónHofbauer1

1EB House Austria, Research Program for Molecular Therapy of Genodermatoses, Department of Dermatology, University Hospital of the Paracelsus Medical University, Salzburg, Austria; 2Department of Molecular Biology, University of Salzburg, Salzburg, Austria; 3Experimental and Clinical Cell Therapy Institute, Spinal Cord Injury and Tissue Regeneration Center, Paracelsus Medical University,
Over 90% of patients suffering from the rare genetic skin blisters disorder recessive dystrophic epidermolysis bullosa (RDEB) will develop aggressive squamous cell carcinoma (SCC). Surgical excision is the primary treatment option, but the tumor recurs and is the principal cause of premature death in patients. The near-certainty with which RDEB patients develop SCC make them the ideal target group for prophylactic cancer vaccination strategies. In contrast to cancer vaccination applied in a therapeutic setting, preventative vaccination against tumor-causing viruses is associated with significant protection from tumor development. As no virus is associated with RDEB-SCC, and no neo-tumor epitopes have been identified, we hypothesized that we could exploit the pre-existing immunity against common childhood pathogens and re-direct it to fight cancer, provided that the tumor cells express the cognate antigen.

secretion assays, in vivo CTL-killing assays, and ex vivo T cell proliferation assays. Finally, we challenged immunized mice with syngeneic tumor cells engineered to express the cognate epitope and demonstrated significant protection from tumor development compared to controls. As a first step, and to provide proof-of-principle, we used a prime-boost DNA vaccination protocol to successfully generate mice with immunity to known measles virus CTL epitopes. We monitored the developing immune response to vaccination via interferon-

Thus we provide proof-of-principle that a re-called immune memory can control tumor outgrowth. Additionally, we can use this model to further analyze the molecular and cellular determinants required for successful antitumor responses, and to develop in vivo approaches to deliver the cognate antigens into the tumor.

Smoking habits and anti-CCP antibodies in patients with Rheumatoid Arthritis

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1Carol Davila University of Medicine and Pharmacy, Romania; 2Victor Babes Clinical Hospital

Objective:
Anti-cyclic citrullinated peptide (anti-CCP) antibodies show high specificity for rheumatoid arthritis (RA). The aim of the study was to investigate the correlation between smoking and high levels of anti-CCP antibodies in patients with RA and to evaluate the association between smoking and the disease activity and, respectively, radiological progression.

Methods:
The retrospective study included 147 patients diagnosed with RA in the Rheumatology Department. Anti-CCP antibodies were measured by enzyme-linked immunosorbent assay (ELISA) in the serum.

The other variables we evaluated were: the onset of the disease, the family history, C reactive protein (CRP) and erythrocyte sedimentation rate (ESR) levels, hand and wrist imaging. Disease activity was measured using DAS28 (Disease Activity Score based on evaluation of 28 joints). The present and past treatment of patients was reviewed.

Results:
The mean value of the anti-CCP antibodies was higher in smokers than in non-smokers (306 U/ml I vs. 289 U/ml) but the difference was not statistically significant (p>0.05). However, the study shows that smokers have a 2.33 fold higher risk of developing a form of RA with positive anti-CCP antibodies than non-smokers (p<0.05; r=0.15).
However, smokers required switching to novel therapeutic agents such as biological therapies earlier in their treatment than non-smokers.

Conclusions:
This research study showed that there is no statistically significant increase in the level of anti-CCP antibodies in smokers as compared to non-smokers. However, smokers were more likely to develop RA with positive anti-CCP antibodies. The disease was more severe in smokers than in non-smokers.

The onset of mixed connective tissue disease on a patient with symptoms of arthritis

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Introduction:
Mixed connective tissue disease is an autoimmune disorder characterized by features of systemic lupus erythematosus, systemic sclerosis, and polymyositis. It is a rare disease and affects predominately women.

Case report:
A 61-year old female patient, with a history of Mixed Connective Tissue Disease (MCTD) with arthritis and pulmonary affectation (Fibrosing Alveolitis) from 2007, in treatment with Medrol, with favorable evolution comes to the hospital with mechanical cervical and low back pain, accompanied by dizziness, mechanical hip pain and inflammatory pain affecting the small joints of wrist and hands with morning stiffness about 30 minutes.
The symptomatology started in 2007 with mixed joint pain, hands swelling and diffuse myalgia. She was initially diagnosed with Rheumatoid Arthritis. In 2010, the
level of C reactive protein was elevated and Rheumatoid Factor 640 UI/ml. The diagnosis of MCTD was brought into consideration by high levels of anti U1 RNP antibodies.

