LIJEČNIČKI VJESNIK

Supl 2
2024

GLASILO HRVATSKOGA LIJEČNIČKOG ZBORA / THE JOURNAL OF THE CROATIAN MEDICAL ASSOCIATION

UTEMELJEN 1877.

Liječ Vjesn God. / Vol. 146 (2024) Broj / Num. Supl 2 Str./Pag. 1-118 Zagreb, Hrvatska / Croatia
UDK 61(061.231)=862=20 / CODEN LIVJA5 / ISSN 0024-3477 (TISAK) / ISSN 1849-2177 (ONLINE)

FOUNDED 1877

HRVATSKI LIJEČNIČKI ZBOR

1874.-2024.

sto pedeset godina

LIJEČNIČKI VJESNIK

Supl 2
2024

https://lijecnicki-vjesnik.hlz.hr/
https://hrcak.srce.hr/lijecnicki-vjesnik

GLASILO HRVATSKOGA LIJEČNIČKOG ZBORA / THE JOURNAL OF THE CROATIAN MEDICAL ASSOCIATION

Osnivač i izdavač
HRVATSKI LIJEČNIČKI ZBOR

Za izdavača
ŽELJKO KRZNARIĆ

Glavni i odgovorni urednik
BRANIMIR ANIĆ

Tajnik uredničkog odbora
Željko Ferenčić

Tajnica redakcije
Draženka Kontek

Urednik web stranice
Alen Babacanli

Urednik suplemenata
Anko Antabak

Urednik smjernica
Mislav Planinc

Dizajn naslovnice
Ante Rašić, Studio Rašić

SAVJET

Predsjednik
Mladen Belicza

Članovi
Nada Čikeš (Zagreb) - Hedviga Hricak (New York) - Mirko Jung (Zürich) - Ivica Kostović (Zagreb) - Ante Padjen (Montreal) - Marko Pećina (Zagreb) - Dinko Podrug (New York) - Miljenko Pukanić (Sydney) - Smiljan Puljić (Upper Saddie River, New Jersey) - Berislav Tomac (Hagen) - Marko Turina (Zürich)

UREDNIČKI ODBOR
Branimir Anić (Zagreb) - Anko Antabak (Zagreb) - Branka Aukst Margetić (Zagreb) - Alen Babacanli (Zagreb) - Ivan Bojanić (Zagreb) - Boris Brkljačić (Zagreb) - Venija Cerovečki (Zagreb) - Mislav Čavka (Zagreb) - Željko Ferenčić (Zagreb) - Božo Krušlin (Zagreb) - Martin Kuhar (Zagreb) - Julije Meštrović (Split) - Mislav Planinc (Zagreb) - Dražen Pulanić (Zagreb) - Duje Rako (Zagreb) - Željko Reiner (Zagreb) - Zdenko Sonicki (Zagreb) - Davor Štimac (Rijeka) - Adriana Vince (Zagreb) - Miroslav Župčić (Rijeka)

MEĐUNARODNI UREDNIČKI ODBOR
Jurgen Deckert (Würzburg, Njemačka) - Patrick Erik Eppenberger (Zürich, Švicarska) - Michael Fuchsjäger (Graz, Austrija) - Primož Gradišek (Ljubljana, Slovenija) - Andrej Grajn (Manchester, UK) - Emir Q. Haxhija (Graz, Austrija) - Tomas Jovaisa (Kaunas, Litva) - Jamin Kashwa (London, Engleska) - Živko Steven Pavletić (Bethesda, SAD) - Semir Vranic (Doha, Katar)

Zagreb, 2024.

OPIS

Liječnički vjesnik je najstariji hrvatski medicinski časopis koji neprekidno izlazi od 1877. te redovito bilježi sva važna stručna i strukovna dostignuća u hrvatskoj i svjetskoj medicini.
U *Liječničkom vjesniku* objavljuju se uvodnici, stručni i znanstveni radovi, pregledni članci, prikazi bolesnika, lijekova i metoda, preliminarna znanstvena i stručna priopćenja, osvrti, pisma uredništvu, prikazi knjiga, referati iz literature i drugi prilozi. Svi rukopisi podvrgnuti su procesu recenzija.
Rukopis i svi članci šalju se *Uredništvu Liječničkog vjesnika*, Zagreb, Šubićeva ul. 9, tel (01) 46-93-300, e-pošta: lijecnicki-vjesnik@hlz.hr.
Članarina, pretplata i sve novčane pošiljke šalju se Hrvatskomu liječničkom zboru, Zagreb, Šubićeva ulica 9, na IBAN HR7423600001 101214818, OIB 60192951611. Članarina Hrvatskoga liječničkog zbora iznosi 30 eura; za liječnike pripravnike i obiteljska članarina iznosi 15 eura. Pretplata za *Liječnički vjesnik* je 42 eura (inozemstvo 84 eura). Radi redovitog primanja časopisa svaku promjenu adrese potrebno je javiti Uredništvu. Svaki član Hrvatskoga liječničkog zbora ima pravo besplatno objaviti članak u *Liječničkom vjesniku;* autori koji nisu članovi Zbora moraju platiti naknadu u iznosu od 27 eura + PDV.

Tiskano u Hrvatskoj

Autorska prava: Objava: Hrvatski liječnički zbor
Svi su članci slobodno dostupni pod uvjetima međunarodne licence *Creative Commons Anribution-NonCommercial-NoDerivates 4.0.* Ova licenca dopušta drugima da preuzimaju djela i dijele ih s drugima dokle god ističu Vaše autorstvo, ali ih ni na koji način ne mogu mijenjati ili koristiti u komercijalne svrhe. https://creativecommons.org/licenses/by-nc-nd/4.0/legalcode

LIJEČNIČKI VJESNIK – POVODOM 150. OBLJETNICE HRVATSKOGA LIJEČNIČKOG ZBORA 1874.-2024.

Suplementi *Liječničkog vjesnika* povodom obilježavanja jubilarne stopedesete obljetnice Hrvatskoga liječničkog zbora (1874.-2024.), predstaviti će se u 2024. godini s novim vizualima naslovnica čiji osnovni motiv čine ponajbolja umjetnička djela iz fundusa Nacionalnog muzeja moderne umjetnosti u Zagrebu.

Nakon prvog broja *Liječničkog vjesnika* na čijoj naslovnici je reproducirano Bukovčevo djelo *Gundulić zamišlja Osmana* iz 1894., s arkadijskim ambijentom, kao svojevrsno snoviđenje u funkciji simboličkog iščekivanja onoga što će se u svjetlu ilirizma oblikovati kao hrvatski modernitet, kroz naslovnice suplemenata *Liječničkog vjesnika* u 2024. godini reproducirat će se djela **Ljube Babića, Vilka Gecana, Miljenka Stančića, Lea Juneka, Nikole Reisera i Miroslava Šuteja** kao svojevrsni imaginarij 20. stoljeća hrvatske kulturne povijesti, vremena afirmacije i jačanja uloge Hrvatskoga liječničkog zbora, te doprinosa vezanih uz institucionalizaciju, profesionalizaciju i modernizaciju medicine s jasnim ciljem promicanja zdravlja, medicinske znanosti i prakse.
Kontekst različitih umjetničkih poetika i stilskih formi nastavlja se slijedom odabranih djela od Babićevog *Zagorskog pejzaža* i nagovješta-

1

2

3

UDK 61 (061.231)=862=20
Liječnički vjesnik citiraju: Scopus, EMBASE/Excerpta Medica, EBSCO, Hrčak, DOAJ, CROSSREF
Liječnički vjesnik tiskano izdanje ISSN 0024-3477 *Liječnički vjesnik* online izdanje ISSN 1894-2177

Founder and Publisher
CROATIAN MEDICAL ASSOCIATION

For Publisher
ŽELJKO KRZNARIĆ

Editor-in-Chief
BRANIMIR ANIĆ

Secretary of the Editorial Board
Željko Ferenčić

Secretary of the Editorial Office
Draženka Kontek

Website editor
Alen Babacanli

Editor of supplements
Anko Antabak

Guidelines Editor
Mislav Planinc

Front page
Ante Rašić, Studio Rašić

ADVISORY BOARD

President
Mladen Belicza

Members
Nada Čikeš (Zagreb) - Hedviga Hricak (New York) - Mirko Jung (Zürich) - Ivica Kostović (Zagreb) - Ante Padjen (Montreal) - Marko Pećina (Zagreb) - Dinko Podrug (New York) - Miljenko Pukanić (Sydney) - Smiljan Puljić (Upper Saddie River, New Jersey) - Berislav Tomac (Hagen) - Marko Turina (Zürich)

EDITORIAL BOARD
Branimir Anić (Zagreb) - Anko Antabak (Zagreb) - Branka Aukst Margetić (Zagreb) - Alen Babacanli (Zagreb) - Ivan Bojanić (Zagreb) - Boris Brkljačić (Zagreb) - Venija Cerovečki (Zagreb) - Mislav Čavka (Zagreb) - Željko Ferenčić (Zagreb) - Božo Krušlin (Zagreb) - Martin Kuhar (Zagreb) - Julije Meštrović (Split) - Mislav Planinc (Zagreb) - Dražen Pulanić (Zagreb) - Duje Rako (Zagreb) - Željko Reiner (Zagreb) - Zdenko Sonicki (Zagreb) - Davor Štimac (Rijeka) - Adriana Vince (Zagreb) - Miroslav Župčić (Rijeka)

INTERNATIONAL EDITORIAL BOARD
Jurgen Deckert (Würzburg, Germany) - Patrick Erik Eppenberger (Zürich, Switzerland) - Michael Fuchsjager (Graz, Austria) - Primož Gradišek (Ljubljana, Slovenia) - Andrej Grajn (Manchester, UK) - Emir Q. Haxhija (Graz, Austria) - Tomas Jovaisa (Kaunas, Lithuania) - Jamin Kashwa (London, UK) - Živko Steven Pavletić (Bethesda, USA) - Semir Vranic (Doha, Qatar)

Zagreb 2024

Description
The Croatian Medical Association started publishing its professional journal *Liječnički Vjesnik* in 1877. Liječnički Vjesnik is one of only about a hundred international journals that were coming out in the late 19th century, maintained continuity during the 20th century, and then entered the 21st century. It is also the oldest Croatian medical journal and regularly captures all important achievements, professional and trade events. Editorials, professional and scientific papers, review articles, patient reviews, medications and methods, preliminary scientific and expert papers, reviews, letters to the editor, book reviews, literature papers and other contributions are published in the journal *Liječnički Vjesnik*. Through publishing original scientific and professional papers by local authors, *Liječnički Vjesnik* has contributed to the overall health care improvement. All manuscripts are subjected to a review process.

All articles should be addressed to the Croatian Medical Association, Office of *Liječnički Vjesnik*, Zagreb, Šubićeva 9, tel. (01) 46-93-300, e-mail: lijecnicki-vjesnik@hlz.hr.
MEMBERSHIP AND SUBSCRIPTION: Membership, subscription or any other cash dispatches should be sent to the Croatian Medical Association, Zagreb, Šubićeva 9, Croatia. Bank account HR7 4236000011012148 18, VAT number HR60192951611. The membership fee for the Croatian Medical Association is 30 euros. The membership feefor the family member is 15 euros. Subscription fee for *Liječnički Vjesnik* is 42 euros (84 euros). Members and other legal entities are advised to inform Croatian Medical Association - Editorial Board of *Liječnički Vjesnik* about any change of address in order to receive the journal regularly. Each member of the Croatian Medical Association is allowed to publish the article in the journal Liječnički vjesnik for free. Non-members are also allowed to publish the article with administration fee in amount of 27 euros + VAT.
Printed in Croatia
Author's. Published by: Croatian Medical Association.
All articles are freely available underthe terms of the Creative Commons Attribution-NonCommercial-NoDerivates 4.0 International Licence. This license allows others to download works and share them with others as long as they credit you, but they can't change them in any way or use them commercially. https://creativecommons.org/licenses/by-nc-nd/4.0/legalcode

Sto pedeset godina za stalež i struku

jem novih mijena u prvoj polovici dvadesetog stoljeća preko Gecanovog *Cinika*, Junekovog *Maternite de Porte Royal* nastalog u Parizu, zatim intimističkog, mističnog i magičnog prizora u djelu *Stara ulica* Miljenka Stančića i Reiserove *Mrtve prirode* prema avangardi koja prati historiografski realitet aktivnosti staleške udruge noseći obilježja i mijene pojedine epohe, zrcaleći pozitivističko-modernistički pokret u dodiru znanosti i umjetnosti u djelu *Ultra A* Miroslava Šuteja.

U preplitanju mijena u umjetnosti ogleda se simbolički tkanje društva unutar kojeg *Hrvatski liječnički zbor* tijekom 150 godina svog opstanka svojim djelovanjem kroz medicinu izrasta u nezaobilaznog činitelja društva, gradeći medicinu kao trajno razvijajuću praksu i umjetnost liječenja.

POPIS REPRODUCIRANIH DJELA IZ FUNDUSA NACIONALNOG MUZEJA MODERNE UMJETNOSTI ZAGREB

1. Ljubo Babić: Zagorski pejzaž (Novembar), 1937.
ulje, drvo; 62,2 x 75,6 cm
inv. br. MG-962

2. Vilko Gecan: Cinik, 1921.
ulje, platno; 110,5 x 99 cm
inv. br. MG-2668

3. Miljenko Stančić: Stara ulica, 1955.
ulje, platno; 67,4 x 96,4 cm
inv. br. MG-8303

4. Leo Junek: Maternité de Porte Royal, Paris, 1940.
ulje, platno; 81 x 100 cm
inv. br. MG-1488

5. Nikola Reiser: Mrtva priroda (Bijela i plava vaza), 1970.
ulje, daska; 63 x 85 cm
inv. br. MG-2944

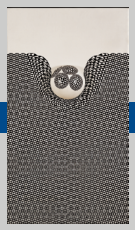
6. Miroslav Šutej: Ultra A, 1965.
polikolor, drvo;
220 x 20 x 121,5 cm
inv. br. MG-2592

Foto: Goran Vranić
© Nacionalni muzej moderne umjetnosti Zagreb

4

5

6



19th Croatian Student Summit

Zagreb, April 9th–12th, 2024

19th Croatian Student Summit
Zagreb,
April 9th-12th, 2024

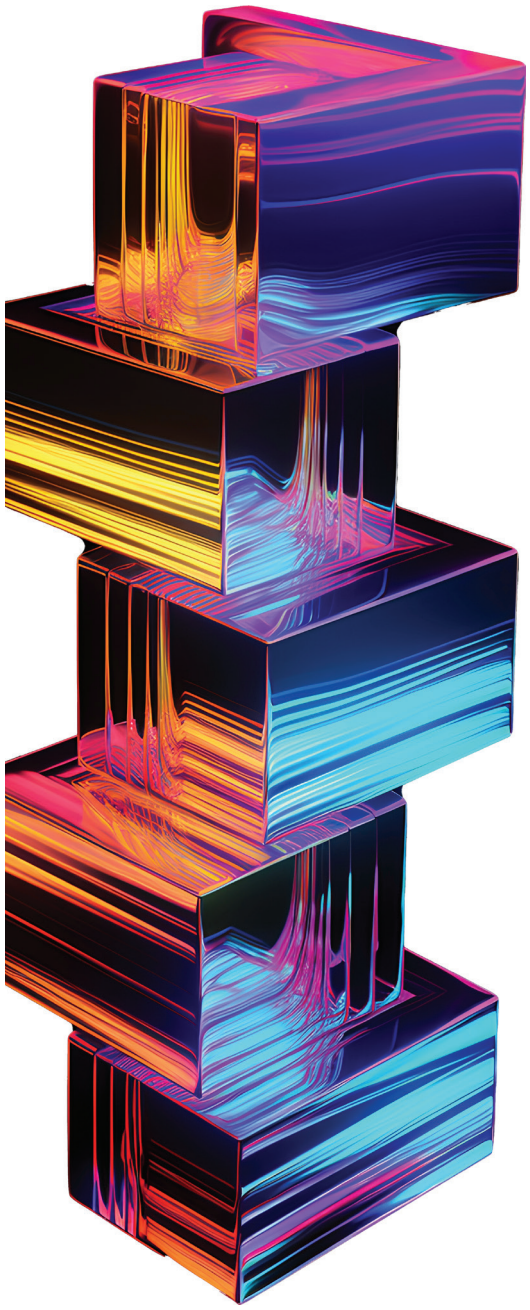
EDITOR-IN-CHIEF
Sebastijan Trifunović
Dora Pavlin
Nikolina Perak
Lucija Dobrić
Martina Vidović
Lazarela Cuparić
Gracia Grabarić

School of Medicine, University of Zagreb

PUBLISHER
University of Zagreb
School of Medicine
Šalata 3, Zagreb, Croatia

FOR PUBLISHER
Slavko Orešković, MD, PhD
School of Medicine, University of Zagreb

Table of contents



Committees

Organizing committee

Lazarela Cuparić, president
Ema Kazazić, vice president
Matija Martinić, vice president

Design team
Mia Vukosav, leader
Lucija Dobrić
Lara-Nika Holjevac Stasiow
Ana Milas
Klara Rudan
Leonarda Maria Šitum
Anamarija Tubikanec
Martina Vidović

Fundraising team
Vinka Potočki, leader
Eva Bišćanin
Ivna Bonačić
Dora Softić
Marija Tešija
Marta Tučkar

Logistics team
Petar Samardžić, leader
Darko Santovac
Karlo Tikvicki

Photography team
Kristina Tomak, leader
Maša Gašparović
Lukas Grbac Lacković
Franka Kovačić

Social media team
Morena Surać, leader
Maria Bara
Ema Kazazić
Bruno Lekaj
Nika Sutara
Stella Sara Worman

Congress supervision
Dino Žujić

International relations
Vinko Micheal Dodig

Programme moderators
Maša Mitrović
Mara Močibob

Social programme team
Laura Rudelj, leader
David Preložiček
Lucija Trutina
Josipa Vlahović
Ivica Zec
Julija Žaneti
Ana Žibrat

Scientific-Programme committee

Gracia Grabarić, president
Luka Mitar, poster session chair
Klara Bardač, workshops chair
Sebastijan Trifunović, BoA, editor-in-chief

Drago Baković
Antonela Barać
Ana Bilić-Pavlinović
Tomislav Brajković
Krunoslav Budimir
Matej Dobrošević
Marko Gavrančić
Emio Halilović
Ozana Jakšić
Jana Majdak
Dora Pavlin
Nikolina Perak
Lina Radončić
Ivan Strinić
Iva Šimunović

Matija Vid Prkačin, MD
Tomislav Smoljo, MD
Davor Virag, MD
Tereza Gabelić, MD, PhD
Dino Papeš, MD, PhD
Assist. Prof. Nikola Sobočan, MD, PhD
Assoc. Prof. Nadira Duraković, MD, PhD
Assoc. Prof. Jelena Osmanović Barilar, MD, PhD

Task force

Leon Enc, coordinator
Lorena Remenar, coordinator

Adriana Adamović
Nina Alebić
Anja Bakić
Nika Bančić
Blanka Anna Belavić
Džana Bjelić
Daniel Bogdanov
Matea Brautović
Iva Grebenar
Luka Hanulak
Matea Ivanda
Jamilah Jassin
Marina Karin
Marta Majcen
Luka Ravlić
Iva Šarac
Marko Šarić
Paula Skuliber
Elizabeta Sudar
Maja Tomljanović
Vedran Vuglić
Anamaria Vukoja
Dušica Zorica
Antea Zrnčić
Tihana Zubak
Nika Žarec

About this year's topic

This year's congress topic, 'T. E. A. M. – Together Everyone Achieves More', is certainly anything but typical.

We chose this topic because today, doctors are generally members of teams that include not only medical professionals, and understanding and adapting the expectations of team members with completely different backgrounds and educational profiles require special effort, time, and skills. The experiences and opinions of our speakers, as well as their diverse career orientations, will provide our participants with new perspectives and prepare them for future work and opportunities in their careers.

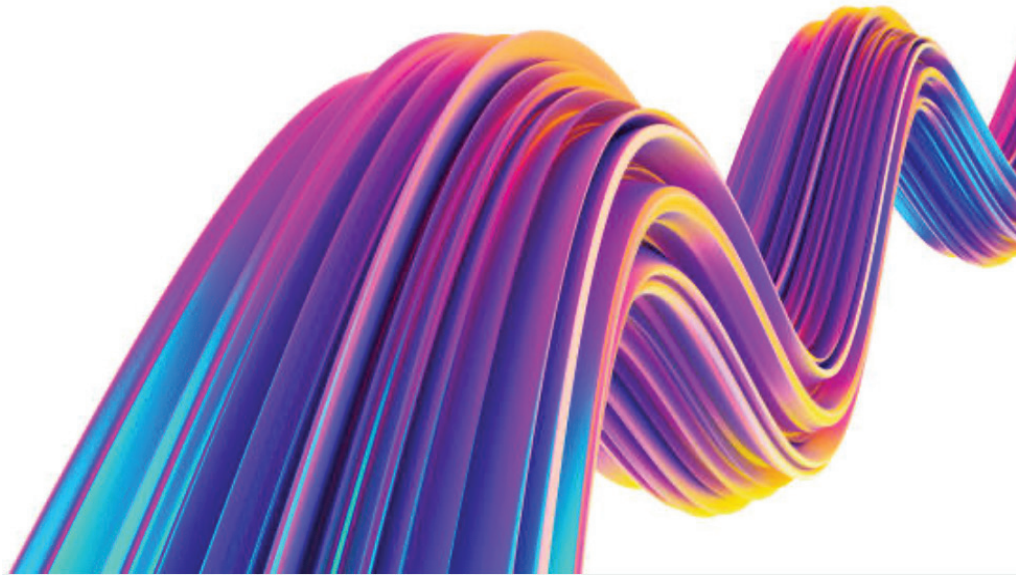
The program is structured in such a way that each day has its own subtopic. Thus, the first day will focus on general aspects of teamwork with an emphasis on the specifics of the medical team; the second day is dedicated to presenting large teams whose members are doctors; the third day focuses on the patient as part of the team; and the last day is dedicated to teamwork between medical students and doctors, who are simultaneously in the roles of teachers and mentors.

An important aspect of this year's congress is the numerous panel discussions that follow the presentations of the speakers, and through pre-designed questions, they will involve the audience and thus motivate them to reflect on the topic at hand.

In line with the congress concept, numerous workshops are also designed to be based on teamwork between at least two student sections or associations.

I hope that you will leave the congress enriched with new experiences, inspired for the future, and willing to implement at least some of what you have heard at this year's congress into your work. If we achieve this with at least one of you, we have already done a tremendously significant job.

Lazarela Cuparić



Welcome messages

Lazarela Cuparić, President of the Organizing Committee

Dear friends,

It is an incredible honor to welcome you at the Croatian Student Summit 19, on behalf of the entire CROSS team. The Croatian Student Summit has been our favorite congress for many years, renowned for its accessibility to students from our and other faculties. Thank you for choosing to dedicate your time to what we have prepared.

Unlike previous congress editions that focused on individual specializations, in recent years, we have initiated a new trend: topics are more comprehensive and do not only address a single medical specialization. Such is the theme this year as well, relevant and tangible to all: 'T.E.A.M. – Together Everyone Achieves More'.

We are witnessing a time in medicine that is practically unimaginable without teamwork, yet we rarely delve deeper beneath the surface. The very title of the topic might lead you astray; we truly do not intend to talk about who does what in which medical team, as that should be somewhat clear to everyone. The essence of the congress is to focus on what truly matters: understanding and interpersonal relationships within different teams and adapting to colleagues with diverse backgrounds.

What particularly delights me is that all interested students are involved in the organization of the congress, and this is done through a public invitation. The more time we spend at this faculty, the more motivated colleagues we meet. They are often already involved in various activities, but sometimes they need additional encouragement. That is the essence of our public invitation - to extend a hand to all those who want to experience team spirit and gain insight into how the organization of large projects works. In the spirit of this year's theme, isn't it? Participating in the student congress is an experience that teaches students, young doctors, and scientists about the importance of exchanging ideas with their peers, shapes their presentation skills, and offers them new friendships, which often last a lifetime.

Personally, organizing this congress is the culmination of my student engagement after all other projects, and leading the largest CROSS team so far is a special privilege. I give all credit for this congress to those who have taken the time out of their busy schedules and strived to achieve our common goal together, as a T. E. A. M.

I would like to conclude this message with a quote that I believe describes the spirit of the Croatian Student Summit 19 well: 'Individually, we are one drop. Together, we are an ocean.'

Gracia Grabarić, President of the Scientific–Programme committee

Dear Colleagues and Friends,

I extend a warm welcome to every single one of you to the 19th edition of the Croatian Student Summit, more popularly known as CROSS.

This year, we're uniting various disciplines under one banner, focusing on the importance of teamwork in medicine and science. We aim to explore the complexities of collaboration, learn from both successes and challenges and equip ourselves with skills for multidisciplinary teamwork. Lectures will be transformed into panel discussions and concise presentations, encouraging collaborative dialogue and audience participation. Each day will delve into different topics such as team purpose and addressing dysfunctionality. We'll also examine real-life experiences and the role of patients and their caregivers in medical teams. Moreover, we'll discuss the vital contribution of both students and their teachers in the learning process.

We are delighted that CROSS continues to attract young scientists from Zagreb and beyond, making it a platform for the exchange of research findings and ideas. This year, our Scientific Programme Committee collaborated to choose the most outstanding contributions for presentation and publication in our abstract book and as a supplement to Liječnički vjesnik. We take pride in our double-blind review process for abstracts, involving two independent reviewers, with the assistance of individuals affiliated with our School of Medicine. I also extend my heartfelt gratitude to all those involved in the creation of our abstract book, ensuring not only its adherence to high scientific standards but also its visually compelling presentation.

The Scientific Committee is also excited to offer a diverse array of creative and innovative workshops. The majority of these workshops are orchestrated by our student societies, either in collaboration with one another or alongside external partners. Together, they will deliver fresh insights and innovative concepts. We encourage you to join us in exploring these captivating sessions and uncovering new and valuable insights.

I am incredibly proud and honored to be part of the CROSS team, comprised of nearly 90 dedicated individuals who have made all of this possible. It is my sincere hope that this congress will leave a lasting impression on you as a place where you encountered diverse perspectives, forged connections with old and new friends, and perhaps gained valuable insights into our chosen topic.

Wishing you a truly enriching and memorable congress experience!

Dino Žujić, Student Council President

Dear friends,

It is my great pleasure and privilege to welcome you to another edition of our beloved student congress, the Croatian Student Summit!

As the topic of CROSS 19 suggests - "Together Everyone Achieves More" - I am sure you will witness nothing less during our four days together. The students of the School of Medicine, University of Zagreb, have been working tirelessly for months to make CROSS 19 happen. From numerous meetings, brainstorming sessions, preparing materials, and creating the best program possible, they have poured their hearts and souls into the final product, which will stay in your memory forever.

The Croatian Student Summit has become a pioneer of student congresses in Croatia and the Balkan area. In the sea of student congresses, CROSS stands out not only because of its duration, which is four days (and four days of packed content), but also because of the number of people and the organizational structure that work on each year's edition. With efforts and love towards CROSS and its participants, we are creating a legacy for our School of Medicine, something that is truly timeless and worth mentioning.

Whenever medical students put their hard work into something other than their studies, it is something to praise, considering the demanding workload of university. So, please, let us appreciate together the work that has been done, and trust me when I say that you will enjoy every part of it. Throughout the four days of lectures, workshops, poster sessions, and social programs, I hope you learn a lot, gain new practical skills, get experienced in presenting your scientific research in front of the audience, and meet new friends with whom you will make new memories during our social programs. After the four days have passed, I hope you will leave with a smile on your face, eager to visit us again for the jubilee CROSS 20 in 2025.

We are eagerly anticipating seeing you all in Zagreb from the 9th to the 12th of April. Let's enjoy the beauty of CROSS together, for the 19th time in a row.

