



ANTWERP MEDICAL STUDENTS' CONGRESS

AMSC 2020 Abstract book

Together for better health



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|| Important: all times mentioned in this abstract booklet are according to the UTC+2/CEST time zone. You can calculate corresponding times for your local area on [this website](#).

Preface

Dear Delegates,

It is with great pleasure that we welcome you to the 14th edition of the Antwerp Medical Students' Congress! We are amazed with the amount of young, ambitious and passionate scientists who showed interest in our event.

Right now, we can proudly present our 14th edition. A platform to discuss researches conducted by fellow students from all over the world. We hope to play a part in broadening your scope of medical knowledge and to give you a change to get some first-hand experience in lesser known topics.

The AMSC 2020 would not exist without the wonderful help of University Hospital of Antwerp (UZA). We are extremely grateful for them, showing their appreciation of science in so many ways of which the AMSC is one. We hope to continue our collaboration in spreading science all over the world with future editions of the AMSC. We would also like to thank the University of Antwerp for its contribution on organizing this early event. With the dean's office, always ready to help and the professors and teachers who make an appearance in our congress.

We hope to make this edition unforgettable for every participant, speaker, helper and team member.

The organizing team of the AMSC 2020

Program

Wednesday 9/09/2020

- 09:00 – 12:00 Oral Research presentations
12:00 – 13:30 Lunch Break
13:30 – 17:15 Oral Research presentations

Thursday 10/09/2020

- 09:00 – 12:00 Poster Research presentations
12:00 – 13:30 Lunch break
13:30 – 15:00 **Lecture 1:** Glycogen-systemic disease
Prof. Dr. Laurence Roosens, clinical biologist (UAntwerp)
15:15 – 16:45 **Workshop** Ligatures
17:00 – 17:30 Award Ceremony

Friday 11/09/2020

- 09:00 – 10:30 **Lecture 2:** The evolution of the older population; Measuring Sarcopenia; Interdisciplinary collaboration 'out of the box'.
Prof. Dr. Jean-Pierre Van Geertruyden, Coordinator of the GHI
Dr. Stany Perkisas, Geriatrics and Psychogeriatrics (ZNA)
Prof. Peter Van Bogaert, Nursing and Midwifery (UAntwerp)
10:45 – 12:15 **Lecture 3:** Baby Pia (Spinal Muscular Atrophy)
Ellen De Meyer, baby Pia's mother
Dr. Diane Beysen, paediatric neurology (UZ Antwerp)
12:15 – 13:30 Lunch break
13:30 – 15:00 **Workshop** Da Vinci Surgical System
15:15 – 16:45 **Workshop** Body Interact

Saturday 12/09/2020

- 09:00 – 10:30 **Lecture 4:** COVID-19
Dr. Niel Hens, epidemiology and medical statistics
Prof. Dr. Therese Lapperre, Respiratory Physician at Bispebjerg University Hospital (Copenhagen)
10:45 – 12:15 **Lecture 5:** Special Olympics
Annelies Matthé, Health & Athlete Leadership Responsible for Special Olympics Belgium
12:15 - 13:30 Lunch break
13:30 – 15:00 **Workshop** Ambuce
15:15 – 16:45 **Lecture 6:** Exoskeletons
Anoek Geers

Meet the AMSC Organising Committee

"Coming together is a beginning. Keeping together is progress. Working together is success."

- Henry Ford



Elisabeth and Jules
Presidents



Quinten and Guillaume
Secretaries



Marjan
Treasurer



Stig
IT



Wajeya, Eva and Susane
PR officers



Lieselotte, Warda and Kristiaan
Workshops officers



Lieke
Graphic designer



Nassma (and Homan, not in picture)
Sponsors Team



Faisal, Fatine, Eduard and Negar – Logistics officers



Stan Schepers
Webmaster AMSC

This wonderful young man deserves a special moment to express our gratitude. He is the only non-medical student to join our forces and is the sole reason we have a beautiful, accessible, and most of all, running website.

We can only describe Stan as a student who found his true passion. With his incredible talent for programming, his dedication to a good cause and his willingness to help his fellow students in moments of need, we are incredibly lucky to have Stan as an addition to this team.

Meet the AMSC Keynote Lecturers

Lecture: Living with a Glycogen-systemic disease

Prof. Dr. Laurence Roosens

Date: Thursday September 10th

Time: 13h30-15h00 (UTC+2)



Prof. Dr. Laurence Roosens, a clinical biologist at our University of Antwerp, working on different subjects like toxicology, therapeutic drug monitoring and metabolic analysis. She will provide a lecture about glycogen storage disease, a rare condition that affects the storage and usage of glycogen in the body. To provide you with more than only the scientific side, an affected family will talk about their experience and daily living with this disease.

Lecture: GDA (Geneeskundige Dagen Antwerpen, Medical Days in Antwerp)

- **Prof. Dr. Jean-Pierre Van Geertruyden: The evolution of the older population: expectations from an epidemiologic and global health perspective.**
- **Dr. Stany Perkisas: Measuring Sarcopenia**
- **Prof. Peter Van Bogaert: Interdisciplinary collaboration 'out of the box'**

Date: Friday September 11th

Time: 9h00-10h30 (UTC+2)



Prof. Dr. Jean-Pierre Van Geertruyden (UAntwerp) created and coordinates the Global Health institute. He worked over a decade as a clinician and a manager in several humanitarian and disease control projects in developing countries. He will talk about The evolution of the older population.

Dr. Stany Perkisas is specialized in geriatrics and psychogeriatrics. He works at a local hospitals in Antwerp (ZNA group). He will talk about the measurement of sarcopenia.



Prof. Peter Van Bogaert is a professor of Nursing and Midwifery Sciences at our University of Antwerp. He is also chair of the research group Centre for Research and Innovation in Care (CRIC). He will talk about interdisciplinary collaboration.

Lecture: Baby Pia and her rare Spinal Muscular Atrophy (SMA) disease.

Dr. Biane Beysen and Ellen De Meyer

Date: Thursday September 11th

Time: 10h45-12h15 (UTC+2)



Pia is a little girl who was diagnosed with spinal muscular atrophy (SMA). With the aid of a national SMS campaign, she was eventually able to get Zolgensma. Pia's mother, Ellen De Meyer, will give us a lecture on the entire process beginning from the diagnosis till setting up a national campaign! Also, dr. Diane Beysen, who is Pia's doctor, will be joining us to illustrate the medical side of the story!

Lecture: COVID-19

Prof. Dr. Therese Lapperre and dr. Niel Hens

Date: Saturday September 12th

Time: 9h00-10h30 (UTC+2)



Dr. Niel Hens, an epidemiological researcher at our University of Antwerp, will provide an interesting lecture about the currently most discussed topic: COVID-19. He develops and applies mathematical and statistical methods to investigate the spreading of infectious diseases. A highly needed and interesting profession in these times!



Prof. Dr. Therese Lapperre is an associate research professor and a respiratory physician at the Bispebjerg University Hospital in Copenhagen, Denmark. She will explain in what ways COVID-19 transmits between people and how the virus affects the respiratory organs.

Lecture: Special Olympics

Annelies Matthé and ThibEAU

Date: Saturday September 12th

Time: 10h45-12h15 (UTC+2)



Annelies Matthé, graduated in 2010 as a physiotherapist at KU Leuven. Through an additional master, Erasmus Mundus Master in Adapted Physical Activity, she came into contact with g-sport and Special Olympics. Between 2012 and 2014, she worked for the non-profit organization responsible for organizing the Special

Olympics European Games in 2014 in Antwerp. Since late 2014 she works for the Belgian organization of Special Olympics. Her main task within Special Olympics Belgium is to coordinate health projects, including the Healthy Athletes Program. In addition, she works out various projects, together with external partners, to raise awareness of the health problems of persons with intellectual disabilities. As for ThibEAU, he is a Special Olympics athlete and also an athlete ambassador. A further introduction will be provided during the interview at the end of the presentation!

Lecture: Exoskeletons

Anoek Geers

Date: Saturday September 12th

Time: 15h15-16h45 (UTC+2)



Focal Meditech is one of the very few companies in Western Europe that manufactures assistive devices that contribute to independent home living and functioning longer and better. In particular, Focal gained a leading position in supplying supports or replacements of the arm and hand function, body support and independent feeding! Anoek Geers is going to give us an introduction on their products and the most recent research projects!

Scientific board

Prof. Dr. Guy Hubens

Head of Abdominal, Paediatric and Reconstructive Surgery (UZA)
Dean of the Faculty of Medicine and Health Sciences
Professor at the University of Antwerp

Prof. Dr. Stijn Verhulst

Head of Paediatrics (UZA)
Senior lecturer at the University of Antwerp

Prof. Dr. Em. Gert Verpooten

Nephrologist (MD, PhD)

Prof. Dr. Johan Wens

Department of General Practice
Senior lecturer at the University of Antwerp

Ms. Ilse De Canck

Research Coordinator at the Faculty of Medicine and Health Sciences (UA)

Prof. Annemieke Smet

Professor at University of Antwerp (tenure track)

Mr. Jorrit De Waele

Post-doctoral researcher

Ms. Kristien Ledeganck

Post-doctoral researcher

Dr. Bruno Hoste

Research Manager Biomedical Sciences and Medicine.
Advisor Fundamental, Strategic Basic and Applied Research, EU, International and National funding opportunities in Life Sciences.

Prof. Dr. Em. Paul Van Schil

Consultant for thoracic and vascular surgery
Professor at the University of Antwerp

Ms. Hannah Ceuleers

Postdoctoral researcher

Prof. Dr. Vincent Segers

Cardiologist at the University Hospital (UZA)

Professor at the University of Antwerp

Prof. Kristof Deseure

Post-doctoral researcher

Guest lecturer at the University of Antwerp

Prof. Dr. Ronny Boey

Speech-language pathology, specialized in stuttering

Post-doctoral researcher

Annelies Van Eyck

Post-doctoral researcher

Prof. Dr. Marc Peeters

Coördinator MOCA, head of oncology in the University Hospital (UZA)

Professor at the University of Antwerp

We would like to thank all the members of our scientific board extensively and heartily for their share in the reading and judging of all of the one hundred fifty submitted abstracts. Due to their aid and effort the best and the most interesting researches will once again be presented during the active days of the AMSC 2020. They have donated their time voluntarily - and freely - to help us create this new edition of our congress. We are extremely grateful to be able to collaborate on such level and hope to extend our cooperation to future editions.

Collaborators



We would like to thank the University Hospital of Antwerp (UZA) in particular for their support. In addition to financial support, there are so many doctors and professors who are committed to the AMSC by organising a lecture or workshop. We sincerely hope we can continue our cooperation in the future in order to provide the medical knowledge to international medical student. Without the UZA, we would not be able to organise this yearly event.

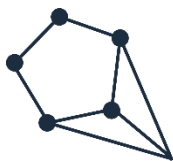


We are extremely grateful for the support that we have received from the University of Antwerp. Their staff members are always ready to help us with practical issues and we are excited to have some of our best professors speaking at the AMSC 2020.



EMSA Antwerp is the mother-organization of whom the AMSC is a project. Our team members are active members of EMSA and since last edition, the first prizes in our research competition are sponsored by EMSA Antwerp. We are grateful for their support in the organization of this event.

Partners



AEICBAS
BIOMEDICAL
CONGRESS

AEICBAS in Porto, Portugal
12th-15th March 2020 (passed)

<http://abc.aeicbasup.pt/>
aeicbasbiomedicalcongress@gmail.com



AIMS Meeting in Lisbon, Portugal
This year's edition cancelled due to COVID19

<http://www.aimsmeeting.org/>
support@aimsmeeting.org



CIMSC In Craiova, Romania
No edition this year.

<https://cimsc.org/>
contact.cimsc@gmail.com



EMIMSC in Famagusta, Cyprus
3rd-5th April 2020 (passed)

<https://dautok.emu.edu.tr>
dau.tok@emu.edu.tr



ICHAMS in Dublin, Ireland
6th-8th February 2020 (passed)

<https://www.ichams.org/>
ichams@rcsi.com



ICMS in Sofia, Bulgaria
13th-16th May 2021

<https://icmsbg.org/>
info@icmsbg.org



IMEDSCOP in Poltava, Ukraine
This year's edition postponed due to COVID19

<http://sntumsa.pl.ua/en>
umsa.snt@gmail.com



IMSCI in Izmir, Turkey
This year's edition postponed due to COVID19

<http://ebat.med.ege.edu.tr/en/>
ebatcongress87@gmail.com



IN4MED in Coimbra, Portugal
27th February – 1st march 2020 (passed)

<http://www.in4med.org/>
in4med@nemaac.net



ISC in Graz, Austria
20th – 22th May 2021

<https://www.medunigraz.at/international-student-congress/>
isc@medunigraz.at



ISCOMS in Groningen, the Netherlands
4th of June 2020 (passed)

<http://iscoms.com/>
iscoms@umcg.nl



JPM in Łódź, Poland
15th – 16th May 2020 (passed)

<http://jpm.umed.pl/>



Marisiensis in Targu Mures, Romania
21st-25th October 2020

<http://marisiensis.ro/>
marisiensis@lstgm.ro



Medespera in Chisinau, Republic of Moldova
24th – 26th September 2020

<https://medespera.asr.md/>
medespera@asr.md



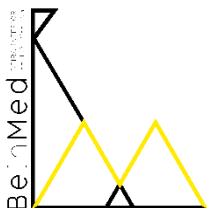
Medicinski podmladak - Medical Youth in Belgrade, Serbia
 ???

<https://www.facebook.com/medicinskipodmladak/>
podmladak.med.bg@gmail.com

MEDICS  2020

MEDICS in Bucharest, Romania
This year's edition cancelled due to COVID19

<https://soms-medics.com/>
contact@soms-medics.com



BeInMed in Covilhã, Portugal
5th – 7th February 2021

<http://beinmed.medubi.pt/>
congresso@medubi.pt



Mosa Conference in Maastricht, The Netherlands
This year's edition cancelled due to COVID19

<http://www.mosa-conference.nl/>
info@mosa-conference.nl



Neurology Congress in Zurich, Switzerland
24th – 25th June 2020 (passed)

<https://www.neurologyconference.com/europe/neurologycongress@brainstormingmeetings.com>



OSCON in Osijek, Croatia
13th – 14th February 2020 (passed)

<https://oscon-mefos.com/en>
info@oscon-mefos.com



SaMED in Sarajevo, Bosnia and Herzegovina
20th – 22nd February 2020 (passed)

<http://www.samed.ba/>
pr@samed.ba



TMSJ in Turkey

<https://tmsj-en.trakya.edu.tr/>
tmsj@trakya.edu.tr



WIMC in Warsaw, Poland
This year's edition cancelled due to COVID19

<https://wimc.wum.edu.pl/>
wimc@wum.edu.pl



YES Meeting in Porto, Portugal
17th – 20th September 2020

<https://yesmeeting.org/>
info@yesmeeting.org



ZIMS in Zagreb, Croatia
5th – 8th December 2019 (passed)

<https://zims.hlz.hr/>
emsazims@gmail.com

Acknowledgements

UZA and UAntwerp

Prof. Dr. Laurence Roosens
Prof. Dr. Jean-Pierre Van Geertruyden
Prof. Peter Van Bogaert
Dr. Diane Beysen
Dr. Niel Hens
Nicolaas van Leeuwen
Femke Van den Audenaeren
All our scientific board members

Guest Lecturers

Prof. Dr. Therese Lapperre
Dr. Stany Perkisas
Annelies Matthé
Anoek Geers
Ellen De Meyer
Jesse Delien

Others

Ambuce (<https://www.ambuce.be>)
Body interact (<https://bodyinteract.com>)
Chimes
Emsa-Antwerp
Karva
Silvio

And all the other volunteers we forgot to mention, who contributed to organizing a successful edition of the Antwerp Medical Students' Congress!