Results:
The patient was treated with Plaquenil and Medrol for one year with significant improvement. She was also administered Methotrexate (MTX) one year but she developed leucopenia so the MTX was stopped. In 2011 a new diagnose was added to MCTD, Fibrosing Alveolitis after persistent episodes of puffy hands and acrosclerosis. She was administered Cyclophosphamide for 6 months. In the last years the patient complains about exercise induced dyspnea and acrocianosis.

Conclusions:
The particularity of this clinical case is that the symptoms of the disease didn’t appeared all at once, but over a number of years, which made the confusion with Rheumatoid Arthritis.

Low level laser therapy in the treatment of osteoarthritis

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Osteoarthritis is the most common form of arthritis, affecting millions of people in the world. It is a complex disease whose etiology bridges biomechanics and biochemistry. Low-level laser therapy (LLLT) is a relatively uncommon, non-invasive treatment for osteoarthritis. LLLT is a light source that generates extremely pure light of a single wavelength. The effect is not thermal, but rather related to photochemical reactions in the cells. We did a systematic review to assess the efficacy of LLLT in the treatment of osteoarthritis (OA).

Methods: We searched the MEDLINE, EMBASE, CINAHL, Web of Science, and Cochrane databases in all languages, using the MeSH term and its text word synonyms and key words (LLLT, treatment of osteoarthritis). A search of computerized bibliographic databases covering medicine, physiotherapy, complementary medicine, and biological sciences was undertaken from date of inception until January 2002 for randomized controlled trials of LLLT for osteoarthritis. 25 studies were identified.

Results: In some articles it was shown that LLLT in compared with placebo can reduce pain in patient with osteoarthritis, and as a result it has a significant effect on quality of patients life. Also some articles have shown that LLLT can reduce morning stiffness. Only one study found significant results for increased knee range of motion. Other outcomes of joint tenderness and strength were not significant. Lower dosage of LLLT was found as effective than higher dosage for reducing pain and improving knee range of motion.

Discussion: For OA, the results are conflicting in different studies. LLLT could be considered for short-term treatment for relief of pain for OA patients, particularly...
since it has few side-effects. Clinicians and researchers should consistently report the characteristics of the LLLT device and the application techniques used.

Insect sting anaphylaxis - does the site of the sting influence the outcome?

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Introduction: Hymenoptera venom hypersensitivity is a frequent but unfortunate event, accounting for approximately 0.5 casualties per million per year. It is known that several factors - environmental, genetic and individual conditions may influence the occurrence and character of a systemic reaction.

Aim of the study: The aim of the study was to identify the relation between site of a sting and progress of anaphylactic reactions in the group of patients allergic to Hymenoptera venom treated in Silesian Regional Allergy Outpatient Clinics.

The frequency and severity of allergic reactions according to area of a sting and its culprit were analyzed.

Materials and methods: The subject of the retrospective analysis was a total of 299 medical records of patients treated in the allergy outpatients clinics in Silesia in the years 1992-2015, each of them a subject to a single or multiple Hymenoptera stings.

Results: Majority of our patients exhibited symptoms of severe anaphylactic reaction (66%). Patients stung in areas of head and neck, and upper limb either by bee of wasp suffered from more severe symptoms than those stung in the other areas of the body (statistical significance, p<0.05). Interestingly, cutaneous symptoms were rarely observed in patients with severe reactions. Epinephrine was used only in 17.1% of cases.

Conclusion:
Site of Hymenoptera sting does influence the outcome. Stings in the areas of head, neck and upper limb are more severe than in the other parts of the body. Epinephrine should be a drug of choice in systemic allergic reactions.
Investigation of Killer Immunoglobulin-like Receptor (KIR) and HLA genotypes to predict the occurrence of acute allograft rejection after kidney transplantation

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Background: After kidney transplantation, natural killer (NK) cells play a pivotal role in triggering the immune response to the allogeneic grafts primarily by their killer-cell immunoglobulin-like receptors (KIR). In this study, we have evaluated whether acute rejection after kidney transplantation was associated with predicted NK cell alloreactivity based on KIR gene and ligand along with KIR/HLA compound genotype analysis.