Sincerely yours,

CROSS 19 agenda

April

tue 9th

11.00 – 15.00	Registrations	17.30 – 17.45	Coffee break
15.30 – 16.00	Opening ceremony	17.45 – 18.45	Second block – Brief Lectures and Panel Discussion **Exploring Generational Science: From Mentee to Mentor in Global Collaboration** Professor Emeritus Ivica Kostović, F.C.A., MD, PhD Associate Professor Željka Krsnik, MD, PhD Višnja Majić Zidarić, MD, PhD
16.00 – 17.30	First block – Brief Introductory Lectures and Panel Discussion **Mastering Healthcare Team Dynamics** Associate Professor Aleksandar Džakula, MD, PhD Professor Stjepan Orešković, PhD Andro Košec, MD, PhD	19.00 – 20.00	Buffet dinner

wed 10th

8.00 – 10.00	Poster session 1	14.45 – 15.10	Coffee break
10.00 – 10.30	Coffee break	15.10 – 15.40	Brief Lecture – **Advancing Neurosurgery: A Doctor's Perspective on Robotic Neuronavigation Development** Associate Professor Darko Chudy, MD, PhD
10.30 – 12.30	Poster session 2		
12.30 – 13.30	Lunch	15.40 – 16.00	Coffee break
13.30 –14.45	Third block – Brief Lectures and Panel Discussion **Uniting Diverse Professions in Healthcare team** Associate Professor Iva Mucalo, PhD Adis Keranović, MD Anton Mažuranić, MD	16.00 – 16.30	Brief Lecture – **Power Dynamics: Discovering the Division of Responsibility within a Team** Marko Marelić, PhD
		16.45 – 18.15	Workshop session 1
		18.30 – 20.00	Workshop session 2

April

thu 11th

8.00 – 10.00	Poster session 3	14.35 – 14.50	Coffee break
10.00 – 10.30	Coffee break	14.50 – 15.50	Fifth block – Brief Lectures and Panel Discussion **Patient Care Complexity from Two Perspectives** Sandra Karabatić, MScN Ino Protrka, MD
10.30 – 12.30	Poster session 4		
12.30 – 13.30	Lunch	15.50 – 16.00	Coffee break
13.30 –14.35	Fourth block – Brief Lectures and Panel Discussion **Uniting Diverse Professions in Healthcare team** Associate Professor Nataša Klepac, MD, PhD Professor Karmen Lončarek, MD, PhD	16.00 – 16.30	Brief Lecture – **CROseq-GenomeBank: The First Croatian Biointelligent Joint Genome Analysis and Aggregate Database** Associate Professor Mario Ćuk, MD, PhD
		16.45 – 18.15	Workshop session 1
		18.30 – 20.00	Workshop session 2

fri 12th

8.00 – 10.00	Poster session 5	14.30 – 14.45	Coffee break
10.00 – 10.30	Coffee break	14.45 – 15.45	Concluding Panel Discussion Professor Emeritus Ivan Damjanov, MD, PhD Associate Professor Tina Dušek, MD, PhD Professor Robert Likić, MD, PhD
10.30 – 12.30	Poster session 6		
12.30 – 13.30	Lunch		
13.30 –14.30	Sixth block – Brief Lectures **We're All in This Together – or Are We?** Professor Emeritus Ivan Damjanov, MD, PhD Associate Professor Tina Dušek, MD, PhD Professor Robert Likić, MD, PhD	15.45 – 16.05	Student Lecture – **Remember Me Project** Kamelija Horvatović, MD, PhD Mirna Rešetar
		16.10 – 16.30	Closing ceremony

CROSS 19 agenda

Lectures and invited speakers

Team Overview: Purpose, (Dys)Functionality, and Results

First block – Mastering Healthcare Team Dynamics

Associate Professor Aleksandar Džakula, MD, PhD, Andro Košec, MD, PhD, Professor Stjepan Orešković, PhD

Ever thought about the ins and outs of being part of and leading a large healthcare team? Our first session will cover teamwork essentials: purpose, functionality, and dealing with both positive and negative outcomes. Join us for a deep dive into the dynamics of teamwork in healthcare.

Associate Professor Aleksandar Džakula, MD, PhD

Aleksandar Džakula is an expert and specialist in the field of Public Health Medicine – Organization of Health Care Services. Currently, he holds the position of Associate Professor at the School of Medicine, University of Zagreb, and works at the School of Public Health "Andrija Štampar" in Zagreb. He has over 20 years of experience in healthcare services analysis, research, and development in Croatia and internationally. He actively participated as an expert and project manager in many activities and programs relating to health care.

His focus is on organizational changes in the healthcare system, particularly in healthcare system management and processes in public administration. His research and analysis are published in international scientific and professional publications with peer review. He has experience working as a consultant, project manager, and trainer in the area of healthcare analysis and planning.

He worked on various projects with international cooperation as an expert and coordinator (Sustainable management development program CDC, Atlanta, US; Management and quality in health care, ENSP, Rennes, France; Health care policy analysis LGI, Budapest, Hungary; Capacity building of health care system, Bosnia and Herzegovina; European Observatory on Health Systems and Policies, EU commission…). He is a valued member of the European Society of Public Health.

Andro Košec, MD, PhD

Andro Košec graduated from the University of Zagreb School of Medicine and was awarded many times during his studies, including Dean's and Rector's awards. He completed his residency in Otorhinolaryngology and Head and Neck Surgery at the Clinical Hospital Centre Sisters of Mercy in 2018. Additionally, he finished his postgraduate doctoral study in 2017. Following these accomplishments, he went further to pass the European Board Examination in Otorhinolaryngology and Head and Neck Surgery and was appointed as a scientific collaborator and later as a Senior Assistant at the Department of Otorhinolaryngology, University of Zagreb School of Medicine. He became a subspecialist in audiology in 2021. He is also a member of several prestigious medical societies and has published extensively in scientific

Professor Stjepan Orešković, PhD

Professor Stjepan Orešković has rich experience in science and is a member of the European Academy of Arts and Sciences. In the world of entrepreneurship, he is known as a successful investor and manager of large private companies. He is the chairman of the Supervisory Board of the international business school IEDC Bled and the majority owner of M+ Group, international CX, and BPTO group. Also, he was the director of the Andrija Štampar School of Public Health and the founder and director of the World Health Organization Collaborating Center for HIV Strategic Information. He is the principal investigator (PI) of Pfizer's GLOBAL GRAND

project (2018-2023), which includes clinical and behavioural teams from

Harvard Medical School – Massachusetts General Hospital and the Faculty of Medicine of the University of Ljubljana and the Faculty of Medicine of the University of Zagreb. He has successfully worked as a consultant on major projects for international organizations such as The World Bank, the European Commission DG Science, and the World Health Organization. He is the president of the Center Council of the Faculty of Medicine of the University of Zagreb, which researches and promotes the best health methods and practices. He is the chairman of the organizing committee of the international conference Data Science and Right to Science and a keynote speaker at numerous conferences. He was a member of the Management Board of ASPHER.

Second block – Exploring Generational Science: From Mentee to Mentor in Global Collaboration

Professor Emeritus, Ivica Kostović, F.C.A., MD, PhD, Associate Professor Željka Krsnik, MD, PhD, Višnja Majić Zidarić, MD, PhD

Following our exploration of healthcare teamwork, we will immerse ourselves in the world of science. This segment will illuminate the journey of three generations of scientists, illustrating the transition from mentee to mentor. We will examine the dynamics and peculiarities inherent in this field, uncovering the intricacies of mentorshipand the evolution of scientific collaboration across the globe.

Academician, Professor Emeritus Ivica Kostović, MD, PhD

Ivica Kostović is a renowned Croatian neuroscientist. We would like to highlight the following from his substantial biography, which proves his outstanding contribution to the scientific community.

He graduated from the University of Zagreb School of Medicine in 1967 and pursued further education in the United States, including postdoctoral work at Johns Hopkins University and Harvard University. Throughout his career, Kostović held various academic and research positions, contributing significantly to the understanding of human brain development. He is the founder of the Croatian Institute for Brain Research as a model of a research and educational unit of the School of Medicine, University of Zagreb, with a long-term program for the development of neuroscience and a doctoral study program in neuroscience at the School of Medicine. He led groundbreaking research on the fetal layer of the human cerebral cortex, known as the "subplate" zone, which considerably influenced our understanding of neurodevelopmental processes. His work has significantly affected global neuroscience, with his findings cited in textbooks and used in legal contexts. He has also played key roles in public service, including serving as Minister of Science and Technology during Croatia's transition period. Recognized internationally, academician Kostović has organized prestigious scientific events and delivered lectures worldwide. He continues to lead research projects and remains a prominent figure in neuroscience.

Associate Professor Željka Krsnik, MD, PhD

Željka Krsnik is an Associate Professor of Neuroscience at the School of Medicine, University of Zagreb, Head of the Laboratory for Neurogenomics, as well as the Laboratory for Digitalization of the Zagreb Brain Collection. Her main research focus is understanding the molecular and cellular mechanisms, in addition to cortical connectivity development of the human cerebral cortex. Over the years, Dr Krsnik has been involved in numerous international collaborative projects, leading research initiatives funded by prestigious organizations and has been an invited speaker at many global conferences.

Previously, she was a postdoctoral associate at Yale University and a member of the BrainSpan Consortium. In 2013 she was awarded the International Brain Research Organization (IBRO) Return Home Fellowship Award. From 2018-2022 Dr Krsnik served as the Chair of

the IBRO Alumni Committee, Chair of the Young IBRO Committee and a member of the IBRO Executive Committee.

Currently, she is a Chair of the ALBA Network and a member of the ALBA Network Board of Directors, a global organization with the mission to foster equity, diversity and inclusion (EDI) in brain sciences across the world. In addition, she serves as a member of the European Academy of Neurology (EAN) Coordinating Panel for DEI in Neurology, FENS Executive Committee, as well as Associate Editor at the Journal of Chemical Neuroanatomy.

Višnja Majić Zidarić, MD, PhD

Višnja Majić Zidarić specializes in pediatric anesthesiology, reanimatology, and intensive care. She graduated from the School of Medicine, University of Zagreb. With a PhD in Neuroscience from the Croatian Institute for Brain Research, her research on the fetal human brain's development has been internationally acclaimed.

Currently, she works at Children's Hospital Zagreb and has experience working at the Institute of Emergency Medicine of the City of Zagreb. She fluently speaks English and German and presents her research globally, contributing significantly to medical science.Her leadership extends to organizing medical symposiums, reflecting her commitment to professional development and knowledge sharing. Her dedication to patient care and advancing medical knowledge make her an admirable individual in the field.

Insights from Working in Large Teams

Third block — Uniting Diverse Professions in Healthcare Team

Associate Professor Iva Mucalo, PhD, Adis Keranović, MD, Anton Mažuranić, MD

Navigating large teams poses inherent challenges, particularly when diverse specialities, sometimes unrelated to medicine, are involved. Following our exploration of healthcare team dynamics and immersion into the scientific realm of medicine, we delve into a crucial aspect - how to effectively collaborate with individuals who do not have a medical background. This segment will address the intricacies of communication and collaboration with professionals pursuing diverse career paths and exhibiting distinct work ethics. Discover answers to these inquiries and more in this segment of the congress.

Associate Professor Iva Mucalo, PhD

Iva Mucalo is a specialist in clinical pharmacy and an associate professor at the Center for Applied Pharmacy of the Faculty of Pharmacy and Biochemistry, University of Zagreb, where she is involved in teaching courses in Pharmaceutical Care, Clinical Pharmacy with Pharmacotherapy, Consultation Skills, Pharmacovigilance, and Pharmacoepidemiology, as well as in organising the Professional Training of Pharmacists. In 2006, she completed a two-year postgraduate specialist study in clinical pharmacy and pharmaceutical practice at the School of Pharmacy, University College London, United Kingdom, and in 2022 she completed a specialisation in clinical pharmacy - hospital pharmacy. Her main research interest includes implementing services in the healthcare system and improving clinical outcomes within the framework of pharmacotherapy management services. At the Zagreb-Center Health Center, she initiated a pilot project called "Pharmacotherapy Counseling Center", which provides pharmaceutical services Pharmacotherapy Management Service.

Adis Keranović, MD

Adis Keranović is a specialist in emergency medicine and holds a Master's degree in Healthcare Management. With over 10 years of experience in all fields of emergency medicine including pre-hospital emergency medicine, helicopter emergency medical services, and clinical emergency medicine. He currently works at the Emergency Department of the University Hospital Centre Zagreb. Throughout his career, he has pursued education beyond the borders of Croatia, including notable experiences at the Emergency departments of the University Hospital in Bern, Switzerland, and Yale New Haven Hospital, as well as Yale University, USA.

He is a PhD student at the School of Medicine, University of Zagreb and an external collaborator on several courses. He is an instructor in Advanced Life Support (ALS) and Trauma (ETC) by the European Resuscitation Council, as well as a national instructor in hospital and pre-hospital emergency medicine, and a national instructor in mass casualty incident management. Actively involved in the Croatian Society for Emergency Medicine (CSEM), he serves as an organizer and leader of numerous congresses and workshops organized by the Society.

Anton Mažuranić, MD

Anton Mažuranić pursued his education in medicine at the University of Zagreb School of Medicine, graduating in 2016. He later embarked on a doctoral program in Biomedicine and Health at the same institution. During his studies, Dr. Mažuranić participated in a student exchange program at the Countess of Chester Hospital NHS Foundation Trust in the UK, gaining valuable experience in colorectal surgery.He subsequently specialized in forensic medicine at the Institute of Forensic Medicine and Criminology of the School of Medicine, University of Zagreb, where he currently works as an autopsy physician. Dr. Mažuranić is also an authorized coroner and a member of the Croatian Society of Forensic Medicine and Toxicology.

Throughout his career, Dr Mažuranić has contributed to scientific research, particularly in the fields of fatal motorcycle crashes and clinical characteristics of malignant diseases, aiming to improve understanding and prevention in these areas. His dedication to medicine and forensic science underscores his commitment to advancing the field and serving his community.

Brief Lecture – Advancing Neurosurgery: A Doctor's Perspective on Robotic Neuronavigation Development

Associate Professor Darko Chudy, MD, PhD

Many groundbreaking projects in medicine extend beyond the confines of hospital corridors, especially with technology's integration into our daily lives. In Croatia, do we have noteworthy and unique projects, particularly in surgery, influenced by technological advancements? Moreover, what were the challenges and successes encountered when individuals from diverse backgrounds collaborated to innovate in this field? Let's explore the intersection of technology and medicine and the collaborative efforts that drive innovation forward, transcending traditional boundaries.

Associate Professor Darko Chudy, MD, PhD

Associate Professor Darko Chudy, MD, PhD, graduated from the University of Zagreb's School of Medicine and completed his residency at the Clinic for Neurosurgery at the same university. He became a specialist in 1997 and later led the Department of Neurosurgery at Clinical Hospital Dubrava. He holds a master's degree in Biology of Biomedicine from the Faculty of Science in Zagreb and patented a non-invasive stereoadapter for neurosurgical operations. He's achieved scientific titles such as senior research associate and scientific advisor.

He pioneered deep brain stimulation (DBS) in Croatia, expanding its application to patients with minimal consciousness. He has collaborated on projects like RONNA and "NERO – Neurosurgical Robot" and lectures on Artificial Intelligence and Medical Robotics at the Faculty of Mechanical Engineering and Naval Architecture in Zagreb. He is a collaborator at the Scientific Center of Excellence for Basic, Clinical, and Translational Neuroscience at the Croatian Institute for Brain Research. He's been recognized internationally for his medical contributions as an Affiliate Associate Professor at the University of Washington, Seattle, USA, and the University of Maribor, Slovenia.

He contributed to the introduction of spinal cord stimulation in Slovenia and DBS in Albania. He was also an opponent in the defence of Hisse Arnts' dissertation at the University of Amsterdam's Medical Faculty.

He organized and spoke at regional DBS meetings, showcasing Croatia's success in treating neurological disorders. He received recognition for his humanitarian efforts during the Vukovar evacuation and has been honoured with numerous awards for his medical achievements. He is married to Maja Chudy and has four children: Hana, Jan, Jura, and Pavao.

Brief Lecture – Power Dynamics: Discovering the Division of Responsibility within a Team

Marko Marelić, PhD

What qualities contribute to effective teamwork in medicine, and how does hierarchy influence our collaborative efforts? Is diversity a catalyst for enhanced performance? We seek to understand both our role as team members and the responsibilities of leadership in navigating the complexities of healthcare teamwork and its sociological dynamics. Let's explore how embracing diversity can enrich our collective abilities, and delve into the essential traits required to lead and manage effectively in the healthcare setting.

Marko Marelić, PhD

Marko Marelić has been actively involved in academic and professional environments throughout his career. He is working as a Senior Research Assistant at the School of Medicine, University of Zagreb, where he participates in research projects and teaches various subjects in Medical sociology. Additionally, he took on roles in professional societies, becoming a board member and secretary of the Croatian Sociological Society. Concurrently, he works at the Faculty of Kinesiology as an external collaborator. His education in Sociology culminated in a PhD after master's and bachelor's degrees, accompanied by numerous publications and participation in different conferences. Currently, he is engaged in the Public Health Hub (PUB HUB) Croatia project.

Partnership with Patients and Caregivers

Fourth block – Navigating Dementia and Palliative Care

Associate Professor Nataša Klepac, MD, PhD, Professor Karmen Lončarek, MD, PhD

Are we giving adequate attention to older patients, those with dementia, or individuals nearing the end of their lives? How are they integrated into the medical team during their final stages of care? Our guests shed light on one of the most crucial yet often overlooked topics in today's modern world, which has yet to receive sufficient discussion in our country.

Associate Professor Nataša Klepac, MD, PhD

Nataša Klepac is a professor of Neurology at the School of Medicine, University of Zagreb and currently works at the Department of Neurology, University Hospital Centre Zagreb.

She was born in Zagreb, Croatia and received her medical degree from the School of Medicine, University of Zagreb. She continued to build her career and specialized in neurology at University Hospital Centre Zagreb during 2002–2007. From 2007 until now she has been working as a subspecialist for neurodegenerative disorders at the Department of Neurology, University Hospital Centre Zagreb. To serve as proof of her expertise and extensive knowledge, she published a lot of valuable research in the field of neurology, mainly neurodegenerative disorders including Parkinson's disease and dementia, and is the author and co-author of many papers regarding those subjects in Croatian and international medical literature.

Professor Karmen Lončarek, MD, PhD

Karmen Lončarek is the Head of the Department for Integrated and Palliative Care at the Clinical Hospital Center Rijeka. She is a tenured professor at the Faculty of Medicine, University of Rijeka, where she leads the Center for Integrated and Palliative Care. Since 2011, she has been actively involved in the systematic development of palliative care, organizing and conducting education in this field. As a medical director, she was involved in establishing the first hospice in Croatia.

Fifth block – Patient Care Complexity from Two Perspectives

Sandra Karabatić, MScN, Ino Protrka, MD

When considering teamwork in medicine, do we consistently acknowledge the patient and their caregiver as integral parts of the team? Could they potentially be the most crucial members? In this segment, let's explore the essential role of placing our future patients and their caregivers at the centre of attention to enhance their care. How can we improve our communication with them to ensure better understanding and collaboration? Let's delve into strategies for better engaging patients and their caregivers to enrich their healthcare experience and improve outcomes.

Sandra Karabatić, MScN

Sandra Karabatić is a Head Nurse at the Ward of Rare Lung Cancers, Department for Respiratory Diseases Jordanovac, Clinical Hospital Centre Zagreb.With an ongoing PhD study at the Faculty of Health Studies, University of Mostar, Bosnia and Herzegovina and a master's degree in nursing science, she has a strong educational background. During her longstanding career, she was awarded many times. Currently serving as an Assistant Professor at the Faculty of Health Studies in Mostar, Bosnia and Herzegovina, and at the University of Applied Health Sciences in Zagreb, Croatia, she brings valuable contributions to her academic environment. Her professional journey includes significant roles such as Head Nurse at the Unit of Thoracic Oncology and Nurse Practitioner in various clinical settings. She is a member of various associations and holds a presidential position at the Croatian Association for Lung Cancer Patients "Jedra". She contributed as an author in many publications and books and a lecturer at various conferences and congresses.

Ino Protrka, MD

Ino Protrka is a family medicine specialist and a healthcare manager. He is currently serving as the Director at Healthcare Center Zagreb-Centar.

His journey started as a medical intern at the Special Hospital for Medical Rehabilitation Krapinske Toplice and progressed to roles such as a family medicine practitioner, culminating in the family medicine residency. He graduated from the School of Medicine, University of Zagreb, and also completed healthcare management courses, which underscores his proactive approach to enhancing healthcare delivery and patient outcomes.

Brief Lecture – CROseq–GenomeBank: The First Croatian BioIntelligent Joint Genome Analysis and Aggregate Database

Associate Professor Mario Ćuk, MD, PhD

Many Mendelian variants are difficult to analyze due to their rarity or lack evidence. Aggregated variant allele count (AC) and frequency (AF) specific for a given population are important parameters for assessing their clinical relevance. Therefore, we generated national Croatian Genome Aggregated Database (CGAD) and Croatian Genome-Phenotype Database (CGPD). That was done for the first time in Croatia (CRO) and within the frame of CROseq-GenomeBank research project. CROseq project was launched in 2021 to systematically introduce and integrate the Whole Genome Joint Analysis into pediatric medicine to: 1) improve personalized health care and diagnostic yield; 2) mitigate underrepresentation of the CRO genomic data in available major worldwide databases.

National genomic databases cataloging CRO-specific Variome and frequency spectra of the rare and common variants with strong effect size (clinically relevant) or rare and common variants with small effect size or uncertain clinical significance which might substantially contribute to the diversity of overall genomic datasets. The representation of the distinctive CRO genomic datasets might be essential for advanced understanding the genetic basis of human inherited diseases, disease-causative gene discovery (list of homozygous pLoFs), and in particular for variant prioritization strategies, exclusion of low-probability candidates, critical classification and interpretation in Croatia and elsewhere.

Associate Professor Mario Ćuk, MD, PhD

Mario Ćuk is a notable specialist in Pediatrics with a subspecialty in pediatric endocrinology, diabetes and metabolic diseases. His academic journey started at the School of Medicine, University of Zagreb, where he graduated with honours and distinguished himself as one of the top students. Besides in Croatia, he has received continuous education in various international institutes including Great Ormond Street Hospital for Children, University College London, Brigham and Women's Hospital, Harvard School of Medicine, Boston and Medical College of Wisconsin, Milwaukee. Over the years, he has excelled in clinical practice and academic research, contributing significantly to the field through numerous publications and research projects.

He is actively involved in teaching and mentoring students and colleagues, for which he has received recognition and awards for outstanding contributions to medical education and research. He is also engaged in international collaborations, particularly in genomic analysis and personalised medicine, aiming to advance pediatric healthcare in Croatia and beyond. His dedication to advancing medical science and education is reflected in his various roles and accomplishments within the medical community.

Teamwork in Learning

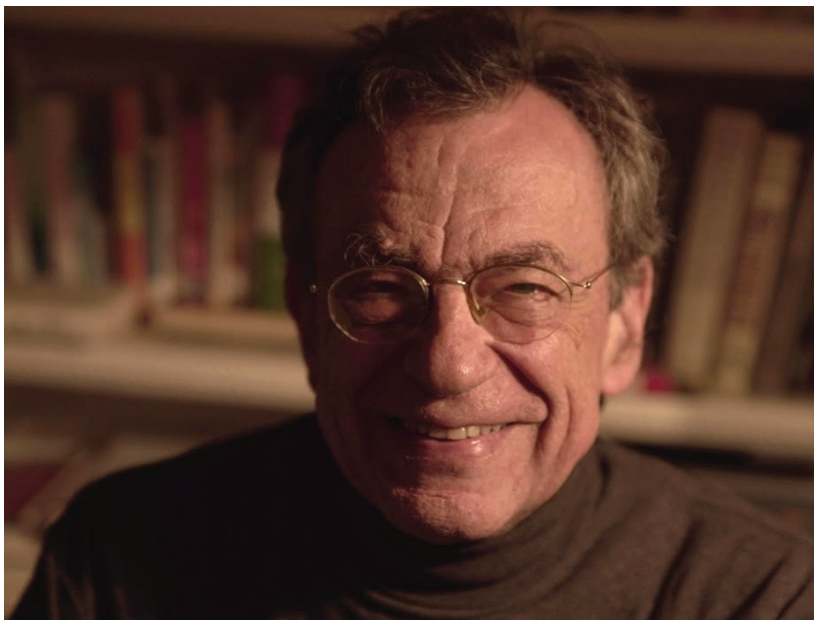
Sixth block – We're All in This Together – or Are We?

Professor Emeritus Ivan Damjanov, MD, PhD, Associate Professor Tina Dušek, MD, PhD, Professor Robert Likić, MD, PhD

How can we, as students, contribute to improving our education? What should our teachers provide us to enhance our learning experience? Let's delve into how both students and teachers form a cohesive team in our pursuit of educational excellence, striving to create an environment that fosters collaboration, critical thinking, and lifelong learning.

Professor emeritus Ivan Damjanov, MD, PhD

Ivan Damjanov is an Emeritus Professor of Pathology at the University of Kansas School of Medicine, Kansas City, Kansas, USA. He graduated from the University of Zagreb School of Medicine in 1964 and later immigrated to the United States. In 1994, he became Chair of the Department of Pathology at the University of Kansas, where he served until his retirement in 2018. Throughout his career, Dr. Damjanov's research focused on murine embryology, experimental germ cell tumors, and embryonic stem cells. He has authored over 350 papers and edited more than 35 medical books and textbooks, including serving as an editor of the 10th Edition of Anderson's Pathology.



He is also known for his textbook "Pathology for Health Professions," now in its 6th edition. Dr. Damjanov has been an influential figure in the field, serving as a reviewer for the National Institutes of Health and on the editorial boards of various biomedical journals. Since retiring, he has relocated to the suburbs of Philadelphia to be closer to his daughters; he enjoys activities such as daily jogging, reading, listening to opera and classical music, as well as spending time in his native Croatia.

Associate Professor Tina Dušek, MD, PhD

Having graduated from the School of Medicine, University of Zagreb, Tina Dušek pursued her career as a specialist of internal medicine with a subspecialization in endocrinology and diabetology. Currently working at the Department of Endocrinology and Diabetology, Clinic for Internal Medicine, University Hospital Centre Zagreb, she finished part of her subspecialty training at the Endocrinology Department of The Christie Hospital NHS Trust in Manchester, England. She is also an Associate Professor at the University of Zagreb, School of Medicine, participating in teaching internal medicine to medical students, and has been the head of the Department of Internal Medicine since 2022. Her specific areas of interest in endocrinology are pituitary and adrenal gland diseases and gynecological endocrinology.

At Harvard Medical School, she completed the postgraduate program „Training to Teach in Medicine“ as well as continuing education courses „Advanced Teaching Skills“ and „Digital Education in Medicine“.

She is the founder and organizer of the Summer School of Island Medicine titled „What if my first job is in a clinic on an island?“ intended for final-year medical students, which has been held on the island of Šolta since 2018.

Professor Robert Likić, MD, PhD

Dr. Likić graduated with honors from the School of Medicine, University of Zagreb in 2001, receiving the Dean's Award for the best student in 1999. He completed his internship and specialized in general internal medicine at the University Hospital Centre Zagreb. He earned board certification in internal medicine in 2007 and a PhD in 2008. Currently a tenured professor in internal medicine at Zagreb Medical School, he also serves as a consultant internist and clinical pharmacologist at the University Hospital Centre Zagreb. His research interests include medical education effectiveness, Pharmacoeconomics, health technology assessment, medical informatics, and rational use of medicines. Dr. Likić has published over 100 research papers in indexed journals, organized international meetings, and received awards including the Matovinovic fellowship in 2009. He is actively involved in national drug committees and professional societies, holding leadership roles in the European Association for Clinical Pharmacology and Therapeutics and the International Union of Basic and Clinical Pharmacology. Recognized for his contributions, he received the "Outstanding Early Educator Award" in 2010 and served as an executive advisor for therapeutics at the University Hospital Centre Zagreb in 2015. Dr. Likić joined the editorial board of the Croatian Medical Journal in 2017 and became a senior editor at the British Journal of Clinical Pharmacology in 2020.