BODY INTERACT™
CLINICAL REASONING EDUCATION



Abstracts

Awards

Competition for Oral Presentations

1st place 200 €

2nd place 100 €

Competition for Poster Presentation: Clinical Fundamental Studies and Other

1st place 100 €

2nd place 75€

Competition for Poster Presentations: Case Reports

1st place 75 €

Timetable Wednesday: Oral Presentations

| Time | Presentations |
|-------|---|
| 09:00 | Oshin Puri: Selecting the p-treatment: flooding v/s graduated exposure |
| 09:15 | Miłosz Błoński: Differences in internal carotid artery tortuosity after coiling of intracranial aneurysms: a single center retrospective analysis |
| 09:30 | Magdalena Chrabąszcz: Sexual dysfunction in women with Systemic Sclerosis: single center study |
| 09:45 | Adrian Janucik: Analysis of the mesenchymal stromal cells (mscs) induced changes in the transcriptomic profile of the lung tissue in a neutrophilic experimental asthma model |
| 10:00 | Jagoda Dradrach: Prevalence and characteristics of patients with coronary artery fistulas in patients undergoing coronary angiography: an 8-year single-center experience |
| 10:15 | Amirkaviani Moaveni: Effects of serum autologous therapy in patients with idiopathic chronic urticaria |
| 10:30 | Weronika Lebowa: Psychoactive substances usage among polish teenagers in Małopolska |
| 10:45 | Oskar Wiśniewski: Low-grade systemic inflammation is associated with increased chemerin in male metabolic syndrome patients |
| 11:00 | Małgorzata Czuba: Can perihemorrhagic area of intracerebral haemorrhage be predictive outcome and risk of expansion? A computational analysis |
| 11:15 | Maciej Frączek: Predictors of intraoperative cerebral aneurysm rupture in patients with subarachnoid hemorrhage |
| 11:30 | Lowilius Wiyono: In-Silico Study of Annona Muricata (Soursop) Leaves Isolates as Anti-Lu Breast Cancer |
| 11:45 | Krzysztof Sacha: Mechanisms of drug resistance of bacteria cultured from medical student stethoscopes |
| 13:30 | Izabela Karpińska: Performance of individualised metabolic surgery and diabetes scores in predicting diabetes remission following bariatric surgery. |

| | |
|-------|---|
| 13:45 | Magdalena Chrabąszcz: Coronavirus Outbreak - Fear, Attitudes, and Coping Strategies for COVID-19 Among Patients with Systemic Sclerosis |
| 14:00 | Anastasiia Shkodina: Features of the location of brain sand in the pineal gland of the elderly people |
| 14:15 | Gabriela Kanclerz: Students' perspective on electronic devices as a source of radiation in everyday life and their impact on health |
| 14:30 | Julia Casaní-Cubel: The role of paraoxonase 1 (PON1) as an oxidation marker, in muscle improvement after increased beta-hydroxybutyrate (BHB) in blood, in patients with multiple sclerosis |
| 14:45 | Keerthana Palaniappa Sivakolundu: Thyroid hormone level alterations and its relationship to atherosclerosis in diabetic patients |
| 15:00 | Ramesha Tahir: Association between Nutritional Status and Functional Capacity of Elderly |
| 15:15 | Patrycja Łączak: Sternal and xiphoid foramen - significant but overlooked anatomical variant of the sternum. A meta-analysis. |
| 15:30 | Weronika Lebowa: Assessment of comorbidities, complications and mortality among elderly patients after emergency abdominal surgery |
| 15:45 | Adrian Perdyan: Alternative medicine among breast cancer patients in Poland: a survey study |
| 16:00 | Gonzalo Mariscal: Orthopedic treatment and early weight-bearing for Pronation Rotation type 3 ankle fractures in elderly patients: Quality of life and complications |
| 16:15 | Magdalena Chrabąszcz: Copeptin and its potential role in prognosis and diagnosis of peripheral microangiopathy in systemic sclerosis. |
| 16:30 | Piotr Stogowski: Validation of 10 points scale for microsurgical training assessment on non-living models |
| 16:45 | Sanam Alilou: Role of the Polymorphisms of the Endothelial Nitric Oxide Synthase Gene in Predicting the Slow Flow Phenomenon After Primary Percutaneous Coronary Intervention |
| 17:00 | Adam Bebenek: Different types of hydrocephalus as risk factors for ventriculoperitoneal shunt malfunction in neonates. |

Timetable Thursday Morning: Poster Presentations

| Time | Group 1 |
|-------|---|
| 09:00 | Klaudia Adamczewska: From epigastric pain to liver transplantation |
| 09:15 | Madalina Andreea Beldie: Neurofibromatosis type 1 - an unusual presentation |
| 09:30 | Paulina Klarczynska: Dyspnea in liver cirrhosis - is it always associated with massive ascites? |
| 09:45 | Maria Zimowska: Ultrasonography in differential diagnosis of carpal tunnel syndrome |
| 10:00 | Mateusz Wladyslaw Wylaz: Ovarian cyst abscess and pleuropneumonia as a complication of cyst puncture during pregnancy |
| 10:15 | Maria-Amalia Velescu: Hepatocellular carcinoma developed on a non-alcoholic steatohepatitis: a case report |
| 10:30 | Augustus Rottenberg: Iatrogenic hydrothorax during percutaneous nephrolithotomy |
| 10:45 | Ali Sheikhy: HLH secondary to Glycogen Storage Disease (GSD) type 1a |
| 11:00 | Paulina Kasperska: Pneumonia caused by Respiratory Syncytial Virus in case of female patient 82 years old |
| 11:15 | Paulina Kasperska: Complications caused by Human Immunodeficiency Virus in case of 38 years old female patient |
| 11:30 | Alexandra Iulia Silion: Complete surgical excision of laryngeal lipomas: a mandatory procedure |
| 11:45 | Madalina Andreea Beldie: Simultaneous arterial and venous thrombosis - the silent killer |

| Time | Group 2 |
|-------------|--|
| 09:00 | Oshin Puri: Pus from the ear: A case of Parotid Abscess |
| 09:15 | Oshin Puri: A limb savior blood test |
| 09:30 | Natalia Goluchkowska: Congenital Immature teratoma in infant- a case report. |
| 09:45 | Nikita Titov: A rare complication of percutaneous transhepatic biliary drainage |
| 10:00 | Piotr Stogowski: Malignant transformation among spine in hereditary multiple exostoses: case report and literature review. |
| 10:15 | Katarzyna Szczepaniec: Unexpected cause of abdominal distension |
| 10:30 | Sanam alilou: Bilateral Corneal Ghost Vessels in an Otherwise Healthy Child |
| 10:45 | Monika Jasinskaitė: Proton therapy for pancreatic cancer |
| 11:00 | Krzysztof Sacha: Adrenal metastasis from melanoma complicated by a hemorrhage - case study |
| 11:15 | Justyna Kacperczyk: Hyponatremia as a side effect of SSRI intake - A case study. |
| 11:30 | Nikolaos Kontomitros: Are fatigue and anorexia significant symptoms ? |
| 11:45 | Matei Iurea: A Difficult Case Of Lynch Syndrome In An Atypical Patient |

| Time | Group 3 |
|-------------|---|
| 09:00 | Jerzy Skuciński: Isomorphic astrocytoma |
| 09:15 | Shweta Tilante: HCV genotype distribution in Georgian population and its correlation with ledipasvir/sofosbuvir treatment efficiency |
| 09:30 | Danka Krtnic: Hippocampal parvalbumin-positive interneurons: the role in alzheimer's disease pathogenesis |
| 09:45 | Djordje Jevtic: What should be measured in anemic heart failure patients? Hemoglobin, ferritin, iron, or all? |
| 10:00 | Indah Sagitaisna Putri : Role of Moringa Seeds Extract (Moringa oleifera, Lam.) As Renoprotector Through Increasing The Expression of Superoxide Dismutase (SOD) in High-Fat and High-Fructose-induced White Rats |
| 10:15 | Małgorzata Teodorska: The sternalis muscle and its clinical significance: a meta-analysis of its prevalence |
| 10:30 | Zahra Mansouri: Formulation and development of ocular nanoemulsion Poloxamer-based thermo-sensitive in situ gel containing acyclovir: ex vivo transcorneal permeation and Irritation test |
| 10:45 | Amirkavian Moaveni: Effects of serum autologous therapy in patients with idiopathic chronic urticaria |
| 11:00 | Akatya Vidushi Sinha: Sleep hygiene : A cross-sectional study on different years of medical students |
| 11:15 | Daria Maryniak: Antimicrobial action of immunotropic phytocomposition |
| 11:30 | Kseniya Ruksha: Comparison of open-source proteomic search engine algorithms for establishing the most efficient proteomic analysis of FFPE colorectal cancer |

Abstract List

EUROPEAN MEDICAL STUDENTS' ASSOCIATION Antwerpen vzw



ANTWERP MEDICAL STUDENTS' CONGRESS

ANALYSIS OF THE MESENCHYMAL STROMAL CELLS (MSCS) INDUCED CHANGES IN THE TRANSCRIPTOMIC PROFILE OF THE LUNG TISSUE IN A NEUTROPHILIC EXPERIMENTAL ASTHMA MODEL

Type: Clinical Fundamental Study, oral

Author: Adrian Janucik¹

Co-author(s): Barbara Makowska¹, Klaudia Borkowska¹, Aleksandra Starosz¹, Kamil Grubczak¹, Arkadiusz Żbikowski², Dawid Groth¹, Marlena Tynecka¹

Supervisors: Andrzej Eljaszewicz, Marcin Moniuszko

1. Department of Regenerative Medicine and Immune Regulation, Medical University of Białystok

2. Department of Medical Biology, Medical University of Białystok

Background: Asthma is one of the most abundant chronic inflammatory diseases worldwide. Despite the growing understanding of the mechanisms of asthmatic inflammation, causative therapy is to date not available. Importantly, inadequately controlled chronic airway inflammation may lead to irreversible changes within the lungs, referred to as airway remodeling. Therefore, there is an increasing need to implement innovative therapies for patients that do not respond to available Treatment. Recently, the interest in the implementation of immunosuppressive mesenchymal stromal cells (MSCs) in inflammatory diseases, including asthma, is growing continuously. Unfortunately, however, the mechanism of MSC-mediated immunosuppression remains elusive. Thus, in the current study, we aimed to analyze MSC induced changes in the transcriptomic profiles of lung tissue in experimental neutrophilic asthma.

Materials & Methods: Mice were challenged for 14 days with 100 Åµg house dust mite extract (HDM) to induce neutrophilic airway inflammation. Adipose tissue-derived MSCs were administrated on the 6th or 13th day of the experiment. Total lung RNA was isolated, and next-generation sequencing (NGS)

on the Illumina platform was conducted. The bioinformatical and biostatistical analysis was performed by using R software. The signature of differentially expressed genes and related changes in canonical and non-canonical signaling pathways was analyzed using IPA software. First, the therapeutic potential of MSCs was assessed by using histological stainings. Next, we evaluated the differences in transcriptomic profiles of lung tissue. Interestingly, the number of differentially regulated genes varied between the models of MSC administration. Finally, by analyzing differentially regulated pathways and biofunctions, we found significant changes in the genes controlling cellular metabolism similar to both models. Finally, by analyzing differentially regulated pathways and bio functions, we found substantial changes in the pathways associated with cellular metabolism.

Results: In summary, we showed that adipose tissue-derived MSCs possess therapeutic potential for the limitation of neutrophilic lung inflammation. More importantly, transcriptomic profiling revealed novel putative mechanisms of MSC-mediated suppression of neutrophilic lung inflammation, which may allow identifying novel therapeutic targets.



ALTERNATIVE MEDICINE AMONG BREAST CANCER PATIENTS IN
POLAND: A SURVEY STUDY.

Type: Epidemiological Study, oral

Author: Adrian Perdyan

Co-author(s): Szastok P Wasiukiewicz M, Bartoszkiewicz M, Rucińska M, Ira A,
Kochman B, Kufel-Grabowska J, Jassem J

Introduction: Alternative medicine (paramedicine, pseudomedicine) denotes Methods and practices that are claimed to have diagnostic or therapeutic effect, but are refuted, unproven, and not science-based. Apart from the lack of efficacy, side effects of such Methods may negatively impact standard anticancer therapies. In general, these procedures are not accepted by medical community and may be illegal. Significant increase in the use of alternative medicine in Poland, particularly among cancer patients, creates a significant medical and social problem.

Materials & Methods: The purpose of this study was to determine the scope of this phenomenon among Polish cancer patients throughout a prepared questionnaire. We have gathered answers from 286 patients. In vast majority patients were diagnosed with breast cancer (274/286, 95, 8%).

Results: From our group 46, 2% (132/286) of patients admitted using alternative medicine Methods. Among different practises the most popular were nutritional therapies (34%), phytotherapy (28%), physical exercises (e.g. yoga, t'ai chi) 8%, meditation and hypnosis (8%). More than half of the patients (171/286, 59, 8%) claim that those Methods are effective and helped during oncological Treatment (139/286, 48, 6%).

Conclusions: Our study confirms a widespread use of alternative medicine among Polish breast cancer patients. Despite the fact that patients seem to be satisfied with those practices development of preventive measures is necessary.

These Methods often can interfere into oncological Treatment what can be detrimental for patients health and therapy outcome.



SLEEP HYGIENE : A CROSS-SECTIONAL STUDY ON DIFFERENT YEARS OF MEDICAL STUDENTS

Type: Clinical Fundamental Study, poster

Author: Akatya Vidushi Sinha

Co-author(s): Dr.Madhavi Mankar

Introduction: Sleep deprivation, a common problem among undergraduate students, leads to daytime sleepiness and poor academic performance. Poor sleep hygiene is linked with sleep problems, poor sleep quality & excessive sleepiness. Hence the following study was conducted to assess the sleep hygiene among medical students.

Aims: To study sleep hygiene among MBBS students of different years of study and any association between socio-demographic and environmental factors affecting their sleep pattern and academic performances.

Methodology: It is a cross sectional study. Pre-designed & validated questionnaires consisting of Pittsburgh Sleep Quality Index (PSQI) were distributed amongst 98 medical students of different years of study. Google forms app was used for collecting the responses of study subjects and Data analysis was further done using IBM-SPSS 20.

Results: A total of 98 medical students were enrolled and the majority of 50.5% were from Final year and 33.9% were from 3rd year. 71.2% reported losing out on sleep time to perform better in exams and on average slept for <4hrs one night before their exam. 81.8% reported irregular sleep-wake schedules during the week. 70.6% reported a "poor" quality of sleep. 77.6% also reported the use of sleep time on surfing through social media.

Conclusions: 61.9% of students who scored less than 60% showed decreased sleep quality since last academic year compared to students who scored in the range of 60%-80%.



COMPLETE SURGICAL EXCISION OF LARYNGEAL LIPOMAS : A MANDATORY PROCEDURE

Type: Case Report, poster

Author: Alexandra-Iulia Silion, Marcu-Alexandru Posea

Co-author(s): Alexandra-Iulia Silion, Marcu-Alexandru Posea

Introduction: We present the case of B.M., a 66-year-old female. She presented to the hospital experiencing dry cough, dysphagia, hoarseness and the sensation of choking in decubitus. The physical exam was normal.

Case history: The patient has a history of 9 previous surgical excisions of a laryngeal lipoma with recurrences within 3 to 4 years. Her diagnosis of laryngeal lipoma was made for the first time in 1990, two years after she had tracheal intubation during a C-section, suggesting trauma as a precipitating factor. The first eight interventions were performed via suspension microlaryngoscopy. The ninth was performed in our service via left lateral cervicotomy, four months prior to her actual presentation.

Investigations: The current endoscopic evaluation reveals a yellowish, oval swelling arising from the left aryepiglottic fold and on palpation, the swelling is mobile and soft. There are no inflammatory signs of the overlying mucosa. The MRI showed a large, well-demarcated, lesion with uniform hyperintensity T1 and T2, and no contrast-enhancement, highly suggestive for a pure fat density mass lesion.

Treatment/Results: In order to excise the mass, it was decided to proceed with surgical management, via suspension microlaryngoscopy, and the tumor was removed through transoral endoscopic CO2 laser resection. The surgery was done under general anaesthesia. The pathology of the tumor was consistent with encapsulated fibrolipoma.

Discussions/Differential Diagnosis: Total excision is mandatory for this type of lesions in order to avoid recurrences. In addition to that, constant careful surveillance of these patients is a keypoint in avoiding missing out a malignant diagnosis. Only the histopathological examination is conclusive for the differential diagnosis, which includes liposarcoma, lipoblastoma and hibernoma.

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HLH SECONDARY TO GLYCOGEN STORAGE DISEASE (GSD) TYPE 1A

Type: Case Report, poster

Author: Ali Sheikhy

Co-author(s): Hedyeh Saneifard

Introduction

Hemophagocytic lymphohistiocytosis (HLH) is an inappropriate activation and proliferation of lymphohistiocytes. macrophages and T cells are the main pathogens in this condition. There are two major etiologies for HLH. Primary HLH, related to congenital immunodeficiency, that is autosomal recessively transmitted. Secondary HLH associated with infections, malignancies, rheumatologic and metabolic disorders. We present a case of HLH following GSD type 1 that is an extremely rare condition.

Case report

A 5 months old female infant was admitted with recurrent fever, poor feeding, pallor, and prolonged diarrhea for 2 months. Pallor, severe hepatosplenomegaly, hypotonia, and seizure were the other findings. After physical examination we requested CBC, VBG, blood chemistry, and sonography for the patient. HLH was suspected due to positive criteria including fever, splenomegaly, bicytopenia, hypertriglyceridemia, low fibrinogen level, increased Ferritin, and supportive criteria (hypoalbuminemia, neurologic symptoms, and abnormal LFT). Diagnosis of HLH was made and treatment with IVIG and Prednisolone was started. The patient responded dramatically to treatments, fever stopped, hemoglobin and WBC increased, ESR dropped so the patient's general condition improved. With suspicion of secondary HLH following metabolic disorders, metabolic work up initiated. All findings were normal.

Whole Exome Sequencing (WES) done and the result was homozygous G6PC mutation that was pathogenic and diagnosis of GSD type 1a confirmed.

Conclusion

HLH is a life threatening hyperinflammatory syndrome requiring aggressive immunosuppressive therapy.

The best defined risk factors for HLH are mutations in genes regulating lymphocyte cytotoxicity, however a number of other conditions can be associated with HLH including malignant, rheumatic and metabolic disorders and immunodeficiencies. Secondary HLH must keep in mind when a patient with suspicious of HLH is evaluated. the list of metabolic disorders that leads to HLH are increasing and these disorders must be considered in each HLH patient. detailed history, physical examinations and laboratory tests are useful for evaluating HLH patients who are suspicious to inborn error of metabolism.

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EFFECTS OF SERUM AUTOLOGOUS THERAPY IN PATIENTS WITH IDIOPATHIC CHRONIC URTICARIA

Type: Clinical Fundamental Study, oral

Author: A.Moaveni , R.Nasiri Kalmarzi , R.Mardani

Co-author(s): A.K.Moaveni

Introduction: Idiopathic chronic urticaria refers to those cases that have no evidence of atopy such as eczema , allergic rhinitis and asthma , normal IgE level and rejected other etiologies. Chronic urticaria is one of the most therapeutic problems in allergy and dermatology field . Standard therapies are not effective as patients will still have symptoms or have systemic complications . therefore it is necessary to achieve a more effective and less complicated method to treat chronic urticarial .

Aims: This study evaluates the effectiveness of autologous serum therapy (AST) in idiopathic chronic urticaria and also determines its usefulness in acute urticaria .

Materials & Methods: Double blind , parallel group , randomized controlled study . 98 patients with chronic urticaria which 49 were serum autologous positive (ASST+) and 49 were serum autologous negative (ASST-) , were divided in to three groups AWB (autologous whole blood) , AWS (autologous whole serum) and placebo for ten consecutive weeks under repeated injections . the severity of the disease was evaluated through a standard DLQI questionnaire . Dermatologic life quality index (DLQI) was used as primary effectiveness variables. Safety parameters assessed were the spontaneously reported adverse events and laboratory parameters.

Results: In serum autologous positive group (ASST+) the well-being rate was 90% in AWB group and 75% in AWS group and 60% in placebo group , the evaluations showed well-being rate 70% in AWB group and 60% in AWS group and 40% in placebo group in serum autologous negative patients (ASST-) . DLQI

showed significant improvement in ASST+ group compared to placebo at the end of study , and both ASST + and ASST : showed comparable improvement .