Material and methods: DNA from 65 patients with biopsy-proven acute kidney allograft rejection (AKAR), 61 clinically well graft function (WGF) recipients and 176 healthy subjects was identified for the presence or absence of 10 variable KIR genes (both activating and inhibitory receptors) and their HLA ligands using polymerase chain reaction-sequence specific primers (PCR-SSP) assay.

Results: Although no significant difference in the frequency of individual KIR genes, the gene content, and the haplotypic distribution between the three categories was detected, the frequency of the KIR3DL1+HLA-Bw4* A allele combination was significantly lower in AKAR patients compared to WGF recipients (p = 0.004, OR = 0.34, CI = 0.16-0.72) and healthy subjects (p = 0.019, OR = 0.47, CI = 0.25-0.89). Kaplan-Meier survival test showed that the KIR3DL1+HLA-Bw4* A allele combination could be considered protective for AKAR (p=0.04 by log-rank).

Conclusion: The results of this study suggest that KIR/HLA polymorphism may be a genetic susceptibility factor to alloreactivity dysfunction in the NK cells of patients with AKAR. It is likely that a KIR/HLA combinatorial study can be beneficial in predicting AKAR occurrence for the purpose of selecting donors appropriately.
Surgery - poster

Time:

Saturday, 27/May/2017:

1:45pm - 3:00pm

Inguinal pain resolution after varicocelectomy

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Varicoceles was first recognized as a clinical problem in 16th century and then a relationship between infertility and varicocele proposed in late 19th century. Than in 1885 it is shown as enlarged scrotal veins that occurs in teenagers.Left-dominant varicocele has a frequency between 70 and 100% of patients, right-sided with only 1-2%, while the bilateral diagnosed in 8-9% of patients. Can be found in 16% of adolescents, 15-20% of all male population. It occurs more often in people who work in an upright position hard physical work. For the occurrence of varicocele on the left side next to anatomical reasons cited and hemodynamic factors.

The symptoms are enlarged, twisted veins in the scrotum, infertility, painless testicle lump, scrotal swelling, or bulge within the scrotum. Diagnosis of varicocele is mainly done by sonographic quantitative evaluation of scrotal vein diameters.

From January 2009 to May 2015, 218 patients were treated for varicocele, of which 146 patients complained for painful varicocele and 120 patients for infertility due to abnormal semen analysis of whom 46 patients had also painful varicocele.

Varicocele can be divided into symptomatic and asymptomatic. The degree of symptoms of patients with varicocele is different from insignificant to the unbearable symptoms that can lead to alterations of mental patients in terms of irritability and depression.

The diagnosis was based on physical examination and radiological the searches. Since radiological procedures most commonly used ultrasound with Doppler testicles.

Treatment can be conservative and operative.

Varicoceles are important disorder that leads to many problems.
The use of fast-track/ERAS protocol in abdominal surgery in patients with severe haemophilia: way to personalize treatment

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Introduction

Haemophilia`s manifestations vary, which requires an individual approach to substitution hemostatic therapy to avoid hemorrhagic and thrombotic complications.

Material & Methods

Mixed study based on an analysis of 45 patients with haemophilia (average age was 53 years) after abdominal operations. For 15 patients scheme of hemostatic therapy has been based on preoperative testing via integrated tests- thromboelastography and thrombodynamics. We use ERAS protocol.Comparison group included 30 patients, hemostatic therapy has been based on standart protocol(World Federation of Haemophilia(2012)Guidelines for the management of haemophilia. 2nd ed.) Recombinant factor VIII\IX concentrates were used.We applied STATISTICA package.

Results

Basing on thromboelastography and thrombodynamics we determined personalized dose of drug, time of first injection, interval between them and duration of hemostatic therapy. 10 of 15 patients were treated according to standart protocol. 5 patients(33%) used original personalized protocols, which reduced doze of drug in 2.1 times. In obedience to ERAS protocol we used scheme of early activation and early enteral nutrition. As a result, reduction of the average duration of hospital stay in 2.3 times has been achieved. Economic benefit was 57.4%. There were neither hemorrhagic nor thrombotic complications.