Student lecture: Remember Me Project

Kamelija Horvatović, MD, MSc, Mirna Rešetar

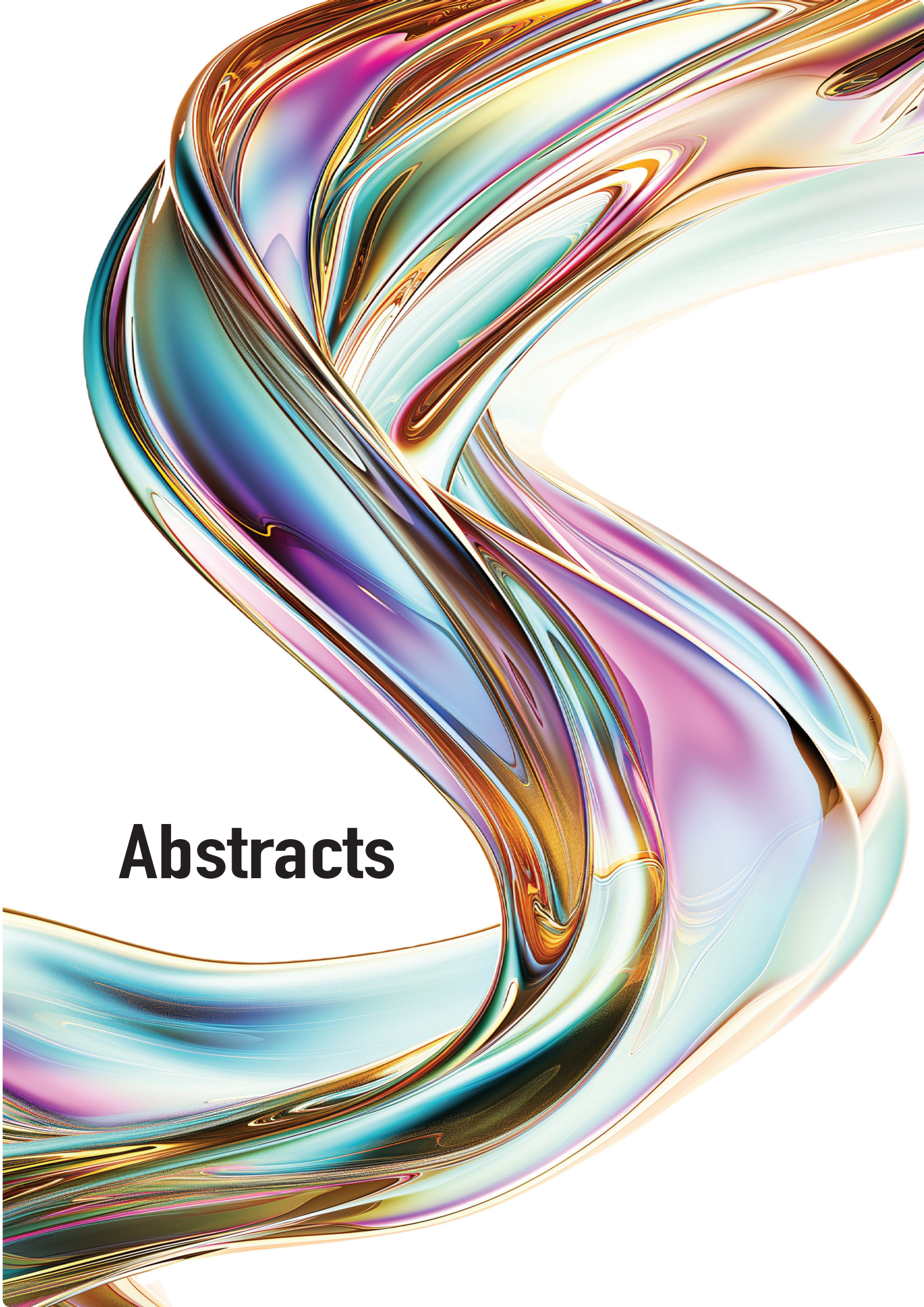
The "Remember Me" project is organized by the Youth Association for P4 Medicine PROMISE, in collaboration with the Student Society for Neuroscience and the Hipokart Association from the School of Medicine in Zagreb, and the Neurobiology Section of Biology Students Association at the Faculty of Science in Zagreb. Primarily, the project aims to extend assistance and conduct creative workshops for elderly individuals afflicted with dementia in nursing homes across Zagreb and Split. The overarching goal is to enhance their quality of life through diverse activities fostering solidarity and community responsibility. Moreover, the project incorporates an educational facet, engaging with high school students and the broader public through public health initiatives.

Kamelija Horvatović, MD, MSc

Kamelija Horvatović is a medical doctor and master of molecular biology with robust interdisciplinary experience in researching neurodegenerative diseases, particularly Alzheimer's dementia. She is the president of the Youth Association for P4 Medicine PROMISE and the project leader of "Remember Me," which aims to connect young volunteer forces with the needy population affected by dementia in nursing homes.

Mirna Rešetar

Mirna Rešetar is a biology and chemistry student at the Faculty of Science, University of Zagreb and the leader of the Student Section for Neurobiology at the Biology Students Association (BIUS). She is a member of the PR team of the "Remember Me" project with a focus on the promotion of the project through the press to the general public and new volunteers. Besides neurodegenerative diseases, her scientific interests include neuro-oncology which she would like to further specialize post-graduation.



Abstracts

ABSTRACTS LIST

Case reports

CR01 Pulmonary embolism and ischemic stroke due to malignant pancreatic disease

Inga Abramović; Juraj Jug

CR02 Amyotrophic lateral sclerosis with unusual presentation: a case report

Maja Alaber; Bruna Bušić, Maša Sorić

CR03 Managing Immunosuppression: Tacrolimus-Related Renal Insufficiency in a Pregnant Heart Transplant Recipient

Marieta Alagić; Ana Marija Anđelić; Martina Bašić; Sanja Konosić

CR04 SEVERE PRENATAL PRESENTATION OF PATAU SYNDROME

Antonia Alfirević; Patricia Barić; Franka Vukorepa Percela; Trpimir Goluža

CR05 Aggressive T-cell Lymphoma in an Elderly Patient: A Master of Disguise

Borna Barić; Dorijan Babić; Maro Bjelica; Tina Čukman; Marija Gomerčić Palčić

CR06 Obstetric Challenges in Uterus Duplex: A Case of HELLP Syndrome and PRES

Patricia Barić; Antonia Alfirević ; Trpimir Goluža

CR07 Diagnostic and treatment challenges in a patient who presents with symptoms of Aspirin-exacerbated respiratory disease

Sara Bedeniković; Sunčica Belušić; Robert Likić

CR08 Multidisciplinary approach to childhood-onset systemic lupus erythematosus and its complications

Karolina Beg; Josip Bošnjak; Mario Šestan; Marija Jelušić

CR09 From the general practitioner's office to the intensive care unit: a case report of submassive saddle pulmonary embolism

Iva Benić; Sunčana Bošnjak Brkić; Tomislav Knotek

CR10 Navigating Insulin Hypersensitivity in Type 1 Diabetes: A Case Report and Management Challenges

Lucija-Dafne Blažević; Lucija Nevena Barišić; Ivana Kraljević

CR11 Congestive Hepatopathy Mimicking Cirrhosis in a Heart Transplant Candidate: A Diagnostic Challenge and Management Dilemma

Martin Bobek; Lucija Bosnić; Katarina Breščanović; Marta Krpan; Ana Ostojić

CR12 Long-term effect of Poly Implant Prothèse and removal of the prosthesis: A case report

Karla Bodakoš; Caterina Marra; Tobia Bellodi; Antonio Spaggiari; Giorgio De Santis

CR13 Giant Saphenous Vein aneurysm following Ultrasound-Guided Foam Sclerotherapy

Ivgeni Bogouslavski; Audrey Strähl; Damir Halužan; Irena Šnajdar

CR14 Surgical Management of a Giant Popliteal Artery Aneurysm: A Case Report

Klara Anja Bojanović; Helena Šandro; Damir Halužan

CR15 Bradycardia as a symptom of cerebellar ischemic insult and vertebral arteries dissection – a case report

Jelena Bošnjak; Valerija Plečko; Katja Kudrna Prašek

CR16 Diagnostic delay of acute aortic dissection with negative D-dimer result

Paula Bošnjak; Iva Benić; Tomislav Knotek

CR17 It takes a village: multidisciplinary management of a patient with silent myocardial infarction and newly discovered type two diabetes

Sunčana Bošnjak Brkić; Paula Bošnjak; Tomislav Knotek

CR18 Acute Kidney Injury in 29-Year-Old Male Athlete: Implications of High Protein Diet and Creatine Supplementation

Branimir Bradarić-Šlujo; Kristijan Brkić; Paula Škibola

CR19 Refractory case of adrenergic urticaria: a diagnostic and therapeutic complexity

Petar Brlas; Maro Bjelica; Borna Bregović; Tina Čukman; Suzana Ljubojević Hadžavić

CR20 From kidney failure to myeloproliferative disease: how diagnoses overlap and what is the importance of good teamwork

Iva Brzica; Nikolina Bašić Jukić

CR21 Suicide Attempt by Ingestion of Excessive Acetaminophen and Alcohol: Case Report

Luka Bukovac; Branimir Bradarić-Šlujo; Mia Markusi

CR22 Unusual cardiac manifestation of systemic lupus erythematosus

Marija Bukvić; Elena Cahun; Marija Bakula; Vlatka Rešković Lukšić

CR23 Complex endovascular repair of asymptomatic post-dissection thoracoabdominal aortic aneurysm in patient with Marfan Syndrome

Ana Čala; Tomislav Meštrović

CR24 Heart transplantation in a female patient with secondary dilated cardiomyopathy due to congenital heart defects

Jan Čavar; Marin Cvitić; Martin Matošić; Ivo Darko Gabrić

CR25 A case report of a multidisciplinary Management of the unstable cervical spine fractures

Matej Črep; Afan Ališić; Josip Bošnjak; Tihomir Banić

CR26 Sacral Neuromodulation as a Treatment for Urinary Symptoms of Multiple Sclerosis: A First Time in Croatia

Alan Curkovic ; Zara Gumzej; Mirko Bakula

CR27 Firework-related severe eye injury : a case report

Rea Deghenghi; Dora Cvrtila; Sanja Masnec; Miro Kalauz; Matija Kalauz

CR28 Cytokine release syndrome in patient with relapsed / refractory blastoid mantle cell lymphoma after first administration of glofitamab

Ana Deškin; Klara Cifrek; Lara Maria Stričak; Inga Mandac Smoljanović, Delfa Radić Krišto

CR29 Mild Traumatic Injury Complicates a Rare Condition – a Case Study in Central Serous Chorioretinopathy

Katarina Domjanović; Marko Sablić; Marta Bolješić; Antonio Kokot

CR30 VEIN OF GALEN MALFORMATION COMPLICATED BY SEVERE CARDIAC FAILURE IN A NEONATE

Marija Doronjga; Ruža Grizelj

CR31 Lymphadenopathy as an indicator of Rosai-Dorfman disease (RDD)

Ivan Đuran; Jasenka Markeljević

CR32 Case report: Perineal gas gangrene in a 3-yearold boy

Sara Floričić; Paula Franić; Ema Erceg; Petra Galić; Dino Papeš

CR33 Use of Levodopa/Carbidopa Intestinal Gel in Advanced Parkinson's Disease

Lara Fotez; Lucija Fotez; Srđana Telarović

CR34 Exploring the Link Between Obstructive Sleep Apnea and Glaucoma: A Case Report

Lucija Fotez; Anja Car; Lara Fotez; Snježana Kaštelan

CR35 Preretinal Hemorrhage - Valsalva Retinopathy

Dora Gašparović; Marko Sablić; Marta Bolješić; Antonio Kokot

CR36 Extraction of bronchial foreign body in extremely low birth weight newborn: a case report

Lucija Grbić; Antonija Gračanin; Miram Pasini; Ratko Prstačić; Ruža Grizelj

CR37 Isolated Brain Metastasis as Initial Presentation of Advanced Esophageal Adenocarcinoma

Zara Gumzej; Alan Ćurković; Vesna Bišof

CR38 Long-term anticoagulation in a woman with recurrent venous thromboembolism and iron-deficiency anemia successfully treated with parenteral iron

Stella Guštek; Dražen Pulanić

CR39 SLC13A5-related neonatal-onset epileptic encephalopathy

Petra Horvat; Franciska Ivišić; Danijela Petković Ramadža

CR40 The optimum time for nephrectomy in clear cell metastatic renal cell carcinoma

Luka Horvat; Marija Gamulin

CR41 A case of ocular ischemic syndrome presenting as nongranulomatous anterior uveitis

Luka Ivić

CR42 Neonatal hyperammonemia due to citrullinemia type 1

Franciska Ivišić; Petra Horvat; Danijela Petković Ramadža

CR43 To Choose the Lesser of Two Evils: Gastrointestinal Bleeding as a Complication of Antithrombotic Therapy After Percutaneous Coronary Intervention (PCI)

Anamarija Jagić; Boris Jakšić; Matias Trbušić

CR44 Cardioneuroablation – a future treatment for vasovagal syncope, case report
Jure Jakovljević; Vjekoslav Radeljić

CR45 Pregnancy with a Transplanted Heart: A Multidisciplinary Challenge

Jana Jelčić; Antonia Junaković; Hana Kalit; Krešimir Reiner

CR46 Paroxysmal nocturnal hemoglobinuria: rare blood disorder diagnosis calls for team effort
Lea Jukić; Inga Mandac Smoljanović

CR47 An unexpected penetrating aortic ulcer with thrombus: a case report

Iva Jurić; Igor Rudež

CR48 The First Three-Dimensional (3D) Printed Model in Planning for Congenital Cardiac Surgery in Croatia - a Case of Scimitar Syndrome

Nermina Kamarić; Lovro Jančić; Konrad Alexander Kiss; Bruno Ban; Darko Anić

CR49 Managing renal cell carcinoma in the solitary kidney- case report

Petra Knežević; Elvira Krešić; Ana Marija Alduk; Sandra Ćulap; Ana-Marija Ćulap

CR50 Dermatomyositis-like skin changes and lower leg ulcers caused by hydroxyurea: A Case Report

Lucija Kolar; Marina Ikić Matijašević

CR51 An unusual location of a solitary fibrous tumour - A **report of two cases.**

Ana Koprivica; Mirjana Miladinović

CR52 Acute abdomen as a first sign of metastatic squamous cell carcinoma of the lungs

Bruno Korać; Branko Bogdanić

CR53 Lumbar drainage instead of external ventricular drainage in patients with hypertensive hydrocephalus

Pia Kosanović; Dora Franciska Tuđman Šuk; Marta Živković Njavro; Zdravka Poljaković-Skurić

CR54 Eyes as a Mirror of Multiple Myeloma; Case Report

Marija Kostanjski; Adrian Sallabi; Josip Došen; Tea Iletić; Tamara Mišljenović Vučerić

CR55 Hip pain? Consider extraosseous multiple myeloma.

Katarina Kovač; Lorena Loje; Miroslav Mayer

CR56 Trastuzumab deruxtecan in severely pretreated patients: Second-line standard demonstrating its efficacy even at later lines – a case report

Ivana Kovačević; Natalija Dedić Plavetić

CR57 Unusual Treatment for the Nutcracker Syndrome

Anamarija Kovačić; Barbara Krejči; Tomica Bratić; Vinko Vidjak

CR58 Alternative Treatment of Massive Deep Vein Thrombosis in a Minor

Barbara Krejči; Anamarija Kovačić; Tomica Bratić; Vinko Vidjak

CR59 Multidisciplinary approach in the treatment of familial hypercholesterolemia revealed after sudden cardiac death: a case series

Matej Krišto; Karolina Beg; Sandra Jakšić Jurinjak

CR60 Cervical Necrotizing Fasciitis: A Race Against Time for Successful Resolution

Marjan Kulaš; Melita Klaić; Klara Miljanić; Matija Mamić

CR61 EUS-guided biliary drainage using lumen-apposing metal stents for distal malignant biliary obstruction

Karla Lakobrija; Sandro Kukić; Tajana Pavić

CR62 A case report of recurrent rhabdomyolysis: A diagnostic challenge

Luka Linarić; Ivana Kulišić; Ante Kuštra; Ana Lovrić; Marina Ikić Matijašević

CR63 Diabetic ketoacidosis and hypernatremic dehydration in an eight-month-old infant with new-onset type 1 diabetes

Nika Lovreković; Nevena Krnić

CR64 Cochlear Implantation as a Treatment Strategy for Single-sided Sensorineural Hearing Loss

Antonia Lovrenčić; Helena Lovrić; Klara Labaš; Andro Košec

CR65 Concomitant Aortic Arch Replacement And Aortic Valvuloplasty: A Comprehensive Approach For A Giant Dissected Thoracic Aneurysm Management

Helena Lovrić; Antonia Lovrenčić; Nikola Slišković; Gloria Šestan; Igor Rudež

CR66 Clinical Challenges and Treatment Strategies of exotic heart tumor - Chondrosarcoma

Matea Lukić; Matija Drinković; Grgur Dulić

CR67 Multidisciplinary step-up approach to Walled-off pancreatic necrosis: a case report

Ivana Maletić; Nika Rakuša ; Mirjana Kalauz

CR68 Female patient with three simultaneous primary malignancies: a case report

Antonio Marić; Zdravko Mitrović

CR69 The Importance of Anti-Tissue Transglutaminase Follow-Ups in an Asymptomatic Child with Positive Family History and Genetic Predisposition for Celiac Disease

Laura Mayer; Zrinjka Mišak

CR70 Reconstructing Complex Midfacial Defects with a Triple Skin-Island Modification of the Vertical Rectus Abdominis Flap (TSI-VRAM)

Mikulić Lovro; Monika Ranogajec; Vedran Jakšić; Darko Solter

CR71 Acute respiratory distress syndrome (ARDS) as a rare complication of primary VZV infection

Ana Milković; Dora Pavlić; Josip Škerlj; Adriana Vince

CR72 Outpatient treatment of pulmonary embolism in a previously healthy adult

Marina Nađ; Mladen Pospišil

CR73 HYPERBARIC OXYGENATION IN THE TREATMENT OF COMPLEX REGIONAL PAIN SYNDROME

Ana Pejić; Anja Žurić; Iva Sabljić; Matilda Sabljak

CR74 Congenital midline cervical cleft: a case report

Mihovil Penavić; Ruža Grizelj; Ratko Prstačić

CR75 Dermatomyositis as a paraneoplastic syndrome in breast cancer

Karlo Petković; Zdeslav Strika; Jasenka Markeljević

CR76 MANAGING SEVERE HYPERTRIGLYCERIDEMIA IN PREGNANCY: CHALLENGES AND THREATS

Paula Petrić; Petra Prebeg; Vesna Gašparović-Elveđi

CR77 Unmasking Cardiac Amyloidosis: A Case Report of a Former Professional Athlete

Ivan Raguž; Loren Serdarević; Adrijan Repušić; Nikola Bulj

CR78 Cholesteatoma imitating squamous cell carcinoma of the temporal bone - a rare case report

Monika Ranogajec; Lea Hasnaš; Jakov Ajduk

CR79 Case report of a patient with wide regular QRS complex tachycardia

Petra Relota; Karla Schwarz; Loren Serdarević; Eva Stanec; Tomislav Letilović

CR80 ACUTE ANKLE SPRAIN LEADING TO CHRONIC ANKLE INSTABILITY

Matilda Sabljak; Iva Sabljić; Anja Žurić; Ema Grba

CR81 Minor tuberosity osteochondroma fracture leading to isolated subscapularis muscle tear -surgical treatment

Domagoj Sajfert; Ante Stojanović; Ivana Sajfert; Hrvoje Pitlović

CR82 Superior vena cava syndrome caused by Hodgkin lymphoma

Marko Sinjeri; Radovan Radonić

CR83 Challenges of Inflammatory bowel disease treatment in pregnancy – case report

Stjepan Skok; Doris Čeović; Marija Kostanjski ; Tajana Filipec Kanižaj

CR84 Extraskeletal osteosarcoma in a 50-year-old female with an undiagnosed Paget's disease

Leo Spaseski; Milena Bogojevska Doksevska; Milan Samardziski; Teodora Todorova

CR85 Unconventional Metastasis: Rare Presentation of Endometrial Carcinoma in the Humerus with Spontaneous Osteolytic Lesion Resolution

Ante Stojanović; Domagoj Sajfert; Jan Čavar; Martin Matošić; Hrvoje Pitlović

CR86 Case report: Incidentally found tumor of the aortic valve

Matija Šego; Anđela Šimunović; Zvonimir Marko Škugor; Zrinka Planinić; Edvard Galić

CR87 High-risk pregnancy in a female patient suffering from the post-operative pulmonary complications

Anđela Šimunović; Tomo Trstenjak; Matija Šego; Vesna Elveđi-Gašparović

CR88 Unmasking the silent invader: a case report of mandibular odontogenic myxoma requiring postoperative reconstruction

Irena Valek; Kristijan Goldašić; Josip Biočić; Goran Batinjan; Emil Dediol

CR89 Surprises along the way – managing a preterm infant with meningomyelocele and its complications

Luka Varmuž; Kristijan Goldašić; Nada Sindičić Dessardo; Ruža Grizelj; Dorotea Ninković

CR90 Congenital Muscular Ventricular Septal Defect as a Rare Cause of Heart Murmur in Adults –Case Report

Ivo Vučko; Marko Vujanović; Matej Martinović; Tomo Svaguša

CR91 Stuttering as a rare presentation of a Wilson disease: a multidisciplinary approach

Marko Vujanović; Ivo Vučko; Gordana Sičaja; Filip Ernoić

CR92 Late reactivation of pulmonary tuberculosis in oncological patient masked by COPD exacerbation and pneumonia

Ana Marija Zdilar; Sara Komljenovi; Juraj Jug

CR93 Challenges in Prenatal Diagnosis: A Case of Holoprosencephaly Associated with Atypical Genetic Syndrome

Lea Župan; Ivana Marinović; Ivanka Bekavac Vlatković

Original research

OR01 Antibiotic-loaded cement spacer in the treatment of the hip periprosthetic joint infection

Afan Ališić; Filip Habeković; Ivan Bohaček; Tomislav Smoljanović

OR02 A survey of protective effect of melatonin against trifluoperazine-induced genotoxicity in peripheral blood lymphocytes via micronucleus assay

Sahar Behzad; Masoumeh Rabiee; Mehdi Evazalipour; Ehsan Zamani

OR03 Comparative Assessment of NO-System Modulators in Mitigating Aminoglycoside-Induced Nephrotoxicity in Rats and stable gastric pentadecapeptide BPC-157 therapy

Dorian Dulčić; Jelena Marušić; Ivan Cepanec, Predrag Sikirić

OR04 Survey study: Medical student-run Public Health Journal Club

Karla Kroflin; Karla Lužaić; Kristina Krstanović; Bruno Korać; Sanja Musić Milanović

OR05 Prevalence of Borrelia burgdorferi s.l. antibodies in patients with neuroinvasive disease in Croatia

Lukas Librić; Jelena Jakšić; Tatjana Vilibić Čavlek

OR06 The histological aspect of pentadecapeptide BPC 157 on the healing of tracheocutaneous fistula in rats

Marjeta Linarić Lipnjak; Hrvoje Vraneš; Matej Lacković, Predrag Sikirić

OR07 Resective epilepsy surgery after stereo-electroencephalography in presurgical assessment of pharmacoresistant refractory magnetic resonance-negative epilepsy: case series

Helena Ljulj; Vlatko Šulentić; Jakob Nemir

OR08 Examining Faecal Pellet Structure as a Potential Early Predictor of Parkinson's Symptoms in 6-OHDA Rat Model

Pavel Markovic; Stela Ilijas; Mihovil Joja; Melita Salkovic-Petrisic; Jan Homolak

OR09 Effects of lateral episiotomy on the emergence of anal incontinence during the first postpartum year in primiparas: prospective cohort study

Aleksandra Martinko; Saša Mađar; Krešimir Živković

OR10 The role of stable gastric Pentadecapeptide BPC-157, L-**Arginine and L-NAME in enhancing rib fracture healing in rats**

Nika Miladin; Luka Kalogjera; Andrej Vrdoljak, Predrag Sikirić

OR11 Does ChatGPT-4 Succeed in ECG Interpretation: Friend or Foe to Cardiologists?

Mihovil Santini; Jakov Santini; Andrej Novak; Ante Lisičić; Ivan Zeljković

Literature reviews

LR01 Associations between Genetic Mechanisms and Oral Isotretinoin Therapy: A Review of Literature

Eva Brenner; Luka Bulić; Marin Cvitić; Aurora Vareško ; Suzana Ožanić Bulić

LR02 Cabbage Leaves as a Traditional Remedy for Osteoarthritis and Mastitis: A Literature Review

Anton Malbašić; Dora Cesarec; Petar Gulin

LR03 Anorexia nervosa and metabolic complications

Danijela Mosković; Ema Reicher; Luka Pavlinac; Mirta Peček

CR01

Pulmonary embolism and ischemic stroke due to malignant pancreatic disease

1. Inga Abramović (0009-0002-7345-8808) 2. Juraj Jug (0000-0002-3189-1518)

1. School of Medicine University of Zagreb

2. Health Center Zagreb West

DOI: https://doi.org/10.26800/LV-146-supl2-CR01

KEYWORDS: Ischemic Stroke, Palliative Care, Pancreatic Neoplasms, Pulmonary Embolism

Abstract:

INTRODUCTION/OBJECTIVES: The incidence of malignant diseases continues to rise steadily, not only because of the aging population but also due to numerous environmental harmful factors.

CASE PRESENTATION: We present the case of a 63-year-old female patient, who during a home visit, exhibited jaundice of the skin and sclera, along with loose stool and low-grade fever persisting for the past two weeks. Clinical examination revealed tenderness in the right hemiabdomen, along with a suspicious right-sided tumor formation. The patient has a history of controlled arterial hypertension and epilepsy. Detailed examination at the Clinical Hospital Merkur confirmed adenocarcinoma involving the distal segment of the common bile duct, for which a stent was inserted via ERCP. Subsequently, a Whipple procedure was performed. Pathological analysis identified a grade 3 adenocarcinoma originating from the pancreatic head. Multiple liver lesions were detected on follow-up MSCT after the procedure. Additionally, a clinically silent right-sided pulmonary embolism was discovered, leading to the patient's hospitalization and initiation of anticoagulant therapy. However, one month later, the patient was readmitted due to left hemiparesis caused by an ischemic stroke. The etiology was suspected to be the interaction of anticoagulants and antiepileptic medications, in addition to pre-existing risk factors for stroke such as malignancy. Antiepileptic therapy was adjusted, and the patient was discharged with further symptomatic treatment. Home care and palliative care were prescribed following the confirmation of the malignant disease diagnosis.

CONCLUSION: Collaboration among different medical specialists and interdisciplinary teams is best demonstrated in treating oncological patients, where the palliative team plays a significant role.

CR02

Amyotrophic lateral sclerosis with unusual presentation: a case report

1. Maja Alaber (0009-0000-2090-1306) 2. Bruna Bušić (0009-0004-1133-4302); 2. Maša Sorić (0000-0002-5002-9800)

1. Department of Emergency Medicine of Bjelovar-Bilogora County, Bjelovar, Croatia

2. Emergency Department, University Hospital Dubrava, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR02

KEYWORDS: Amyotrophic Lateral Sclerosis; Hallucinations, Visual; Motor Neuron Disease; Respiratory Insufficiency

Abstract:

INTRODUCTION/OBJECTIVES: Amyotrophic lateral sclerosis (ALS) is a rare, progressive neurodegenerative condition that affects the motor neurons. Common signs and symptoms include weakness in specific muscle groups, involuntary muscle twitching, and difficulties with speaking and swallowing. We present a case of a man experiencing visual hallucinations and respiratory failure as the initial manifestations of ALS.

CASE PRESENTATION: A 59-year-old man presented in the emergency department reporting visual hallucinations earlier that week. He also noted breathing difficulties and fatigue over the last 8 months, especially in the evenings.

Initial examination showed his oxygen saturation was 69%, without any signs of respiratory or neurological issues. Arterial blood gas analysis revealed hypoxemia and hypercapnia with normal pH. Other laboratory tests, chest x-ray, and brain computed tomography scan appeared normal. During the admission, his condition deteriorated, leading to intubation and mechanical ventilation due to respiratory arrest. The primary possible diagnosis was a myasthenic crisis. The patient underwent treatment with intravenous immunoglobulins, pyridostigmine, and a low dose of corticosteroids, but without apparent improvement. Additionally, the patient tested negative for both AchR and MuSK antibodies. A cerebrospinal fluid analysis was normal, as well as genetic testing for spinal muscular atrophy and myotonic dystrophies. Despite initial normal electrodiagnostic findings, a subsequent test three weeks later revealed general neuronal damage characteristic of motor neuron disease.

CONCLUSION: Even though the acute treatment of respiratory insufficiency remains independent of its underlying condition, early diagnosis of ALS is crucial for implementing appropriate treatment and maintaining the quality of life for these patients.

CR03

Managing Immunosuppression: Tacrolimus-Related Renal Insufficiency in a Pregnant Heart Transplant Recipient

1. Marieta Alagić (0009-0003-5143-5864) 1. Ana Marija Anđelić (0009-0008-1226-8975) 1. Martina Bašić (0009-0008-7673-9270) 2. Sanja Konosić (0000-0002-7420-7472)

1. School of Medicine University of Zagreb

2. Department of Anesthesiology, Reanimatology and Intensive Care Medicine, University Hospital Centre Zagreb; School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR03

KEYWORDS: heart transplantation; pregnancy; renal insufficiency; tacrolimus

Abstract:

INTRODUCTION/OBJECTIVES: Managing immunosuppressive therapy in a pregnant heart transplant recipient can be challenging. Tacrolimus, an immunosuppressive drug, can have altered blood clearance during pregnancy. Renal insufficiency may be a side effect of this drug.

CASE PRESENTATION: This case involves a 41-year-old female with a prior history of dilatative cardiomyopathy and ICD implantation due to recurrent ventricular tachycardia, who had undergone heart transplantation after experiencing out-of-hospital cardiac arrest. Two years later, pregnancy planning required immunosuppressive therapy to be modified: mycophenolate mofetil was discontinued due to its FDA pregnancy category D classification, and adequate immunosuppression was to be maintained with a higher dose of tacrolimus (targeted blood level: 10-15 ng/mL) and prednisone. Frequent monitoring of tacrolimus levels was required, as well as an assessment of kidney and heart function. Subsequent heart biopsy showed no evidence of transplant rejection. In the late first trimester, NT-proBNP increased to 800 ng/L, yet echocardiography revealed no graft pathology. As pregnancy advanced, high tacrolimus dose caused renal insufficiency (creatinine level: 168 µmol/L). At 36 weeks, the patient developed hyperkalemia and hematuria, requiring an emergency C-section. A male neonate with an Apgar Score of 10/10 was delivered. Post-delivery, mycophenolate mofetil was administered and the tacrolimus dose was reduced, allowing for renal function to recover (creatinine level upon discharge: 109 µmol/L).