FEATURES OF THE LOCATION OF BRAIN SAND IN THE PINEAL GLAND OF THE ELDERLY PEOPLE

Type: Clinical Fundamental Study, oral

Author: Anastasiia Shkodina

Co-author(s): Ruslana Hrinko, Ivan Starchenko

Introduction. Recent studies have shown that a significant number of diseases, which develop mainly in the elderly age, deteriorate the function of the central nervous system and endocrine glands including the pineal gland. It is believed that the appearance of brain sand in the internal structure of the pineal gland is a manifestation of age-related changes, but there is insufficient information about the genesis and distribution of these inclusions in different pathological conditions.

The aim: to study the peculiarities of the location of the brain sand in the elderly.

Methods and materials. The study was based on 16 epiphyses of deceased males and females of the elderly age (70.3 ± 8.75 years). Total preparations of the pineal gland were fixed in 10% neutral formalin, dehydrated in alcohols and encapsulated in paraffin according to conventional Methods. Histological sections were made from paraffin blocks, which were stained with hematoxylin and eosin. The obtained samples were divided into groups depending on the presence of pineal acervuli in the interparticle trabeculae of the pineal gland: group 1 : presence of brain sand ($n = 9$), group 2 : absent ones ($n = 7$). The morphometric research were performed using a light microscope Olympus BX-41 with a set of appropriate licensing programs. Statistical analysis was performed using the program IBM SPSS Statistics 23.0.

Results. In pineal glands of elderly people light pinealocytes which quantity does not change depending on localization of "brain sand" prevail. Usually the "brain sand" is localized in the outer capsule and parenchyma of the lobes of the pineal

gland, which is considered a consequence of age-related metabolic changes. The finding of these structures in the interparticle trabeculae of samples from elderly patients is accompanied by a decrease in the proportion of glial cells and the vascular component in the internal structure of the pineal gland. However, the condition of arterial microvessels in both groups remains the same. With increasing human age, the proportion of gliocytes decreases, which leads to the development of trophic disorders in the parenchyma of the pineal gland.

Conclusion. It can be assumed that these changes are caused by varying degrees of vascularization of the organ, which may be genetically determined and requires further research. Such differences can exacerbate trophic disorders and calcification of the pineal gland, which is manifested in the appearance of "brain sand" in the interparticle trabeculae.



IATROGENIC HYDROTHORAX DURING PERCUTANEOUS NEPHROLITHOTOMY

Type: Case Report, poster

Author: Augustus Rottenberg

Co-author(s): Kudakwashe Mawondo, Chloe Chan, Yaqub Latoo, Edwin Zedek, Ridwan Sharif

Iatrogenic hydrothorax during percutaneous nephrolithotomy

Introduction

Percutaneous nephrolithotomy (PCNL) is used to treat large renal and upper ureteric calculi. PCNL has a high rate of pulmonary complications (PCs). We present a case of intraoperative iatrogenic hydrothorax in a 45-year-old woman undergoing PCNL for complex staghorn calculi.

Case history

Induction of anaesthesia and initial surgery were uneventful. 2.5 hours intraoperatively the patient's peak airway pressures rose, and her oxygen saturations fell. On examination, she had reduced air entry bilaterally, a dull percussion note on the right side, and a distended abdomen.

Investigations

Chest X-ray (CXR) showed a right hydrothorax, and clear fluid was aspirated on needle paracentesis. Examination of irrigation fluid input/output revealed 8L was unaccounted for.

Treatment

A chest drain was inserted, which drained 2L over the next 48 hours. The patient was admitted to ICU for fluid management and inotropic support, remaining intubated and ventilated for 24 hours. She later developed high oxygen requirements, and received antibiotics for right-sided pneumonia. She was discharged after nine days, returning for further stone fragmentation with no residual complications.

Discussion

Anaesthetic challenges during PCNL include potential fluid absorption, dilutional anaemia, hypothermia, blood loss, injury to adjacent organs, and pleural space violations. Clinically significant PCs have been reported in 32.5% of cases[1], but hydrothorax is rare, reported in fewer than 3.1% of cases[2]. Risk factors include supracostal approach and right-sided surgery[3], both present in this case. All reported cases were diagnosed postoperatively, with none reported in the UK; we report a unique case occurring intraoperatively in the UK. We recommend careful patient selection for supracostal PCNL, meticulous surgical planning of the tract, close observation and urgent CXR following chest symptoms, and strict monitoring of irrigation fluids. A high index of suspicion is needed in prolonged procedures, and surgery with supracostal approaches or multiple tracts.

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HIPPOCAMPAL PARVALBUMIN-POSITIVE INTERNEURONS: THE ROLE IN ALZHEIMER'S DISEASE PATHOGENESIS

Type: Other, poster

Author: Danka Krtinic

Co-author(s): Bojan Korica

Introduction: Alzheimer's disease (AD) is a neurodegenerative disease which causes memory loss and cognitive decline (1). The main pathological change in AD is the accumulation of protein beta amyloid in specific brain regions (2). One of the regions where these abnormalities can be found is hippocampus, where are also located GABAergic interneurons. The most significant part of these interneurons are parvalbumin-positive (PV+) neurons, which have strong inhibitory effect on hippocampal pyramidal cells (3). As it is believed that dysregulation of GABAergic neurotransmission may play an important role in the pathogenesis of AD (4, 5), the aim of this research study was to investigate the changes in immunohistochemical expression of parvalbumin in hippocampal interneurons.

Materials & Methods: 5xFAD transgenic mice (TG) and their non-transgenic controls (NTG) were used. After animals were sacrificed at sixteen and thirty six weeks of age, samples were obtained from three different regions of hippocampus (dentate gyrus, CA1 and CA2/3 region) and prepared for immunohistochemical staining. Statistical analysis was performed using Mann-Whitney U test.

Results: Examination of the change in the number of PV+ cells between 16-week-old TG and NTG mice did not produce statistically significant **Results** in any of observed hippocampal regions. Statistically significant increase in PV+ cells was found only in the CA1 region of 36 weeks old TG mice, compared to NTG controls of same age. Comparison of TG mice of different ages showed statistically significant increase in PV+ cells in all three hippocampal regions.

Conclusion: Obtained Results indicate that progression of AD symptoms could be related to enhanced activity of GABAergic interneurons. That leaves room for further investigation of the role of PV+ interneurons in the pathogenesis of AD, which should follow up the examined process for a longer period of time and take into consideration the role of compensatory mechanisms.

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ANTIMICROBIAL ACTION OF IMMUNOTROPIC PHYTOCOMPOSITION

Type: Epidemiological Study, poster

Author: Daria Maryniak, Mariia Faustova, Maiia Ananieva

Co-author(s): Daria Maryniak, Mariia Faustova, Maiia Ananieva

Relevance. Nowadays, various herbal preparations are widely and effectively used to activate non-specific immunity in the autumn-winter season as a source of biologically active substances of plant-based origin. Herbal preparation of Immunifit (Â«Skarbnytsya-zdorovyaÂ», Ukraine") contains water-alcohol extracts of Echinacea flowers EchinÃªcea purpÃªrea flores, Licorice roots Licoricia radix, Clover flowers Trifolium Flores, Anise fruits Anethi fructene apricot, flowers RhapÃªnticum carthamoÃªdes rhizomes et radices, leaf Nettle Dioecious UrtÃª-ca diÃªica herba.

The aim of the study. To assess the sensitivity of museum strains of opportunistic pathogens to Immunifit.

Materials & Methods. The antimicrobial activity of Immunifit was studied in comparison with the control - 70% solution of ethyl alcohol. The sensitivity of standard strains of microorganisms *S. aureus* ATCC 25923, *S. epidermidis* ATCC 14990, *E. faecalis* ATCC 29212, *E. coli* ATCC 25922, *C. albicans* ATCC 10231 was studied by serial dilutions according to the order of the Ministry of Health of Ukraine â„–167 from 05.04 .2007 "On approval of guidelines. Determination of sensitivity of microorganisms to antibacterial drugs ". To compare the effect of therapeutic agents, which was determined 10 times with each museum strain, performed statistical processing of the Results of the study using Microsoft Excel 2016.

Results. While determining the bacteriostatic effect of this herbal preparation on museum strains of microorganisms, Enterococci were the most sensitive, MBC (minimum bacteriostatic concentration) of the substance was 1:128. Staphylococci were sensitive to this herbal preparation as 1:64, *Escherichia coli*

diluted 1:4, also in this MBK. MBK 70% solution of ethyl alcohol in relation to all reference strains of microorganisms was diluted 1: 1.

Conclusions. The use of Immunifit has a big perspective in Treatment of antimicrobial infection. The most sensitive to this herbal preparation was enterococci, MBK of which exceeded the control by 128 times ($p < 0,01$).



WHAT SHOULD BE MEASURED IN ANEMIC HEART FAILURE PATIENTS?
HEMOGLOBIN, FERRITIN, IRON, OR ALL?

Type: Clinical Fundamental Study, poster

Author: Djordje Jevtic

Co-author(s):

Introduction: Anemia has proven to be an important factor which affects quality of life, readmission and survival of chronic heart failure (HF) patients. However, studies have not shown a consensus on whether low hemoglobin, iron or ferritin ultimately has the greatest influence. We aimed to determine which laboratory parameter is a stronger predictor of disease progression in anemic HF patients.

Materials & Methods: We prospectively examined 285 patients admitted for HF. Patients were divided into anemic and non-anemic, using three different Methods to define anemia: 1) Hemoglobin $<13\text{g/dL}$ in men & $<12\text{g/dL}$ in women 2) Iron $<10\text{ }\mu\text{mol/L}$ 3) Ferritin $<100\text{ }\mu\text{g/L}$ or ferritin $100\text{-}299\text{ }\mu\text{g/L}$ + transferrin saturation $<20\%$. Follow-up was 33 months. Analyzed parameters included: history and physical, electrocardiography, echocardiography & laboratory parameters, therapy, readmission & survival.

Results: Out of 285 patients admitted for HF, 45.7% had low hemoglobin. Higher prevalence of: ascites ($p=.05$), New York Heart Association class IV (37.6% vs. 28.3%), diabetes mellitus ($p<.001$), chronic kidney disease ($p<.001$), inotropic therapy administration ($p=.04$), length of hospital stay ($p=.02$), readmission ($p=.002$) and mortality ($p<.01$), were observed in this group compared to non-anemic. Iron and ferritin deficient groups had no difference in length of hospital stay, risk factors, readmission and mortality rates compared to their non-anemic counterparts ($p>.05$). Log-rank test confirmed lower survival in hemoglobin deficient ($p=.003$) with no difference in iron ($p=.07$) and ferritin ($p=.39$) deficient patients.

Conclusion: Compared to iron and ferritin, hemoglobin was superior in predicting unfavorable clinical outcome in our study of anemic HF patients. Considering Results from other studies, it is feasible that low iron and ferritin can indicate future decrease in hemoglobin. Hence, assessment of all three parameters should be used with a goal of preventing hemoglobin decline and unnecessary disease progression.



STUDENTS' PERSPECTIVE ON ELECTRONIC DEVICES AS A SOURCE OF RADIATION IN EVERYDAY LIFE AND THEIR IMPACT ON HEALTH

Type: Clinical Fundamental Study, oral

Author: Gabriela Kanclerz, Urszula Sołdaj

Co-author(s): Artur Kacprzyk, Grzegorz Tatoń

Introduction: Despite wide implementation of electronics in modern societies their impact on health still remains the matter of debate. Some individuals complain of a variety of non-specific physical symptoms which in their opinion are attributed to exposure to electromagnetic field (EF), what is formerly called electromagnetic hypersensitivity (EHS). According to literature the prevalence and characteristics of EHS significantly differ between certain populations. Our aim was to analyze the knowledge about the influence of EF originating from devices of everyday use and to identify the prevalence and patterns of EHS among Polish students.

Materials & Methods: We conducted a prospective study with the use of a 22-element questionnaire accessible via internet platform. The questions concerned responders' demographic data, their experience and knowledge in the field of (bio)physics, their attitude towards EF-emitting devices and potential health consequences of their use. The survey was addressed to students of both medical and non-medical faculties.

Results: 219 students (males/females: 103/116), with an average age of 22 ($\bar{A} \pm 4.1$), responded to the survey. 173 (79.0%) of the responders claimed that electronic devices (ED) may have a negative impact on human health, with higher prevalence of these concerns among females as compared to males (females vs. males: 87.1% vs. 69.9%, $p < 0.01$). 120 (54.8%) of interviewees had observed a negative impact of ED on their well-being. Symptoms most commonly attributed to EF exposure were headaches, sore eyes or earache, fatigue and drowsiness. 66 (30.1%) of the responders denied any symptoms resulting from exposure to EF.

Conclusion: Although the responders were youth, who considered themselves as highly familiar with EF-emitting electronic devices and their mechanism of action, some of the responders displayed behavior which may be linked to EHS.



ORTHOPEDIC TREATMENT AND EARLY WEIGHT-BEARING FOR
PRONATION ROTATION TYPE III ANKLE FRACTURES IN ELDERLY
PATIENTS: QUALITY OF LIFE AND COMPLICATIONS

Type: Clinical Fundamental Study, oral

Author: Gonzalo Mariscal Ruiz-Rico

Co-author(s): Rafael Lorente, Alejandro Lorente, Carlos Barrios

Introduction: Pronation Rotation type III ankle fracture represents almost 40% of total ankle surgeries. In elderly patients, non-weight-bearing protocol is the standard procedure. Leaving elderly patients without weight-bearing could be detrimental to their quality of life. This study aimed to compare the quality of life and complications of weight-bearing and non-weight-bearing in elderly patients.

Materials & Methods: Elderly patients with non-displaced suprasyndesmal fracture and deltoid ligament injury or non-displaced medial malleolus fracture with reduced syndesmosis were included. The quality of life was assessed with the Barthel Index and the SF-12 questionnaire at 6 weeks, 1 year and two years. The associated complications were compared.

Results: A total of 62 patients were included. The quality of life, measured with the SF-12 scale, showed a significant increase in the short and long term in the WB group (53.5 ± 5.8 vs 65.2 ± 4.4 at 6 weeks and 70.1 ± 4.2 vs 80.9 ± 3.7 at 2 years; $P < 0.001$). The WB group also showed a greater quality of life measured through the Barthel Index (54.5 ± 5.2 vs 64.3 ± 4.0 at 6 weeks and 71.0 ± 4.3 vs 80.7 ± 3.4 at 2 years; $P < 0.001$). There was no significant difference in the complication rate of the two groups.

Conclusion: Elderly patients with Pronation Rotation type III ankle fractures could receive weight-bearing, to increase the quality of life and functionality. Weight-bearing is a safe procedure with a low complication rate.



ROLE OF MORINGA SEEDS EXTRACT (MORINGA OLEIFERA, LAM.) AS RENOPROTECTOR THROUGH INCREASING THE EXPRESSION OF SUPEROXIDE DISMUTASE (SOD) IN HIGH-FAT AND HIGH-FRUCTOSE-INDUCED WHITE RATS (RATTUS NORVEGICUS)

Type: Other, poster

Author: Indah Sagitaisna Putri, Dyah Ratna Budiani, Riza Novierta Pesik, Slamet Riyadi

Co-author(s):

Introduction: High-Fat and High-Fructose diet could lead to organ damaged, including kidney. It is caused by the overproduction of anion superoxide, leading to suppressing endogen antioxidant and stress oxidative. Moringa seeds (*Moringa oleifera*, Lam.) contain plenty of secondary metabolites rich in antioxidants. This study aimed to investigate the effect of Moringa seeds extract to SOD expression in kidney of high-fat and high-fructose fed white rats (*Rattus norvegicus*).

Materials & Methods: This laboratory experimental method study design used twenty-four male Wistar rats which were assigned into 4 groups. K1 (control) were fed with standard pellet, K2, K3 and K4 were fed with high-fat high-fructose diet for 50 days. Ethanolic extract of Moringa seeds were administered at dose of 150mg/kgbw for K3 and 200mg/kgbw weight for K4. After 28 days, rats were terminated and the kidneys were removed for histological study. SOD expression were measured using Immunohistochemistry staining then analysed using Kruskal-wallis test and posthoc Mann-whitney.

Results: The test results showed significant difference of SOD expression between K1-K2, K2-K3, and K2-K4 in renal tubules ($p < 0.05$). In renal glomerulus, there were significant differences between all groups, except K3-K4 ($p > 0.05$).

Conclusions: Moringa oleifera seeds extract at dose of 150 mg/kgBW and dose of 200 mg/kgBW significantly increases SOD expressions in renal of high-fat and high-fructose fed Wistar rats (*Rattus norvegicus*)



PERFORMANCE OF INDIVIDUALISED METABOLIC SURGERY AND
DIABETTER SCORES IN PREDICTING DIABETES REMISSION FOLLOWING
BARIATRIC SURGERY.

Type: Clinical Fundamental Study, oral

Author: Izabela Karpínska

Co-author(s):

Introduction: Bariatric surgery was proven to be the most efficient Treatment of obesity and type 2 diabetes mellitus (T2DM). Despite detailed qualification, not every patient achieve desirable outcome of T2DM remission after intervention. Recently, Individualized Metabolic Surgery (IMS) and DiaBetter scores have been developed to predict diabetes remission after bariatric surgery.

The aim of the study was to validate and compare the performance of IMS and DiaBetter scores as the predictors of diabetes remission 1 year after surgical Treatment.

Materials & Methods: The retrospective analysis included consecutive patients with T2DM who underwent Roux-en-Y gastric bypass (RYGB) or sleeve gastrectomy (SG) and completed 1-year follow-up. The IMS and DiaBetter scores were calculated for each patient. Score relationship with diabetes remission was assessed using logistic regression. Discrimination was evaluated by area under the receiver operating characteristic (AUROC) curves whereas calibration by Hosmer:Lemeshow test.