Conclusion

Our study, based on the fast-track/ERAS protocol and the use of integrated hemostatic tests, allowed in 33% of cases to determine personalized for each patient scheme of substitution hemostatic therapy, thereby diminishing the risk of thrombotic complications, without increasing one of hemorrhagic intra- and postoperative complications, reducing the chance of the occurrence of an inhibitor to clotting factor and decreasing economic costs.
3D - model of the mechanism of protection the weak spots of abdominal wall

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Aleksandra Romanovna Kirsanova

Самарский государственный медицинский университет, Russian Federation

During the study weak spots in the abdominal corpses of adults and children was found that all weak spots of the anterior abdominal wall have functional muscle protection which prevents the output of the abdominal cavity to the subcutaneous fat. The model of the anterior abdominal wall helps to visualize the muscle protection of weak spots of abdominals.

Accurate description of the functional mechanisms of muscle protection of the weak places still doesn't exist.

Was found that all the weak spots of the anterior abdominal wall have functional muscle protection. Also found that anterior abdominal wall muscles have two reduction regime - an isometric and isotonic. Blocking of the weakest spots on abdominals and subinguinal gaps is ensured by the mechanisms of isotonic and isometric contraction the straight and pyramidal muscles of the abdomen and downward movement of the internal oblique and transverse abdominal muscles. Protection white line is an isometric contraction and convergence of internal the edges of the rectus muscles with simultaneous thickening and reduction of the with white lines, especially in the umbilical region. The model of the anterior abdominal wall helps to visualize the muscle protection of weak spots of abdominal wall.

We have proved the existence of a functional muscle protection described mechanisms of its work, created a model of the anterior abdominal wall. All of the above allows us to hope that this study will put an end to disagreements with the authors in question functional muscle protect the weak spots of the abdominals.

Genioplasty of symmetrical microgenia

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Microgenia is one of the rather difficult and hard deformations of face becoming apparent by the whole complex of disturbances of size and form of lower jaw. Retroposition of chin, and decrease of sagittal and vertical sizes of facial lower zone are the leading clinical signs. The aim was an increase of effectiveness of the surgical treatment of symmetrical microgenia patients.

From 2012 to 2015 the treatment of 12 (8 women and 4 men; average age, 23 years; range, 16-36 years) symmetrical microgenia patients was prospectively investigated. The surgical outcome was evaluated by analysis of pre- and postoperative photographs, lateral cephalograms, the plaster face models with a set of teeth, and
patients’ self judgment. All patients were being eliminated by genioplasty created by professor A.G. Kurashev (Patent USSR №2029502, 1995) at the department. Genioplasty is made with the common anaesthesia and intraoral access.

All the 12 operated symmetrical microgenia patients got a good anatomical and functional effect. The patients were satisfied with their appearance. No complications were noticed. The remote results of the surgical procedure were observed for 1-4 years. There was not a deformation relapse.

The created way of genioplasty in case of symmetrical microgenia allows to restore a natural form of the chin part of lower jaw and eliminate a disproportion of different parts, extremely improving the face aesthetics. Autogenous bone on a muscular bone preserves blood supply providing the optional conditions for the bone healing.

**Long-term outcomes in simultaneous pancreas-kidney transplant recipients: retrospective single centre study.**

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Introduction: Simultaneous pancreas-kidney transplantation (SPKT) is the treatment of choice for patients with end-stage renal failure due to type 1 diabetes mellitus (DM1).

Since the 1980s, pancreas transplant has become the most effective strategy to restore normoglycemia in patients with DM1.

Objectives: The aim of this study is to present long-term outcomes of SPKT.

Methods: We performed a retrospective analysis of 73 SPKT recipients who underwent transplantation between 1988 and 2015.

Results: 50.68% of patients were male. During the time of surgery the mean age was 37.38 ± 7.44 years, BMI was 22.9 ± 2.69. DM1 was diagnosed average 24.76 ± 5.97 years before SPKT. For 23.44% it was pre-emptive transplant. 59.38% and 17.19% were on hemodialysis and CADO respectively (the mean dialysis time was 29.05 months). 91.8% had enteric drainage. Mean HLA - A, - B, -DR mismatches were: 1.42, 1.58, 1.27. All patient received induction of immunosuppression (polyclonal immunoglobulins: ATG/Thymoglobulin – 57.2% or monoclonal: daclizumab/basiliximab – 42.8%). Patient survival at 1, 5, 10, 15 years is 99%, 98%, 91% and 75%; kidney survival is 100%, 97%, 85% and 67%; and pancreas survival is 95%, 92%, 87% and 67% respectively. There was noticed tendency to increase creatinine level (from 1.18 at 1 year to 1.78 at 15 years) and decrease of haemoglobin level (from 13.84 at 1 year to 12.65 at 15 years).