CONCLUSION: High-dose tacrolimus alongside prednisone can maintain immunosuppression in pregnant heart transplant recipients. Close monitoring of tacrolimus levels and renal function ensures optimal prevention of graft rejection and prompt intervention in case of complications.

CR04

Severe prenatal presentation of Patau syndrome

1. Antonia Alfirević (0000-0003-1339-5294) 1. Patricia Barić (0000-0002-7507-4149) 2. Franka Vukorepa Percela (0009-0001-7111-8263) 2. Trpimir Goluža (0000-0001-8735-7341)

1. School of Medicine Zagreb, University of Zagreb

2. Department of Perinatal Medicine, Clinic for Women's Diseases and Obstetrics, University Hospital Centre Zagreb; School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR04

KEYWORDS: Apgar Score, Chromosome Aberrations, Karyotype, Trisomy 13 Syndrome

Abstract:

INTRODUCTION/OBJECTIVES: Genetic syndromes caused by chromosomal aberrations include a distinctive pattern of multiple congenital anomalies that increase neonatal mortality. Patau's syndrome represents one of the most severe chromosomal disorders, with a median survival of 2.5 days, often resulting in intrauterine death.

CASE PRESENTATION: A pregnant woman at 33 weeks of gestation was admitted to the hospital for observation and treatment based on the latest ultrasound results. The findings revealed premaxillary protrusion and atrioventricular valves lying in the same plane. The patient had a trouble-free first pregnancy, and there were no genetic abnormalities in the family background. Upon admission, fetal echocardiography was indicated, which revealed a common AV channel and asymmetric ventriculomegaly, indicating left-sided hypoplasia of the heart. The presence of numerous prenatal abnormalities ("lemon sign", bilateral cleft lip and palate, hydronephrosis, cryptorchidism), as well as symmetrical growth restriction, indicated a syndrome, prompting the termination of the pregnancy via cesarean section at 38 weeks of gestation. Due to an Apgar score of 2, 4 and perinatal asphyxia the newborn required resuscitation and was transferred to the Intensive Care Unit. Prostaglandin therapy was introduced with the aim of keeping the ductus Botalli open. Clear phenotypic features indicated Patau syndrome, which was confirmed by karyotype analysis. Death occurred on the third postpartum day.

CONCLUSION: When finding fetal malformations, it is crucial to inform the family about the possible outcomes and involve them in the process of managing the pregnancy. Genetic counseling is a step that is recommended for families if they are planning a new pregnancy.

CR05

Aggressive T-cell Lymphoma in an Elderly Patient: A Master of Disguise

1. Borna Barić (0009-0006-6881-5160) 1. Dorijan Babić (0000-0003-4143-0894) 1. Maro Bjelica (0009-0003-1858-127X) 1. Tina Čukman (0009-0001-9923-5007) 2. Marija Gomerčić Palčić (0000-0002-6836-4447)

1. School of Medicine, University of Zagreb

2. Division of Pulmonology, Department of Internal Medicine, Sestre milosrdnice University Hospital, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR05

KEYWORDS**:** Aged; Comorbidity; Lymphoma, T-Cell; Neoplasm Metastasis; Patient Care Team

Abstract:

INTRODUCTION/OBJECTIVES**:** T-cell lymphomas in elderly patients present challenges due to aging complexities and potential comorbidities. This aggressive subset necessitates a nuanced approach, considering age-related factors in diagnosis, treatment, and overall patient care.

CASE PRESENTATION**:** A 74-year-old patient with a history of myocardial infarction, known chronic obstructive pulmonary disease (COPD) and a previously removed squamous cell carcinoma of the base of the tongue, underwent extensive ENT and pulmonary medical evaluations due to rapid growth of the tumor at the base of the tongue, left lower lobe of the lung and mediastinal lymphadenopathy. The patient's health deteriorated due to the obstruction of the oropharynx leading to an urgent tracheostomy and also due to a change in his mental state. The biopsy of the above-mentioned tumorous tissue revealed only granulomatosis, with no signs of malignancy. The high metabolic FDG uptake in the PET-CT scan, along with the aggressive nature and rapid growth of the tumorous tissue, necessitated a comprehensive and extensive rebiopsy of the base of the tongue, leading to the diagnosis of a peripheral T-cell lymphoma with a high risk of affecting the central

nervous system. Treatment was initiated using the CEOP regimen with a reduced dosage, considering the patient's age and comorbidities. Despite these challenges, the patient was afebrile and cardiopulmonary compensated and was discharged.

CONCLUSION: This case highlights the challenges of treating elderly patients emphasizing the importance of a multidisciplinary approach and the need to perform biopsies at multiple sites including the rebiopsies of previously negative tumorous tissues to ensure a correct diagnosis.

CR06

Obstetric Challenges in Uterus Duplex: A Case of HELLP Syndrome and PRES

1.Patricia Barić, 1.Antonia Alfirević, 2.Trpimir Goluža

1-School of Medicine Zagreb, University of Zagreb, Zagreb, Croatia

2-Department of Perinatal Medicine, Clinic for Women's Diseases and Obstetrics, University Hospital Centre Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR06

KEYWORDS: Didelphic Uterus, Eclampsia, HELLP Syndrome, Placental Abruption

INTRODUCTION: Uterus duplex, also known as uterus didelphys, is a rare congenital anomaly characterized by the presence of two uterine cavities. It often poses challenges for pregnancy management and complicates labor and delivery. Close monitoring throughout pregnancy is crucial to detect and manage any potential complications arising from the unique anatomy of the uterus didelphys.

CASE REPORT: We present a case of a 30-year-old woman with a uterus duplex, whose pregnancy was located in the left uterine horn. During the 29th week of pregnancy, the patient underwent an emergency cesarean section due to placental abruption. Following delivery, she experienced an eclampsia attack and was admitted to the neurological intensive care unit, where she was given benzodiazepines as treatment. Two days later, she developed somnolence, headache, and nausea. Imaging revealed intracerebellar bleeding and signs of Posterior Reversible Encephalopathy Syndrome (PRES). Treatment with anti-edematous, antihypertensive, and antiepileptic therapy led to the complete normalization of her condition. Laboratory diagnostics confirmed hemolysis, elevated liver enzymes, and low platelets (HELLP syndrome) in the patient. She was discharged in good condition with recommendations for regular follow-up MR and MRA scans, ambulatory EEG monitoring, and additional laboratory tests after seven days.

CONCLUSION: This case underscores the intricate management of obstetric complications in patients with uterus duplex. The presence of HELLP syndrome and PRES in this patient highlights the importance of thorough monitoring and timely intervention in complex pregnancies. It emphasizes the need for multidisciplinary care and close follow-up to ensure optimal outcomes in such challenging cases.

CR07

Diagnostic and treatment challenges in a patient who presents with symptoms of Aspirin-exacerbated respiratory disease

1. Sara Bedeniković (0009-0002-3685-7615) 1. Sunčica Belušić (0009-0002-6902-6391) 3. Robert Likić (0000-0003-1413-4862)

1. School of Medicine, University of Zagreb, Zagreb, Croatia

3. Division of Clinical Pharmacology, University Hospital Centre Zagreb, Zagreb, Croatia; School of Medicine, University of Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR07

KEYWORDS: Aspirin, Asthma, Nasal Polyps, Pharmacology

Abstract:

INTRODUCTION/OBJECTIVES**:** Aspirin-exacerbated respiratory disease (AERD), also known as Samter's triad, is characterized by three main features: bronchial asthma, nasal polyposis, and sensitivity to aspirin or nonsteroidal anti-inflammatory drugs (NSAIDs). The etiological cause of AERD is unknown.

CASE PRESENTATION: A 40-year-old female patient was referred to the outpatient clinic of the Clinical Pharmacology Unit at the University Hospital Centre Zagreb. She had been diagnosed with asthma in her youth and experienced a bronchospastic episode after consuming acetylsalicylic acid (ASA) at the age of 16. The patient also had adverse reactions to ibuprofen, which were alleviated by Ventolin inhalation, and to beta-lactam antibiotics, which presented with redness and a genital rash. She visited the outpatient clinic for pharmacological testing to determine her hypersensitivity to ASA. It was discovered in the patient's medical history that, in addition to asthma and a reaction to ASA, she also had nasal polyposis. Owing to these findings, no test was conducted as it was deemed unnecessary. The presence of these three symptoms fulfills the criteria for a diagnosis of Samter's triad, also known as AERD. A specialist recommended avoiding NSAIDs and instead using paracetamol, tramadol, or celecoxib.

CONCLUSION: Aspirin-exacerbated respiratory disease (AERD) necessitates a multidisciplinary approach to patient management involving surgical and medical treatment. Since the exact cause of AERD remains unknown, treatment is symptomatic. Therefore, collaboration among multiple specialists is essential for an improved outcome.

CR08

Multidisciplinary approach to childhood-onset systemic lupus erythematosus and its complications

1. Karolina Beg (0009-0009-6670-9956), 1. Josip Bošnjak (0009-0005-3593-3999), 2. Mario Šestan (0000-0003-1092-6491), 2. Marija Jelušić (0000-0002-1728-4260)

1. School of Medicine, University of Zagreb
2. Department of Pediatrics, University Hospital Centre Zagreb, University of Zagreb School of Medicine, 10000 Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR08

KEYWORDS**:** Autoimmune Diseases; Interdisciplinary Communication; Pediatrics; Systemic Lupus Erythematosus

Abstract:

INTRODUCTION/OBJECTIVES: Childhood-onset systemic lupus erythematosus (cSLE) is a systemic autoimmune disease with production of autoantibodies directed primarily against nuclear antigens, affecting multiple organs and diagnosed before the age of 18 years.

CASE PRESENTATION: We present a patient who was diagnosed with cSLE at the age of 7. The disease remained under satisfactory control for many years, primarily managed with hydroxychloroquine, systemic glucocorticoids, azathioprine, and methotrexate. At the age of 18, she was hospitalized due to a decline in her overall condition and the development of multiorgan dysfunction syndrome as a result of an exacerbation of cSLE and macrophage activation syndrome (MAS). Initially, the patient exhibited dysfunction in the liver, kidney, pancreas, heart, and hematopoiesis, accompanied by coagulopathy and severe electrolyte imbalance. As the disease progressed, she developed secondary thrombotic microangiopathy, experiencing rectorrhagia, macrohematuria, and altered consciousness. She received pulse glucocorticoid therapy, and in collaboration between rheumatologists, nephrologists and intensive care medicine specialists, plasmapheresis was

initiated, but had to be halted after two cycles due to the development of myocardial infarction with non-obstructive coronary artery disease. Following consultation with cardiologists, antiplatelet therapy was started. Treatment of MAS continued with cyclosporine and anakinra. In addition, the patient developed steroid-induced diabetes and endocrinologist introduced insulin. She received psychological help because of coping with long-term hospitalization.

CONCLUSION: Due to the complexity of cSLE and its complications, the optimal approach to ensuring proper healthcare for these patients involves a collaborative effort among various pediatric subspecialists and other healthcare professionals, guided by the pediatric rheumatologist.

CR09

From the general practitioner's office to the intensive care unit: a case report of submassive saddle pulmonary embolism

1. Iva Benić (0009-0005-8347-845X) 2. Sunčana Bošnjak Brkić (0009-0006-4548-1794) 2. Tomislav Knotek (mentor) (0009-0009-3113-8102)

1. Health Center Zagreb East

2. Institute of Emergency Medicine of the City of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR09

KEYWORDS: COVID-19; dyspnea; pulmonary embolism

Abstract:

INTRODUCTION/OBJECTIVES: The term saddle pulmonary embolism (SPE) refers to pulmonary embolism (PE) that is located on the pulmonary trunk and expands to the main pulmonary arteries. Although it is typically associated with right ventricular dysfunction, the clinical presentation is often unremarkable, making the diagnosis a challenge.

CASE PRESENTATION: A 45-year-old male patient was referred to the emergency room by his GP due to progressive dyspnea on exertion lasting 10 days. Other than recent mild respiratory tract infection, there were no risk factors for PE. He presented with normal vital signs, ECG and chest X-rays. However, examination revealed elevated d-dimers of 3.82 mg/L and CT pulmonary angiogram confirmed a large thrombus of the pulmonary trunk, extending down to the lobar branches bilaterally. The patient was immediately admitted to the intensive care unit (ICU) where he started receiving anticoagulation therapy. Other significant findings were elevated serum troponin (671.9 ng/L) and NT-proBNP (1349 ng/L), indicating cardiac injury, and elevated levels of anti-SARS-CoV-2 IgG (>40 000 AU/ml), suggesting recent COVID-19. Given the atypical presentation, the focus became uncovering etiology. Radiographic and laboratory tests during hospitalization showed no signs of DVT, malignancy or thrombophilia, and the working theory remained COVID-19 precipitated SPE. Nevertheless, additional examination was scheduled in outpatient gastroenterology and further supervision was assigned to the GP.

CONCLUSION: This case demonstrates the significance of having the differential diagnosis of PE/SPE in mind in nonspecific clinical presentations, as well as the importance of collaboration in management of such challenging patients.

CR10

Navigating Insulin Hypersensitivity in Type 1 Diabetes: A Case Report and Management Challenges

1.Lucija-Dafne Blažević, 1.Lucija Nevena Barišić, 2.Ivana Kraljević

1. School of Medicine, University of Zagreb, Croatia, 2.Division of Endocrinology, University Hospital Centre

Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR10

KEYWORDS: angioedema, diabetes mellitus, hypersensitivity, insulin

INTRODUCTION: Type 1 diabetes is a chronic autoimmune condition in which the body destroys insulin-producing beta cells in the pancreas, resulting in insufficient insulin production. Individuals with this condition require basal-bolus insulin administration to regulate blood sugar levels and prevent diabetes-related complications. Rarely some individuals have insulin hypersensitivity, posing health risks and challenges in managing blood sugar.

CASE REPORT:A 26-year-old male diagnosed with type 1 diabetes mellitus in May 2023, initially prescribed long-acting insulin glargine and rapid-acting insulin aspart, presented to the emergency room approximately one month later with angioedema affecting the eyes, lips, face, and neck, accompanied by generalised urticaria. Laboratory parameters showed normal sedimentation rate, C-reactive protein and leukocytes. Oral steroids and antihistamines were administered, and allergy testing was recommended. Subsequently, insulin glargine was substituted with insulin detemir. Allergy testing yielded no measurable allergens. Another episode of oedema and urticaria prompted a switch from rapid-acting aspart to lispro. A month later, the patient experienced another Quincke's oedema episode, driving a change from detemir to insulin NPH, resulting in symptom regression but poorer glucose regulation. The hypersensitivity testing was also advised but couldn't be conducted due to ongoing angioedema and corticosteroid use. However, the late onset of symptoms strongly suggests a potential type 4 hypersensitivity reaction.

CONCLUSION;Insulin hypersensitivity poses a rare but significant challenge in type 1 diabetes management, demanding a meticulous approach. Despite efforts to mitigate symptoms through insulin switching, satisfactory glycemic control remains difficult to attain, heightening the risk of chronic complications of diabetes.

CR11

Congestive Hepatopathy Mimicking Cirrhosis in a Heart Transplant Candidate: A Diagnostic Challenge and Management Dilemma

1. Martin Bobek (0009-0003-1582-4184) 1. Lucija Bosnić (0009-0008-

5656-0564) 1. Katarina Breščanović (0009-0003-2590-6183) 1. Marta Krpan (0009-

0002-7152-7793) 2. Ana Ostojić (0000-0003-4234-4461)

1. School of Medicine, University of Zagreb, Zagreb, Croatia

2. University Hospital Centre Zagreb, Department of Internal Medicine, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR11

KEYWORDS: ascites, cirrhosis**,** constrictive pericarditis, heart transplantation

Abstract:

INTRODUCTION/OBJECTIVES: Liver disease resulting from heart failure (HF) has generally been referred to as "cardiac hepatopathy". Congestive hepatopathy in the stage of cirrhosis can be an absolute contraindication for heart transplantation (HT) or an indication for simultaneous heart and liver transplantation.

CASE PRESENTATION: We present a case of a 63-year-old female patient with a history of HF due to constrictive pericarditis. She had signs of right heart failure with ascites. During the workup for HT, an abdominal ultrasound and MSCT scan of the abdomen described her liver as cirrhotic with developed portosystemic collaterals with suspicion of hepatocellular carcinoma (HCC), all of which was an absolute contraindication for the HT. After gastroenterology consultation, ascites were evaluated, revealing the serum ascites albumin gradient ≥11 g/L

with total protein in ascites of 33 g/l. This suggests that the patient had portal hypertension and ascites due to heart failure and not liver cirrhosis. A transjugular liver biopsy with measurement of the hepatic venous pressure gradient (HVPG) was performed, describing centrilobular fibrosis with HVPG was three mmHg, supporting the diagnosis of congestive hepatopathy without cirrhosis and posthepatic portal hypertension. MRI of the abdomen ruled out HCC. As ascites and liver changes were considered consequences of heart disease, the patient successfully underwent heart transplantation in 2024. and is clinically well.

CONCLUSION: Congestive hepatopathy can mimic liver cirrhosis, requiring HVPG measurement and transjugular liver biopsy as a diagnostic procedure for the evaluation of heart transplant candidates. The importance of a multidisciplinary team is highlighted in this case.

CR12

Long-term effect of Poly Implant Prothèse and removal of the prosthesis: A case report

1. Karla Bodakoš (0000-0002-4912-3453) 2. Caterina Marra (0000-0002-3511-8127) 2.Tobia Bellodi (0009-0005-8267-6884) 2. Antonio Spaggiari (0) 2. Giorgio De Santis (0000-0002-6717-5767)

1. Faculty of Medicine, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia
2. Department of Plastic and Reconstructive Surgery, Policlinico of Modena, Modena, Italy

DOI: https://doi.org/10.26800/LV-146-supl2-CR12

KEYWORDS: Breast Implants; Device Removal; Prostheses and Implants; Silicone Gels.

Abstract:

INTRODUCTION/OBJECTIVES: Poly Implant Prothèse (PIP) implants were used for breast reconstruction until 2010 when they were withdrawn from the market because of the low-quality material and the high risk of rupture. This case report aims to present a long-term effect on a patient who had this type of prosthesis for 17 years.

CASE PRESENTATION: A 45-year-old female patient was admitted to the Department of Plastic and Reconstructive Surgery at Policlinico of Modena Hospital due to symptoms of pain, tenderness and swelling in the right mammary region. In surgical history, the patient had bilateral reduction mammoplasty in 2002 and bilateral cosmetic breast augmentation (BA) with PIP prosthesis in 2006. On a physical exam, it was found bilateral asymmetry of the breasts, with the right breast region larger and more tense than the left. Moreover, a nodular subcutaneous neoformation of hard consistency was noted at the level of the right inframammary fold. Due to previously mentioned symptoms, magnetic resonance imaging was arranged and it showed a rupture of the prosthesis in the right breast. Bilateral implant removal surgery was performed in September of 2023. The subcutaneous neoformation at the inframammary fold was removed and sent for histological examination.

CONCLUSION: This case highlights the long-term effect on general health and quality of life in female patient who previously had PIP implants due to cosmetic BA. Taking into account the findings so far, it is advisable to remove this type of prosthesis before the appearance of the symptoms, considering all health regulations and relevant advice.

CR13

Giant Saphenous Vein aneurysm following Ultrasound-Guided Foam Sclerotherapy

1. Ivgeni Bogouslavski (0009-0001-3544-2541) 1. Audrey Strähl (0009-

0002-3523-8345) 2. Damir Halužan (0000-0002-8587-8351) 2. Irena Šnajdar (0000-0002-4429-1095)

1. School of Medicine, University of Zagreb, Zagreb, Croatia

4. Department of Surgery, University Hospital Centre Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR13

KEYWORDS: Aneurysm, Sclerotherapy, Saphenous Vein, Varicose veins, Venous insufficiency

Abstract:

INTRODUCTION/OBJECTIVES: Venous Aneurysms, commonly mistaken as soft tissue tumors, result from abnormal dilation of a vein linked to previous trauma or chronic venous insufficiency. Venous aneurysms present most commonly in the extremities and abdomen. Nevertheless, the great saphenous vein (GSV) is an infrequent vessel for the formation of a venous aneurysm with only seldom reported cases in the literature.

CASE PRESENTATION: A 55-year-old woman was referred for treatment of symptomatic varicose veins in both her legs. Color Doppler ultrasound revealed severe insufficiency of the left saphenofemoral and saphenopopliteal junctions with a GSV aneurysm measuring 5.5 centimeters in diameter. Similar changes were found on the right leg with a GSV aneurysm measuring 2.2 centimeters. She had a history of hypertension, hysterectomy, and Ultrasound-guided foam sclerotherapy (UGFS) for treatment of varicose veins 10 years ago. Surgical treatment included ligation and extirpation of the aneurysm, followed by GSV extirpation and mini phlebectomy in the upper and lower leg. The same procedure was repeated for the right leg. UGFS was followed for the smaller superficial varicose veins, using 2% Aethoxysklerol foam. The excised aneurysm specimen was sent for histopathologic examination, revealing a dilated vessel with degenerative wall changes and associated bleeding in the surrounding fatty tissue. The patient was discharged the following day in good condition.

CONCLUSION: This case of a giant GSV aneurysm highlights a rare presentation of chronic venous insufficiency. Although infrequent, it should be kept in mind to prevent misdiagnosis with soft tissue tumors. Continued research is essential for a better understanding of this vascular pathology.

CR14

Surgical Management of a Giant Popliteal Artery Aneurysm: A Case Report

1. Klara Anja Bojanović (0009-0008-1452-9139) [Izlažući autor] 1. Helena Šandro (0009- 0004-5012-9758) 1. Damir Halužan (0000-0002-8587-8351)

1. Division for Vascular Surgery, Department of Surgery; University Hospital Centre Zagreb; School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR14

KEYWORDS**:** arteriography; claudication, intermittent; grafting, vascular; popliteal artery aneurysms; surgical anastomosis

Abstract:

INTRODUCTION/OBJECTIVES: A popliteal artery aneurysm occurs when the local dilation exceeds 50% of the normal 7-10 mm diameter. Typically asymptomatic, it may manifest as a mass in the popliteal fossa, with 50% of cases being bilateral. Symptoms, when present, include knee pain and acute or chronic limb ischemia. Surgical intervention is recommended for aneurysms over 20 mm, regardless of symptoms. Recent studies indicate a 10% incidence of aneurysms ≥15 mm, with those ≥50 mm rarely reported, highlighting their extreme infrequence.

CASE PRESENTATION: A 70-year-old patient presented with knee pain, a popliteal fossa mass, and leg claudication in October 2023. MSCT angiography revealed a 58mm popliteal aneurysm on the left and a 44 mm aneurysm on the right counterpart. Considering the patient's symptomatic presentation and the magnitude of the aneurysm, which exceeds the surgical intervention threshold by 175%, he was referred to the vascular surgery department. Following thorough preoperative care, the surgical procedure involved resection of

the left popliteal artery aneurysm utilizing a medial approach. An above-the-knee T-T reconstruction was performed, using an 8 mm InterGard Silvergraft for vascular augmentation. The distal anastomosis was performed between the P1 and P2 segments of the popliteal artery ensuring precise vascular reconstruction.

CONCLUSION: This case highlights the critical significance of surgical intervention for giant popliteal aneurysms. Emphasizing the surgical importance for aneurysms exceeding 20mm is crucial due to the inevitable risk of distal embolization, rupture and the subsequent necessity for amputation posing a significant clinical concern.

CR15

Bradycardia as a symptom of cerebellar ischemic insult and vertebral arteries dissection – a case report

1. Jelena Bošnjak (0000-0002-9598-8642) 1. Valerija Plečko (0000-0002-

6161-8707) 1. Katja Kudrna Prašek (0000-0000-0000-0000)

1. Department of Emergency Medicine, University Hospital Centre Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR15

KEYWORDS: bradycardia; cerebrovascular disorder; vertebral artery dissection

Abstract:

INTRODUCTION/OBJECTIVES: Bradycardia is defined as a heart rate lower than 50-60 beats per minute (bpm). Sometimes it can be a normal finding, but it can also be caused by various conditions, such as cardiac disorders, medications, metabolic disturbances, or increased intracranial pressure.

CASE PRESENTATION: A 51-year-old male patient presented to the emergency department of University Hospital Centre Zagreb because of a headache and general weakness that occurred that morning. On the way to the clinic, he vomited twice in his car, but during the examination, he didn't have any symptoms at all. His past medical history consisted of hypertension and head trauma a year ago, for which he didn't seek medical help. He has smoked for 30 years. During examination, a pulse of 40 bpm was measured. ECG showed sinus rhythm, 37 bpm, left axis deviation, and no signs of acute ischemia. The physical examination was normal, including the neurological exam. Lab results, including troponin levels, were in the normal range. We decided to do a CT scan of the brain because of mentioned past head trauma. The CT showed extensive ischemia of the left cerebellar hemisphere in the supply area of arteria cerebelli inferior posterior (ACIP). The CT angiography of head and neck arteries showed dissection of both vertebral arteries. The patient was admitted and treated with antiaggregation and symptomatic therapy in the Intensive Care Unit of the Neurology Department.

CONCLUSION: Sinus bradycardia, especially when symptomatic, requires a detailed workup to rule out serious conditions that require emergency treatment.

CR16

Diagnostic delay of acute aortic dissection with negative D-dimer result

1. Paula Bošnjak (0009-0008-8464-7392) 2. Iva Benić (0009-0005-8347- 845X) 1. Tomislav Knotek (0009-0009-3113-8102)

1. Institute of Emergency Medicine of the City of Zagreb, Republic of Croatia

2. Health Center Zagreb East

DOI: https://doi.org/10.26800/LV-146-supl2-CR16

KEYWORDS: aortic dissection; biomarkers; fibrin fragment D

Abstract:

INTRODUCTION/OBJECTIVES: Acute aortic dissection (ADD) is a cardiovascular emergency associated with significant mortality and morbidity. Approximately 50% of patients die in the first 48 hours. Misdiagnosis frequently occurs, especially in patients with symptoms mimicking those of other cardiovascular disorders. D-dimer is a biomarker we usually rely on when ruling out AAD. We present a case of delayed recognition of acute aortic dissection in a patient with a negative D-dimer test.

CASE PRESENTATION: A 50-year-old patient presented to the emergency room with chest pain radiating to the neck and jaw that started one hour ago. He was in poor condition, pale, perspired profusely, was hypotensive and bradycardic. There were no other notable findings during the physical examination. The electrocardiogram showed no abnormality, serum troponin was negative and D-dimer was 0.29 mg/L FEU. Chest x-ray and point of care ultrasound of lungs and heart were normal. After 24 hours he was admitted to the cardiology department, CT aortography was ordered and a diagnosis of non-A non-B aortic dissection was confirmed. The patient underwent total arch replacement a few days later.

CONCLUSION: Around 10% of AADs have negative D-dimer results. D-dimer shows high sensitivity but low specificity, therefore nonelevated D-dimer may be useful to exclude the diagnosis of AAD in patients with low aortic dissection risk score, but no biomarkers are considered diagnostic for AAD. This case highlights the importance of precise clinical and diagnostic factors.

CR17

It takes a village: multidisciplinary management of a patient with silent myocardial infarction and newly discovered type two diabetes

1. Sunčana Bošnjak Brkić (0009-0006-4548-1794) 1. Paula Bošnjak (0009-0008-8464-7392) 2. Tomislav Knotek (mentor) (0009-0009-3113-8102)

1. Institute of Emergency Medicine of the City of Zagreb

2. Department of Emergency Medicine, University Hospital Center Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR17

KEYWORDS: diabetes mellitus, type 2; dyspnea; pneumonia; ST elevation myocardial infarction

Abstract:

INTRODUCTION/OBJECTIVES: Myocardial infarction (MI) is usually presented with radiating chest pain. Although “thinking horses, not zebras”, is valuable advice, an MI can be silent (SMI), especially in patients with type two diabetes (T2D), a result of cardiac autonomic dysfunction. We present a zebra case of SMI.