Results: Out of 252 patients enrolled 150 (59.5%) were women and 102 (40.5%) were men with median age 48 years. 46.83% of patients underwent SG whereas 53.17% had RYGB. The T2DM remission rate reached 90.5%. Preoperatively median of glycated hemoglobin (HbA1c) was 6.75% and BMI was 45.39 kg/m², both decreased to 5.8% and 33.09 kg/m² respectively after 1 year.

Either IMS or DiaBetter were predictive of diabetes remission in a logistic regression analysis (OR 0.97, $p<0.0001$; OR 0.51, $p<0.0001$, respectively). The DiaBetter score presented excellent discrimination (AUROC 0.81; $p<0.0001$) whereas IMS had acceptable discrimination (AUROC 0.76; $p<0.0001$). Only DiaBetter score demonstrated statistically good calibration

Conclusion: Both IMS and DiaBetter scores can be used in preoperative assessment of diabetes remission after bariatric surgery. DiaBetter score seem to be more accurate than IMS score in predicting metabolic outcomes after bariatric surgery.



PREVALENCE AND CHARACTERISTICS OF PATIENTS WITH CORONARY ARTERY FISTULAS IN 11, 271 PATIENTS UNDERGOING CORONARY ANGIOGRAPHY: AN 8-YEAR SINGLE-CENTER EXPERIENCE

Type: Epidemiological Study, oral

Author: Jagoda Dradrach

Co-author(s): Jagoda Dradrach, Jakub Chmiel, Grażyna Świtacz, Miłosz Kacper Książek, Radosław Kacorzuk, Paweł Iwaszczuk

Introduction: Coronary artery fistula (CAF) is a rare defect defined as an abnormal direct connection between one of the coronary arteries and a heart chamber or another blood vessel. The majority of these fistulas are congenital. Although most of patients are asymptomatic, some may present with symptoms of dyspnea, fatigability, angina or palpitations.

Materials & Methods: We retrospectively investigated medical records of all patients who underwent coronary angiography (CAG) at our Institution from 1 January 2010 to 31 December 2017. Patients with CAF were selected. Coronary artery disease (CAD) was defined by presence of $\geq 50\%$ diameter stenosis in any major epicardial vessel or presence of coronary stent/bypass graft.

Results: 32 CAF were found in 30 (0.27%, 63.33% females) out of 11, 271 patients who underwent CAG in that period. Ten (33.33%) were multiple. Median age was 70. LCA gave origin to 23 (76.67%) fistulas; 3 LMCA-LV, 11 LAD-LV, 7 LAD-PA, 2 Cx-PA. RCA gave origin to 9 (23.33%); 5 RCA-RA, 1 RCA-RV, 2 RCA-PA, 1 RCA-LV. Patients presented with chest pain (43.33%), dyspnea (33.33%), fainting (10%), and suffered from arterial hypertension (70%), diabetes mellitus (33.33%), heart failure (30%), pulmonary hypertension (33.33%) and atrial fibrillation (30%). CAD was concomitant in 10 patients (33.33%). Most patients (60%) were hospitalized due to suspected stable CAD, 4 (13.33%) due to suspected acute coronary syndrome and 8 (26.66%) for other reason. Moderate or severe valvular heart disease was detected in 21 (70%) of

patients. Congenital heart diseases accompanying CAF were atrial septal defect (6.67%) and foramen ovale (6.67%).

Conclusions: The prevalence of CAF in 11, 271 patients was 0.27%. Three out of every four CAF arose from left coronary artery. One third were multiple. Majority of patients had significant valvular heart diseases and arterial hypertension. CAD and pulmonary hypertension accompanied CAF in one-third of the patients.



THE ROLE OF PARAOXONASE 1 (PON1) AS AN OXIDATION MARKER, IN MUSCLE IMPROVEMENT AFTER INCREASED BETA-HYDROXYBUTYRATE (BHB) IN BLOOD, IN PATIENTS WITH MULTIPLE SCLEROSIS

Type: Clinical Fundamental Study, oral

Author: Casaní-Cubel Julia, De la Rubia Ortí Jose Enrique

Co-author(s):

Introduction: Previous studies have determined that multiple sclerosis (MS) Results in metabolic changes that lead to reduction in muscle mass. These metabolic changes occur from energy disturbances at the mitochondrial level, where low levels of the Paraoxonase 1 (PON1) enzyme are associated with increased levels of oxidative stress. Ketone bodies, particularly betahydroxybutyrate (BHB), restore these energetic disturbances by improving muscle activity. PON1 can be used as an oxidation marker, to demonstrate this anthropometric improvement. The objective of this work was to determine the role of PON1 in muscle improvement after BHB increase in blood, specifically in patients with MS.

Material and Methods: A pilot study was carried out for 4 months, with 51 patients diagnosed with MS, randomly divided into: an intervention group that received an isocaloric diet of a Mediterranean nature supplemented with 60 ml of coconut oil; and a control group that received the same base diet but without coconut oil. Anthropometric measurements and blood samples were taken before and after the Treatment to determine, the concentration of PON1 and BHB in serum.

Results: A significant increase in PON1 was obtained, which may be associated with an increase in BHB and lean muscle mass.

Conclusion: The enzyme PON1 appears to be a good marker of decreased oxidation status, in MS patients who show muscle improvement after increased BHB in the blood.



HYPONATREMIA AS A SIDE EFFECT OF SSRI INTAKE: A CASE STUDY.

Type: Case Report, poster

Author: Justyna Kacperczyk

Co-author(s): Małgorzata Stompór MD, PhD (tutor)

Introduction: We report the case of 89-years old female who presented with symptoms of anxiety and memory loss, 7/10 in AMTS scale.

Case history: She suffers from spontaneous head tremor, gastroesophageal reflux disease, progressive blindness and deafness. On daily basis she has been taking atrovastatin, lutein, ginko biloba and pantoprazole.

Investigations: Blood examination: Na=139; K=5.16; creatinine=0.77; urea=21.5; B12=260.8. In head CT scan: cortico-basal atrophy, hypodense ischemic lesions in temporal and parietal lobes.

Treatment/Results: She has been prescribed Polocard 75mg. After 1.5-year of follow-up episode of depression within stupor (F03) occurred. Alpragen 0.25mg and Escitalopram 10mg has been prescribed. Events of symptomatic hyponatremia started appearing after 3 months from administration. Despite, withdrawal of escitalopram, modification of SSRI therapy and sodium supplementation once induced hyponatremia was constantly present with ups and downs (range:128-139mmol/l) within 2 years of follow-up. Patient is needed constant fludrocortisone intake without which occurrence of syndrome of inappropriate antidiuretic hormone secretion (SIADH) induced by escitalopram is observed.

Discussion: Geriatric patients are often prone to severe side effects due to multidrug therapy. As a physician it is crucial to be aware of possible rare complications and drug interactions. The knowledge of preventing them by implementation of the best possible pharmacological therapy for every individual and treating them in case of occurrence is principal.

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UNEXPECTED CAUSE OF ABDOMINAL DISTENSION

Type: Case Report, poster

Author: Katarzyna Szczepaniec

Co-author(s): Joanna Musialik

Background: We present the case of 55-years-old male, previously suffered only from hypertension, who was diagnosed because of significant abdominal distension. The problem has begun a few years earlier but the patient was convinced that it was only abdominal obesity. The reason of starting the diagnostics was the appearance of non-characteristic abdominal pain. In physical examination: abdominal circumference 126cm, abdomen arched above the level of the chest, tightens abdominal skin with an uneven surface, locally modeling on palpable, spherical structures located in the abdomen cavity.

Investigations: In an ultrasound examination, the multiple fluid cavities in abdomen cavity with no possibility of imaging the other organs have shown. In computer tomography scans, a significantly enlarged liver of 33cm, with the presence of numerous cysts (the largest 12cm in diameter) have found which allowed to diagnose polycystic liver disease (PLD).

Despite the absolutely normal liver and kidney function and because of abdominal pain due to hepatomegaly and deterioration of quality of life, the patient was qualified for liver transplantation.

Discussion: PLD is very rare genetic disease and symptomatic PLD occurs mainly in the context of isolated polycystic liver disease (PCLD) and autosomal dominant polycystic kidney disease (ADPKD) with extra-kidney manifestation. Screening mutations of the genes causing PCLD (PRKCSH and SEC63) or ADPKD (PKD1 and PKD2) confirm the clinical diagnosis¹. In PCLD more than 20 fluid-fulfilled hepatic cysts are found. In ADPKD, renal failure due to polycystic kidneys and non-renal extra-hepatic features are common in contrast to PCLD. Usually asymptomatic, but one of the five patients may feel abdominal pain, distension

or nausea. Uncommonly, surgery, including transplantation is needed (0.003% of all indications).

Background: Abdominal distension may be a symptom of a various diseases. The most common cause are ascites or neoplasm, but in differential diagnosis we should include rare causes such as PLD.

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THYROID HORMONE LEVEL ALTERATIONS AND ITS RELATIONSHIP TO ATHEROSCLEROSIS IN DIABETIC PATIENTS

Type: Clinical Fundamental Study, oral

Author: Keerthana P Sivakolundu

Co-author(s): Anjana Chari, Mariyappan A, Srinivas A, Komala G

Background: Thyroid hormone levels often fluctuate in patients with type-2 diabetes mellitus (DM). The clinical implications of this fluctuation remain unknown. Previous research has shown that small changes in thyroid hormone levels increase the risk of DM-related complications such as atherosclerosis. Because DM-related atherosclerosis is mediated by oxidative damage, we hypothesized that thyroid hormone levels affect the anti-oxidative functions of high-density lipoprotein (HDL) in DM patients. This alteration in the anti-oxidative properties of HDL are reflected as DM-related atherosclerosis.

Methods: We conducted a case-control study that comprised of fifty DM patients with no prior history of thyroid abnormalities and fifty age-, sex-matched healthy controls. Thyroid hormone levels (free T3, freeT4) and thyroid stimulating hormone (TSH) levels were evaluated in all participants using enzyme-linked immunosorbent assay. The antioxidant properties of HDL were assessed by measuring the levels of serum paraoxanase-1 (PON-1).

Results: DM patients had significantly higher free T4 compared to healthy controls ($p=0.001$). Free T3 levels were significantly reduced in DM patients than controls ($p=0.041$). There were no group-differences in TSH levels. PON-1 levels were significantly reduced in DM patients compared to healthy controls. In addition, PON-1 levels increased with increases in free T3 levels in DM patients. No such changes were observed in healthy controls.

Conclusion: We found that thyroid hormone levels are affected in DM patients. Furthermore, thyroid hormone levels predicted alterations in anti-oxidative properties of HDL. These findings implicate the importance thyroid hormone

fluctuation in DM patients and their potential contribution to DM-related atherosclerosis by reducing the anti-oxidative properties of HDL. Furthermore, this study highlights the importance to carefully manage thyroid hormone levels in patients with DM.

Keywords: Thyroid hormones, DM, HDL, atherosclerosis.



FROM EPIGASTRIC PAIN TO LIVER TRANSPLANTATION

Type: Case Report, poster

Author: Klaudia Adamczewska, Katarzyna Szczepaniec, Paulina Klarczyńska

Co-author(s): Joanna Musialik

Case history: We present the case of 36-year-old female (U.S.), previously healthy, who was diagnosed because of non-specific abdominal pain of moderate severity, localized in the right epigastric region. In physical examination, she was felt only slight discomfort in the right epigastrium. After several days the symptoms persistent, abdominal ultrasound (US) was performed and an enlarged liver with numerous hypoechoic focal lesions having a hyperechoic rim were shown. Further diagnostics with magnetic resonance imaging revealed described changes with the largest dimension up to 45mm and a characteristic image of the shooting target. Pathomorphological examination of coarse needle biopsy specimen confirmed the initial diagnosis of HEHE (hepatic epithelioid hemangioendothelioma) (CD31(+), CD34(+), Ki67 positive in individual cells). No extrahepatic changes were found and after quick qualification, the patient successfully underwent liver transplantation.

Diagnostics of abdominal pain is a process that often requires sequencing of many laboratory and imaging tests. Predominantly, detected focal liver lesions are not associated with reported complaints, in most cases they have a benign nature, e.g. cysts or hemangiomas. However, in a certain percentage of cases, focal lesions are classified as malignant and are indication for surgical resection or even liver transplantation. HEHE is a very rare, endothelial malignant liver tumor (<1 case per million) with uncertain biological behavior which usually falls between benign hemangioma and malignant angiosarcoma¹. An extrahepatic locations most commonly include lungs and bones².

The course of the disease is asymptomatic for a long time, and in multifocal cases the only solution is liver transplantation³. Survival and survival rates without recurrence after 5 and 10 years after transplantation are 83% and 74%

as well as 82% and 64%, respectively. The history of this patient confirms the need for meticulous diagnostics of every abdominal pain.

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MECHANISMS OF DRUG RESISTANCE OF BACTERIA CULTURED FROM MEDICAL STUDENTS STETHOSCOPES

Type: Epidemiological Study, oral

Author: Krzysztof Sacha, Paweł Harbut, Amadeusz Hajduk, Kuba Orszulak, Monika Kabała

Co-author(s):

Introduction: European Centre for Disease Prevention and Control (ECDC) reports that 1 in 18 patients in Europe has HAI and about 80.000 patients become infected by hospital pathogens every day. Medical students' stethoscopes used during clinical classes are potential sources of HAI etiologic agents. The aim of this work was to examine the presence and to compare drug resistance of bacterial strains on the stethoscopes of medical students attending classes in different wards in 2 hospitals in Silesia, Poland. Methods: Sixty four samples taken from stethoscopes were obtained using sterile swabs and transport medium. Twenty four samples were swabbed in the Intensive Care Unit (ICU), 18 - in the Internal Medicine Department and 22 - in the Gastroenterology Department. All samples were cultured on Columbia, Chapman, MacConkey agars and BHI, enriched with 1% horse serum at 37°C for 24h. Then colonies were re-isolated using the same media and BHI. Isolated strains were identified in the automatic system - VITEK 2 Compact (bioMérieux, Marcy l'Etoile, France). Drug resistance mechanisms were performed according to The European Committee on Antimicrobial Susceptibility Testing (EUCAST) 2019.

Results: Samples taken from stethoscopes contained coagulase-negative Staphylococci (CNS), Micrococci, Aerococci, Bacilli and Corynebacteria. Four samples: three from ICU and one from Gastroenterology ward, contained Staphylococcus aureus. 9 samples presented no bacterial growth. Out of 26 examined samples, 18 were resistant to antibiotics (penicillin, methicillin, linezolid, MSB and MLSB resistance), 7/9 from ICU, 5/10 from Internal Medicine ward and 6/7 from Gastroenterology ward. Three presented multidrug

resistance, 2 strains from ICU: *Staphylococcus hominis* with methicillin and MSB, *Staphylococcus warneri* with methicillin and MLSB and 1 from the Gastroenterology ward: *Staphylococcus epidermidis* with methicillin and MSB.

Conclusion: Because student' stethoscopes are potential sources of HAI etiologic agents, their carefully disinfection between patients is required to prevent transmission of HAI.

Keywords: stethoscopes, bacteria, medical students



ADRENAL METASTASIS FROM MELANOMA COMPLICATED BY A HEMORRHAGE - CASE STUDY

Type: Case Report, poster

Author: Krzysztof Sacha

Co-author(s): Study Supervisor: Aleksander Targoński MD PhD, Michał Tkocz MD PhD

Background: Adrenal tumors mainly present as adrenocortical carcinomas, malignant pheochromocytomas and adrenal metastases. Metastases to adrenal gland originate principally from the lung, breast, large intestine, kidney. Adrenal metastases are frequently encountered during autopsy but clinical presentation is rather uncommon. Although the majority of patients with melanoma metastasis to adrenal glands do not show any symptoms, abdominal CT scan can be crucial. According to a retrospective study, median survival of surgical and non-surgical patients was 18.6 months and 7.7 months, respectively.

Case history: A 43 year-old man was admitted as an emergency to the St. Barbara Province Specialist Hospital in Sosnowiec due to right lower abdominal pain related to right adrenal hemorrhage. Medical history revealed melanoma with metastases to right adrenal gland, bones and small intestine.

Investigations: Contrast-enhanced CT showed a right adrenal tumor (56 x 42 mm) and large acute hematoma (115 x 115 x 95 mm ApxCCxSD) compressing the upper pole of the right kidney. An increase of right extraperitoneal hematoma and decreased hemoglobin were observed after admission. The patient was qualified for surgery.

Treatment: Retroperitoneal haematoma was evacuated, and right adrenalectomy was performed. Complete blood count and diagnostic procedures confirmed surgical success. After 4 days, the patient did not report any pain and was discharged home with discharge recommendations.

In Conclusion, complete adrenal resection seems an appropriate intervention for melanoma metastasis to adrenal gland. Abdominal diagnostic imaging of the abdomen can help detect adrenal metastases and allow timely therapy.



IN-SILICO STUDY OF ANNONA MURICATA (SOURSOP) LEAVES
ISOLATES AS ANTI-LUMINAL A BREAST CANCER

Type: Clinical Fundamental Study, oral

Author: Lowilius Wiyono, Brenda Cristie Edina, Kresanti Dewi Ngadimin, Jeremy Rafael Tandaju, Andrea Laurentius

Co-author(s):

Introduction: Breast cancer is the second most common cancer worldwide, equally diagnosed in either productive or menopausal women, of which incidence rate was projected to increase up to 300% in 2030 around the globe, including Indonesia. Exploration of megadiverse flora in Indonesia provides opportunities for researchers to develop promising substances as targeted therapy for breast cancer. Soursop (*Annona muricata* or *Graviola* sp.) is widely promoted as an alternative cancer Treatment. Therefore, an extensive in-silico analysis will give us deeper insights into their predictive characteristics in the future development of breast-cancer-targeted therapy.

Material & Methods: The crystal structure of Estrogen (ESR) and Progesterone (PR) receptor protein used in this study were retrieved from RSCB Protein Data Bank (PDB)(Entry PDB Code: 5WGQ). An analysis of ESR and PR protein then conducted to determine its physicochemical properties. The compounds or isolates included in this study were discovered by using a literature review on chemical compounds of soursop which then filtered out based on prior studies. A total of 12 compounds were chosen for this study. These compounds were retrieved from PubChem and HMDB and assessed with Drug-Likeness Test to discover their physicochemical properties. The molecular docking was carried out using AutoDock 4.2 software and analyzed to measure the models' binding energy and interaction.