Conclusion: SPKT provides a marked prolongation of the patient's life and freedom from insulin injections. Enteric drainage is currently the surgical technique of choice.
The Relationship between Anterior Chamber Depth, Axial Length and Intraocular Lens Power among Candidates for Cataract Surgery

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Anatomical parameters in ophthalmology are variable according to different factors. The aim of this study was to determine the relationship between AL, ACD and intraocular lens power in a center from Iran among patients who had cataract surgery, in comparison to studies from countries.

In a cross-sectional retrospective study from 2011 to 2013, the records of 698 cataract patients referring to Khatam Al Anbia hospital in Mashhad, Iran were evaluated. We divided patients, based on their AL and ACD, into three separate groups and compared their results.

The Chi-Square test and the Independent-samples t-test were used to compare data between two groups, respectively. The Kendall and the Pearson product-moment correlation tests were used to assess the relationship between AL and ACD. The linear Regression model was used to obtain a mathematical model to estimate ACD, using AL, age and sex.

Among individuals who had normal AL (between 22-24.5mm), there was a positive correlation between AL and ACD (p<0.001, r=0.17), however, among individuals with short (AL<22mm) or long sightedness (AL>24.5mm), no significant correlation was detected. We also found that older people have shorter AL (p=0.001 and r=-0.287). Men have an average longer AL (23.7±2.4mm vs. 22.9±2.1mm; p<0.001) and deeper ACD compared to women (2.93±0.45mm vs. 2.82±0.42mm, p=0.002).

Although some anatomical variations may exist regarding ophthalmic anatomy, factors like race and geographical area have little effect on the relationship between
ACD, AL and IOL power calculation, furthermore our results support the use of third and fourth generation formulas for IOL power calculation.

SEXUAL DIFFERENCES IN SHAPE AND POSITION OF PTERION

Nikola Knezi

Faculty of medicine, Serbia

Introduction: Pterion is a topographical point on the side of the skull. Pterion is a landmark in the study of a kind has not been done on the skulls of Eastern Europe.

Aim: The aim of the study is to determine the type and localization pterion in the study population and whether there is a statistically significant difference pterion position in relation to sex.

Materials and methods: The study was performed on the skulls of 30 adult individuals without significant pathological changes. The type of pterion on both sides of each skull was determined. The distances between the centre of the pterion and defined bony landmarks were measured using the ImageJ software.

Results: In the studied sample the most common was the sphenoparietal type of pterion, in 92,31% of male and 94,44% of female skulls. The second most common was epipteric type, 7,69% in male and 5,55% in female skulls. In male skulls studied the pterion was found at 39,01±5,90 mm from the front end of the frontozygomatic end, 42,07±2,82 mm from the zygomatic angle. In female skulls the pterion is found 37,80±9,52 mm from the end of the frontozygomatic suture, 41,90±10,12 mm from the zygomatic angle.

Conclusion: In the studied sample there is a domination of the sphenoparietal type of pterion, with no significant difference found between the position of pterion and gender. The localization of pterion are of importance because it is an anatomic landmark for the important in neurosurgery, maxillofacial and ophthalmic surgery.

Key words: Pterion, morphology, morphometry

Trans-abdominal ultrasonography or endoscopy for detecting gastric abnormalities which is the better choice: a pilot study

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Objective
We evaluated the consistency between endoscopic and sonography findings for the detection of gastric abnormalities.

Materials and methods
Forty patients with gastric complaints who were scheduled for endoscopy, were enrolled in the study. All the patients underwent trans-abdominal sonography after consumption of 500-1000 ml of water in fasting conditions. A biopsy was obtained during endoscopy for cancer related tests.

Results
Overall endoscopy detected 26 abnormalities while sonography detected 16. The ROC curve analysis showed that sonography had a sensitivity and specificity of 64% and 43%, respectively.

The accuracy of sonography was 0.533 (p = 0.734) for detecting gastric abnormalities. Biopsy showed 5 cases of infiltrative carcinoma of the stomach which endoscopy was not able to detect, however sonography did display signs of gastric wall distention.

Conclusion
Overall for detecting gastric abnormalities endoscopy is the better choice since it gives the physician a more precise look into the stomach. Considering the fact that sonography is a relatively cheap, noninvasive and a more easier to use screening tool, furthermore it gives the physician a view of the gastric wall layers and allows suspicion regarding dysplastic processes, in most cases of gastric complaints sonography is a good supplementary screening tool.