CASE PRESENTATION: A 58-year-old with no known history presented with dyspnea, cough, and physical exertion intolerance lasting six days, denying any chest pain. Triaged as category four, his examination revealed tachycardia, hypertension, hypoxia, and lung crackles, while the ECG showed an anterior STEMI. Laboratory findings pointed towards inflammation, diabetes with BGLs of 20.5 mmol/L, and heart damage with elevated serum troponin, NT-proBNP and D-dimers (3357.9 ng/L, 7918 ng/L, 3.22 mg/L FEU respectively). Pneumonia and pleural effusions were confirmed by CXR and lung-and-heart PoCUS. CTPA ruled out pulmonary embolism. He was admitted to the coronary ICU where he underwent PCI with LAD stenting. Afterwards, he developed pulmonary oedema, requiring ventilation. Following physiotherapy, pneumonia and diabetes management, he was discharged and referred to outpatient endocrinology. A year later, HbA1C improved from 10.6 to 6.4% and future T2D follow-ups were transferred to his GP, but due to ICM and unimproved EF (30%), an ICD was placed. He currently has a stable clinical course with improved NT-proBNP level of 1284 ng/L

CONCLUSION: This case highlights not only that atypical presentations can mask and delay treatment of an MI, but also the importance of a multidisciplinary approach, as various specialists contributed towards diagnosis, treatment, and follow-up that led to this patient's good outcome.

CR18

Acute Kidney Injury in 29-Year-Old Male Athlete: Implications of High Protein Diet and Creatine Supplementation

1. Branimir Bradarić-Šlujo (0000-0002-4261-724X) 2. Kristijan Brkić (0009- 0001-3632-1821) 3. Paula Škibola (0000-0002-9415-2560)

1. Department of Emergency Medicine Sisak County 2. Clinical Hospital "Sveti Duh" 3. Department of Emergency Medicine Zagreb County

DOI: https://doi.org/10.26800/LV-146-supl2-CR18

KEYWORDS: acute kidney injury, creatine, dietary supplements, hypertension, dietary supplements

Abstract:

INTRODUCTION/OBJECTIVES: Creatine monohydrate and protein rank among the most popular supplements for athletes, yet the extent of their association with kidney damage remains a subject of debate. Here, we present a case that suggests a link between their consumption and acute kidney injury.

CASE PRESENTATION: : A 29-year-old man arrived at the Emergency Department with elevated blood pressure values (165/90), tingling sensations in his hands, and a headache. Over the past two months, he had been rigorously training while adhering to a high-protein diet and consuming 5 grams of creatine daily. Blood tests indicated acute kidney injury (creatinine 163 µmol/L, urea 10.8 mmol/L, eGFR 74 ml/min/1.73m^2). During his hospitalization, the patient received a prescription for ramipril 2.5 mg, amlodipine 5 mg, and 1000 mL of saline solution. Protein intake was restricted to 1.5 g/kg/day, creatine consumption was discontinued, and hydration was limited to 2500 ml. Ramipril 2.5 mg was administered as necessary. A follow-up examination one week later revealed improved kidney function (eGFR 95 ml/min/1.73m^2). Ambulatory blood pressure monitoring (ABPM) confirmed that the patient's blood pressure remained within the normal range throughout the day and night. The patient received guidance to restrict protein and salt intake and to avoid using creatine.

CONCLUSION: This case highlights the potential risks associated with high-protein diets and creatine supplementation in athletes. Although the direct causal link is unclear, clinicians should remain vigilant for signs of kidney injury, emphasizing renal protection through adequate hydration, medication, and education on balanced nutrition to safeguard athlete health.

CR19

Refractory case of adrenergic urticaria: a diagnostic and therapeutic complexity

1. Petar Brlas (0009-0003-4485-4315) 1. Maro Bjelica (0009-0003-1858-127X) 1. Borna Bregović (0009-0008-5866-5722) 1. Tina Čukman (0009-0001-9923-5007) 2. Suzana Ljubojević Hadžavić (0000-0002-3640-9567)

1. School of Medicine, University of Zagreb

2. Department of Dermatology and Venereology, University Hospital Centre Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR19

KEYWORDS: Antihistamines; Omalizumab; Propranolol; Urticaria, Adrenergic

Abstract:

INTRODUCTION/OBJECTIVES: Adrenergic urticaria (AU) is a rare stress-induced physical urticaria characterized by outbreaks of red papules surrounded by halos of hypopigmented, vasoconstricted skin. The diagnosis is made by administering an intradermal adrenaline injection or by observing propranolol response. Treatment options are limited and include trigger avoidance, antihistamines, and propranolol. Severe cases may require oral corticosteroids or immunotherapy.

CASE PRESENTATION: A 29-year-old female patient presented with a 10-month history of sudden appearance of erythematous wheals with an encircling white halo. The patient complained of burning, itching and tingling sensations throughout the entire body skin. The lesions recurred during stress and temperature changes. They lasted for half an hour and spontaneously regressed. The morphological appearance and medical history were indicative of the AU diagnosis. A biopsy was unremarkable, showing normal epidermis with mild edema in the dermis, dilated capillaries and a sparse mononuclear infiltrate. Hematological, biochemistry, endocrinological, immunological laboratory results were unremarkable, and chest X-ray, transabdominal ultrasound were normal. Total IgE was within normal limits. Prick test was positive to grass, rye and cat hair, but the patient also reported occasional rhinocononjuctivitis. Treatment started with a single dose of antihistamines, later elevated to fourfold with no clinical improvement. Propranolol showed initial improvement, but was poorly tolerated and discontinued. Oral prednisone therapy caused worsening of symptoms and eventual discontinuation. Omalizumab biological therapy proved ineffective. All dermatological treatments yielded no improvement.

CONCLUSION: Adrenergic urticaria is a disease with great diagnostic and therapeutic complexities. The treatment options for AU are limited. Since there is only a limited amount of literature data available, additional reports and research on adrenergic urticaria are needed.

CR20

From kidney failure to myeloproliferative disease: how diagnoses overlap and what is the importance of good teamwork

1. Iva Brzica (0009-0005-2743-572X) 2. Nikolina Bašić Jukić (0000-0002-0221-2758)

1. School of Medicine University of Zagreb

2. Department of Nephrology, Arterial Hypertension, Dialysis, and Transplantation; University Hospital Centre Zagreb; School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR20

KEYWORDS: Anagrelide, essential thrombocythemia, hemolytic uremic syndrome, kidney transplantation, liver function tests

Abstract:

INTRODUCTION/OBJECTIVES: The acute postpartum onset of microangiopathic hemolytic anemia with renal failure raised suspicion of hemolytic uremic syndrome (HUS) despite the absence of significant thrombocytopenia. Following a kidney transplant, post-transplantation changes in the hematological findings lead to a surprisingly different diagnosis.

CASE PRESENTATION: A 31-year-old woman, almost 37 weeks pregnant, developed preeclampsia, leading to a cesarean section. Two weeks after childbirth, she developed microangiopathic hemolytic anemia and renal insufficiency, raising suspicion of HUS despite the absence of significant thrombocytopenia. She was treated with plasma exchanges and hemodialysis without clinical benefit. After two years of peritoneal dialysis, a kidney transplant was performed. Following the transplant, the patient gradually developed severe thrombocytosis, leading to a diagnosis of essential thrombocythemia. Six years after the diagnosis of essential thrombocythemia, due to the rising platelets, Anagrelide was introduced into her therapy. Although the latest check-up showed a decrease in platelets, a drug-induced liver injury was also discovered, which led to a reduction in the Anagrelide dosage. A month after adjusting the treatment, liver function tests showed

improvement.

CONCLUSION: The development of different clinical presentations and mutually incompatible diagnoses has led to the need for a multidisciplinary approach to bring the best treatment solution. Anagrelide is effective but should be used with caution in kidney transplant recipients.

CR21

Suicide Attempt by Ingestion of Excessive Acetaminophen and Alcohol: Case Report

1. Luka Bukovac (orcid.org/0000-0001-7559-7137) 2. Branimir Bradarić-Šlujo (orcid.org/0000-0002-4261-724X) 1. Mia Markusi (orcid.org/0000-0003-0990-9360)

1. Department of Emergency Medicine Zagreb County 2. Department of Emergency Medicine Sisak County

DOI: https://doi.org/10.26800/LV-146-supl2-CR21

INTRODUCTION: Paracetamol (acetaminophen: N-acetyl-para-aminophenol: APAP) is a widely used antipyretic and analgesic with additional mild anti-inflammatory properties, available over the counter globally. However, its single dose exceeding 10 grams poses a risk of liver damage, particularly pronounced in vulnerable populations such as children, the elderly, and individuals fasting or consuming substances inducing liver enzymes like alcohol and antiepileptics.

CASE PRESENTATION: A 20-year-old male attempted suicide by ingesting 20 tablets of 1 gram of acetaminophen along with 1.5 liters of beer. He had a history of mixed personality disorder and prior suicide attempts. Upon admission to the emergency department, he underwent standard detoxification procedures including gastric lavage, N-acetylcysteine infusion, and volume replacement. Laboratory assessments revealed hepatotoxic effects and mild metabolic acidosis, without renal dysfunction. Abdominal ultrasound results were normal, with peak transaminase levels (AST 3827 and ALT 3546 IU/L) observed 48 hours post-ingestion. Throughout hospitalization, liver function parameters improved, and the patient's overall condition and vital signs remained stable. Discharged in good health, he was referred for psychiatric evaluation and treatment at an appropriate psychiatric institution, in addition to B-complex vitamin therapy.

CONCLUSION: Acetaminophen poisoning primarily occurs unintentionally due to inadequate awareness of its risks or in suicide attempts. Prompt administration of the antidote and supportive therapy are crucial in managing cases involving high acetaminophen doses.

CR22

Unusual cardiac manifestation of systemic lupus erythematosus

1. Marija Bukvić (0009-0005-6327-9509) 1. Elena Cahun (0009-0008-6916-6806) 2. Marija Bakula (-) 3. Vlatka Rešković Lukšić (-)

1. School of Medicine University of Zagreb

2. Divison of Clinical Immunology and Rheumatology, Department of Internal Medicine, University Hospital Centre Zagreb, Zagreb, Croatia

3. Department of Cardiology, Department of Internal Medicine, University Hospital Centre Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR22

KEYWORDS: Cardiac Tamponade; Endocarditis; Lupus Erythematosus, Systemic

Abstract:

INTRODUCTION/OBJECTIVES: Systemic lupus erythematosus (SLE) may present with different cardiac manifestations, including myocarditis, pericarditis, nonbacterial thrombotic (Libman-Sacks) endocarditis,

thrombosis, arrhythmias etc.

CASE PRESENTATION: We present a case of a 46-year-old woman initially admitted to the Neurology Department for a transient ischemic attack (TIA) and severe dyspnea. As a part of a routine examination, she was referred for echocardiography. On the mitral valve (MV), a 13x14mm vegetation was described, along with severe mitral regurgitation (MR) and left atrial dilation. Blood cultures were negative, and inflammatory parameters were within normal range. Due to the high embolic potential and repeated TIA, urgent cardiac surgery was performed with the implantation of a mechanical MV. While waiting for the immunological tests, the early postoperative period was complicated, with large pericardial effusion and tamponade. Initially, post-pericardiotomy syndrome was suspected, but soon after, the antinuclear antibody test came positive, with complement depletion and high antiphospholipid (AP) titer. The patient was diagnosed with active SLE and AP syndrome, so glucocorticoids and antimalarial drugs were started. Despite the treatment, over an 8-month period, the patient was repeatedly hospitalized due to recurrent pericarditis and tamponade, necessitating pericardiocentesis. Azathioprine, intravenous immunoglobulins, and intrapericardial triamcinolone were administered. Only after remission of SLE, there was no more recuring of pericardial effusion. In the 3-year follow-up period, she was without cardiac problems.

CONCLUSION: In this case, the initial manifestations of Libman-Sacks endocarditis were cerebral embolization and severe MR, necessitating urgent cardiac surgery, followed by recurrent pericarditis. Only after the remission of SLE, episodes of recurrent pericarditis ceased.

CR23

Complex endovascular repair of asymptomatic post-dissection thoracoabdominal aortic aneurysm in patient with Marfan Syndrome

1. Ana Čala (0009-0001-0606-5986) 2. Tomislav Meštrović (0000-0002- 3492-3837)

1. School of Medicine, University of Zagreb 2. Department of Vascular Surgery, University Hospital Centre Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR23

KEYWORDS: Aortic Dissection, Endovascular Aneurysm Repair, Marfan Syndrome, Thoracoabdominal Aortic Aneurysm

Abstract:

INTRODUCTION/OBJECTIVES: Marfan Syndrome (MFS) is an autosomal dominant, systemic connective tissue disorder caused by mutations in the fibrillin (FBN1) gene. Despite being passed on as a dominant trait in 25% of cases mutations occur de novo. MFS is most associated with ocular, cardiovascular and skeletal abnormalities. Aortic aneurysm and dissection are its most lethal manifestations. Endovascular aortic repair (EVAR) is generally associated with fewer complications than open surgical repair, however, in patients with MFS, the safety of endovascular repair is still questionable.

CASE PRESENTATION: A 44-year-old female presented with Stanford Type B aortic dissection. An emergency thoracic aortic endovascular repair (TEVAR) was performed, and the patient had undergone a carotid-subclavian bypass. The procedure was complicated by Type Ib endoleak. Subsequently, the patient underwent secondary interventions consisting of re-TEVAR and coil embolization procedures. At the age of 51, composite aortic root replacement was performed. The patient was regularly followed up and after almost ten years MSCT angiography showed an enlargement of post-dissection thoracoabdominal aortic aneurysm. Thus, genetic testing was done, and MFS was confirmed. Consequently, an elective inner-branched EVAR was performed, and the patient successfully recovered. Twenty years ago, her sister had died young due to acute aortic dissection.

CONCLUSION: Endovascular treatment for aortic pathologies in patients with connective tissue diseases (CTDs) is still controversial. Nevertheless, recent developments in endovascular technology may challenge

this view. In addition, we emphasize the importance of prompt genetic testing in families with increased risk of CTDs.

CR24

Heart transplantation in a female patient with secondary dilated cardiomyopathy due to congenital heart defects

1. Jan Čavar (0009-0009-7008-5381) 2. Marin Cvitić (0000-0001-6438-5980) 3. Martin Matošić (0009-0006-2912-579X) 2. Ivo Darko Gabrić (0000-0003-4719-4634)

1. School of Medicine, University of Zagreb 2. Department of Cardiomyopathies, Heart Failure, and Valvular Heart Diseases; Clinic for Heart and Vascular Diseases; Sestre milosrdnice University Hospital Center, Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR24

KEYWORDS**:** Bicuspid Aortic Valve Disease; Cardiomyopathy, Dilated; Coronary Stenosis; Heart Septal Defects, Ventricular; Heart Transplantation

Abstract:

INTRODUCTION/OBJECTIVES: Heart transplantation is a multidisciplinary approach to treating advanced heart failure, where the insufficient heart is replaced with a new donor organ. We aim to underline the challenges preceding heart transplantation in a patient with secondary cardiomyopathy, and underscore the importance of teamwork in achieving optimal patient outcomes.

CASE PRESENTATION: We present a 61-year-old female patient who developed secondary dilated cardiomyopathy due to congenital birth defects such as bicuspid aortic valve and ventricular septal defect. In 2015, she experienced a cardiac arrest due to ventricular fibrillation, which was successfully treated with cardiopulmonary resuscitation. Post-resuscitation course of treatment was complicated by sepsis and signs of multi-organ failure. In 2021, the patient was hospitalized due to exacerbation of chronic heart failure. Echocardiography, stress echocardiography, and coronary angiography were conducted, showing significant enlargement of the left ventricle with an ejection fraction of 33%, along with a 90% stenosis of the left circumflex artery. In the same procedure, an intravascular stent was implanted at the site of the described stenosis. The patient was then listed on the national heart transplant waiting list. In January 2023, she underwent an orthotopic heart transplantation performed by a team of cardiac surgeons. At the latest follow-up, the patient demonstrated a significant improvement in her quality of life and is able to perform her daily activities without issue.

CONCLUSION: This case illustrates how heart transplantation can be used to treat secondary cardiomyopathies and also attributes the successful outcome to the collaborative efforts of both cardiologists and cardiac surgeons.

CR25

A case report of a multidisciplinary management of the unstable cervical spine fractures

1. Matej Črep (0000-0001-8732-1090) 1. Afan Ališić (0000-0003-1945-6262) 1. Josip Bošnjak (0009-0005-3593-3999) 2. Tihomir Banić (0000-0002-1654-5289)

1. School of Medicine, University of Zagreb

2. Clinic for Surgery, University Hospital Centre Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR25

KEYWORDS: Accidents, Trafic; Patient Care Team; Spinal fractures; Traumatology

Abstract:

INTRODUCTION/OBJECTIVES: Fractures of the odontoid process are common cervical spine fractures in the elderly and occur due to cervical spine hyperflexion. These injuries are severe due to the proximity of the medulla, great mobility of the cranio-cervical junction, and risk of vertebral artery injury. This report aims to present a patient with a cervical spine fracture and highlights the importance of a multidisciplinary approach in treating such injuries.

CASE PRESENTATION: An 84-year-old female involved in a car accident as a passenger was administered to the emergency department (ER) with an immobilized cervical spine. Upon arrival, she complained of neck and occipital pain. Initial X-ray scans suspected a cervical spine fracture, and the computerized tomography (CT) confirmed a type II fracture of the base of the odontoid process with associated atlantoaxial subluxation. The patient also had a first metacarpal bone fracture that was immobilized at the ER. After a neurosurgeon and multiple CT scans ruled out intracranial hemorrhage, posterior atlantoaxial fusion with titanic screws and sublaminar wires was performed. Additionally, spongioplasty from the left iliac bone was performed for enhanced healing. The early postoperative period was uneventful and the patient underwent physical therapy. Ten days postoperatively, she was discharged with a neck immobilization and recommended physical therapy.

CONCLUSION: Fractures of the cervical spine pose a challenge due to long-term neurological deficits. This report demonstrated that early recognition, appropriate care, and a well-coordinated team of trauma surgeons, neurosurgeons, radiologists, and physical therapists result in good postoperative outcomes in patients with unstable cervical spine fractures.

CR26

Sacral Neuromodulation as a Treatment for Urinary Symptoms of Multiple Sclerosis: A First Time in Croatia

1. Alan Curkovic (0009-0001-5456-3365) 1. Zara Gumzej (0000-0002-7703-4044) 2. Mirko Bakula (0000-0003-4612-3578)

1. School of Medicine, University of Zagreb, Zagreb, Croatia

2. Department of Urology, University Hospital Centre Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR26

KEYWORDS: Implantable Neurostimulators; Multiple Sclerosis; Urinary Bladder, Overactive; Urinary Incontinence

Abstract:

INTRODUCTION/OBJECTIVES: Multiple sclerosis (MS) is a chronic autoimmune disease of the central nervous system often associated with an overactive bladder (OAB). While symptoms of OAB are typically treated pharmacologically, recent studies suggest the potential of sacral neuromodulation (SNM) as an effective approach in those with refractory symptoms. SNM is a novel minimally invasive therapy that involves electrical stimulation of a sacral nerve root to modulate a neural pathway.

CASE PRESENTATION: A 22-year-old female with previously diagnosed MS presented to urology in 2021 with symptoms of OAB. A bladder diary showed up to 14 daily voids and significant daily urinary incontinence as the most bothersome symptoms. Therapy for suspected OAB was initiated with Solifenacin without symptomatic improvement. A urodynamic study confirmed the diagnosis of OAB with a bladder capacity of 66ml, detrusor overactivity, and urine leakage. Therapy was escalated to the second-line treatment with Mirabegron. Despite escalated therapy, the patient recorded no significant improvement. In 2022 the decision was made to use SNM for further treatment as an alternative to intravesical botulinum toxin therapy and eventual intermittent catheterization. The test phase utilizing temporary electrostimulation demonstrated

significant symptomatic improvement, so permanent electrostimulator implantation followed. At 12-month follow up the patient reported frequency regression to 7 – 12 voids per day and absolute absence of urinary incontinence.

CONCLUSION: This case represents the first-time use of SNM for urinary symptoms of MS in Croatia and demonstrates that, although case-by-case evaluation and further investigation are needed, SNM may positively improve urinary symptoms in select patients with MS.

CR27

Firework-related severe eye injury: a case report

1. Rea Deghenghi (0000-0002-4059-0602) 2. Dora Cvrtila (0000-0001-7335-2267) 3. Sanja Masnec (0000-0003-1472-0511) 3. Miro Kalauz (0000-0001-7616-9871) 4. Matija Kalauz (0009-0002-1680-2000)

1. Family medicine, Health Center Zagreb-Centre

2. Family medicine, Health Center Zagreb- West

3. Department of ophthalmology, University Hospital Center Zagreb, School of Medicine University of Zagreb

4. School of Medicine, University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR27

KEYWORDS: blindness; eye; injury

Abstract:

INTRODUCTION/OBJECTIVES: Ocular trauma caused by fireworks is a significant cause of ocular morbidity in children. It can result in penetrating eye trauma, globe contusions, burns and permanent loss of vision.

CASE PRESENTATION: A 14-year-old female presented with a grave firework-related left eye injury. The patient sustained the injury after an accidental activation of a pyrotechnic device. The examination revealed a full thickness superior and inferior left eyelid laceration, peribulbar and periocular oedema, burns of the surrounding skin, with no light perception in that eye. On initial evaluation, a CT scan was performed, showing a ruptured and extruded left globe and a multifragmented medial and inferior orbital wall fracture. No neuromuscular damage was described. Urgent transfer to the University Hospital Center Zagreb from the general hospital where she was initially admitted was organized, as a globe rupture is a vision-threatening emergency. Reconstruction of the anterior and posterior lamella of the left eyelid was performed with an addition of globe exploration, corneoscleral suturing and conjunctivoplasty. Postoperative antimicrobial prophylaxis was introduced to prevent the risk of endophthalmitis. Postoperative recovery proceeded without complications. She was dismissed on the 12th day with irreversible vision loss on the left eye.

CONCLUSION: Despite prompt and adequate treatment, eye injuries can lead to disfiguration and blindness. Therefore, we want to emphasize the importance of continuous education in the use of proper eye protection and ultimately promote total avoidance of potentially harmful behaviors that may lead to ocular injury.

CR28

Cytokine release syndrome in patient with relapsed / refractory blastoid mantle cell lymphoma after first administration of glofitamab

1. Ana Deškin (0009-0007-1259-9486), 1. Klara Cifrek (0009-0008-9034-5753), 1. Lara Maria Stričak (0009-0009-6283-2834) 2. Inga Mandac Smoljanović (0000-0001-5234-9464) 2. Delfa Radić Krišto (0000-0002-2827-7808)

1. School of Medicine University of Zagreb, 4. Unit for Hematology, Department of Internal Medicine, Clinical

Hospital Merkur, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR28

KEYWORDS: Cytokine Release Syndrome, Exanthema, Immunotherapy, Lymphoma

Abstract:

INTRODUCTION/OBJECTIVES: Blastoid mantle cell lymphoma is a highly aggressive type of non-Hodgkin's lymphoma (NHL) with a dismal clinical course. Glofitamab is a novel T-cell bispecific humanized monoclonal antibody that has shown promising results in the treatment of relapsed or refractory mantle cell NHL. This antibody works by binding to both CD20 on tumor cells and CD3 on T lymphocytes.

CASE PRESENTATION: A 36-year-old male patient was diagnosed with blastoid mantle cell B-NHL in October 2017 and has since been treated with several immunochemotherapeutic protocols. In February 2023, while receiving ibrutinib, progression with lymphadenopathy, organomegaly, skin infiltrates, and paraneoplastic peripheral neuropathy with CNS infiltration occurred. Three cycles of the R-MATRIX protocol were administered. Neuropathy and organomegaly were completely resolved, but lymphadenopathy and skin infiltration persisted. In November 2023, Glofitamab was administered as a bridging therapy preceding an allogeneic stem cell transplantation. A few minutes following the first infusion, cytokine release syndrome grade 2 and tumor flare developed, which caused erythematous skin rashes, shivering, tachycardia, and febrility. The patient received treatment with glucocorticoids, tocilizumab, and anakinra. Symptoms resolved within 48 hours, and future infusions of glofitamab were asymptomatic.

CONCLUSION: Cytokine release syndrome (CRS) is a systemic reaction that may happen as a response to therapeutic antibodies such as Glofitamab and cause symptoms like fever and rashes. Treatment includes corticosteroids and tocilizumab, an anti-interleukin 6 antibody. Glofitamab shows promise for treating relapsed or refractory blastoid mantle cell lymphoma and CRS events associated with it are usually manageable and low-grade.

CR29

Mild Traumatic Injury Complicates a Rare Condition – a Case Study in Central Serous Chorioretinopathy

1. Katarina Domjanović (0009-0003-3044-0314) 2. Marko Sablić (0000- 0002-9203-9732) 3. Marta Bolješić (0009-0008-7454-6790) 4. Antonio Kokot (0000- 0002-4836-7536)

1. Student section of Anatomy "CRANIOS", Medical Faculty Osijek, 31000 Osijek, Republic of Croatia 2. Department of Anatomy and Neuroscience, Medical Faculty Osijek, 31000 Osijek, Republic of Croatia 3. Department of Anatomy and Neuroscience, Medical Faculty Osijek, 31000 Osijek, Republic of Croatia 4. Department of Anatomy and Neuroscience, Medical Faculty Osijek, 31000 Osijek, Republic of Croatia, Ophthalmology Polyclinic Dr. Balog

DOI: https://doi.org/10.26800/LV-146-supl2-CR29

KEYWORDS: Central Serous Chorioretinopathy, Eye Injuries, Retinal Diseases, Laser Therapy

Abstract:

INTRODUCTION/OBJECTIVES: Central serous chorioretinopathy (CSCR) is a relatively uncommon retinal disorder characterized by the accumulation of subretinal fluid, often leading to neurosensory retinal detachment. Although the etiology of CSCR remains elusive, it is often associated with psychosocial stressors and systemic corticosteroid use. We present a case detailing the clinical presentation, evaluation, and management of a patient with CSCR in whom a mild traumatic event triggered diagnostic challenges and future therapeutic considerations.

CASE PRESENTATION: This case presents a 37-year-old male with diagnosed CSCR of the right eye. Despite

having no significant issues with his eyesight during his youth, the patient began using corrective lenses at the age of 14. The patient, who had been under continuous monitoring since 2022 for CSCR, reported an inadvertent trauma to the left eye in 2023. This, coupled with the onset of visual disturbances in the left visual field, led to ophthalmologist's recommendation for further examination. The diagnostic process revealed myopic astigmatism, peripheral retinal degenerations, and typical CSCR features in both eyes. The therapeutic approach included MicroPulse Laser Therapy for both eyes, along with localized interventions and systemic medications.

CONCLUSION: In conclusion, CSCR complications following mild trauma underscore the clinical complexity associated with this condition, emphasizing the importance of comprehensive approach and a nuanced understanding of contributing factors. Observed response to treatment prompts continued monitoring and clinical vigilance to further refine strategies for the management of CSCR and optimization of visual outcomes in affected individuals.

CR30

Vein of Galen malformation complicated by severe cardiac failure in a neonate

1.Marija Doronjga, 2.Ruža Grizelj

1School of Medicine, University of Zagreb

2Division of Neonatology, Department of Pediatrics, University Hospital Centre Zagreb

https://orcid.org/0000-0001-6077-9878 Ruža Grizelj

https://orcid.org/0009-0007-9361-6953 Marija Doronjga

DOI: https://doi.org/10.26800/LV-146-supl2-CR30

Keywords: congenital abnormalities; heart failure; newborn; Vein of Galen Malformations

INTRODUCTION: Vein of Galen aneurysmal malformation (VGAM) is a rare congenital vascular anomaly occurring in 1 in 25,000 births that can be life-threatening if not diagnosed and treated early. It is characterized by the shunting of blood from the arterial to the venous system resulting in high-output cardiac failure, hydrocephalus, and neurodevelopmental impairment in the most severe forms.

CASE PRESENTATION: A 3000-g neonate was delivered by C-section at term due to signs of heart failure noted on fetal ultrasound. Her Apgar scores were 5 and 5 at the 1st and 5th minutes respectively necessitating immediate endotracheal intubation and positive-pressure ventilation. Marked cardiomegaly was noted on chest X-ray, and echocardiography revealed high-output cardiac failure, suprasystemic pulmonary hypertension, and right-to-left shunting across the arterial duct and foramen ovale. Head ultrasound showed a large midline venous structure draining multiple high-flow fistulas consistent with VAGM. A brain MRI confirmed the diagnosis. Endovascular embolization of VGAM was performed on the 1st and 5th day of life, resulting in successful flow reduction, and improvement of cardiac failure. The neonate was discharged at 29 days of age. Follow-up at 4 years demonstrated near complete obliteration of VGAM, normal ventricular volume, and brain parenchyma, as well as normal neurodevelopment.

CONCLUSION: This case underscores the significance of prompt diagnosis and intervention for VAGM, especially in cases with high-output heart failure which carries an estimated early mortality rate of 20-50%. Endovascular embolization is the treatment of choice and improves outcomes. It is important to consider VAGM in the differential diagnosis of neonatal congestive heart failure.