Results: Molecular docking has revealed Murihexocin C to be the best ligand compared to other compounds used in this study, based on its lowest binding energy level. This result is also comparable to gossypol as the 1st line therapy of

breast cancer. Drug-Likeness Test also revealed the appropriate physicochemical properties of Murihexocin C as a potential drug.

Conclusion: The isolates of soursop have the potential to be a novel drug against breast cancer, particularly Murihexocin C. These in-silico study Results should be beneficial for further in-vitro and in-vivo studies.



CAN PERIHEMORRHAGIC AREA OF INTRACEREBRAL HAEMORRHAGE
BE PREDICTIVE OF OUTCOME AND RISK OF EXPANSION? :
COMPUTATIONAL ANALYSIS

Type: Clinical Fundamental Study, oral

Author: Małgorzata Czuba

Co-author(s):

Introduction: Most computational analysis of intracerebral haemorrhage (ICH) is applied to hematoma mass, neglecting its surroundings. We determine whether analysis of perihemorrhagic density can be associated with outcome and ICH expansion.

Materials & Methods: We retrospectively analysed 60 patients with spontaneous supratentorial ICH. Their head CT images were transformed to obtain exact contour of ICH. We extracted circular area around contour, with circle centre in its centroid and perimeter equal to distance between two furthest point on contour. For such area, we calculated four moments of a distribution: standard deviation (SD), coefficient of variance (CoV, variance/mean), skewness (S, third moment) and kurtosis (K, fourth moment). Upon admission patients were assessed using Glasgow Coma Scale (GCS) and upon discharge using Glasgow Outcome Scale (GOS). ICH expansion was defined as any increase in ICH volume on control CT. Poor outcome was defined as GOS < 3.

Results: a total of 34 (56.67%) patients had poor Treatment outcome and 15 (25%) had ICH expansion. Patients with poor outcome had lower GCS upon admission (4.97 ± 3.24 vs. 10.84 ± 4.52 ; $p < 0.01$) and were older (69.18 ± 12.56 vs. 55.58 ± 17.91 ; $p < 0.01$). They also had higher SD (32.18 ± 9.70 vs. 27 ± 9.04 ; $p = 0.039$), CoV (8.43 ± 4.62 vs. 5.36 ± 3.16 ; $p < 0.01$) and S (0.16 ± 0.84 vs. -0.25 ± 0.67 ; $p = 0.045$). Patients with ICH expansion had higher SD (34.87 ± 11.37 vs. 28.29 ± 8.59 ; $p = 0.021$) and CoV (9.6 ± 5.6 vs. 6.27 ± 3.46 ; $p < 0.01$) and lower K (-0.61 ± 0.72 vs. -0.07 ± 0.86 ; $p = 0.034$). In

multivariate logistic regression analysis higher CoV (OR: 1.711; 95% CI: 1.113-3.289;p=0.048) and age (OR: 1.103; 95% CI:1.024-1.229;p=0.03) and lower GCS (OR: 0.691; 95% CI: 0.513-0.852;p<0.01) remained associated with higher risk of poor Treatment outcome. Lower K (OR: 0.382; 95% CI: 0.132-0.879;p=0.042) was associated with higher risk of ICH expansion.

Conclusion: Computational analysis of perihemorrhagic density can be useful in determining outcome and risk of ICH expansion.



THE STERNALIS MUSCLE AND ITS CLINICAL SIGNIFICANCE: A META-ANALYSIS OF ITS PREVALENCE

Type: Other, poster

Author: Małgorzata Teodorska, Dominik P. Łazarz, Mateusz A. Rosa

Co-author(s): Jakub R. Pękala, Przemysław A. Pękala, Krzysztof A. Tomaszewski

Purpose: The purpose of present study is to summarize all available information about the prevalence and anatomy of the sternalis muscle. From a medical point of view, clinicians shall be aware of this variant.

Methods: To detect all available data about sternalis muscle, major online databases were extensively searched. Case reports, conference abstracts, review articles, case series, incomplete datasets and letters to editors were not included. The three independent reviewers appraised studies adequacy and performed a data extractions. Any discrepancies were solved by consensus. The meta-analysis was conducted with strict adherence to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The quality of included articles was examined using the AQUA tool designed for anatomical studies. The data was divided into two main groups of articles : mammographic and others (cadaveric, radiological).

Results: A total of 35 articles (n=99, 096 subjects) were pooled into this meta-analysis. The Results revealed that the overall prevalence of the sternalis muscle in both cadaveric and radiological studies was 5.8% (95%CI: 4.6-7.1). However mammography was able to distinguish the muscle only in 0.16% of cases. Moreover, it was more prevalent in CT studies (7, 2%) than in cadaveric studies (5.4%) and when present it was most often found as an unilateral structure (66.9%). With respect to geographical subgroups, the presence of the sternalis was more common in Asia (7.1%) than in Europe (3.5%). On average, it was 79.0 mm high, 17.3 mm wide and 3.3 mm deep.

Conclusions: This evidence-based anatomical meta-analysis on the sternalis muscle showed that it is an significant anatomical variant. Surprisingly common occurrence should oblige us to consider the presence of this muscle during oncological surgery, radiological examination and mammography. Furthermore, it could be used as flap in the plastic and reconstructive surgery of head and neck.



PREDICTORS OF INTRAOPERATIVE CEREBRAL ANEURYSM RUPTURE IN PATIENTS WITH SUBARACHNOID HEMORRHAGE

Type: Clinical Fundamental Study, oral

Author: Maciej Frączek

Co-author(s):

Introduction: Intraoperative cerebral aneurysm rupture (IOR) is a common phenomenon with frequency of around 19%. There has not been enough research on operative cerebral aneurysm Treatment and its complications. Our study's main point is to assess possible predictors of IOR.

Material and Methods: We retrospectively study examined all saccular aneurysms surgically treated from 2013 to 2019. Study group consisted of 198 patients. Patients who experienced a subarachnoid hemorrhage were assessed with Glasgow Coma Scale (GCS) upon admission and according to the Hunt and Hess system, modified Fisher grading scale, World Federation of Neurosurgical Societies (WFNS) scale and also with modified Rankin Scale (mRS) on discharge.

Results: In our study frequency of IOR was 20.20%. Patients with IOR had higher aneurysm dome size (9.43 ± 8.39 vs. 4.96 ± 2.57 mm; $p < 0.01$) in comparison to those without IOR. Presence of blood clot on aneurysm dome was significantly associated with IOR (12.50% vs. 2.53%; $p < 0.01$). We also observed that lamina terminals fenestration during surgery is associated with lower risk of IOR (7.50% vs. 21.52%; $p = 0.04$). Multiple aneurysms were also associated with lower risk of IOR (5.00% vs. 18.35%; $p = 0.038$). Anticoagulants intake was strongly associated with risk of IOR (5.00% vs. 0%; $p < 0.01$). Glucose blood levels were also elevated in patients with IOR (7.47 ± 2.78 vs. 6.90 ± 2.22 mmol/l; $p = 0.04$). Multivariate analysis associated that urea blood levels (OR 0.55, 0.33 to 0.81, $p < 0.01$) and multiple aneurysms (OR 0.04, 0.00 to 0.37, $p = 0.014$) were protective against the occurrence of IOR. Analysis also revealed that APTT (OR 1.18, 1.03 to 1.38, $p = 0.026$) was IOR predictive.

Conclusion: Factors like large aneurysm dome, blood clot on aneurysm dome, anticoagulants intake and elevated glucose blood levels can be a predictive of IOR event. Performing lamina terminalis fenestration, appearance of multiple aneurysm and high urea blood levels may be associated with lower risk of such event.



NEUROFIBROMATOSIS TYPE 1 - AN UNUSUAL PRESENTATION

Type: Case Report, poster

Author: Mădălina Andreea Beldie

Co-author(s): Remus-Andrei Tofan, Lavinia Caba (MD, PhD)

Introduction: We present the case of a 48-years old male who is admitted to the Cardiology Department for headaches, hypertension, tachycardia, dyspnea, and heavy sweating. General physical exam revealed the presence of more than six cafe au lait (CAL) spots with the diameter bigger than 5mm, precise borders and uniform color, multiple cutaneous neurofibromas, and one plexiform neurofibroma, which are highly evocative for the diagnosis of neurofibromatosis type 1(NF-1).

Case history: The patient has no relevant medical history, but a remarkable anamnestic finding consists of the presence of NF-1 signs in one of the patients' offsprings.

Investigations: Laboratory tests revealed elevated levels of urinary vanillylmandelic acid and urinary total metanephrines, with no additional pathologic changes. Also, a full-body CT was performed and it showed the presence of an expansive lesion located on the left adrenal gland, highly suggestive of pheochromocytoma. Based on laboratory tests, and CT evaluation the diagnosis of pheochromocytoma was established.

Treatment and Results: The patient received preoperative pharmacological Treatment for 10 days, represented by alpha and beta-blockers associated with a high salt diet. Surgical Treatment consisted of minimally invasive left adrenalectomy. Postoperative levels of urinary vanillylmandelic acid and urinary total metanephrines were in normal ranges, showing that there are no remaining tumor cells.

Discussions and Differential Diagnosis: The diagnosis of NF-1 is established in adult patients who meet at least two of the following criteria: more than six CAL spots bigger than 5mm, two or more neurofibromas or a plexiform neurofibroma, freckling in the axillary or inguinal regions, optic glioma, two or more iris hamartomas, distinctive osseous lesions or a first degree relative with NF-1. The peculiarity of this case consists in the fact that the patient presented with pheochromocytoma, a complication of multiple genetic syndromes, one of them being NF-1.

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SIMULTANEOUS ARTERIAL AND VENOUS THROMBOSIS - THE SILENT KILLER

Type: Case Report, poster

Author: Mădălina Andreea Beldie

Co-author(s): Remus-Andrei Tofan, Mariana Floria (MD, PhD, FESC)

Introduction: We present to you the case of an 83 years old female patient, who was admitted to the hospital for dyspnoea due to congestive heart failure, paroxysmal atrial fibrillation, chronic kidney disease, and severe hypoglycaemia.

Case history: The patient has a medical history of diabetes mellitus. In the Emergency Department, the hypoglycaemia was treated and the patient was transferred to the Cardiology Unit after a possible acute pulmonary embolism was suspected.

Investigations: A CT-scan angiography was performed which objectified the presence of bilateral pulmonary embolism at the level of the lower pulmonary lobes while, incidentally, also showed the presence of a 22/37 mm thrombus at the level of the ascending aorta. Neoplasia or thrombophilia was excluded. Severe metabolic acidosis was diagnosed.

Treatment and Results: The multidisciplinary team began with 24 hours of conservative Treatment, and then decided to continue the administration of low-molecular-weight heparin. After the two-week-long administration of the heparin and the improvement of the Treatment of congestive heart failure, a new CT-scan revealed the disappearance of the thrombus from the ascending aorta.

Discussions: It is important to mention that there is no consensus in the actual guidelines referring to the Treatment of this pathology. The arterial and venous thrombosis, while considered as having different physio-pathological entities, can appear simultaneously in a particular clinical situation. Being such a rare

finding in the medical world, it is mandatory to investigate this association to identify its causes.

The particularity of this case was determined by the lack of a major risk factor for this disease, like an active neoplasm or thrombophilia. Despite that, dehydration alongside the procoagulant status of chronic kidney disease, metabolic acidosis, and the presence of paroxysmal atrial fibrillation had had an important role to play.

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SEXUAL DYSFUNCTION IN WOMEN WITH SYSTEMIC SCLEROSIS:
SINGLE CENTRE STUDY

Type: Clinical Fundamental Study, oral

Author: Magdalena Chrabąszcz, Albert Stec, Aleksandra Knot, Lidia Rudnicka, Małgorzata Olszewska, Mariusz Sikora

Co-author(s):

Introduction: Systemic Sclerosis (SSc) is a chronic autoimmune disease characterized by abnormal fibrotic processes, inflammation and microvascular damage. Apart from the life-threatening organ involvement, sexual dysfunction is also an important issue with great impact on the quality of life. Aim of the study: To assess the rates of sexual activity and to identify domains of sexual function driving impairment in SSc.

Material and Methods: Female patients with SSc hospitalized in Department of Dermatology, between February 2018 and January 2019, were asked to fill in the Female Sexual Function Index (FSFI) and the Mell-Krat Scale. The FSFI is the 19-item questionnaire that assesses sexual functioning in six domains (sexual desire, arousal, vaginal lubrication, orgasm, sexual satisfaction and pain) in the last 4 weeks, whereas the Mell-Krat Scale is a tool used in sexological diagnosis dedicated to Polish population. Gender, age, comorbidities, clinical course, Treatment and modified Rodnan Skin Score to evaluate patient's skin thickness were considered.

Results: 58, 33% (28/48) women agreed to participate; 41, 66% (20/48) disagreed to participate because of the following reasons: embarrassment - 45% (9/20), no current sexual relationship: 35% (7/20), not interested: 15% (3/20), other: 5% (1/20). We analyzed 28 women with the mean age 52.27 ± 10.2 years old. Sexual dysfunction was found in 54% (15/28) of the SSc patients assessed by FSFI Scale, the most compromised domains being desire (mean score 2.8) and arousal (mean score 2.9). The mean score in Mell-Krat Scale was 42.08 ± 13.87 . There was no significant correlation between FSFI

scores and duration of disease ($p=0,643$) and modified Rodnan Skin Score ($p=0,616$). Sexual impairment was independently associated with older age ($p<0,05$).

Conclusions: Sexual dysfunction are common problems in female patients with systemic sclerosis. Dermatologists should acknowledge the high prevalence of these problems among their patients and maintain the interdisciplinary cooperation with other specialists.



CORONAVIRUS OUTBREAK - FEAR, ATTITUDES, AND COPING
STRATEGIES FOR COVID-19 AMONG PATIENTS WITH SYSTEMIC
SCLEROSIS

Type: Clinical Fundamental Study, oral

Author: MD Magdalena Chrabąszcz, PhD, MD Mariusz Sikora, Medical Student Aleksandra Knot, Medical Student Albert Stec, MD Cezary Maciejewski, Professor, MD, PhD Małgorzata Olszewska, Professor, MD, PhD Lidia Rudnicka

Co-author(s): MD Magdalena Chrabąszcz, PhD, MD Mariusz Sikora, Medical Student Aleksandra Knot, Medical Student Albert Stec, MD Cezary Maciejewski, Professor, MD, PhD Małgorzata Olszewska, Professor, MD, PhD Lidia Rudnicka

Introduction: COVID-19 outbreak has quickly spread worldwide, causing a high pressure on the health-care system. Patients with Systemic Sclerosis (SSc) need a regular screening and frequent intravenous Treatments. The aim of the study was to determine level of fear, attitudes and coping strategies among SSc Patients during COVID-19 outbreak.

Materials & Methods: We collected telephone survey using the Fear of COVID-19 Scale (FCV-19S) which is a seven-item validated scale and self-designed questionnaire on attitudes and coping strategies towards the coronavirus outbreak.

Results: The majority of inquired patients agreed to conduct the survey (17/20 patients, 85%). The study population consisted of 17 female systemic sclerosis patients with median age 53 (IQR 47- 58) and median disease duration 8 (IQR 4-12). 88% (15/18) of patients considered themselves as being at higher risk of severe COVID-19 infection. The median level of fear for SARS-COV2 was 21.00 (IQR 17-27) and for Influenza 14 (IQR 12- 17) $p=0.008$. None of the patients were vaccinated for Influenza this season and only 17, 6% were vaccinated anytime in the past.

94% of patients discontinued vasodilator infusion at the Hospital, because of the self-isolation during the COVID-19 outbreak. 52, 9% of them reported increased Raynaud's syndrome severity during this period, 23% reported occurrence of new digital ulcerations and 23% reported the aggravation of breathlessness. One out of 12 (5, 8%) patients treated with immunosuppressant agents discontinued therapy.

The main source of information on SARS-COV2 were media: television (76, 4%), Internet (17, 6%), and only 6% from the healthcare professionals.

Conclusions:

Patients with SSc feared of SARS-COV2 significantly more than influenza and considered themselves at risk of severe COVID-19 disease course. Majority maintained strict rules of social distancing including cancellation of scheduled hospital visits for vasodilatory infusions. Considerable proportion of patients reported aggravation of scleroderma course during COVID-19 outbreak.



COPEPTIN AND ITS POTENTIAL ROLE IN PROGNOSIS AND DIAGNOSIS
OF PERIPHERAL MICROANGIOPATHY IN SYSTEMIC SCLEROSIS.

Type: Clinical Fundamental Study, oral

Author: Magdalena Chrabąszcz, Albert Stec, Aleksandra Knot, Lidia Rudnicka,
Małgorzata Olszewska, Mariusz Sikora

Co-author(s):

Introduction

Systemic sclerosis is an immune-mediated disease characterized by endothelial dysfunction and vasculopathy of the small and large vessels. Severe or rapidly progressive digital ulcers at an early disease stage are associated with decreased patient's quality of life. Biomarkers for rapid progression of vascular lesions are still being researched, which could allow intensification of rheological Treatment early enough to prevent ulceration formation. The aim of the study was to determine copeptin concentration (peptide reflecting the activity of the vasopressinergic system that has strong vasoconstrictive properties) in patients with systemic sclerosis.

Materials & Methods:

Concentrations of copeptin were measured in the blood plasma of patients with systemic sclerosis (n = 30) [prior and after the Introduction of rheological therapy] and healthy individuals (n = 30) using commercially available ELISA test kits. Copeptin values were also correlated with clinical features and capillaroscopic patterns.

Results:

Claudin-3 concentration was higher in patients with systemic sclerosis compared with healthy control ($173, 4 \pm 32, 7$ vs $81, 6 \pm 14, 3$ pg/ml; $p < 0, 05$).