Effects of colitis and stress on brain microglial status of mice

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Introduction: Patients suffering from inflammatory bowel diseases (IBD) have higher prevalence rates of anxiety and depressive disorders. One potential mechanism which may explain these findings is an influence of IBD-associated inflammatory processes on brain microglia via the gut-brain axis.

Aim: In the current work we thus set out to investigate the effects of experimental colitis, mild psychological stress, and their combination on brain ionized calcium-
binding adapter molecule 1 (Iba1) expression, a marker of microglial activation, in mice.

Material and Methods: Thirty-two mice were equally allocated to 4 treatment groups. They either received 2% dextran sulphate sodium (DSS) added to the drinking water to induce mild colitis, or tap water (control group) and after 7 days of treatment, both groups were further subdivided into stressed (a 30-minute session of water avoidance stress (WAS)) or unstressed animals. Ninety minutes post-WAS the brains were collected for immunohistochemistry. Iba1 immunoreactivity per brain area was quantified by software-assisted image analysis. Data were analysed by two-way ANOVA.

Results: DSS-treated mice displayed a blunted Iba-1 expression in several brain areas including the infralimbic cortex, the cingulate cortex, the dentate gyrus of the hippocampus, the paraventricular hypothalamic nucleus and the medial amygdala. In contrast, WAS did not alter Iba-1 expression in both DSS-treated and control mice.

Discussion: The current experiments indicate that visceral inflammation can affect brain microglia activation and provide an example of gut-brain interaction in an animal model of IBD.

Impact of twelve weeks march field training on intermittent claudication in patients with peripheral artery disease after endovascular procedures.

Maciej Kostewicz
Enel-Sport, Poland

Introduction. March Training (MT) is one of the ways to improve the results of treatment of patients with PAD. The aim of this study was to demonstrate that a longer time actually used in twelve weeks march field training on the claudication distance in patients with PAD after endovascular surgery.

Material and Methods. The study included 30 patients with peripheral arterial disease (PAD) and evaluated the claudication distance on a treadmill: before endovascular surgery, 3 days and 3 months after surgery. The maximum claudication distance (MCD) was measured during each test on a treadmill. The patients were randomly divided into 2 groups of 15: group A consisted of patients that were not recommended to march after endovascular surgery and group B consisted of patients to whom training was recommended. Patients in group B were march training at home for 3 months.

Results. Group A - MCD before surgery: 103,23m, MCD 3 days after surgery: 179m, MCD 3 months after treatment: 136,67m, p <0.001. Group B - MCD before surgery: 97,07m, MCD 3 days after surgery: 192,62m, MCD 3 months after treatment: 270,53m, p <0.001.

Conclusion. March training properly carried out for 3 months after endovascular treatment of patients with PAD leads to clinically significant improvement of MCD. MCD carried out for 3 months after endovascular treatment of patients with PAD is
better in group of patient systematically doing march training comparing with group of patient without this training type.

**Lexical acquisition of prematurely and full-term born Austrian children at 3;0-3;5 of age**

**Nina Brosch**

Medical University of Graz, Austria

**Introduction**

In literature preterm infants (<32 weeks of pregnancy and/or <1500g birth weight) are considered as high-risk patients. Constant monitoring of their development is important in order to timely recognize possible deficits.

**Aim**

The study was focused on analysing the effects of preterm birth on children’s lexical acquisition.

**Material and Methods or Patients and Methods**

26 full-term and 27 preterm children (<32 weeks of pregnancy and/or <1500g birth weight) were tested. Both groups grew up monolingual German speaking and were examined at the age of 3;0-3;5 (preterm children uncorrected age).

The lexical acquisition was tested with the AWST-R. Lexical acquisition and cognitive development are closely linked and cannot be taken in isolation. Therefore, both groups were additionally tested with the development test BSID-III.

**Results**

Premature children scored significantly lower in BSID-III tests of language and motoric development. However, differences in cognitive progress could not be demonstrated. With AWST-R significant differences between both groups on lexical acquisition could be illustrated. Especially in three out of 13 test categories full-term children showed a significantly higher performance. AWST-R also showed that in both groups verbs were more easily determined than nouns. The typical female dominance in lexical acquisition could not be confirmed.

**Discussion**

The unexpected trend of discrepancy between lexical acquisition and cognitive progress of preterm children pointed out during the study seems to be unusual. This tendency shall be reviewed with a larger study group.
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