CR31

Lymphadenopathy as an indicator of Rosai-Dorfman disease (RDD)

1. Ivan Đuran (0009-0007-4266-826X) 2. Jasenka Markeljević (0009-0007-3481-9574)

1. School of Medicine University of Zagreb

2. Department of Clinical Immunology and Rheumatology, Department of Internal Medicine, Clinical Hospital Center "Sestre milosrdnice", School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR31

KEYWORDS: Autoimmune diseases, Emperipolesis, Histiocytosis, Lymphadenopathy

Abstract:

INTRODUCTION/OBJECTIVES: RDD is a rare histiocytic disorder that typically presents as massive cervical bilateral lymphadenopathy, accompanied by fever, weight loss, and night sweats. It is characterized by nonmalignant proliferation of distinctive histiocytic cells within lymph nodes and lymphatics in extranodal sites. Here, I will present a patient previously diagnosed with sicca syndrome and monoarthritis, who had used cyclophosphamide and methylprednisolone for short amount of time before admission.

CASE PRESENTATION: A 42-year-old woman was admitted to the hospital due to recurrent inguinal lymphadenopathy, persisting for four months. One month before admission, she noticed fever, fatigue, and weight loss. No palpable adenopathy was identified in other lymph node chains, nor was there spleen or liver enlargement. Serological tests for multiple viruses were negative and blood tests were normal. A computed tomography scan showed an enlarged inguinal node. A biopsy of the node was obtained. Smears revealed massive histiocytic infiltrates with emperipolesis phenomena. Immunohistochemical study demonstrated S100 protein positive, CD68 positive, and CD1a negative histocytes. The diagnosis of RDD was confirmed. Treatment with corticosteroids was initiated with a gradual reduction of dosage. However, months and years after admission, the patient underwent multiple otorhinolaryngology treatments for nasal destructions caused by massive accumulations of histiocytes, serving as an extranodal landmark of RDD. She refused corticosteroid treatment, hoping for the spontaneous resolution of symptoms, which is in fact extremely common.

CONCLUSION: Autoimmune diseases often co-exist and can manifest with seemingly insignificant signs. However, cooperation with multiple specialists in sharing knowledge can assist our patients in achieving the best possible outcome.

CR32

Case report: Perineal gas gangrene in a 3-yearold boy

1. Sara Floričić (0009-0009-2196-3619) 1. Paula Franić (0009-0003-32417302) 1. Ema Erceg (0009-0005-7857-9504) 1.Petra Galić (0009-0004-2545-1606) 2. Dino Papeš (0000-0001-7241-9693)

1. School of Medicine University of Zagreb

2. Department of Pediatric Surgery, University Hospital Centre Zagreb, Croatia; School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR32

KEYWORDS: Child, Clostridium septicum, Debridement, Gas Gangrene, Scrotum

Abstract:

INTRODUCTION/OBJECTIVES: Gas gangrene is a necrotizing infection most often caused by Clostridium perfringens occurring after extremity trauma. Rarely, spontaneous inoculation can occur. Gas gangrene is a rapidly progressive medical emergency with high mortality.

CASE PRESENTATION: A three-year-old boy was examined at the emergency pediatric department of another institution for mild perianal redness, pain and hematoma. Upon admission, he was febrile, hemodynamically stable, but extensive hematoma and bruising was noted perianally and the anal sphincter was dilated and hypotonic. CT scan showed perirectal edema and thickening of the rectal wall with pneumatosis. Perineal trauma was suspected and the patient was transferred to our institution. During transport the patient deteriorated and upon arrival he was somnolent, hypotensive and disoriented. Physical examination revealed progression of the perineal skin discoloration reaching the suprapubic area, scrotum, penis and presacral area, with edema and multiple blisters/bullae filled with dark serous fluid. After initial stabilization he underwent emergency surgery - laparotomy. Pneumatosis of the colon was found so a total colectomy with terminal ileostomy was performed. Intraoperatively, gas bubbles were noted in the small bowel mesenteric veins. Perianal and scrotal incisions were made, but the extent of skin necrosis and generalized intraabdominal involvement was infaust, and the child passed away several hours post-surgery due to uncontrollable septic shock and multiorgan failure. Clostridium septicum was isolated from blood and swab cultures.

CONCLUSION: Despite early diagnosis and urgent treatment perineal gas gangrene has poor prognosis, especially if the infection spreads intraabdominally. Early radical debridement is the mainstay of treatment.

CR33

Use of Levodopa/Carbidopa Intestinal Gel in Advanced Parkinson's Disease

1.Lara Fotez (0000-0002-4612-4274), 1.Lucija Fotez(0000-0002-5185-0684), 2.Srđana Telarović

1 School of Medicine, University of Zagreb, Zagreb, Croatia

2 –Department of Neurology, University Hospital Center Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR33

KEYWORDS:Carbidopa; Dopaminergic Neurons; Dyskinesias; Levodopa; Parkinson Disease

INTRODUCTION: Parkinson's disease (PD) is a progressive neurodegenerative disorder characterized by the decline of nigrostriatal dopaminergic neurons. Symptoms encompass resting tremors, bradykinesia, and rigidity. The advanced PD stage leads to motor, cognitive, and autonomic dysfunctions, representing a therapeutic challenge.

CASE REPORT: A 52-year-old male patient with longstanding and advanced PD, under the care of an attending neurologist, presented to the Extrapyramidal Disorders Clinic. Examination revealed dysarthria, mild generalized rigidity, static tremor in the right hand, and a slight right leg dragging during walking. Oral antiparkinsonian therapy of ropinirole and levodopa/carbidopa was prescribed. At the 5-year follow-up, as the disease progressed furthermore, the patient developed balance loss, swallowing difficulties, and digestive issues. Independence in daily functioning and walking is lost, significantly impairing his quality of life. Due to inadequate disease management with oral therapy and the patient's positive clinical response to levodopa/carbidopa gel via temporary nasojejunal tube, continuous levodopa/carbidopa intestinal gel (LCIG) infusion through duodenostomy was proposed as a therapeutic solution. LCIG therapy, in the carboxymethyl cellulose gel form via cassette, is administered directly into the duodenum and proximal jejunum through percutaneous endoscopic duodenostomy using a probe externally connected to a portable infusion pump. At the 4-month follow-up, the patient felt improvement, and walked coordinately with mild generalized dyskinesias, advising the therapy continuation.

CONCLUSION: Levodopa/carbidopa constitutes the golden standard in PD treatment. Prolonged use, however,

diminishes therapeutic response due to irregular drug absorption, reflecting gastric motility dysfunction as a non-motor PD symptom. Direct duodenal LCIG application significantly improves motor symptoms and effectively manages the disease.

CR34

Exploring the Link Between Obstructive Sleep Apnea and Glaucoma: A Case Report

1. Lucija Fotez (0000-0002-5185-0684) 2. Anja Car (0009-0000-7845-3796) 3. Lara Fotez (0000-0002-4612-4274) 4. Snježana Kaštelan (0000-0002-3983-1157)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. School of Medicine, University of Zagreb, Zagreb, Croatia 4. Department of Ophthalmology, Clinical Hospital Dubrava, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR34

KEYWORDS: Glaucoma; Intraocular Pressure; Sleep Apnea, Obstructive

Abstract:

INTRODUCTION/OBJECTIVES: Glaucoma is a progressive neurodegenerative eye condition characterized by structural alterations that result in permanent vision impairment. Obstructive sleep apnea (OSA) stands as a systemic risk factor for glaucoma, marked by disruptions in breathing patterns during sleep, and may influence the exacerbation and advancement of glaucoma progression.

CASE PRESENTATION: A 44-year-old male patient presents with progressive visual disturbances. His medical history includes type 2 diabetes mellitus, chronic obstructive pulmonary disease, obesity, and depression. During the initial ophthalmological examination, his best-corrected visual acuity measured 0.9 in the right and 0.8 in the left eye. Intraocular pressures (IOP) were recorded at 18 mmHg in the right and 19 mmHg in the left eye. Biomicroscopy revealed normal findings, while fundus examination disclosed subatrophy of the optic nerve head, evidenced by a cup-to-disc ratio of 0.6/0.7 in the right and 0.6 in the left eye. Perimetry testing revealed a bilateral concentric reduction in retinal sensitivity, and OCT showed a decrease in the retinal nerve fiber layer thickness. Glaucoma was suspected, and therapy with topical medication started. As vision and visual field continued to decline progressively, neurological evaluation revealed a diagnosis of OSA, prompting the commencement of continuous positive airway pressure treatment. Despite well-regulated IOP, the disease continued to progress, resulting in visual acuity of less than 10% and tunnel vision, significantly impacting the patient's visual function and overall quality of life.

CONCLUSION: Comprehensive ophthalmic evaluation and interdisciplinary care are crucial for managing patients with OSA, facilitating early detection, and preventing vision-threatening complications.

CR35

Preretinal Hemorrhage - Valsalva Retinopathy

1. Dora Gašparović (0009-0008-7716-662X) 2. Marko Sablić (0000-0002- 9203-9732) 2. Marta Bolješić (0009-0008-7454-6790) 3. Antonio Kokot (0000-0002- 4836-7536)

1. Medical Faculty Osijek, 31000 Osijek, Republic of Croatia
2. Department of Anatomy and Neuroscience, Medical Faculty Osijek, 31000 Osijek, Republic of Croatia
3. Ophthalmology Polyclinic Dr. Balog

DOI: https://doi.org/10.26800/LV-146-supl2-CR35

KEYWORDS: Lasers, Retinal Hemorrhage, Valsalva Maneuver, Blood Pressure

Abstract:

INTRODUCTION/OBJECTIVES: Valsalva retinopathy classically manifests as preretinal hemorrhage. The mechanism is characterized by a sudden increase in intrathoracic or intra-abdominal pressure against a closed glottis, which leads to an increase in intravenous pressure within the eye, causing retinal capillaries to rupture.

CASE PRESENTATION: A 32-year-old pregnant woman arrived at the clinic for examination after a sudden loss of vision. Another clinic diagnosed her with preretinal hemorrhage, and she underwent Nd:YAG laser hyaloidotomy. The outcome was unsatisfactory. This was her first pregnancy, and she had no acute or chronic diseases. At the first examination, the best-corrected visual acuity in the right eye was 1.0, while the left eye detected only sensations of light. Fundoscopy revealed no pathological changes in the right eye, but showed a massive circular-domed collection of blood in the left eye macula. Further processing included Optical Coherence Tomography (OCT), which indicated subhyaloid bleeding. Due to the iron toxicity and high gestational age, a pre-term delivery was recommended in collaboration with the gynecologist, followed by a pars plana vitrectomy. On the day after vitrectomy, the best-corrected visual acuity was 0.6 for the left eye and 1.0 after a week. OCT findings of the left eye showed the normal morphological configuration of the macula.

CONCLUSION: Nd:YAG laser hyaloidotomy must be done within a few hours of disease inception; otherwise, due to blood clotting, it will prevent opening the posterior hyaloid membrane and blood evacuation. Given the toxic effect of iron on neuroretinal cells, it's advisable to consider induced childbirth followed by "pars plana vitrectomy."

CR36

Extraction of bronchial foreign body in extremely low birth weight newborn: a case report

1. Lucija Grbić (0009-0009-0013-9858) 1. Antonija Gračanin (0009-0004-5643-1683) 2. Miram Pasini (0000-0003-0256-1330) 3. Ratko Prstačić (0000-0003-3623-3562) 4. Ruža Grizelj (0000-0001-6077-9878)

1. School of Medicine, University of Zagreb 2. Department of Pediatric Surgery, University Hospital Centre Zagreb 3. Department of Otorhinolaryngology, University Hospital Centre Zagreb 4. Department of Neonatology, University Hospital Centre Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR36

KEYWORDS: atelectasis, bronchial obstruction, foreign body aspiration, premature

Abstract:

INTRODUCTION/OBJECTIVES: The foreign body presence in the premature infant respiratory system could be a major cause of morbidity and mortality. It poses a critical medical challenge in neonates who are particularly vulnerable to complications from airway obstruction. Prompt identification, intervention, and a multidisciplinary approach are key to preventing respiratory distress and other life-threatening consequences.

CASE PRESENTATION: A premature neonate born at 25 weeks of gestation and weighing 780 grams was referred to the Neonatal Intensive Care Unit after primary resuscitation during which it was endotracheally intubated with surfactant substitution. Since birth, the baby has been on conventional mechanical ventilation. From the beginning, the clinical course was complicated by necrotizing enterocolitis, leading to surgical intervention on the 45th day of life. The course of stay was further convoluted by the presence of a foreign body, specifically the tip of the aspiration catheter. This was observed alongside right lower lobe atelectasis on a follow-up X-ray after the initial surgery. The residual catheter was extracted with the child's weight of 1250 grams using a flexible choledochoscope through an endotracheal tube with the presence of a multidisciplinary team consisting of a pediatric surgeon, neonatologist, and otorhinolaryngologist. Surgery was successful, enabling the re-expansion of the right lung lobe and establishing normal breathing in a premature infant.

CONCLUSION: Although extracting a foreign body from a neonate's airway is challenging due to small and

underdeveloped airways with limited instrumentation, rapid response, and a comprehensive multidisciplinary approach lead to a successful outcome in this rare condition.

CR37

Isolated Brain Metastasis as Initial Presentation of Advanced Esophageal Adenocarcinoma

1. Zara Gumzej (0000-0002-7703-4044) 1. Alan Ćurković (0009-0001-5456-3365) 2. Vesna Bišof (0000-0002-2826-9664)

1. School of Medicine, University of Zagreb, Zagreb, Croatia

2.. Department of Oncology, University Hospital Centre Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR37

KEYWORDS: Antineoplastic Combined Chemotherapy Protocols; Brain Neoplasms; Esophageal Neoplasms; Receptor, ErbB-2

Abstract:

INTRODUCTION/OBJECTIVES: Adenocarcinoma is a predominant histological subtype of esophageal cancer in developed countries most commonly presenting with dysphagia, odynophagia, and unintentional weight loss. Esophageal adenocarcinoma is an uncommon cause of brain metastases seen in ~1-13% of cases with only a few reports of neurological deficits as the first presentation of the disease.

CASE PRESENTATION: A 56-year-old male without a history of malignant disease was admitted to the hospital in August 2020 after experiencing sudden onset left-sided hemiparesis and hypoesthesia. Magnetic resonance imaging exhibited a solitary mass located in the right parietal region. Computerized tomography displayed an esophageal mass which was later found to be a 1 cm polyp near the gastroesophageal junction by endoscopy. Biopsy of the polyp revealed HER2-positive adenocarcinoma. Parietal craniotomy with ablation was performed and pathohistology was consistent with that of metastatic adenocarcinoma. Positron emission tomography revealed further metastases in the hepatogastric ligament and multiple nodules in the right hepatic lobe. According to TNM classification, the extent of the disease was classified as stage 4 with a one-year survival rate estimated at 26.6%. In the past 3.5 years since the initial presentation, the patient has exceeded the expected prognosis through the use of multiple systemic chemotherapy protocols and timely and effective palliative intervention.

CONCLUSION: This case demonstrates that atypical presentation of neoplastic disease should remain in the differential diagnosis in patients with sudden onset of focal neurological deficits. While advanced disease poses complexity in treatment, early intervention, and effective supportive care improve both patient outcomes and quality of life.

CR38

Long-term anticoagulation in a woman with recurrent venous thromboembolism and iron-deficiency anemia successfully treated with parenteral iron

1. Stella Guštek (0009-0002-5334-8206) 2. Dražen Pulanić (0000-0002-1177-8921)

1. School of Medicine, University of Zagreb, Zagreb, Croatia

2. Division of Hematology, Department of Internal Medicine, University Hospital Center Zagreb, Zagreb, Croatia; School of Medicine, University of Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR38

KEYWORDS: Anemia, Iron-Deficiency; Anticoagulants; Venous Thromboembolism

Abstract:

INTRODUCTION/OBJECTIVES: Venous thromboembolism (VTE) can manifest as deep vein thrombosis (DVT) and/or pulmonary embolism (PE), requiring anticoagulant therapy. Iron-deficiency anemia (IDA) is the most common anemia in the world and its treatment might be challenging in patient receiving anticoagulation.

CASE PRESENTATION: A 39-year-old woman developed proximal DVT of her right leg during the second pregnancy in 2018 and was treated with low-molecular-weight heparin. Hereditary thrombophilia was not confirmed. She was also negative for antiphospholipid antibodies. Occasionally, she received iron therapy due to IDA because of heavy menstrual cycles. After one year of anticoagulant therapy she had good recanalization of DVT on Color-Doppler ultrasound, negative D-dimers and stopped anticoagulant treatment. In 2021, she was hospitalized due to DVT of her left leg, massive PE and severe IDA, requiring transfusion of red cell concentrates and parenteral iron therapy together with anticoagulant therapy with rivaroxaban. Since that was her second VTE, long-term anticoagulation therapy was prescribed. She had again heavy menorrhagia with IDA, without other bleedings. She underwent fractional curettage, followed by parenteral iron therapy. Rivaroxaban was replaced with apixaban in dose for prolonged secondary thromboprophylaxis, with resolution of menstrual bleedings and IDA, without another VTE recurrence.

CONCLUSION: Due to its potentially fatal outcome, patients with recurrent VTE should receive long-term anticoagulant therapy. Some of them can develop IDA because of chronic bleeding and require parenteral iron therapy, since it can rapidly improve anemia and restore body iron storage. Together with iron replacement, it is mandatory to diagnose and to treat underlying disorder that causes IDA.

CR39

SLC13A5-related neonatal-onset epileptic encephalopathy

1. Petra Horvat (0009-0007-4632-208X) 1. Franciska Ivišić (0009-0000- 0117-9135) 3. Danijela Petković Ramadža (0000-0002-8562-153X)

1. School of Medicine, University of Zagreb, 2. Department of Pediatrics, University Hospital Centre Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR39

KEYWORDS: seizures, genetic disease, newborn, mutation

INTRODUCTION/OBJECTIVES: SLC13A5 citrate transporter disorder is a rare autosomal recessive developmental epileptic encephalopathy. Loss of function variants in the SLC13A5 gene impair sodium-coupled citrate transporter in the plasma membrane, which is highly expressed in the brain, teeth, liver, and testes. The disease is characterised by early-onset epilepsy, often pharmacoresistant, developmental delay, and amelogenesis imperfecta. Currently, there is no etiological therapy and the main focus of the treatment is seizure control.

CASE PRESENTATION: A male newborn, the first child of healthy and unrelated parents, delivered via C-section at 41 weeks of gestation, presented with generalised hypotonia, macrocrania, facial dysmorphia, and myoclonic seizures that started three hours after birth. EEG showed paroxysmal changes and brain MRI revealed mildly reduced cerebral volume. Several antiepileptic drugs were tried out and seizure control was achieved with levetiracetam and phenobarbital. Thorough diagnostic testing, including metabolic work-up, microarray, and epilepsy gene panel gave negative results. In the next several months, the patient had seizure reoccurrence, delayed psychomotor development, and the first deciduous teeth appeared smaller and discolorated. Whole exome sequencing (WES) showed a homozygotic pathogenic mutation in the SLC13A5.

CONCLUSION: SLC13A5-related epileptic encephalopathy is a rare inherited disease that can be diagnosed only by gene testing. Although the epilepsy gene panel was negative, pharmacoresistant epilepsy associated with developmental delay and dysmorphia indicated a genetic disorder and prompted WES that revealed the diagnosis. Although no specific treatment exists, establishing the right diagnosis is essential for informing the family about the expected prognosis and genetic counselling.

CR40

The optimum time for nephrectomy in clear cell metastatic renal cell carcinoma

1. Luka Horvat (0000-0002-9191-2843) [Izlažući autor] 2. Marija Gamulin

1. School of Medicine, University of Zagreb, Croatia, 2. Department of Oncology, University Hospital Centre Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR40

KEYWORDS: Carcinoma, Renal Cell; Immunotherapy; Nephrectomy

Abstract:

INTRODUCTION/OBJECTIVES: Kidney cancer comprises 2–3% of all malignant diseases, with clear cell renal cell carcinoma accounting for over 80% of cases. It is twice as common in men than women, most often occurring after 60. Along with systemic treatment, cytoreductive nephrectomy is an important treatment option for patients with clear cell metastatic renal cell carcinoma (ccmRCC).

CASE PRESENTATION: The first sign of illness in a 47-year-old previously healthy male (ECOG=0) was pain in the upper right humerus. The CT scan showed a 51x44 mm tumor in the right kidney and osteolytic metastases in the right humerus, with soft tissue involvement, along with multiple pulmonary and mediastinal metastases. In July 2021, a kidney biopsy confirmed clear cell renal cell carcinoma. Due to ccmRCC, the patient was treated with first-line dual immunotherapy with Ipilimumab and Nivolumab. As a side effect of the treatment, the patient developed diabetes mellitus, thyroiditis, and hypothyroidism, which were treated with insulin and levothyroxine. After two years of immunotherapy, PET CT FDG revealed a 2 cm reduction in kidney cancer size, disappearance of lung and mediastinal metastases, and stable disease in the right humerus. The patient is scheduled for a nephrectomy with subsequent further follow-up.

CONCLUSION: According to the literature, median patient survival is around 22 months. However, due to rapid treatment with dual immunotherapy and delayed nephrectomy, the patient's survival will exceed the aforementioned with good quality of life as a result of quality decisions made by the multidisciplinary team. The nephrectomy was delayed because the patient's side effects are biomarkers of response to dual immunotherapy.

CR41

A case of ocular ischemic syndrome presenting as nongranulomatous anterior uveitis

1. Luka Ivić (0009-0004-7936-6570)

1. Department for Ophthalmology, University Hospital Centre Zagreb, School of Medicine of University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR41

KEYWORDS: Uveitis, Photophobia, Eye Pain, Retinal Hemorrhage, Retinal Neovascularization

Abstract:

INTRODUCTION/OBJECTIVES: Ocular ischemic syndrome is a rare but potentially vision-threatening disorder caused by chronic and severe hypoperfusion of the eye due to ipsilateral carotid or ophthalmic artery obstruction, typically presenting with symptoms of gradual vision loss. Rarely, it can present with symptoms and signs typical of anterior uveitis, complicating the diagnosis.

CASE PRESENTATION: A 75-year-old female presented to the Emergency Outpatient Clinic of University

Hospital Centre Zagreb due to ocular hyperemia, pain, and photophobia in her right eye. The best corrected visual acuity was 0.4/0.5. A slit lamp examination of the right eye showed ciliary flush, pigmented endothelial deposits, and inflammatory cells in the anterior chamber. The initial working diagnosis was anterior uveitis which was initially treated with topical atropine and topical dexamethasone. During subsequent visits, vision of the right eye deteriorated. A slit lamp examination now showed a dense corticonuclear cataract, posterior synechiae, and iris neovascularizations. Gonioscopy demonstrated neovascularizations of the iridocorneal angle of the right eye. Fluorescein angiography showed delayed filling of the retinal vasculature of the right eye. Ultrasound examination of the carotid and vertebrobasilar arteries demonstrated reversible flow within the right ophthalmic artery, confirming the diagnosis of ocular ischemic syndrome. The patient was subsequently treated with retinal focal laser photocoagulation combined with intravitreal antiVEGF agents.

CONCLUSION: Ocular ischemic syndrome is a rare vison-threatening condition that can present with symptoms typical of anterior uveitis. However, despite having a similar presentation, the etiology and treatment of these two entities are distinct, highlighting the importance of accurate and timely diagnosis.

CR42

Neonatal hyperammonemia due to citrullinemia type 1

1. Franciska Ivišić (0009-0000-0117-9135) 2. Petra Horvat (0009-0007-4632-208X) 3. Danijela Petković Ramadža (0000-0002-8562-153X)

1. School of Medicine, University of Zagreb 2. School of Medicine, University of Zagreb 3. Department of Pediatrics, University Hospital Centre Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR42

KEYWORDS: citrullinemia, hyperammonemia, newborn, sleepiness

Abstract:

INTRODUCTION/OBJECTIVES: Urea cycle disorders are rare inherited metabolic diseases caused by enzyme or transporter deficiencies disrupting the urea cycle. These diseases are characterized by the accumulation of ammonia, a highly toxic substance. Hyperammonemia has a deleterious effect on the brain causing edema and severe neurological consequences, if untreated. Early recognition and urgent treatment are needed to prevent severe patient outcomes.

CASE PRESENTATION: A female full-term newborn presented on the third day of life with tachypnea, tremor, and somnolence. Due to clinical presentation, serum ammonia was checked, revealing a high ammonia concentration. An emergent treatment protocol included stopping protein intake, 10% glucose infusion, nitrogen scavenger therapy by 10% sodium benzoate and 21% arginine hydrochloride. The treatment was efficient and ammonia normalized within 24 hours. Urgent metabolic work-up showed high citrulline in blood and high excretion of orotic acid in the urine, pointing to the diagnosis of citrullinemia type 1, later confirmed by genetic testing. Chronic treatment included a low-protein diet and peroral nitrogen scavenger therapy. At the last evaluation at the age of 2.5 years, the patient has normal neurological development.

CONCLUSION: Neonatal hyperammonemia is a life-threatening condition presenting with unspecific symptoms, such as disturbance of consciousness, vomiting, or convulsions after two to three days of symptom-free interval. If unrecognised and untreated it can have fatal outcomes or severe neurological sequelae. Therefore, it is of utmost importance to consider hyperammonemia in a neonate manifesting neurological symptoms or feeding intolerance. Early initiation of proper treatment can prevent brain damage and poor outcomes.

CR43

To Choose the Lesser of Two Evils: Gastrointestinal Bleeding as a Complication of Antithrombotic Therapy After Percutaneous Coronary Intervention (PCI)

1. Anamarija Jagić (0009-0008-3521-1744) 2. Boris Jakšić (0009-0004-5261-8854) 3. Matias Trbušić (0000-0001-9428-454X)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. Department of Cardiovascular Diseases, University Hospital Centre Sestre Milosrdnice, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR43

KEYWORDS: Anemia; Coronary Artery Disease; Gastrointestinal Hemorrhage; Melena; Percutaneous Coronary Intervention

Abstract:

INTRODUCTION/OBJECTIVES: Percutaneous coronary intervention (PCI) is a non-surgical procedure used to open a blocked coronary artery. Even though it increases the survival rate of coronary artery disease, there are some risks: restenosis, thrombosis, myocardial infarction, as well as bleeding. When prescribing therapy, it is important to estimate bleeding and ischemic risks.

CASE PRESENTATION: An 88-year-old patient with cardiovascular comorbidities presented with anginal complaints in activity worsening in the past two months. PCI was performed and two stents were placed. Because of the risks of ischemia, as well as bleeding (hypertension, atrial fibrillation, chronic kidney disease), triple antithrombotic therapy was prescribed, with the removal of acetylsalicylic acid (ASA) after two weeks. After 10 days, the patient was admitted again with anginal complaints. PCI with placement of two more stents was performed. After the procedure, melena, normocytic anemia, and bleeding from duodenal angiodysplasia were diagnosed. The bleeding angiodysplasia was fixed via thermocoagulation and anemia was treated. ASA was immediately removed from the therapy and the proton-pump inhibitor (PPi) dose was doubled. The patient's state improved and there were no signs of anemia or angina at the check-up a month later.

CONCLUSION: It is often challenging to prescribe an appropriate antithrombotic therapy to patients with numerous comorbidities that affect coagulation. It is also important to estimate the need and risks of therapeutic procedures. In this patient's case, it is possible that the second angina attack was caused by reduced oxygen supply because of anemia (type 2 myocardial infarction), which might make the second PCI non-essential.

CR44

Cardioneuroablation – a future treatment for vasovagal syncope, case report

1.Jure Jakovljević (0009-0003-1034-3402) [Izlažući autor],2. Vjekoslav Radeljić (0000- 0003-2471-4035)

1.School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia; Clinic for Cardiovascular Medicine, Sestre milosrdnice University Hospital Center, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR44

KEYWORDS: Catheter Ablation; Ganglia, Parasympathetic; Syncope, Vasovagal; Tilt-Table Test

Abstract:

INTRODUCTION/OBJECTIVES: Vasovagal syncope, also known as neurocardiogenic syncope, is a condition characterized by excessive stimulation of the vagal nerve, leading to loss of consciousness. Cardioneuroablation is a new treatment option for bradycardias and vasovagal syncope. The purpose of this procedure is to destroy the para-septal ganglia, which reduces the parasympathetic influence on the heart.

CASE PRESENTATION: A 38-year-old woman was taken to the emergency department in March 2023 with symptoms such as dizziness, weakness, chest pain, nausea, and vomiting. During the clinical examination, she passed out. The monitor showed bradycardia and asystole for 9 seconds. The patient had experienced numerous pre-syncopal and syncopal episodes in stressful situations like blood draws. She also has celiac disease and asthma. In March 2022, she underwent hysteroscopy due to endometrial polyps. Echocardiography was normal, and bilateral carotid sinus massage was negative, but the tilt table test revealed cardioinhibitory and vaso-depressive reactions 10 minutes after nitroglycerin was administered. An electrophysiological examination was performed in April 2023, which showed a positive atropine test, indicating a 35% rise in heart rate following administration of atropine. In November 2023, cardioneuroablation was performed, and the para-septal ganglia plexuses were ablated, with the procedure's acute success confirmed by a negative atropine test after ablation. The patient was stable and discharged with anticoagulant therapy (apixaban 5 mg 2x1).