Concentrations of copeptin significantly correlated with Reynaud's phenomenon activity assessed by Reynaud's Condition Score ($r=0,71$, $p<0,05$). Patients with "active" and "late" capillaroscopic pattern had higher copeptin concentration than patients with "early" capillaroscopic pattern. Concentration of copeptin decreased after intravenous therapy with prostaglandin analogues (185,5 pg/ml before Treatment vs 136,7 pg/ml after Treatment).

Conclusions:

This study evaluated copeptin as a potential marker of vascular damage in systemic sclerosis and response to Treatment that improves blood rheological parameters. Further studies are needed in order to identify patients with rapidly progressing vascular damage and a high risk of developing digital tip ulcers.



ULTRASONOGRAPHY IN DIFFERENTIAL DIAGNOSIS OF CARPAL TUNNEL SYNDROME

Type: Case Report, poster

Author: Maria Zimowska

Co-author(s): PhD Jakub Antczak, Aleksandra Danielak

Introduction: CTS (carpal tunnel syndrome) is the most common entrapment neuropathy affecting about 3% of adult population. Electrophysiology may reveal even slight disturbances in median nerve conduction through the tunnel and are considered to be the gold standard in diagnosing of CTS. Recently however HRUS (high resolution ultrasound) gained attention as valuable adjunctive diagnostic method capable of detecting morphologic changes not visible in the electrophysiology.

We present J.D, a 74-year old man with recurrence of CTS symptoms (numbness in left forearm).

Case history The patient with end stage renal failure with a fistula in left forearm, with surgical decompression of left CTS in the past, was referred to our department due to recurrence of CTS symptoms.

Investigations: Electrophysiology revealed marked prolongation of median nerve distal motor latency along with decrease of CMAP (compound muscle action potential) amplitude and the absence of sensory response. Surprisingly, HRUS revealed normal cross-sectional area of the median nerve without compression in the tunnel. The nerve was however compromised by additional belly of palmaris longus muscle. Additionally, an aneurysm of persistent median artery was observed about 1cm proximally to the distal wrist crest.

Treatment: Considering the character of the ailment- not specific for the CTS (numbness mainly during the dialysis, no numbness at night), conservative Treatment was recommended .The control ultrasound and electrophysiologic

tests are planned. In case of progression of CTS in these tests, patient will be consulted by neurosurgeon in order to eventual qualification to decompression.

Discussion: This case demonstrates utility of HRUS in revealing unusual causes of median nerve compression at the wrist in some patients with symptoms and electrophysiologic tests suggestive of CTS. HRUS may help to avoid needless attempt to transect carpal ligament and may indicate proper surgical management.

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HEPATOCELLULAR CARCINOMA DEVELOPED ON A NON-ALCOHOLIC STEATOHEPATITIS: A CASE REPORT

Type: Case Report, poster

Author: Velescu Maria-Amalia, Prof Dr Al Hajjar Nadim

Co-author(s): Cristea Andreea-Petra, Md Popa Călin

Introduction: An apparently healthy 69 years-old male patient presented for an ultrasound check-up.

Case history: The man is known with NAFLD (non alcoholic fatty liver disease) for several years. The echographic examination revealed a hepatic tumor. The 83/78 mm nodular mass was localized in the V-VI segment of the liver, exceeding the hepatic boarders.

Investigations: A biopsy of the nodule was performed revealing a moderately differentiated hepatocellular carcinoma (HCC). A computer tomography examination of the abdomen and pelvis was used in order to properly stage the tumor. The examination showed no lymph node enlargement or abdominal metastases.

Treatment: The patient was admitted for curative Treatment. In order to obtain a full resection, the surgical team removed the tumor of the V-VI segments of the liver and the gallbladder. The histopathological examination of the surgical specimen showed clear surgical margins (R0), confirmed the initial diagnoses of moderately differentiated HCC. Thus, the stage was pT1bN0M0LOV0 (stage IB). The patient did not receive post-surgical chemotherapy and presented at follow-up after 3, 6 and 12 months. The evaluation performed one year after the surgery showed no signs of recurrence.

Discussions: The particularity of the case consists in the development of HCC on a liver with non-alcoholic steatohepatitis and the atypical resection of the V-VI segments with free margins into a very fragile parenchyma. The development of

HCC in NAFLD is thought to be multifactorial involving a low grade chronic systemic inflammatory response, increased lipid storage and lipotoxicity, gut dysbiosis, hyperinsulinemia with insulin resistance. In addition, patients with HCC from NAFLD in general have a distinctive phenotype presenting for examination at an older age, the tumor being less aggressive and less likely to be diagnosed by surveillance compared with HCC caused by viral hepatitis.

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A DIFFICULT CASE OF LYNCH SYNDROME IN AN ATYPICAL PATIENT

Type: Case Report, poster

Author: Matei Iurea

Co-author(s): Dr. Mihaela Mocan, Dr. Andrada Tărnovan, Simona-Maria Eșurcanu

Background

Lynch Syndrome, also known as hereditary nonpolyposis colorectal cancer (HNPCC), is one of the most lethal types of colorectal cancers. It is an autosomal dominant transmitted disorder that consists of an increased risk of colon cancer associated with other types of cancers including endometrial cancer (in female patients), ovary, renal, and even skin cancer. This disease occurs because patients inherit a defective DNA mismatch repair system with associated low stability of the microsatellites with 4 main abnormal genes: MLH1, MSH2, MSH6 and PMS2.

Case Report

A 47-year-old female patient presented to the Emergency Department for significant weight loss (10 kilograms in 3 months), rectal bleeding and tenesmus, 7-8 episodes of diarrhea per day, and malaise. The clinical exam revealed a mass in the right lateral region of the abdomen that was later proved to be a Grawitz tumor. Imagistic procedures also revealed a 9.1 cm long tumor in the ascending colon.

Management

Using Amsterdam II and modified Bethesda criteria, as well as significant family history (2 first-degree relatives diagnosed with colon cancer), a diagnosis of Lynch Syndrome was established. The patient underwent curative surgery and

was later given folinic acid, fluorouracil and oxaliplatin with a favorable response.

Discussions

Lynch Syndrome is an autosomal dominant transmitted disease that affects patients of all ages, although patients are usually diagnosed in their fourth decade of life. Usually , HNCC is associated with another type of neoplasia and thus the importance of considering Lynch syndrome as a possible diagnosis among patients with a familial colorectal cancer history.



OVARIAN CYST ABSCESS AND PLEUROPNEUMONIA AS A COMPLICATION OF CYST PUNCTURE DURING PREGNANCY

Type: Case Report, poster

Author: Mateusz Władysław Wylaż

Co-author(s):

Introduction

The patient was a 26-year-old woman gravida 1, para 1, admitted to the Perinatology Clinic of Jagiellonian University in Kraków at 26th week of gestation in order to perform elective puncture of left ovarian cyst. On admission the patient reported lower abdominal pain, but there was no abnormalities on physical examination.

Case history

In the past, the patient already had ovarian cysts removed twice. During the hospitalization the cyst puncture was performed and there were no complications after the procedure. 6 weeks later the patient was readmitted due to acute abdominal pain. Ovarian cyst torsion was suspected.

Investigations

Blood tests showed increased levels of leukocytes, C-reactive protein and procalcitonin. The patient had a high fever and a fluid in the Douglas pouch was visualized in the ultrasound examination.

Treatment&Results

Due to a suspected cyst abscess, a biopsy was performed and antibiotic was administered. Throughout the days of hospitalization, despite the implemented

Treatment, the patient's condition did not improve. Caesarean section was performed. During the operation, a purulent cyst with left appendages was removed and peritoneal lavage was performed. Intestinal obstruction was excluded and further Treatment was initiated. On the 8th day after surgery pleuropneumonia as another complication occurred. After a week, the patient was discharged in a good condition.

Discussion

Cyst abscess and sepsis are severe, though rare, complications of ovarian cyst biopsy. They should be considered in the presence of symptoms such as sudden fever or increased level of inflammatory markers accompanied by abdominal pain and peritoneal symptoms. Due to the higher risk and uncharacteristic symptoms occurring in pregnant women, particular attention should be paid during diagnostics. Caesarean section, surgery with peritoneal lavage and are procedures to be done in such cases.

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DIFFERENCES IN INTERNAL CAROTID ARTERY TORTUOSITY AFTER
COILING OF INTRACRANIAL ANEURYSMS - SINGLE CENTER
RETROSPECTIVE ANALYSIS

Type: Clinical Fundamental Study, oral

Author: Miłosz Błoński

Co-author(s): Tutors: Kornelia Kliś MD, PhD , Roger Krzyżewski MD , Borys Kwinta MD, PhD

Introduction: Arterial tortuosity is a phenomenon that affects hemodynamics of blood flow. It is influenced by patients age, atherosclerosis, collagen defects and deficiencies. Impact of surgical procedures of aneurysms on arterial tortuosity is still unknown. We decided to determine, whether tortuosity of internal carotid artery (ICA) is affected by performing coiling of cerebral aneurysm.

Materials & Methods: We retrospectively analyzed 52 patients with single intracranial aneurysm, treated with endovascular procedure. Based on their Digital Subtraction Angiography images, obtained prior to the procedure and after first follow-up examination (avg. 15 months), we analyzed tortuosity of ICA, both on the side of embolization and on the other side. Following tortuosity descriptors were calculated: relative length (RL), sum of angle metrics (SOAM), triangular index (TI), product of angle distance (PAD), and inflection count metric (ICM). To represent changes in tortuosity, for each descriptor we defined \hat{I} as value of the descriptor on follow-up examination minus value of the descriptor before procedure.

Investigations: In the follow up the tortuosity of ICA changed on both coiled and not coiled side. Mean \hat{I} RL was smaller on coiled side (-0.02 ± 0.03 vs -0.01 ± 0.03 ; $p=0.002$) in comparison to the other side. \hat{I} PAD (1.06 ± 0.98 vs 0.54 ± 0.92 ; $p=0.007$) and \hat{I} ICM (2.41 ± 2.18 vs 1.1 ± 1.85 ; $p=0.001$) were bigger on the embolized side. Furthermore, male patients had higher \hat{I} TI (-0.04 ± 0.12 vs 0 ± 0.07 ; $p=0.018$) of both ICA. Additionally, patients taking angiotensin-converting-enzyme inhibitors (ACEI) had smaller \hat{I} SOAM (-0.12 ± 0.17 vs

0.58 $\hat{\pm}$ 0.59; p=0.011) and $\hat{\gamma}$ "PAD (0.12 $\hat{\pm}$ 0.25 vs 1.16 $\hat{\pm}$ 0.98; p=0.023). We also observed that there is a negative correlation between age and $\hat{\gamma}$ "TI (R=-0.23; p=0.018). Logistic regression analysis showed that embolization independently influenced the increase of $\hat{\gamma}$ "ICM (OR 1.29, 95%CI: 1.04-1.65; p=0.027) and reduction of $\hat{\gamma}$ "RL (OR 0.18, 95%CI: 0.03:0.92; p=0.046).

Conclusion: Coiling procedures performed on cerebral aneurysms as well as patients' age, sex and ACEI intake may influence the tortuosity of ICA.



PROTON THERAPY FOR PANCREATIC CANCER

Type: Case Report, poster

Author: Monika Jasinskaitė

Co-author(s): Liveta Sereikaitė, Živilė Undžėnaitė

Introduction

J.H.K., a 56-year-old male was admitted with jaundice. The patient reported significant weight loss and fatigue.

Case history

The patient was diagnosed with the pancreatic head adenocarcinoma with a single isolated lung metastasis status post a lung resection and extended duration systemic chemotherapy and consolidative chemoradiation. The patient underwent 12 cycles of systemic FOLFIRINOX which he has tolerated incredibly well and had a marked biochemical radiographic and metabolic response. He has undergone PBT (proton beam therapy) (15 fractions, 4500 cGy). The patient presents for a routine follow-up after completion of neoadjuvant chemoradiotherapy and pancreaticoduodenectomy (Whipple resection) was performed. He had a good Treatment response with a CAP score of 1, indicating a near-complete response. He was properly recovering from surgery and described no significant toxicities at this time. Currently, he has no evidence of any disease.

Investigations

He was diagnosed with borderline resectable pancreatic adenocarcinoma by using biopsy before surgery. Also, he had elevated CA 19-9.

Postoperative lung right middle lobe, wedge resection showed metastatic poorly differentiated adenocarcinoma in the lung consistent with the pancreatic primary.

Post-operative status: ductal adenocarcinoma was diagnosed, his overall stage is pT1c N0 M1, additional pathologic findings showed chronic pancreatitis and duodenal ulcer.

Results

The patient benefits from neoadjuvant Treatment. Extended duration systemic chemotherapy and PBT led the patient to radical pancreaticoduodenectomy.

Discussions

The dosimetric advantage of protons results in a finite range with little or no exit dose and a smaller volume of normal tissue to be irradiated. It is worth noting that precision is becoming increasingly more important to take advantage of PBT for patients. The technical advances allow that the precision PBT will become widely available, and it may be the lead application in the Treatment of cancer in the future.

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CONGENITAL IMMATURE TERATOMA IN INFANT- A CASE REPORT.

Type: Case Report, poster

Author: Natalia Gołuchowska

Co-author(s): Piotr Rzepniewski, Prof. Bożena Kociszewska-Najman MD, PhD

Introduction: Teratomas are rare congenital neoplasms. They account for 3% of all childhood tumors; 40% to 70% of them are located in the sacrococcygeal and presacral regions. Head and neck locations of the tumor are uncommon, account for only 2%.

Case history: In our clinic was born a male infant at 30 WG. The newborn's general condition was very severe, 5-2-2 points on Apgar scale. Birth weight was 2980g. (with the tumor). The infant was from the 3rd pregnancy, the first delivery by c-section. The pregnancy was complicated by PROM for seven days. Prenatal US and MR showed cystic-solid craniofacial tumor that destroyed the infratemporal fossa and right cranial face- immature teratoma. The infant was operated on on the 2-nd day of life. The tumor size was: 25-30cm After the surgery, birth weight decreased to 1600g. The patient remains under oncological observation. Regular tests don't show any dangerous changes, and the level of AFP gradually decreases.

Investigations: The newborn suffered from large craniofacial tumor. He was haemodynamically unstable due to tumor's high vascularity (from the external carotid artery).

Treatment: The newborn had very severe circulatory and respiratory failure, was artificially ventilated for 38 days and received four catecholamines. Due to tumor compression, intubation wasn't possible, therefore a tracheostomy was performed. Parenteral feeding via a central catheter was also used. Peripheral edema was treated with furosemide. The surgery was performed, which significantly improved the overall condition of the newborn.

Discussion: Thanks to imaging tests, the teratoma can be prenatally diagnosed. This allows doctors to prepare the c-section, which facilitates delivery. Early surgical intervention and adequate provision of the newborn increase his chances of survival with the craniofacial teratoma.

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A RARE COMPLICATION OF PERCUTANEOUS TRANSHEPATIC BILIARY DRAINAGE

Type: Case Report, poster

Author: Nikita S. Titov

Co-author(s): Vladimir V. Khorev, Maria A. Katkova, Kirill R. Butov

Introduction: This case report describes an unusual condition developed after percutaneous transhepatic biliary drainage (PTBD) in a 69-year-old man with a history of pancreatic head cancer complicated with common biliary duct (CBD) stricture.

Case history: The patient presented to the clinic with jaundice and complained of bile leakage and pain in the area of external-internal drainage which was placed 3 weeks before.

Investigations: Laboratory studies showed a direct bilirubin level of $247 \frac{1}{4} \text{ mol/l}$. A chest CT scan revealed the free gas (800 ml), fluid (600 ml), and collapsed right lung. The patient underwent thoracocentesis, 500 ml of fluid, presumably bile, was obtained. Drainage tube dislodgement had been suspected. The patient was referred to percutaneous transhepatic cholangiography.

Results: The crooked passage of biliary catheter using guidewire was identified. Catheter dislodgement complicated with bilopneumothorax was confirmed. Insofar as reinsertion of the drainage wasn't possible this patient underwent common bile duct stenting and was transferred to the Department of Surgery for further Treatment.

Differential Diagnosis: This complication occurs if biliopleural fistula emerged due to initially punctured pleura during catheter placement. This is not uncommon because it is difficult to detect pleura by ultrasonography, therefore, not to injury pleural space during catheter placement [1]. In such case, inadvertent partial removal of the catheter promotes suction of bile and air to

the pleural cavity due to negative pressure there. Besides, constant respiratory motions can contribute to tube dislodgement [2]. English-language sources describe several cases of bilothorax as complications of PTBD. Their authors note that appropriate diagnosis and prompt Treatment are important as bile is conducive for bacterial growth [1, 3]. Some cases have resulted in death from infectious complications [2, 3]. However, we found only one publication that mentions the combination of bilo- and pneumothorax [4].

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ARE FATIGUE AND ANOREXIA SIGNIFICANT SYMPTOMS ?

Type: Case Report, poster

Author: Kontomitros Nikolaos

Co-author(s): Alexakis Chalant, Morea Beatrice - Elizabeth, Andreopoulou Ioanna - Nikoleta

Case presentation: A 59-year-old male patient presented to our hospitals emergency department due to an important fatigue and anorexia for the past one month. The patient was healthy, with a mild mitral systolic murmur and a family history of gastric cancer. Two days later the patient was admitted to the hospital due to a left hemiparesis, hypoesthesia and dysarthria. An emergency brain CT-Scan revealed a right hemispheric acute systemic stroke and thrombolytic therapy was initiated. In a search of the emboli source, a transesophageal echocardiography was performed showing vegetation on the atrial surface of the posterior leaflet of mitral valve. The patient was treated empirically with gentamycin and vancomycin for infective endocarditis, while a series of blood cultures were performed which were negative for bacteria. Blood analysis showed hepatic cytolysis, anemia and increase in pancreatic amylase and lipase. Due to high suspicion of an underlined neoplastic process abdominal u/s was performed and revealed multiple hypodense nodules pointing towards metastasis. An abdominal CT-Scan increased the suspicion of pancreatic cancer and fine needle liver aspiration confirmed the presence of a pancreatic adenocarcinoma. In the meantime the patient had another thromboembolic event with the development of a deep venous thrombosis. The patient was referred to a team of oncologists and general surgeons for further management. This case brings forward the rare, severe and underdiagnosed paraneoplastic syndrome of marantic endocarditis (ME) in correlation with pancreatic cancer, a subclinical entity by itself. In that way the clinicians should always have in their differential diagnosis ME in case of an antibiotic resistant endocarditis presenting with thromboembolic events, as early diagnosis diminishes the complications and bring us one step closer to the neoplasm Treatment



SELECTING THE P-TREATMENT: FLOODING V/S GRADUATED EXPOSURE

Type: Other, oral

Author: Mr. Oshin Puri, Prof. Latika Mohan, Dr. Manisha Dubey, Dr. Rajesh Kathrotia, Dr. Vikram Singh Rawat, Dr. Zinkal Shah

Co-author(s):

Introduction- Cognitive Behavioral Therapy (CBT), graduated exposure, systematic desensitization and flooding as imaginal, audio-visual (AV), interoceptive or in vivo exposures are therapeutic options for phobias. This study assesses response of people afraid and indifferent to cockroaches to 2 AVs mimicking graduated exposure and flooding.