CONCLUSION: In conclusion, this case highlights that vasovagal syncope can significantly impact quality of life, and cardioneuroablation offers a new and promising therapeutic approach to treating it.

CR45

Pregnancy with a Transplanted Heart: A Multidisciplinary Challenge

1. Jana Jelčić (0009-0003-9268-4090) 2. Antonia Junaković (0009-0002-5032-8373) 3. Hana Kalit (0009-0001-2332-7722) 4. Krešimir Reiner (0000-0002-9207-8440)

1. School of Medicine University of Zagreb 2. School of Medicine University of Zagreb 3. School of Medicine University of Zagreb 4. Department of Anesthesiology; University Hospital Centre Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR45

KEYWORDS: Cesarean Section; Heart Transplantation; Peripartum Period; Pregnancy Complications

Abstract:

INTRODUCTION/OBJECTIVES: An increasing number of heart transplantation patients are reaching adulthood and becoming pregnant. To ensure the best possible outcome, a multidisciplinary team, consisting of a cardiologist, gynecologist, and anesthesiologist is necessary in pregnant patients with transplanted hearts.

CASE PRESENTATION: A 32-year-old patient, who underwent a heart transplantation at 17, was admitted for completion of pregnancy. She underwent regular monthly obstetric and cardiac check-ups and chronic immunosuppressive therapy was modified at the beginning of pregnancy. A c-section was performed in the 39th gestational week and a live female newborn was delivered. During surgery, transient uterine atony was addressed with uterine massage, synthetic oxytocin, and methylergometrine. After surgery, the patient was transferred to the coronary ICU due to the potential for postoperative ischemic complications, where she experienced repeated uterine atony with significant vaginal bleeding a few hours after admission. The patient was transferred back to the operating room, where suction evacuation of uterine contents was performed, and carboprost and tranexamic acid were administered. She received 5 EC, 2 FFP, 6 g fibrinogen, and 2500 IU FXIII during the procedure. Afterward, she was transferred to the obstetric ICU. Following consultation among gynecologists, cardiologists, and anesthesiologists, meropenem and vancomycin were introduced for 7 days, and immunosuppressive therapy was adjusted. The postoperative course was uneventful and the patient was discharged on the eighth postoperative day.

CONCLUSION: This case demonstrates the successful management of challenges associated with the improved survival of transplant patients. Through collaborative efforts of the cardio-obstetric team, despite complications, the pregnancy was successfully completed.

CR46

Paroxysmal nocturnal hemoglobinuria: rare blood disorder diagnosis calls for team effort

1.Lea Jukić (0000-0002-1976-7258) [Izlažući autor] 2. Inga Mandac Smoljanović (0000-0001-5234-9464)

1. School of Medicine, University of Zagreb, Zagreb, Croatia, 2. Department of Hematology, Clinical Hospital Merkur, Zagreb, Croatia; School of Medicine, University of Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR46

KEYWORDS: Complement Activation; Complement Inactivating Agents; Hematuria; Hemoglobinuria, Paroxysmal; Hemolysis

Abstract:

INTRODUCTION/OBJECTIVES**:** Paroxysmal nocturnal hemoglobinuria (PNH) is a rare hematologic disorder characterized by intravascular hemolysis due to unregulated complement activation. An acquired somatic mutation causes red blood cells (RBC) to lose the anchor protein glycosylphosphatidylinositol (GPI) that usually binds complement regulatory proteins like CD55 and CD59.

CASE PRESENTATION: A 23-year-old male patient with a history of kidney stones and hematuria presented to the emergency department due to a sudden onset of epigastric pain and macrohematuria that was preceded by nausea, vomiting, and diarrhea. Initial workup showed elevated bilirubin levels, and no x-ray signs indicative of kidney stones. Laboratory findings confirmed hemolytic anemia (RBC 3.88 x1012/L), thrombocytopenia (8.99 x109/L), and increased lactate dehydrogenase (LDH), accompanied by macrohematuria and proteinuria. Plasmapheresis with corticosteroid therapy was started. Further testing showed normal levels of ADAMTS13, reduced levels of haptoglobin, as well as a negative direct and indirect antiglobulin test, confirming a diagnosis of non-immune microangiopathic hemolytic anemia. Analysis of RBC CD55 and granulocyte FLAER/CD24 expression revealed PNH clones amongst RBC. The bone marrow biopsy showed a normocellular bone marrow, with present trilineage hematopoiesis. Due to high PNH clone and severe presentation, complement inhibition therapy was initiated.

CONCLUSION: This case report demonstrates the vast variety of clinical findings in the differential of anemias, highlighting the importance of multidisciplinary collaboration between different clinical specialties and laboratory medicine. All patients with proven pancytopenia unexplained hemolysis, or thrombosis should be tested for PNH.

CR47

An unexpected penetrating aortic ulcer with thrombus: a case report

1. Iva Jurić (0009-0000-8748-1289) 2. Igor Rudež (0000-0002-7735-6721)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. Department of Cardiac and Transplant Surgery, University Hospital Dubrava, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR47

KEYWORDS: Penetrating Aortic Ulcer; Thrombus; Tumor

Abstract:

INTRODUCTION/OBJECTIVES: Penetrating aortic ulcer is an atherosclerotic lesion that extends from the intima into the media of the aortic wall. Typically observed in older patients with significant atherosclerosis, it may present with a spectrum of symptoms, ranging from an incidental finding to severe chest or back pain.

CASE PRESENTATION: A 49-year-old female patient was admitted to the hospital due to migratory headaches with fever, hypoglossal nerve palsy and articulation problems, which occurred after an episode of acute pharyngitis two months ago. Since 2010, she has been treated for Sweet syndrome. Due to exacerbation, corticosteroid therapy was initiated, resulting in a significant regression of symptoms. As part of the immunological assessment, transesophageal and transthoracic echocardiograms were performed, revealing a 2.6mm x 1.8mm exophytic floating formation in the ascending aorta. The aortic wall appeared thickened, and the formation was attached to the wall by a narrow stalk. Suspicion of endocarditis or a tumor formation led to the patient being transferred to the Department of Cardiac and Transplant Surgery. There, an elective surgical procedure involving aortic valve repair and excision of the formation was performed. The pathohistological examination of the thickened aortic wall revealed an aortic ulcer, and the suspicious formation turned out to be a thrombus. Postoperative course was uneventful and corticosteroid therapy for Sweet syndrome was continued in consultation with a rheumatologist.

CONCLUSION: In this case, initial concerns of endocarditis or tumor were dispelled, revealing an unexpected aortic ulcer with a thrombus, which highlights the need for comprehensive diagnostic approach in managing vascular pathologies.

CR48

The First Three-Dimensional (3D) Printed Model in Planning for Congenital Cardiac Surgery in Croatia - a Case of Scimitar Syndrome

1. Nermina Kamarić (0009-0008-4253-5050) 2. Lovro Jančić (0009-0004-2016-5037) 3. Konrad Alexander Kiss (0009-0002-8496-3383) 4. Bruno Ban (0009-0009-3247-0393) 5. Darko Anić (0000-0002-7378-944X)

1. School of medicine, University of Zagreb 2. School of medicine, University of Zagreb 3. School of medicine, University of Zagreb 4. School of medicine, University of Zagreb 5. Department of Cardiac Surgery, University Hospital Center Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR48

KEYWORDS: 3D printing; congenital cardiac surgery; Scimitar syndrome

Abstract:

INTRODUCTION/OBJECTIVES: Scimitar syndrome is a rare congenital heart defect (CHD) characterized by anomalous venous drainage of the right lung to the inferior vena cava. Herein we present a case of a 40-year-old patient with Scimitar syndrome and mitral valve regurgitation. Notably, this case marks the first application of 3D printing technology in the preoperative planning for a CHD in Croatia.

CASE PRESENTATION: The patient is a 40-year-old male without significant past medical history. He underwent a cardiology workup for fatigue. Echocardiography revealed moderate-to-severe mitral valve regurgitation with right heart dilatation. Computed tomography (CT) showed partial anomalous drainage of right pulmonary veins into the inferior vena cava, giving the diagnosis of Scimitar syndrome. A digital 3D model of patient-specific heart anatomy was generated based on the CT scan. Two weeks before surgery, a physical, two-colored, real-size model was fabricated. The patient underwent cardiac surgery. The mitral valve was replaced, as it was unsuitable for repair due to extensive leaflet fibrosis. Furthermore, in periods of intermittent deep hypothermic circulatory arrest a baffle was created using autologous pericardium rerouting the blood from the anomalous pulmonary veins into the left atrium. The postoperative course was remarkable for a complete atrioventricular block, necessitating pacemaker implantation. The patient was discharged from the hospital on 17th postoperative day.

CONCLUSION: The use of 3D models in cardiac surgery is state-of-the-art technology and its benefit is best

highlighted in complex CHD. The model accurately replicated the anatomical proximity of the hepatic veins and the Scimitar vein, which posed a significant surgical challenge.

CR49

Managing renal cell carcinoma in the solitary kidney- case report

1. Petra Knežević (0009-0003-3256-6527) 2. Elvira Krešić (0000-0001-9942-0272) 3. Ana Marija Alduk (0000-0002-5438-4439) 4. Sandra Ćulap (0009-0007-8041-9192) 5. Ana-Marija Ćulap (0009-0001-0220-2816)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. Department of Diagnostic and Interventional Radiology, University Hospital Centre Zagreb, Zagreb, Croatia 3. Department of Diagnostic and Interventional Radiology, University Hospital Centre Zagreb, Zagreb, Croatia; School of Medicine, University of Zagreb, Zagreb, Croatia 4. School of Medicine, University of Zagreb, Zagreb, Croatia 5. Institute of emergency medicine of Osijek-Baranja County

DOI: https://doi.org/10.26800/LV-146-supl2-CR49

KEYWORDS: Carcinoma,Renal Cell, Microwave Ablation,Cryoablation, Solitary Kidney

Abstract:

INTRODUCTION/OBJECTIVES: Renal cell carcinoma (RCC) represents 3% of all tumors in adult age. With the expansion in cross-sectional imaging, there has been an increase in the number of incidentally detected small renal tumors. Treatment options for those tumors are partial or radical nephrectomy and ablation therapy (microwave ablation, cryoablation, radiofrequency ablation).

CASE PRESENTATION: A 44-year-old female was admitted to the hospital for further evaluation of a tumor in the left kidney. The patient underwent thyroidectomy 9 years ago due to papillary thyroid carcinoma. Five years ago, a right nephrectomy was performed due to the presence of RCC. A year ago, a tumor mass was shown on a Computed Tomography (CT) scan within the solitary left kidney. Due to the size and location of the tumor, it was decided to perform percutaneous cryoablation of the tumor. The procedure was complicated by hemorrhage into the canal system and a drop in red blood cell count. Digital subtraction angiography did not show contrast extravasation, and the bleeding stopped spontaneously. A small residue of the tumor, located anteriorly in the post-ablation zone, was shown on the follow-up CT scan. Microwave ablation of the remaining viable tissue was performed, and the patient was discharged in good general condition, with a follow-up CT scheduled for one month after the procedure.

CONCLUSION: Minimally invasive ablative methods are safe and effective for small renal tumors. The decision of which method to use depends on the availability of the method itself, the localization of the tumor, and the operator's preference.

CR50

Dermatomyositis-like skin changes and lower leg ulcers caused by hydroxyurea: A Case Report

1. Lucija Kolar (0009-0008-4974-5835) 2. Marina Ikić Matijašević (0000- 0003-1511-0336)

1. School of Medicine University of Zagreb 2. Department for Clinical Immunology, Rheumatology and Pulmology,University Hospital Sveti Duh

DOI: https://doi.org/10.26800/LV-146-supl2-CR50

KEYWORDS: dermatomyositis; essential trombocythemia; hydroxyurea; leg ulcer

Abstract:

INTRODUCTION/OBJECTIVES: Dermatomyositis-like eruptions are a known but very rare side effect of

hydroxyurea, which is widely used in the treatment of chronic myeloproliferative disorders but is also used off-label as a therapy for skin diseases such as psoriasis. Despite already well-described multiple cutaneous drug adverse events, even patients with severe skin manifestations caused by hydroxyurea remain undiagnosed or misdiagnosed.

CASE PRESENTATION: Here we describe a patient who was treated with hydroxyurea due to essential thrombocythemia that resulted in dermatomyositis-like skin changes, xerosis, painful, well-defined ulcers on the distal lower legs, and potentially true clinically hypomyopathic dermatomyositis, and in whom we observed an excellent regression of skin changes and normalization of slightly elevated creatinine kinase after discontinuation of hydroxyurea and three months therapy with intravenous immunoglobulins. Also, as far as we know, our patient is the first in whom a low positive myositis-specific antibody anti-signal recognition particle was also found but without a typical clinical picture that would correspond to the said myositis-specific antibody. Specifically, the patient did not present with a clinical picture of immunemediated necrotizing myopathy. Three years after patient is still without clinical signs and symptoms of inflammatory myopathy.

CONCLUSION: The true role of these antibodies in the pathogenesis of multiple cutaneous manifestations, primary dermatomyositis cutaneous changes, during hydroxyurea therapy remains unknown, and further investigations are necessary. As internists and dermatologists, we must always keep in mind that certain clinical entities can be adverse events of a drug and that hydroxyurea toxicity management requires an interprofessional team of healthcare providers.

CR51

An unusual location of a solitary fibrous tumour - A report of two cases.

1. Ana Koprivica (0009-0000-4551-4580) 2. Mirjana Miladinović (0000-0001-6202-8429)

1. University of Montenegro, Faculty of Medicine 2. The Clinical Center of Montenegro, Department of Pathology, University of Montenegro, Faculty of Medicine

DOI: https://doi.org/10.26800/LV-146-supl2-CR51

KEYWORDS: lungs, peritoneum, a solitary fibrous tumour

Abstract:

INTRODUCTION/OBJECTIVES: A solitary fibrous tumour (SFT) is a rare mesenchymal tumour of variable malignant potential, usually of pleural origin. There are defined histological criteria for distinguishing benign from malignant SFTs. However, the connection between the histological features and the clinical behaviour of SFT is not so clear and these tumours still have an unpredictable course.

CASE PRESENTATION: A 63-year-old male patient had a four-month history of abdominal complaints; a computerized tomography (CT) scan revealed a 40 cm tumour mass from the xiphoid process to the level of the urinary bladder. Surgical extirpation of the tumour was performed and the diagnosis of peritoneal SFT (score 6 - high grade) was established by pathohistological evaluation. After more than two years of follow-up, the patient has no signs of recurrence/dissemination of the underlying disease. A 65-year-old woman, after a prolonged SARS-CoV-2 infection, had a 7 cm tumour nodule that was accidentally found on the CT scan in her left lung. A lobectomy was performed. The pathohistological diagnosis of intrapulmonary SFT was established (score 3 - low grade). After two years, the patient was pathohistologically proven to have metastases of SFT in her left femur. In both cases, tumours were positive for CD34, CD99, Bcl2 and a special STAT6 immunohistochemical marker.

CONCLUSION: Because of its heterogeneous morphology, SFT presents a diagnostic challenge because it can mimic different mesenchymal and non-mesenchymal tumour entities. These two cases of unusually located

SFTs show the importance of discussing the atypical biological behaviour, as well as clinicopathological and immunohistochemical features necessary for diagnosis.

CR52

Acute abdomen as a first sign of metastatic squamous cell carcinoma of the lungs

Bruno Korać[1], Branko Bogdanić[2]

1 - School of Medicine, University of Zagreb, Zagreb, Croatia

2 – Department of Surgery, University Hospital Centre Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR52

KEYWORDS: abdomen, acute; laparotomy; neoplasm metastasis; neoplasms, squamous cell

INTRODUCTION: Squamous cell carcinoma (SCC) of the lung, is the second most common type of non-small cell lung cancer (NSCLC). It is more strongly associated with smoking than any other type of NSCLC. Risk factors include age, second-hand smoke exposure, family history, and exposure to minerals/metals or asbestos. Gastrointestinal metastases from lung cancer are uncommon but can occur, with the small bowel being the most common site.

CASE PRESENTATION: A 73-year-old male smoker arrived at the emergency department with 5-day diffuse abdominal pain, 3-day obstipation, and 1-day vomiting. Laboratory findings showed mild anemia (hemoglobin 112 g/L), elevated CRP levels (15,7 mg/L), and slightly elevated leukocytes. CT scans showed a thickened wall of the ileum with bowel obstruction, emphysema, and suspected inflammation due to consolidation in the left lung. Urgent explorative laparotomy revealed two jejunal tumors causing obstruction, tumors of the spleen, and enlarged mesenteric lymph nodes. Two resections and two end-to-end anastomoses were performed, and the postoperative course was uneventful. A pathology finding of resected small bowel was metastatic SCC. A bronchoscopy identified a primary tumor in the left lower lobe. Despite radiotherapy plans, the patient's condition deteriorated rapidly, and he passed away 46 days after the surgery.

CONCLUSION: Acute abdomen as the first symptom of squamous cell carcinoma of the lungs is extremely rare. The outcome of patients with GI metastases is very poor, and most of the patients succumb to their disease within 6 months after the diagnosis, as was the case with our patient.

CR53

Lumbar drainage instead of external ventricular drainage in patients with hypertensive hydrocephalus

1. Pia Kosanović (0009-0009-2915-3186) 2. Dora Franciska Tuđman Šuk (0009-0001-7017-5207) 3. Marta Živković Njavro (0000-0003-3049-4091) 4. Zdravka Poljaković-Skurić (0000-0002-7216-6478)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. Health Centre Zagreb- Centar, Zagreb, Croatia 4. Department of Neurology, University Hospital Centre Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR53

KEYWORDS: Craniotomy, Drainage, Hemorrhage, Hydrocephalus

Abstract:

INTRODUCTION/OBJECTIVES: Hypertensive (obstructive) hydrocephalus is symptomatic accumulation of cerebrospinal fluid inside the cerebral ventricles. Acute hypertensive hydrocephalus occurs in intracranial hemorrhage, it can result in permanent brain damage. Treatment includes external ventricular drain that aids in reduction of intracranial hypertension and allows continuous intracranial pressure monitoring. Lumbar drainage is used as an equally efficient urgent treatment.

CASE PRESENTATION: A 76-year-old male presented with an abrupt disturbance in consciousness. Emergency neuroradiological examination proved an acute hematoma in the vermis of cerebellum, with blood extravasation into ventricular system and development of supraventricular hydrocephalus and early signs of tonsillar herniation of cerebellum. The patient had isochoric pupils with a weak photo-reactive response and an abnormal bilateral plantar response. Decompression craniotomy and evaluation of the hematoma was performed and an external ventricular drain was placed. The ventricular drain had to be taken out on two occasions due to system dysfunction with consequent clinical and neuroradiological symptoms of hydrocephalus. A lumbar drain was then placed with neuroimaging control and monitoring of intracranial pressure and a significant regression of hydrocephalus was evident with an overall improvement in the clinical picture. There was a continued gradual improvement in the neurological status and stationary physical rehabilitation was recommended

CONCLUSION: Lumbar drainage is a valuable method for temporary drainage of cerebrospinal fluid in case of hypertensive hydrocephalus with a significantly lower risk of side effects when compared to external ventricular drainage. Studies have shown it to be a promising measure in prevention of hemorrhage-related ischemia and other complications.

CR54

Eyes as a Mirror of Multiple Myeloma; Case Report

1. Marija Kostanjski (0009-0002-8853-7277) [Izlažući autor] 2. Adrian Sallabi (0009-0006-7749-4880) 3. Josip Došen (0009-0002-7261-6747) 4. Tea Iletić (0009-0004-1350-4686) 5. Tamara Mišljenović Vučerić (0000-0002-4507-7533)

1. Faculty of Medicine, University of Rijeka, Rijeka, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. Faculty of Medicine, University of Rijeka, Rijeka, Croatia 4. Faculty of Medicine, University of Rijeka, Rijeka, Croatia 5. Department of Ophthalmology, Clinical Hospital Center, Rijeka, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR54

KEYWORDS: Blepharoptosis; Carotid-Cavernous Sinus Fistula; Diplopia; Multiple Myeloma

Abstract:

INTRODUCTION/OBJECTIVES: Superior ophthalmic vein thrombosis (SOVT) is an extremely rare condition with multiple etiologies, including orbital infections, tumors, and traumatic or spontaneous carotid-cavernous fistulas. This case report aims to present an unusual case of superior ophthalmic vein thrombosis, which served as the initial indication of potential multiple myeloma. To date, only one similar case has been described in the literature.

CASE PRESENTATION: An 81-year-old female patient was admitted to the Department of Ophthalmology with a confirmed diagnosis of SOVT. She reported exacerbation of pain in her right eye the day before admission, accompanied by 12 days of eye protrusion, pulsatile right-sided headaches, and ptosis of the right eyelid. Eye examination revealed restricted adduction of the right eye, diplopia on vertical gaze, chemosis of the conjunctiva, and dilated conjunctival and episcleral vessels. Treatment involved brimonidine tartrate, timolol maleate, and latanoprost eye drops. She has been under the hematologist's monitoring for years due to a stable course of IgG lambda monoclonal gammopathy without progression. Consultations with various specialists raised suspicion of multiple myeloma. A year later, worsening ocular findings and retinopathy with signs indicative of a hematological disease emerged. Orbital MRI indicated thickening of the extraocular

muscles, suggesting thyroid orbitopathy radiologically, although not confirmed clinically or through laboratory tests. The patient declined the proposed biopsy of the extraocular muscles.

CONCLUSION: SOVT serves as a significant clinical indicator of potential systemic diseases such as multiple myeloma, highlighting the necessity for interdisciplinary collaboration in diagnosis and management to achieve optimal clinical outcomes.

CR55

Hip pain? Consider extraosseous multiple myeloma.

Katarina Kovač[1], Lorena Loje[1], Miroslav Mayer MD, PhD[1,2] (mentor)

[1] School of Medicine Zagreb, University of Zagreb, Zagreb, Croatia
[2] Division of Clinical Immunology and Rheumatology, Department of Internal Medicine, University Hospital Center KBC Zagreb, Zagreb, Croatia

Katarina Kovač (0000-0003-4475-4341)

Lorena Loje (0009-0004- 5081-3090)

Miroslav Mayer (0000-0001-9951-6610)

DOI: https://doi.org/10.26800/LV-146-supl2-CR55

Keywords: Arthralgia, Multiple Myeloma, Systemic Sclerosis, CREST Syndrome

INTRODUCTION: Multiple myeloma is a neoplastic proliferation of plasma cells producing monoclonal immunoglobulin. It's a rare cancer of the skeletal system, that rarely manifests in extraosseous form that correlates with a poorer prognosis and reduced survival rates.

CASE PRESENTATION: We present a 55-year-old Caucasian male patient treated since 2018 for CREST syndrome (calcinosis, Rayund's phenomenon, esophageal dysmotility, sclerodactyly, and telangiectasia) who was transferred from the Emergency Department to the Hospital Rheumatology Department for further evaluation due to pain located in his hip region. Two weeks after the initial localized symptoms, the patient reports radiation of the pain through the right side of the pelvis alongside the development of fever. The patient also reports irritation while urinating, but bowel movements are normal. On examination, the reduced range of motion is noted. An ultrasound of the perineum revealed a collection of heterogeneous content and a CT scan confirmed a lobule tumor mass that invaded the urine bladder, right obturator muscle, prostate, and rectum. With additional scintigram, metastasis in the manubriosternal junction and on the right side of the pubic bone were found. A biopsy confirmed a Myeloma multiplex type IgA lambda. The patient was transferred to the Hematology Unit for further evaluation and treatment.

CONCLUSION: The presentation of symptoms, such as hip pain, commonly attributed to degenerative conditions, can obscure the possibility of rare and potentially life-threatening diseases. In this case, thorough symptom investigation precipitated the identification of extraosseous multiple myeloma, leading to timely intervention and ultimately saving the patient's life.

CR56

Trastuzumab deruxtecan in severely pretreated patients: Second-line standard demonstrating its efficacy even at later lines – a case report

1. Ivana Kovačević (0009-0007-6289-204X) 2. Natalija Dedić Plavetić (0000-0003-0505-4756)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. Division of Medical Oncology, Department of Oncology, University Hospital Center Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR56

KEYWORDS: Antibody Drug Conjugate, Breast Neoplasms, Epidermal growth factor 2, Trastuzumab Deruxtecan

Abstract:

INTRODUCTION/OBJECTIVES: Trastuzumab emtansine (T-DM1) was the standard second-line treatment for patients with human epidermal growth factor receptor 2 positive metastatic breast cancer (HER2+mBC) until recently. In a DESTINY Breast-01 trial, efficacy of trastuzumab deruxtecan (T-DXd) in heavily pre-treated patients was demonstrated. DESTINY Breast-03 trial proved T-DXd to be dramatically superior compared to T-DM1. T-DXd is the current standard as a second-line treatment. Consequently, previously treated women did not receive it.

CASE PRESENTATION: We present a 60-year-old female patient with 8 years history of HER2+mBC treatment. She progressed in 2017 developing lung metastases. According to guidelines for those who progressed during adjuvant trastuzumab therapy, T-DM1 therapy was started and upon progression she was treated with multiple lines of therapy for HER2+mBC according to drug availability reimbursement in Croatia: T-DM1, doxorubicin as a second line, lapatinib plus capecitabine, vinorelbine with pertuzumab and trastuzumab, and neratinib plus capecitabine as a fifth-line therapy. Unfortunately, CT scans showed progressive dynamic of disease, and T-DXd and tucatinib were unavailable in Croatia at that time. Thankfully, as a part of compassionate use program, T-DXd therapy was approved and started in August 2022. Since the patient developed grade 1 pneumonitis within 4 months, a reduced dose was administered. Despite dose reduction, disease regression was achieved and after 22 cycles (17 months), therapy with T-DXd is ongoing as sixth line of treatment. Patient is asymptomatic and without significant side effects.

CONCLUSION: This case accentuates, despite pneumonitis and reduced dose, T-DXd showed durable response in heavily pre-treated patient with HER2+mBC.

CR57

Unusual Treatment for the Nutcracker Syndrome

1. Anamarija Kovačić (0009-0005-5536-1190) [Izlažući autor] 2. Barbara Krejči (0009-0002-4017-8391) 3. Tomica Bratić (0000-0002-3806-4785) 4. Vinko Vidjak (0000-0003-3929-3130)

1. School of Medicine, University of Zagreb, Croatia 2. School of Medicine, University of Zagreb 3. Clinical Hospital Merkur, Clinical Department of Diagnostic and Interventional Radiology, Zagreb, Croatia 4. Clinical Hospital Merkur, Clinical Department of Diagnostic and Interventional Radiology, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR57

KEYWORDS: Endovascular Procedures; Radiology, Interventional; Renal Nutcracker Syndrome; Printing, Three-Dimensional

Abstract:

INTRODUCTION/OBJECTIVES: Nutcracker syndrome, also known as renal vein entrapment syndrome, is a condition involving an anatomically anomalous narrowing of the angle between the aorta and superior mesenteric artery with subsequent compression of the left renal vein and obstruction of its blood flow. It manifests in young, developing adults in various ways, while severe cases may require kidney autotransplantation. Interventional radiology provides endovascular treatment, often offering only short-term improvement. This case report aims to demonstrate the value of a hybrid approach as a long-term solution to the problem.

CASE PRESENTATION: A 15-year-old suffering from the aforementioned syndrome experienced severe chronic pain, which significantly decreased his quality of life by limiting his ability to attend school and sports activities. The conventional methods of treatment, including percutaneous transluminal angioplasty (PTA) with stenting, can lead to complications such as inadequate stent placement or stent migration. Instead, our

patient received a personalized 3D-printed stent that was laparoscopically placed around the left renal vein, preventing its compression. This procedure was a team effort that brought together Croatian and Chinese medical professionals whose collaboration marked the first time such a stent was used in a non-Chinese patient. Results showed immediate regression of the disease followed by a complete recovery.

CONCLUSION: Even though the described procedure is still not widely used to treat nutcracker syndrome, it is worth considering in suitable patients and has a great prospect of becoming the standard model of care, providing instant results and definitive treatment.

CR58

Alternative Treatment of Massive Deep Vein Thrombosis in a Minor

1. Barbara Krejči (0009-0002-4017-8391) [Izlažući autor] 2. Anamarija Kovačić (0009-0005-5536-1190) 3. Tomica Bratić (0000-0002-3806-4785) 4. Vinko Vidjak (0000-0003-3929-3130)

1. School of Medicine, University of Zagreb, Croatia 2. School of Medicine, University of Zagreb 3. Clinical Hospital Merkur, Clinical Department of Diagnostic and Interventional Radiology, Zagreb, Croatia 4. Clinical Hospital Merkur, Clinical Department of Diagnostic and Interventional Radiology, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR58

KEYWORDS: Venous Thrombosis; Thrombectomy; Thrombolytic Therapy; Thrombophilia

Abstract:

INTRODUCTION/OBJECTIVES: Deep vein thrombosis is an impactful mortality-contributing factor in adults, less common in the juvenile population, especially in its massive form. This report aims to showcase an unconventional solution for this rare occurrence.