Methodology- Fear of Cockroach Questionnaire (FCQ) by Michele Scandola et.al. was used to categorise participants into afraid or indifferent groups and measure change in cockroach fear post AV exposures.

Visual analog- Valence (V) scale (scored b/w 1 to 5; 1-unpleasant, 3-neutral, 5-pleasant) was used to determine the type of response (typical/ atypical) to the AVs.

AV1 mimicked flooding and AV2 mimicked graduated exposure.

25 participants each, afraid and indifferent of cockroaches were shown the 2 AVs in random order 15 days apart and V rating and FCQ score (FCQs) were recorded each time.

Results- 7/25 afraid ($V > 3$) and 3/25 indifferent ($V < 3$) participants reacted to AV1 atypically. Reduction in FCQs was significantly ($p = 0.0013 < 0.05$) more in atypically reacting afraid participants (Mean change (MC) = -70) than in typical respondents (MC = -8.67).

3/25 afraid and no indifferent participant reacted atypically ($V < 3$) to AV 2. FCQs of atypically reacting afraid participants decreased ($MC = -26.55$) while that of typical respondents increased ($MC = +4.33$) but the difference wasn't significant ($p > 0.05$).

Conclusion- Identifying typical and atypical respondents to intended Treatment is necessary, to avoid exacerbating the anxiety. Here, AV flooding (AV1) was effective in 7/25 afraid participants. Graduated exposure, considered to be a safer alternative exaggerated phobic anxiety of 3/25 afraid participants. To determine the response a phobic patient might have to the intended therapy, analysing his/ her response to AV exposures prior to interoceptive or in vivo exposure might be of help.



A LIMB SAVIOUR BLOOD TEST

Type: Case Report, poster

Author: Mr. Oshin Puri*, Dr. Yeshwanth G, Dr. Monika Pathania

Co-author(s):

Patient History- 32/M smoker p/w blackish discolouration a/w severe pain in left little and ring finger, loss of right upper limb function, decrease in left eye vision and feeling of imbalance. Past h/o progressive blackish discolouration of right and left middle toe for which he underwent sequential bilateral LL, finally above knee amputation with d/o recurrent cellulitis at other hospitals.

On examination- patient was alert and conscious, b/l radial, right brachial and b/l femoral pulses were absent, dry gangrene of left little and ring finger, Right UL UMN weakness, and dysdiadochokinesia were seen.

Ophthalmology consultation and CT confirmed left occipital lobe infarct causing cortical blindness.

Investigations- HbA1c : 11%, Cholesterol : 311mg/dl, HDL : 37mg/dl, LDL : 204mg/dl, Homocysteine : 29.76 micromole/L, negative ANA/pANCA/cANCA profiles (ruled out vasculitis (1)).

CT Angiogram showed multiple stenotic lesions in central vessels of head and neck explaining right cerebellar, left MCA territory and occipital lobe infarcts. Occluded peripheral vessels confirmed absent pulses.

Diagnosis- T2DM, dyslipidemia, hyperhomocysteinemia with extensive arterial thrombosis, right cerebellar infarct, left cortical blindness and left MCA territory infarct.

Treatment- Insulin and metformin for T2DM, statins for dyslipidemia, anticoagulants for thrombosis and folate for hyperhomocysteinemia (2). Spread of gangrene was prevented.

Conclusion- Here, lower limb gangrene resulted from thrombosis due to elevated homocysteine misdiagnosed as recurrent cellulitis. Thus, amputations that left him handicapped could have been avoided by testing homocysteine. During his permanent morbidity, he began smoking, accelerating atherosclerosis (3) along with T2DM and dyslipidemia acquired during his bedridden status. This caused left cortical blindness, right cerebellar signs and extensive thrombosis in b/l UL. Thus, early detection for hyperhomocysteinemia could have prevented the metabolic disorders he acquired and prove to be a limb saviour as in case of his ULs.

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PUS FROM THE EAR: A CASE OF PAROTID ABSCESS

Type: Case Report, poster

Author: Dr. Mahinder Kumar Meena, Mr. Oshin Puri*, Dr. Vivek Mohanty, Dr. Parshant Singla, Dr. Monika Pathania

Co-author(s):

Background- Untreated Parotid abscess may rupture and drain through preauricular skin and rarely through ear canal. Untreated patients are at a risk of fasciitis, facial nerve palsy and deep neck abscess (1). This case illustrates unusual association of parotid abscess with Internal Jugular vein (IJV) thrombosis and partial ptosis.

Case presentation- 50/F presented with purulent discharge from right ear and ear ache. On palpation a 4X4 cm right infra-auricular swelling was felt with purulent discharge from the right ear. Partial right ptosis was seen without any nerve deficit.

Investigations- Investigations revealed neutrophilic leukocytosis with TLC 17200cells/mm³ (N-81.9%, L-12.4%, M-5.3%, E-0.3%). Her ESR was 32mm/h. Otoendoscopy showed a fistula connecting the right parotid gland and external acoustic meatus. USG(Neck) showed large hyperechoic ill-defined lesions at the angle of the mandible. CECT(Neck) suggested right parotid abscess and the right IJV thrombosis. FNAC revealed Methicillin sensitive staphylococcus aureus (MSSA).

Diagnosis- Right Parotid abscess

Treatment- Antibiotics were started as MSSA was isolated. Oral Vit-K antagonists were given to titrate INR.

Discussion- Parotid abscesses rarely drain from external auditory canal indicating brachial arch developmental anomalies. A patent Foramen Huschke,

(variation in tympanic bone in 4.6%cases), is found in rare cases of otorrhea with salivary drainage from ear more commonly in females and on the right side (2, 3). Here, pus discharge from the right ear of the female indicates a persistent Foramen Huschke.

Right ptosis indicates involvement of autonomic fibres from superior cervical ganglion.

IJV thrombosis probably resulted from inflammatory processes around IJV and extension of micro thrombi via retromandibular and facial vein.

Conclusions- Developmental variations can lead to uncommon presentations of common conditions like drainage of pus through the ear.

â€œImaging should be done in neck abscesses to rule out neck vein thrombosis.

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LOW-GRADE SYSTEMIC INFLAMMATION IS ASSOCIATED WITH
INCREASED CHEMERIN IN MALE METABOLIC SYNDROME PATIENTS

Type: Clinical Fundamental Study, oral

Author: Oskar Wojciech Wiśniewski, Piotr Jarecki, Waldemar Herman, MD,
Marlena Wójcicka, MPH

Co-author(s): Prof. Katarzyna Łącka, MD, PhD (Tutor)

Introduction: Chemerin is a novel proinflammatory adipokine responsible for immunocompetent cells influx in the adipose tissue or vascular wall. In addition, chemerin alters lipid profile into proatherogenic, decreases endothelial nitric oxide production and promotes lipid accumulation in adipocytes. Thus, the role of chemerin in the pathogenesis of obesity, atherosclerosis and arterial hypertension is well established, while data regarding the metabolic syndrome (MetS) are rather sparse.

The aim of the study was to investigate chemerin alterations in men suffering from the MetS in the context of low-grade systemic inflammation.

Material and Methods: The study group consisted of 62 males fitting IDF 2005 metabolic syndrome criteria, while 70 individuals without MetS were recruited to the control group. All participants were aged 40-70 and were inhabitants of Lubusz province. Chemerin and inflammatory parameters, including hs-CRP and IL-18, were measured twice and averaged. Blood samples were taken in the morning after an overnight starvation and tobacco smoking abstinence.

Results: Chemerin concentrations were significantly elevated in the study group compared to the controls (median 89.48 ng/mL vs 77.9 ng/mL; $p=0.002$). In addition, higher plasma hs-CRP (median 2.15 ng/mL vs 1.01 ng/mL; $p=0.0057$) and IL-18 (median 530.64 pg/mL vs 418.85 pg/mL; $p<0.0001$) were also observed in patients diagnosed with the MetS than in the control group. Furthermore, multivariate logistic regression analysis established IL-18 as an independent risk factor of the MetS occurrence ($OR=1.014$, $95\%CI=-1.004$, $95\%CI+=1.024$;

p=0.008), while hs-CRP and chemerin did not show a predictive value in the MetS risk assessment.

Conclusions: Raised chemerin accompanied increased plasma hs-CRP and IL-18 concentrations in the MetS population, while only IL-18 turned out to be a risk factor of the MetS appearance.



STERNAL AND XIPHOID FORAMEN - SIGNIFICANT BUT OVERLOOKED ANATOMICAL VARIANTS OF THE STERNUM. A META-ANALYSIS.

Type: Other, oral

Author: Patrycja Łączak, Paweł Pasieka, Agnieszka Barnowska, Alexander Komosa, Jakub Pękała

Co-author(s): Przemysław A. Pękała PhD MD, Krzysztof A. Tomaszewski PhD MD, Jerzy Walocha Prof PhD MD

Introduction

Sternal and xiphoid foramina are anatomical variants of human sternum. The unawareness of their presence might lead to serious complication of numerous procedures. In this study we aimed to assess prevalence and morphometric features of sternal and xiphoid foramen.

Methods

A search of major medical databases (PubMed, SciELO, Web of Science and ScienceDirect) was conducted. Only articles clearly stating the number of analyzed sternums as well as number of sternums with foramina and/or diameter of the foramen were enrolled in the study. The statistical analysis was performed with usage of MetaXL 5.0 software.

Results

34 studies (n=12.278 subjects) were included in the analysis. The overall pooled prevalence of sternums with sternal and/or xiphoid foramen was 8.7% (95%CI: 6.1-11.6). The mean pooled prevalence in sternal body equaled 6.6% (95%CI:5.5-7.9), while mean pooled prevalence of xiphoid foramen was 2.3% (95%CI:0.1-6.4). In studies assessing only xiphoid process (3 studies, 1443 subjects) the prevalence was noticeably higher - 51.9% (95%CI:40.0-63.6). Males were more

prone to have sternal foramen compared to females (10.2% vs 6.3%). Mean transverse and vertical diameter of the foramen based on 5 studies (n=218 subjects) equaled 4.7 mm (95%CI: 3.8-5.5), and 5.6 mm (95%CI: 4.2-6.9), respectively.

Conclusion

Our analysis proves that sternal foramen is a structure of non-negligible prevalence and size. Any doctor should be aware of it when performing operations in the sternal area. This study suggests that the prevalence of xiphoid foramen might be underestimated. To our knowledge this is the first meta-analysis dedicated to the prevalence of sternal foramen.



DYSPNEA IN LIVER CIRRHOSIS - IS IT ALWAYS ASSOCIATED WITH MASSIVE ASCITES?

Type: Case Report, poster

Author: Klaudia Adamczewska, Katarzyna Szczepaniec, Paulina Klarczyńska

Co-author(s): Joanna Musialik

We present the case of a 58-years-old female (BK), who was diagnosed because of severe resting dyspnea increasing for 5 months. In physical examination: central cyanosis, digital clubbing and platypnea as well as jaundice, peripheral oedema and ascites were found. In arterial blood gasometry, the hypoxaemia and orthodeoxia - decrease in arterial blood saturation by 4% in standing position compared to the lying position were examined. In further diagnostics with contrast echocardiography, the intrapulmonary leakage was shown and dilated pulmonary vessels in the lower lobes in high resolution computed tomography (HRCT) of the chest were found. At the same time, the diagnostics of liver failure was carried out. Positive anti-HCV antibodies and HCV viremia of 29955IU/ml (HCV genotype 1b), were found. Finally, decompensated liver cirrhosis due to hepatitis C virus infection and hepatopulmonary syndrome (HPS) were diagnosed. The patient was referred to antiviral therapy and after successful Treatment she was classified to liver transplantation (LTx). During the waiting period the progress of HPS was observed and the patient had to use a home oxygen concentrator. Three months after LTx, the symptoms of HPS have disappeared completely.

HPS is a complication of hepatic diseases and/or portal hypertension connected with circulatory oxygenation disorder due to intrapulmonary leakage resulting from pulmonary vascular dilatation¹. HPS accompanies chronic liver disease with varying frequency, occurring in 15-20% of patients with cirrhosis^{1, 3}. It is an independent indication for LTx, which is the only effective method of HPS therapy, whose symptoms disappear in more than 85% of patients within 6-12 months after LTx¹. The main symptom of HPS is platypnea-orthodeoxia syndrome, it should be differentiate from intracardiac leakage in the course of

heart defects^{1, 2}. In patients with chronic liver diseases, in case of chronic dyspnea, HPS should be taken into consideration.

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COMPLICATIONS CAUSED BY HUMAN IMMUNODEFICIENCY VIRUS IN CASE OF 38 YEARS OLD FEMALE PATIENT

Type: Case Report, poster

Author: Paulina Kasperska

Co-author(s): Eliza Oleksy, Anna Ziðłowska, Jakub Dreliszak, Katarzyna Sas, Małgorzata Nowicka

Introduction

HIV (Human Immunodeficiency Virus) cause AIDS (Acquired Immune Deficiency Syndrome). Infection with HIV occurs through sexual contact, contaminated injection equipment, perinatal exposure, and consequent exposure to secretions or tissues containing the virus. There is an asymptomatic and symptomatic phase of virus infection. The symptomatic phase is a consequence of significant impairment of the functional immune system and further rapid disease progression. Tuberculosis, mycobacteriosis, pneumocystis carinii and cytomegaly are frequently recognized opportunistic infections.

Case presentation

A 38 years old patient admitted to the Geriatrics Clinic in Jurasza Hospital in Bydgoszcz due to persistent fever up to 39 Celsius degrees for three weeks. The patient reported headaches and stomachaches. A patient walking alone, independent in self-care. Patient with verbal and logical contact. Patient at the time of admission did not report the occurrence of infectious diseases. On the skin there are erythematous, erythematous-exfoliative lesions located on the smooth skin of the trunk and extremities, and on the scalp. Laboratory tests were performed, consultations and diagnostic tests were commissioned. A positive HIV result confirmed by Western Blot was obtained from the test Results. Contact isolation was used. Positive Results - cerebrospinal fluid culture and blood cultures - cryptococcus neoformans. The Treatment used was amphotericin B (used in a larger dilution), flucotizine, azithromycin (doses

calculated by body weight), dexaven, biseptol, transfused one unit of Red Blood Cell Concentrate. From the Results of microbiological tests of sputum - DNA of mycobacteria tuberculosis was detected. For patient was used air-droplet isolation. Due to epidemiological reasons in the country, it is not possible to transfer the patient to specialistic Infectious Hospital.

Conclusion

HIV virus infection does not give characteristic symptoms. If you don't do a diagnostic test, you may not know that you have been infected even for 10-12 years. A person who does not know that he lives with HIV can get AIDS disease. It can also infect others. AIDS prevention is very important. Rapid application of antiretroviral therapy significantly extends patient survival. In the majority of untreated patients HIV infection progresses to AIDS within 10 years, and the patient dies within the next 2 years. Death occurs as a result of infection or failure of organs.



PNEUMONIA CAUSED BY RESPIRATORY SYNCYTIAL VIRUS IN CASE OF FEMALE PATIENT 82 YEARS OLD

Type: Case Report, poster

Author: Paulina Kasperska

Co-author(s): Eliza Oleksy, Anna Ziólkowska, Katarzyna Sas, Jakub Dreliszak

Introduction

RSV (Respiratory Syncytial Virus) is main pathogen responsible for respiratory infections. Exist high morbidity in elderly group of patients. The pathway for spreading the infection is through a droplet route and direct contact. The incubation period is 4-6 days, while the period of excretion is about 14 days. Main symptoms: runny nose, sore throat, cough. Only in elderly group with concomitant diseases and immunodeficiencies, pneumonia may develop. For those patients symptomatic Treatment is used. Sometimes intubation and assisted breathing (respirator) will be necessary. Hydration of the patient, suction of secretions from the respiratory tract, bronchodilators are used. There have been also reports of the beneficial effects of ribavirin in inhalations. Simmilar reports relate to use of immunoglobulins contain high titer of RSV antibodies.

Case history

A patient 82 years old urgently admittted to Geriatric Clinic in Jurasza Hospital in Bydgoszcz because of pneumonia. Patient transfered from Inectious Hospital in Bydgoszcz. COVID-19 (Coronavirus Disease 2019) test : negative. Main symptoms: weakness, cough, exertional dyspnoea, fever. Comorbidities: post-myocardial infraction, post-nephrectomy, hypertension, chronic kidney disease in 3rd stage suspected. Patient walked without any help, independent in self care with verbal logical contact. Patient without skin changes. At the time of admission to ward patient had high level of C-reactive protein (43, 89mg/l) in blood test. During hospitalization used: empirical antibiotic therapy with

ceftriaxone, nebulizations by berodual and pulmiort, oral expectorants and intravenous steroid therapy. The Treatment of chronic diseases was continued. Treatment of hipercholesterolemia was modified to increase the rosuvastatin dose. Additional tests revealed vitamin D deficiency : supplementation was recommended. Treatment improved clinical condition of patient.

Disscussion

The World Health Organization (WHO) announced on 11th March pandemic status in the world, caused by new coronavirus. WHO is alerting of growing infections worldwide. Main Symptoms of infection SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2) cause COVID-19 (Coronavirus Disease 2019) such as: fever, dry cough, fatigue, shallow breathing, sore throat, runny nose, sneezing, diarrhea. Most cases of this disease are mild, but some can lead to pneumonia, multiple organ failure, acute respiratory distress syndrome, sepsis, septic shock, and death. During the world pandemic SARS-CoV-2 virus causing COVID-19 disease, medical specialists find it difficult to differentiate between disease entities. Patients who are presenting symptoms of COVID-19 disease are suspected of carrying virus. Only the test performed indicates the presence or absence of the disease. Symptoms can be confusing. The waiting time for the test result in Poland lasts up to two days. It is worrying that patient during hospitalization can become infected with a virus while waiting for the test result.



VALIDATION OF 10 POINTS SCALE FOR MICROSURGICAL TRAINING
ASSESSMENT ON NON-LIVING MODELS

Type: Clinical Fundamental Study, oral

Author: Piotr Stogowski

Co-author(s): Filip Fliciński, Jan Białek, Filip Dąbrowski, Maciej Piotrowski,
Tomasz Mazurek

Introduction: High cost and ethical controversy of using living models in microsurgical training made non-living models more popular. However non-living models don't provide appropriate feedback of microsurgical performance. This study presents a simple instrument for basic assessment of microsurgical anastomosis on non-living model.

Methods: Seventy medical students were divided into two groups depending on their prior microsurgical experience. Each participant performed three end-to-end anastomoses on chicken femoral artery model. Anastomoses were reviewed by three blinded experts and then photographed. Evaluation included a patency tests, longitudinal cut of anastomosis and the newly proposed 10 point scale. Presented scale consists of 5 factors important for anastomosis closure (anastomosis closure, suture spacing, bites size, knot tying and cut ends length), graded on 3 point scale (0-2 points).

Results: Anastomoses evaluated by experts as patent significantly correlated with a high summary score in scale ($r=0.73$ $p<0.0001$). There was a significant difference in score between groups ($p<0.0001$). There were strong interclass correlation in scoring among all 3 evaluators ($ICC=0.82$ $p<0.0001$).

Conclusions: Proposed 10 point scale is valid and reliable tool to assess microsurgical anastomoses.



MALIGNANT TRANSFORMATION AMONG SPINE IN HEREDITARY
MULTIPLE EXOSTOSES: CASE REPORT AND LITERATURE REVIEW.

Type: Case Report, poster

Author: Piotr Stogowski

Co-author(s): Tomasz Szmuda, Paweł Słoniewski

Introduction: Hereditary multiple exostoses is (HME), autosomal dominant disease caused by EXT1 gene mutation with estimated prevalence of 1:50, 0000 individuals. HME is characterized by growth of multiple bone exostoses that develop until closure of growth plates. The most commonly involved bone is femur. Spine localization is estimated under 10%. However some new studies reports that 60% of patients with HME had coincidental intra-spinal tumors. This suggest that spine could be more important site among patients with HME than thought before. Most serious complication is malignant transformation of exostoses. It varies about 2% and usually leads to chondrosarcoma. The prognosis in spinal sarcomas is poor, a better cure rate has been obtained with a combination of surgery and chemotherapy.

Case story: 28-years- old men with HME confirmed by mutation in EXT1 -gene presented with 6 - month history of dyspnea associated with pain of thoracic spine and left upper limb (VAS 7/10). No past surgical history, any member of his family had HME.

Investigations: On physical examination, he had multiple bony tumors on limbs. MRI revealed a total destruction of T1 vertebrae with large mass arising from Th1. SINS (Spinal Instability Neoplastic Score) = 12. PSTMS (Primary Spinal Tumor Mortality Score) = 4. Enneking Scale : IIB.

Treatment: Patient underwent wide subtotal resection of the tumor with anterior spinal cord decompression and fusion of C7 to T3 using T1-T2 vertebral body implant and anterior plate C7-T3. Histopathological exam confirmed high grade osteosarcoma. In neurological examination measured after surgery

patient had not any focal deficits with back pain VAS 4/10. After 11 months of follow- up patient died due to recurrence of initial lesion.

Discussion: Malignant degeneration of spine exostoses is rare, but should be considered in differential diagnosis among patients with back pain and HME. These values are probably higher, because asymptomatic lesions are often not diagnosed with HME.



ASSOCIATION BETWEEN NUTRITIONAL STATUS AND FUNCTIONAL CAPACITY OF ELDERLY

Type: Clinical Fundamental Study, oral

Author: Ramesha Tahir

Co-author(s): Maryam Sohail, Zuhair Ali Rizvi

Introduction:

In Pakistan, people of age 60 years and above constitute approximately 5.54% of total population. In this seldom neglected group of population, the most common cause of disability is malnutrition, which is usually insufficiently treated.

Objectives:

The objective of this study is to determine the association between nutritional status and functional capacity of the elderly.

Materials & Methods:

This Cross-sectional study was conducted in Holy Family Hospital, Rawalpindi starting from June 2019 to December 2019. The sample size of 100 individuals included individuals aged

60 years and above; while those who did not give consent, individuals with severe terminal illness and cancer, bedridden patients, comatose patients, patients on Total Parenteral Nutrition and those who are paralyzed were excluded. Weighing machine and measuring tape were used as tools. While, Mini Nutritional Assessment Scale and Katz Index were used to assess the nutritional status and functional capacity respectively, via one-on-one interviews, essentially translated from English to Urdu for convenience; and

afterwards, was back- translated. The socio-demographic variables like gender, age, educational status, marital and employment status were also recorded. The information recorded and assessed was later entered and analyzed using SPSS. Descriptive statistics were applied. Chi's square test, along with Fisher's Exact Test, was used to compare functional status in patients with normal nutritional status, at risk of malnutrition and malnourished.

Results:

Out of 100 included participants, 57% were male while 43% were female, 63% were married, 9% were divorced, 28% were widowed, 9% ran any sort of business, 54% were retired, 75% lived in a joint family, 25% in a nuclear family, while none lived alone, 28% were diabetics, 45% were hypertensive, 14% had Ischemic Heart Disease, 4% had renal disease, 16% had liver disease, 44% had osteoarthritis, while 2% had thyroid related disorders. A statistically significant association between nutritional status and functional capacity of elderly was observed. ($p=0.000$)

Conclusion:

Well Nourished elderly have better Functional Capacity. Keywords: Elderly; Functional Capacity; Nutritional Status



ROLE OF THE POLYMORPHISMS OF THE ENDOTHELIAL NITRIC OXIDE SYNTHASE GENE IN PREDICTING THE SLOW FLOW PHENOMENON AFTER PRIMARY PERCUTANEOUS CORONARY INTERVENTION

Type: Clinical Fundamental Study, oral

Author: Sanam Alilou

Co-author(s): Reza Kiani, Sanam Alilou, Shirin Rafatnia, yasaman taslimi, Sima Habibzadeh, Safoora Gharibzadeh, ata firouzi, Shahin Rahim, Ali Zahedmehr, Farzaneh Mehrvarz, Mehrdad Moghadam Ahari, Parham Sadeghipour

Aim: In the present study on post-primary percutaneous coronary intervention (PPCI) patients, we aimed to study the association between two polymorphisms of the endothelial nitric oxide (eNOS) gene (-786T>C and +894G>T) and the no-reflow/slow flow phenomenon after PCI, in order to understand the effect of this gene on PCI Results and complications.

METHODS

A total of 103 post-PPCI patients were enrolled. The coronary no-reflow phenomenon was defined as a thrombolysis in myocardial infarction (TIMI) flow grade 0:1, and the coronary slow-flow phenomenon (CSFP) was defined as a TIMI flow grade \leq 2.

RESULTS

Due to the small number of post-PPCI patients complicated by the no-reflow phenomenon ($n = 4$), the main comparison was made between the CSFP (coronary slow flow phenomenon) ($n = 20$) and normal-flow ($n = 83$) groups. Carriers of the -786C allele of the eNOS -786T>C polymorphism showed a trend of a higher frequency of the CSFP (OR: 3.90, 95% CI: 0.87 to 17.45; $P = 0.07$). However, no such association was detected for the +894T allele of the eNOS +894G>T and the CSFP (OR: 0.92, 95% CI: 0.21 to 3.98; $P = 0.91$). In the adjusted

analysis, the -786T>C polymorphism did not reach statistical significance after adjustments.

CONCLUSIONS

We found no significant association in our post-PPCI patients between the CSFP and 2 of the most common polymorphisms of the eNOS gene.



BILATERAL CORNEAL GHOST VESSELS IN AN OTHERWISE HEALTHY CHILD

Type: Case Report, poster

Author: Sanam Alilou, Hossein Aghaei, Acieh Eshaghi, Shirin Rafatnia

co-author(s):

Purpose: To report a rare case of bilateral corneal ghost vessels in a 6 :year- old child with an unremarkable past ocular and past medical history.

Methods: A single observational case report

Results: A 6-year-old girl was referred to our clinic for further evaluation, due to suboptimal visual acuity in both eyes. Her past medical and ocular history revealed no systemic, inflammatory, infectious, or degenerative disorders. Slit lamp examination revealed regressed blood vessels ("ghost vessels") in anterior and mid-corneal stroma as the only pathologic finding . Confocal scanning microscopy of both corneas demonstrated scattered branching railroad-shaped ghost vessels at the level of middle and anterior stroma. Complete systemic work up was performed for the patient. No identifiable risk factor for development of corneal vascularization was found.

Conclusions: According to our findings we assume that in our patient, vasculogenesis occurred due to angioblast invasion to the presumptive cornea due to disequilibrium in mechanisms involved in vascular patterning during embryonic development .

Key words: Corneal neovascularization, Ghost vessel, Vasculogenesis, Angiogenesis



HCV GENOTYPE DISTRIBUTION IN GEORGIAN POPULATION AND ITS
CORRELATION WITH LEDIPASVIR/SOFOSBUVIR TREATMENT
EFFICIENCY

Type: Epidemiological Study, poster

Author: Shweta Tilante

Co-author(s): Mohammed Kumar Naick, Maia Zhamutashvili

The body of this abstract will not be published in this abstract booklet, as requested by the author.



PSYCHOACTIVE SUBSTANCES USAGE AMONG POLISH TEENAGERS IN
Małopolska

Type: Epidemiological Study, oral

Author: Weronika Lebowa

Co-author(s):

INTRODUCTION: Regular collection, analysis and interpretation of data on psychoactive substance use among young people is important to facilitate, plan, implement and evaluate of public health interventions to reduce the burden related to psychoactive substance use.

AIM: The aim of the study is to conduct and statistically analyze questionnaire regarding various psychoactive substances usage of Polish teenagers.

MATERIALS & METHODS: Students attending primary and junior high schools in Małopolska were enrolled into the study. The questionnaire enquiring about intake of alcohol, tobacco and drugs was conducted.

RESULTS: The study involved 3778 students (50% females). Mean age equaled 14.1 ± 0.7 years. The most common substance declared by both sexes was alcohol (35.81% had drunk it at least once). The popularity of the alcohol was higher among boys (39.01% boys vs 32.60% girls, $p < 0.001$) and town dwellers (39.29% towns vs 33.30% villages, $p < 0.001$). The second most popular substance was tobacco in the form of cigarettes (20.84% had smoked at least once). Insignificant difference in usage between two sexes was noted (21.60% boys vs 20.06% girls, $p = 0.24$). In comparison of places, the cigarettes were more prevalent among residents of towns (towns 24.52% vs 18.17% villages, $p < 0.001$). Drugs were the least popular psychoactive substances among teenagers (3.36% had taken them at least once). Their intake was higher among boys than girls (3.99% vs 2.72%, $p = 0.03$). Furthermore, drug usage was statistically significantly higher among residents of towns compared to residents of villages (4.63% vs 2.44%, $p < 0.001$).

CONCLUSIONS: Boys are more prone to take each type of harmful substances than girls. It may affect in a further development of cardiovascular diseases (CVD) and constitute one of the factors which contributes to higher prevalence of CVD among men. The study showed that psychoactive substances are more popular among residents of towns than among residents of villages.



ASSESSMENT OF COMORBIDITIES, COMPLICATIONS AND MORTALITY AMONG ELDERLY PATIENTS AFTER EMERGENCY ABDOMINAL SURGERY

Type: Clinical Fundamental Study, oral

Author: Weronika Lebowa

Co-author(s):

INTRODUCTION

The majority of patients undergoing emergency laparotomy are older adults that carry the highest mortality and the highest postoperative complications rate. Acute abdomen is one of the most common reasons for emergency hospitalizations in surgical wards.

AIM

The aim was to identify the prevalence of complications at baseline in elderly population and the prevalence of postoperative complications and postoperative mortality.

METHODS

Consecutive patients ≥ 65 years, requiring emergency abdominal surgery in 2010-2017 were enrolled into the study. Patients were differentiated in terms of age (age groups: 65-74 years, 75-84 years and ≥ 85 years).

RESULTS

The study sample comprised 986 older patients (57% females) with a median age of 76 (from 65 to 102). 35.9% patients were 65-74 years, 47.0% were 75-84 years and 17.1% were ≥ 85 years. The proportion of patients with

comorbidities at baseline were: heart diseases : 81.0%, endocrinological diseases : 33.6%, vascular diseases : 22.7%, gastrological diseases : 18.8%, neurological diseases : 17.1% and psychiatric diseases : 6.2%. Postoperative mortality was 24.0% at 30 days. Mortality rate was highest among patients ≥85 years: 41.4% vs. 24.9% (among those 75-84 years), $p<0.001$, and 41.4% vs. 10.6% (among those 65-74 years), $p<0.001$. The highest postoperative mortality was reported for acute intestinal ischemia : 57%, $p<0.001$, pancreatic cancer complications : 52%, $p<0.001$ and peptic ulcer disease complications : 45%, $p<0.001$. Postoperative complications within 30 days were observed in 56.6% of patients.

CONCLUSIONS

The prevalence of postoperative complications increased with age and mortality rate was statistically significant higher in the oldest patients in comparison with younger elderly patients. Older patients are increasingly operated on in acute setting and remain a diagnostic and surgical challenge due to their clinical condition, usually more complex than in younger adults.



FORMULATION AND DEVELOPMENT OF OCULAR NANOEMULSION
POLOXAMER-BASED THERMO-SENSITIVE IN SITU GEL CONTAINING
ACYCLOVIR: EX VIVO TRANSCORNEAL PERMEATION AND IRRITATION
TEST

Type: Other, poster

Author: Zahra mansouri

Co-author(s):

Objective: The current study sought to formulate and in-vitro characterize thermo sensitive in-situ-gel Nanoemulsions (NEs) containing Acyclovir (ACV) for ocular drug delivery, and evaluate it for ex-vivo corneal permeation and ocular irritation test

Material and Methods: ACV loaded NEs were prepared by spontaneous emulsification method. Poloxamer407 with its thermo reversible properties was selected as surfactant. Physiochemical properties and release study of in-situ gel NEs were investigated. The formulation with suitable properties for ocular drug delivery was selected for corneal permeation, hen s egg test- chorioallantoic (HET-CAM) test and modified Draize test to evaluate its ocular irritancy and toxicity.

Results: In The optimum in-situ-gel NE consists of (5%) Triacetin, (8.33%) TranscutolÂ®P, (15.33%) Poloxamer407 and (1.34%) Poloxamer188, with the mean size of 28.11 ± 1.46 nm and 0.38 ± 0.04 poly dispersity index (PDI) had suitable physiochemical properties such as pH, viscosity, osmolality, refractive index (RI) which were acceptable for ocular administration. The mean of drug release efficiency was $76.59 \pm 2.76\%$ during 6 hours and showed sustained release pattern compered to control solution. Based on permeation study through bovine corneal membrane during 6 hours, drug permeation of optimum formulation increased about 2.8 fold higher than control solution. Modified Draize test and HET-CAM test illustrated that the optimum in-situ-gel NE was not irritant and could be well tolerant by eye.

Conclusion: In Conclusion, these Results demonstrate that this new ACV formulation can be considered as novel ophthalmic delivery system for ocular viral infections.



DIFFERENT TYPES OF HYDROCEPHALUS AS RISK FACTORS FOR VENTRICULOPERITONEAL SHUNT MALFUNCTION IN NEONATES.

Type: Clinical Fundamental Study, oral

Author: Adam Bębenek

Co-author(s): Julia Kuzaj, S. Kwiatkowski

Introduction:

Despite expanding medical knowledge and advancement in technology, pediatric hydrocephalus is a worldwide spread problem with a prevalence of approximately 6 /100 000 life-born infants. Many causes of hydrocephalous, intraventricular haemorrhage (IVH), trauma, inflammation, neoplasms are the reason for intensive surgical Treatment which burdens both patients and their families. The general purpose of Treatment is the same in every patient, to maintain proper pressure of CSF within the central nervous system. Most often they are treated permanently with the ventriculoperitoneal shunt (VPS) which is considered best but not flawless method. Risk of malfunction accompanies every patient with VPS implanted.

Aim of the study:

The purpose of this study was the assessment of the risk factors for malfunction of the VPS in neonates to find conditions which require advanced monitoring.

Methods:

The retrospective study was conducted evaluating 58 subjects admitted to the Clinic of Children's Neurosurgery in the University Children's Hospital of Cracow between 2016 and 2018. Patients gestational age varied between 23 and 40 hbd (mean: 29 hbd, median: 28 hbd). Causes of the hydrocephalous considered in the study were as follows: neoplasm, IVH, trauma, The assessment included

different types of hydrocephalus and their association with a malfunction of the VPS. Data were calculated with TIBCO Statistica.

Results:

From among 58 patients with hydrocephalus treated with the VPS, 35 suffered IVH, 5 had neoplasm, 8 had a CNS malformation, 9 had a CNS infection and 1 suffered a trauma. Only IVH has proved the statistical significance ($p>0.05$) for being a risk factor for malfunction of the VPS within the first 2 years after implantation.

Conclusion:

Neonates who suffered IVH should be thoroughly monitored within the first year after the episode.