CASE PRESENTATION: A minor-aged hockey player experienced a traumatic injury during a sporting event that led to extensive thrombosis of the deep femoral and iliac veins bilaterally, the infrarenal portion of the hypoplastic inferior vena cava, as well as collateral paravertebral veins. Both the acquired injury and the congenital hypoplasia of the inferior vena cava represent significant risk factors bolstering a state of hypercoagulability and subsequent clot formation. Considering the severity of the patient's condition and his young age, the primary institution of care could only offer conservative treatment, and three other clinical hospitals decided against admission, but he was ultimately transferred to Clinical Hospital Merkur. Upon a comprehensive evaluation of the child's specific circumstances by a team of health professionals, a treatment strategy fitting his individual needs was determined. The patient underwent local thrombolysis and pharmacomechanical thrombectomy, followed by a fibrinolytic infusion of Alteplase during a twelve-hour observation period in the Intensive Care Unit. The next day, a control phlebography with additional aspiration thrombectomy restored the full patency of the affected vessels, resulting in a complete recovery.

CONCLUSION: Encouraged by this success, we recommend the described course of treatment be included in the decision-making process regarding therapeutic protocols for massive deep vein thrombosis in all patient age groups.

CR59

Multidisciplinary approach in the treatment of familial hypercholesterolemia revealed after sudden cardiac death: a case series

1. Matej Krišto (0009-0005-1534-0416) [Izlažući autor] 2. Karolina Beg (0009-0009-6670-9956) 3. Sandra Jakšić Jurinjak (0000-0002-7349-6137)

1. Health Center Zagreb-Center, Zagreb 2. School of Medicine, University of Zagreb 3. Department of Cardiovascular Diseases, University Hospital Centre Zagreb; School of Medicine, University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR59

KEYWORDS: Coronary Artery Disease; Non-ST Elevated Myocardial Infarction; PCSK9 Inhibitors; Receptors, LDL

Abstract:

INTRODUCTION/OBJECTIVES: Familial hypercholesterolemia (FH) is a group of inherited genetic disorders, commonly caused by mutations in the LDL receptor gene, leading to reduced synthesis or disruption in receptor function. Consequently, increased LDL plasma levels due to reduced uptake accelerate atherosclerosis development and increase the risk of premature coronary artery disease (CAD).

CASE PRESENTATION: We present a family with familial hypercholesterolemia, revealed after sudden cardiac death (SCD) of a young male at the age of 37. The first patient, a 75-year-old man with arterial hypertension, underwent triple coronary artery bypass surgery in 2014 due to CAD and NSTEMI. Going further back, the family history was positive for SCD and early CAD. His younger 31-year-old son, was diagnosed with non-obstructive CAD and hypercholesterolemia after SCD of his brother. His poor statin therapy compliance resulted in an acute coronary syndrome episode a year later, leading to percutaneous coronary intervention on the left anterior descending artery. The third patient, a 45-year-old daughter, was also diagnosed with non-obstructive CAD, but her target values of LDL cholesterol were not reached despite therapy with statins. Hypolipidemic statin therapy was up-titrated, and new therapy with PCSK9 inhibitor was introduced for all family members. Because of the hard time coping with the diagnosis of FH and its consequences, a young patient required psychiatric treatment and psychological support, leading to better compliance in therapy for FH.

CONCLUSION: The interdisciplinary approach and team cooperation of a cardiologist, psychiatrist, psychologist, cardiac surgeon and endocrinologist are crucial for achieving a successful therapy outcome in patients with FH.

CR60

Cervical Necrotizing Fasciitis: A Race Against Time for Successful Resolution

1. Marjan Kulaš (0000-0001-5140-8514) [Izlažući autor] 2. Melita Klaić (0000-0003-4493-3702) 3. Klara Miljanić (0000-0002-5049-6783) 4. Matija Mamić (0000-0002-3117-2943)

1. School of Medicine, University of Zagreb

2. School of Medicine, University of Zagreb

3. Health Center Zagreb - West

4. Department of maxillofacial surgery, Clinical Hospital Dubrava, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR60

KEYWORDS: Emergency Treatment, Necrotizing Fasciitis, Soft Tissue Infections, Surgical Procedures

Abstract:

INTRODUCTION/OBJECTIVES: Cervical Necrotizing Fasciitis (CNF) is a purulent inflammatory process of the neck that lacks a lesion's borders and is characterized by necrosis. If not properly treated, CNF can ultimately be fatal. We present an emergency patient with necrotizing fasciitis of the right para- and retro-pharyngeal space where a prompt reaction was necessary.

CASE PRESENTATION: A 32-year-old obese but otherwise healthy man, was referred for an emergency CT scan of the head and neck region due to painful and acute neck edema. Clinical status presented red and indurated swelling, extremely painful on palpation. The inflammation of the parotid region spreads into the para- and retropharyngeal space towards the paravertebral musculature. Surgical treatment consisted of the

necerectomy of the necrotic skin and the underlying structures on the right side of the neck. Two passive drains were placed to reduce local edema. Antibiotics were administered i.v. and the neck was irrigated several times per day with an antibacterial wound solution. Postoperatively, the patient's general condition gradually improved and the inflammatory parameters decreased.

CONCLUSION: Timely recognition and intervention are critical in managing severe soft tissue infections such as CNF. Surgical necrectomy, administration of i.v. antibiotic therapy and supportive care are the mainstay of the treatment in such cases case.

CR61

EUS-guided biliary drainage using lumen-apposing metal stents for distal malignant biliary obstruction

Karla Lakobrija[1] , (0000-0002-2201-8207), Sandro Kukić (0000-0001- 6425-1624)[1],Tajana Pavić (0000-0002-0370- 5001) [1,2]

[1]School of Medicine, University of Zagreb

[2]Division of Gastroenterology and Hepatology, Department of Internal Medicine, University Hospital Center "Sestre Milosrdnice", Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR561

Keywords: Choledochostomy; Endosonography; Endoscopy; Cholestasis; Drainage

Abstract:

INTRODUCTION/OBJECTIVES: Distal malignant biliary obstruction is often the result of periampullary cancers unresectable upon the initial diagnosis. Traditional transpapillary access via endoscopic retrograde cholangiopancreatography (ERCP) is ineffective in slightly less than 20% of cases, leading to the introduction of endoscopic ultrasound-guided choledochoduodenostomy (EUS-CDS) with a lumen-apposing metal stent (LAMS) as an alternative to percutaneous biliary drainage.

CASE PRESENTATION: A 59-year-old female was hospitalized for upper abdominal pain, nausea and jaundice. Laboratory results indicated biliary obstruction and elevated tumor marker CA19-9. Cross-sectional imaging revealed gallbladder distension without cholelithiasis, dilated bile ducts, primarily the common bile duct, a pancreatic head mass and focal liver lesions, both suggesting neoplasia. A single procedure included an EUS-guided fine needle biopsy, subsequently confirming pancreatic adenocarcinoma with liver metastases. Following this, ERCP was performed, but despite multiple attempts to cannulate the biliary system, transpapillary drainage was unsuccessful due to perimapullary tumor infiltration. Consequently, EUS-guided choledochoduodenoanastomosis (EUS-CDS) with LAMS placement was carried out in the same act using a free-hand technique. A choledochoduodenal anastomosis was successfully established, creating an effective draining biliary bypass away from the tumor and pancreatic duct. Postprocedural bilirubin levels decreased and ultrasound showed a normal-width common bile duct with significant clinical improvement.

CONCLUSION: This case report documents the first successful implementation of EUS-CDS using LAMS in Croatia, resulting in significant progress in minimally invasive interventional endoscopy for conditions previously managed surgically. EUS-CDS, superior to percutaneous methods after failed ERCP, is increasingly recognized for effective biliary drainage and shows promise as a possible first-choice treatment for such cases.

CR62

A case report of recurrent rhabdomyolysis: A diagnostic challenge

1. Luka Linarić (0009-0005-4418-044X) [Izlažući autor] 2. Ivana Kulišić (0009-0003-9328-497X) 3. Ante Kuštra (0009-0001-1735-4839) 4. Ana Lovrić (0009-0007-9139-0129) 5. Marina Ikić Matijašević (0000-0003-1511-0336)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. School of Medicine, University of Zagreb, Zagreb, Croatia 4. School of Medicine, University of Zagreb, Zagreb, Croatia 5. Department of Clicinal Immunology, Rheumatology and Pulmonology, University Hospital Sveti Duh, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR62

KEYWORDS: ezetimibe, myopathy, rhabdomyolysis, statins

Abstract:

INTRODUCTION/OBJECTIVES: Rhabdomyolysis is a medical condition characterized by muscle necrosis, usually caused by metabolic disorders, infections, trauma and certain medications, most commonly statins. Ezetimibe, a selective cholesterol absorption inhibitor, is a drug of choice for the treatment of dyslipidaemia in patients with a high risk of rhabdomyolysis.

CASE PRESENTATION: A 65-year-old patient was hospitalized due to weakness and pain in the proximal muscles, dark urine, fever, elevated muscle enzymes (CK 23681 IU/L) and inflammatory markers. The patient had prior hospitalizations due to rhabdomyolysis attributed to statin therapy, and has subsequently been using ezetimibe as a replacement for the past few months. In order to find the potential cause, a thorough evaluation was performed. The EMG findings didn't reveal a myopathic pattern. Muscle biopsy and negative myositis-specific antibodies excluded inflammatory myopathies. The myositis-viral panel and blood cultures were negative. Laboratory tests ruled out endocrinopathies or electrolyte abnormalities. Neurological assessment revealed no signs or symptoms indicative of metabolic or mitochondrial myopathies. Ezetimibe discontinuation and extensive hydration for the prevention of acute kidney injury (AKI) led to the recovery of muscle weakness and pathological findings.

CONCLUSION: Early recognition of rhabdomyolysis and fluid initiation, regardless of renal function, prevent severe metabolic disturbances and AKI. In the case of recurrent rhabdomyolysis, an extensive diagnostic workup for identification of the specific cause, along with discontinuation of the drug that may be an etiologic factor is mandatory. Ezetimibe is an extremely rare cause of rhabdomyolysis. Further investigation to identify possible underlying defects in muscle metabolism and regular clinical assessments are needed.

CR63

Diabetic ketoacidosis and hypernatremic dehydration in an eight-month-old infant with new-onset type 1 diabetes

1. Nika Lovreković (0009-0009-7436-736X) 2. Nevena Krnić (0000-00020108-5881)

1. School of Medicine University of Zagreb2. Division for Pediatric Endocrinology, Department of Pediatrics; University Hospital Centre Zagreb; School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR63

KEYWORDS: Dehydration; Diabetes mellitus, type 1; Diabetic ketoacidosis; Hypernatremia

Abstract:

INTRODUCTION/OBJECTIVES: Diabetic ketoacidosis (DKA) is a life-threatening complication of type 1 diabetes (T1D) characterized by hyperglycemia, metabolic acidosis, and increased ketone production. DKA is a frequent complication in newly diagnosed T1D patients. Hypernatremia (sodium levels above 145 mmol/L) is rarely seen in DKA patients.

CASE PRESENTATION: We present a case of an eight-month-old male infant with T1D who developed severe

DKA and hypernatremic dehydration at onset of diabetes. His mother has juvenile-onset T1D. Initial evaluation at ER revealed DKA (BG 22.3 mmol/L, pH 7.026) and patient was admitted to Pediatric intensive care unit. He was awake and conscious (blood pressure 107/78 mmHg, pulse 114/min, respiratory rate 60/min), BW 6600 g, (-2.5 SD), with Kussmaul breathing pattern. Laboratory findings showed hyperglycemia (24.8 mmol/L), metabolic acidosis (pH 6.97, base excess -26.3), hypernatremia (Na 146, corrected Na 152 mmol/L) and hypokalemia (3.5 ... 2.7 mmol/L). The treatment with parenteral rehydration (dextrose fluids and potassium replacement) and intravenous insulin was initiated. Further laboratory evaluation revealed elevated HbA1c (7.4%), low C-peptide (0.11 nmol/L) and negative tyrosine phosphatase-related (IA-2) and anti-glutamic acid decarboxylase (GAD) islet antibodies. Additional genetic analysis to rule out gene mutations associated with neonatal diabetes was negative.

CONCLUSION: Type 1 diabetes is rarely seen in infants, but often present with rapid development, less recognizable symptoms and severe DKA. DKA should be considered in all ill-appearing infants presenting with dyspnea and metabolic acidosis. In case of negative islet antibodies and positive family history, it is important to rule out the genetic forms of diabetes in all infants.

CR64

Cochlear Implantation as a Treatment Strategy for Single-sided Sensorineural Hearing Loss

Antonia Lovrenčić[1], Helena Lovrić[1], Klara Labaš[1], Andro Košec[1]

1School of Medicine, University of Zagreb, Zagreb, Croatia, [2]Department of Otorhinolaryngology and Head and Neck Surgery, University Hospital Center Sestre milosrdnice, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR64

KEYWORDS: Cochlear Implantation; Hearing Loss, Sensorineural; Otologic Surgical ProcedureIntroduction

INTRODUCTION: Hearing loss is a prevalent complaint often prompting referrals to otorhinolaryngology specialists, with sensorineural hearing loss (SNHL) accounting for majority of cases. SNHL results from various pathologies affecting the cochlea, auditory nerve, or central nervous system.

CASE PRESENTATION: This case presents a patient who experienced severe left-sided hearing loss after a middle ear infection in 2005. Additional impairment occurred in 2022, with sudden idiopathic right-sided hearing loss following sea-diving. Immediately after, short-term dizziness was recorded, without further balance disturbances. Despite undergoing conservative treatment, there was no significant improvement, and a hearing-aid fitted on the patient's right ear demonstrated minimal benefit to speech intelligibility. Pure tone audiogram confirmed bilateral SNHL, while physical examination revealed no structural facial or ear abnormalities and MRI showed normal middle ear morphology. Residual hearing on the right ear enabled intelligibility in quiet surroundings, but the ideal rehabilitation option was a left-sided cochlear implantation (CI), with residual hearing preservation. In 2024, left-sided CI was performed using a retroauricular approach and soft-surgery hearing preservation techniques. The surgery was successful, early postoperative care went well and the patient was released in good general condition with appropriate local findings. Device activation was planned for three weeks following surgery.

CONCLUSION: After presenting with bilateral SNHL and yielding no significant improvement from conservative approach, this case highlights potential advantages of CI as a treatment choice for severe single-sided SNHL and bimodal hearing options. This patient will likely benefit greatly from device activation joined with a right-sided hearing-aid, potentially improving speech and overall quality of life.

CR65

Concomitant Aortic Arch Replacement And Aortic Valvuloplasty: A Comprehensive Approach For A Giant Dissected Thoracic Aneurysm Management

1. Helena Lovrić (0009-0008-7335-3647) [Izlažući autor] 2. Antonia Lovrenčić (0000-0002-5576-0360) 3. Nikola Slišković (0000-0002-9796-736X) 4. Gloria Šestan (0000-0002-6245-5508) 5. Igor Rudež (0000-0002-7735-6721)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. Department of Cardiac Surgery, Dubrava University Hospital , Zagreb, Croatia 4. Department of Cardiac Surgery, Dubrava University Hospital , Zagreb, Croatia 5. Department of Cardiac Surgery, Dubrava University Hospital , Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR65

KEYWORDS: Aortic Aneurysm, Thoracic; Aortic Valve Insufficiency; Blood Vessel Prosthesis Implantation; Cardiac Surgical Procedures; Dissection, Thoracic Aorta

Abstract:

INTRODUCTION/OBJECTIVES: Aortic aneurysms and dissections involving the ascending aorta and aortic arch can often be coupled with acute aortic regurgitation and often necessitate urgent and complex surgical interventions for optimal management. This report presents a case in which an interposition graft is used to replace the ascending aorta and aortic arch, with the separate reimplantation of supra-aortic branches and aortic valve repair.

CASE PRESENTATION: We present a case of a 67-year-old woman who had a thoracic aneurysm with Stanford A aortic dissection of unknown date. Preoperative MSCT aortography revealed ascending aortic aneurysm with a maximum diameter of 11x10,4 cm and an intramural thrombus. The ultrasound showed mild to moderate aortic regurgitation. The procedure was performed using cardiopulmonary bypass in mild hypothermia with antegrade cerebral perfusion. The ascending aorta and aortic arch were replaced with interposition vascular graft and supra-aortic branches were reimplanted separately. The aortic valve was repaired using subcommissural annuloplasty. After the procedure, the patient was transferred to the Intensive Care Unit in a hemodynamically stable condition. Due to increased drainage in the early postoperative period, resternotomy and hemostasis were performed, resulting in normal postoperative drainage. The patient's postoperative course was uneventful and the patient was discharged from the hospital on postoperative day 20.

CONCLUSION: Aortic aneurysm is a complex aortic disease that has multiple possible complications including acute aortic dissection and aortic valve regurgitation. This case illustrates the successful use of an interposition graft, supra-aortic branch reimplantation, and aortic valve repair in managing a complex ascending aortic aneurysm with dissection.

CR66

Clinical Challenges and Treatment Strategies of exotic heart tumor - Chondrosarcoma

Matea Lukić[1], Matija Drinković[2], Grgur Dulić[2]

1- Faculty of Medicine, J. J. Strossmayer University of Osijek, Osijek, Croatia

2 - Department of cardiac and thoracic surgery, Clinical Hospital Centre Osijek, Osijek, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR65

KEYWORDS: Chondrosarcoma, Echocardiography, Heart Neoplasms, Mitral Valve Stenosis

INTRODUCTION: Chondrosarcoma is a malignant tumor which arises from cartilaginous tissue. Primary heart chondrosarcomas are extremely rare and the literature is still scarce. Most of the primary tumors were described in right atrium.

CASE REPORT: A 56-year-old male patient with no conspicuous medical history has reported to his general practitioner (GP) due to easy fatigability in physical activity for several months. GP performed auscultation

and mild murmur was heard. The patient was referred to Cardiology department where transthoracic ultrasound (TTE) was done. TTE revealed a heterogeneous, egg-shaped mass that was 7x5cm big, originally believed to be a left atrial myxoma. Because of the sheer size of the mass and its protrusion into the left ventricle during diastole, there was a functional mitral stenosis and surgery was performed. Perioperatively the mass was attached to the posteroseptal wall of left atrium (LA); the attachment was near mitral annulus as well. The tumor was shaved off of the LA. Pathological examination revealed it to be chondrosarcoma. His postoperative course was complicated with complete atrioventricular block, so permanent pacemaker was implanted. He was discharged after 10 days. On follow-up, no neoplasm reoccurred within 1 year. However, after the second year positron emission tomography and computed tomography (PET-CT) were performed revealing a mass in the left acetabular region that could be primary tumor or metastasis of the original heart chondrosarcoma.

CONCLUSION: Surgical treatment is the first choice of treatment for chondrosarcomas of the heart, which are extremely rare malignancies that can only be definitively diagnosed through a pathological examination.

CR67

Multidisciplinary step-up approach to Walled-off pancreatic necrosis: a case report

1. Ivana Maletić (0009-0004-8503-0360) 2. Nika Rakuša (0009-0003-9250-474X) 3. Mirjana Kalauz (0000-0002-7925-4737)

1. University of Zagreb, School of Medicine, Zagreb 2. University of Zagreb, School of Medicine, Zagreb 3. University Hospital Centre Zagreb, Department of gastroenterology, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR67

KEYWORDS: Pancreatitis, Peripancreatic Fat Necrosis, False aneurysm, Ultrasonography, Drainage

Abstract:

INTRODUCTION/OBJECTIVES: Walled-off pancreatic necrosis (WOPN) is a rare complication of acute pancreatitis, according to the Atlanta classification system defined as a collection associated with necrotizing pancreatitis, persisting after 4 weeks and surrounded by a wall. WOPN is a heterogeneous collection containing liquid and solid necrotic material that can lead to recurrent pancreatitis, fistula formation, bowel obstruction, or death.

CASE PRESENTATION: 54-year-old man was first admitted in February 2023 with acute necrotizing pancreatitis and four weeks after the onset of symptoms he was transferred to the Department of Gastroenterology, University Hospital Zagreb. Radiological follow-up showed multiple WOPN. With persistent epigastric abdominal pain, elevated inflammatory markers and enlarged collections indications for drainage were established. The largest collection of 132 mm located close to major gastric curvature was treated with endoscopic drainage. During the single-step procedure, expandable metal stent was inserted allowing drainage of puss and necrotic material. Ectopic multilocular collection located intrahepatally (between IVb and V liver segment), that spread due to pancreatic anatomical location and peripancreatic fat, was treated by percutaneous drainage for 2 weeks. A follow-up CT scan showed splenic artery pseudoaneurysm, abnormal outpouching of arterial wall bounded by tunica adventitia. It was treated by transcatheter embolization where 14 coils were placed proximally and distally to pseudoaneurysm and patient was hemodynamically stable afterwards.

CONCLUSION: Walled-off pancreatic necrosis is a serious complication after acute necrotizing pancreatitis. A multidisciplinary approach is recommended for the treatment involving percutaneous, endoscopic, and surgical procedures. Minimally invasive and step-up approach is advised but often combination of these techniques is required.

CR68

Female patient with three simultaneous primary malignancies: a case report

1. Antonio Marić (0009-0007-4870-1171) [Izlažući autor] 2. Zdravko Mitrović (0000-00029896-1234)

1. School of Medicine, University of Zagreb, Zagreb, Croatia2. Division of Hematology, Clinical Hospital Dubrava, Zagreb, Croatia; School of Medicine, University of Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR68

KEYWORDS: Carcinoma, Drug Therapy, Lymphoma, Multiple Primary Neoplasms, Radiotherapy

Abstract:

INTRODUCTION/OBJECTIVES: Multiple primary malignancies (MPMs) are defined as the coexistence of at least two unrelated primary malignancies in a single patient, with the tumors differing in their histology. We present the case of a patient with aggressive lymphoma of the maxillary sinus, myoepithelial carcinoma in the oral cavity, and suspected cholangiocarcinoma in the liver.

CASE PRESENTATION: We present a 76-year-old woman with a complex medical history who complained of upper left jaw soreness and pain. Clinical examination detected a proliferative process on the right maxillary gingiva, lateral half of the hard palate, and dorsally extending to the anterior soft palate. Computed tomography (CT) of the head, neck, and chest revealed a 48x48x46mm neoplastic process in the right maxillary sinus destructing the surrounding bones. In addition, an irregular, heterogeneous lesion with different contrast imbibition was noted at the base of the tongue, with cervical lymphadenopathy on the left side of the neck. The biopsy confirmed diffuse large B-cell lymphoma in the sinus, whereas myoepithelial carcinoma was diagnosed in the oral cavity mass and the lymph node. As a part of lymphoma staging, an abdominal CT scan revealed a 26x22mm oval lesion with a marginally enhancing ring in the VIII liver segment, indicative of cholangiocarcinoma, yet inaccessible for fine needle aspiration or biopsy.

CONCLUSION: This case underscores the significance of histological confirmation of two adjacent tumors with different radiological characteristics. A multidisciplinary approach by radiologist, head & neck surgeon, pathologist, hematologist, gastroenterologist, and radiation oncologist was required in this patient with MPMs.

CR69

The Importance of Anti-Tissue Transglutaminase Follow-Ups in an Asymptomatic Child with Positive Family History and Genetic Predisposition for Celiac Disease Case Report

1. Laura Mayer (0000-0003-1968-6578) [Izlažući autor] 2. Zrinjka Mišak (0000-0002- 1944-3536)

1. Institute of Emergency Medicine of Krapina-Zagorje County

2. Clinic for Children's Diseases Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR69

KEYWORDS: Anti-transglutaminase Autoantibody, Celiac Disease, Family Health History, Gluten-Free Diet, HLA-DQ Antigens

Abstract:

INTRODUCTION/OBJECTIVES: Celiac disease (CD) is a systemic autoinflammatory disease triggered by gluten in genetically susceptible individuals. Patients may be asymptomatic with the diagnosis. Therefore, as family members are at higher risk, family screening is recommended. Family screening is done by assessing the serological values of Immunoglobulin A (IgA) and anti-tissue transglutaminase antibody IgA (anti-tTG IgA).

CASE PRESENTATION: A child, born to a mother with early-diagnosed CD, mirrored by a sibling's condition,

was genetically tested, revealing HLA-DQ2 positivity—signaling a familial predisposition to CD. Despite being symptom-free with normal physical findings, born from an uncomplicated pregnancy, the child's IgA and anti-tTG were first tested at the age of 18 months. Results within the normal range allowed a continued normal diet. Afterward, yearly anti-tTG IgA monitoring ensued. For the next eight years, the child remained asymptomatic and healthy, with all serological tests reporting normal. At ten, unexpectedly, anti-tTG spiked to 59 U/mL. The absence of symptoms notwithstanding, a duodenal biopsy was performed, yielding a Marsh 3 score—confirming CD. A strict gluten-free diet was prescribed, along with regular clinic visits.

CONCLUSION: This case underscores the stealthy nature of CD and the vital role of regular monitoring in at-risk individuals. It demonstrates that CD can manifest after years of normal health, highlighting the necessity of persistent surveillance to preempt the long-term repercussions of undiagnosed and untreated CD. Through this narrative, we see the importance of not just genetics, but also vigilance in healthcare for those who may seem outwardly healthy but are at latent risk for similar diseases.

CR70

Reconstructing Complex Midfacial Defects with a Triple Skin-Island Modification of the Vertical Rectus Abdominis Flap (TSI-VRAM)

Mikulić Lovro[1], Monika Ranogajec[1], Vedran Jakšić[1], Darko Solter[1,2]

[1]School of Medicine, University of Zagreb

[2]Department of Otorhinolaryngology - Head and Neck Surgery, University Hospital Center Sestre Milosrdnice, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR70

KEYWORDS: Adenoid cystic carcinoma; Head and Neck Neoplasms; Maxilla; Myocutaneous flap; Transplantation, Autologous

INTRODUCTION: The vertical rectus abdominis myocutaneous free flap (VRAM) and its triple skin-island modification (TSI-VRAM) is a type of flap that can adequately reconstruct complex midfacial defects. This case illustrates how individual flaps can be creatively prepared to address specific defects for each patient.

CASE PRESENTATION: A 58-year-old male patient presented with advanced T4aN0M0 adenoid cystic carcinoma of the left maxilla. MRI revealed a large tumor of the maxilla with erosion of the superior, medial, inferior, and posterior maxillary wall and infiltration of the left orbit. There were no radiological signs of bone erosion of the skull base. Extensive surgical resection of the tumor with total maxillectomy, orbital exenteration, and pterygopalatine fossa evacuation was performed, resulting in a class IVB midfacial defect (Brown 2010). The defect was reconstructed subsequently with a TSI-VRAM. The flap was folded over its longitudinal axis, providing adequate volume restitution of the midface. Multiple skin islands of the flap were used to resurface the orbit and lateral nasal wall and for oronasal separation. The healing was uneventful, and the patient was discharged from the hospital 15 days after surgery. He underwent adjuvant radiotherapy and has remained disease-free five years after the procedure.

CONCLUSION: Folded TSI-VRAM flap provides ample source of soft tissue for restitution of midfacial volume. Its multiple skin islands enable the reconstruction of synchronous epithelial defects of the midface as well as oronasal separation. This reliable flap is an excellent choice for the reconstruction of complex midfacial defects.

CR71

Acute respiratory distress syndrome (ARDS) as a rare complication of primary VZV infection

1. Ana Milković (0009-0004-6300-3716) [Izlažući autor] 2. Dora Pavlić (0009-0004-2845-3439) 3. Josip Škerlj

(0009-0006-0105-0626) 4. Adriana Vince (0000-0003-2355-6573)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. School of Medicine, University of Zagreb, Zagreb, Croatia 4. Department for Gastrointestinal Infections, University Hospital for Infectious Diseases "Dr. Fran Mihaljević", Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR71

KEYWORDS: Acute respiratory distress syndrome, chickenpox, pneumonia, Varicella Zoster Virus

Abstract:

INTRODUCTION/OBJECTIVES: Varicella Zoster Virus (VZV) is a human herpesvirus 3, commonly affecting children. Severe varicella develops in immunocompromised patients, however, varicella pneumonia complicated with acute respiratory distress syndrome is very rare.

CASE PRESENTATION: A 31-year-old female patient, diagnosed with the multiple sclerosis since 2020, was hospitalized at the Infectious Diseases Hospital due to a severe primary VZV infection. Recently, she received ocrelizumab and bolus doses of corticosteroids due to MS exacerbation. At the time of admission, she was febrile with a dense generalized vesicular rash. PCR test confirmed VZV DNA in the plasma and she received intravenous immunoglobulins and acyclovir. On the initial chest X-ray, mild bilateral interstitial lesions were visible, but four days later there was a significant worsening of the findings with the progression of bilateral confluent infiltrates and interstitial lesions, overshadowing both lungs. Due to the deterioration of respiratory function, she was transferred to the ICU. Treatment consisted of mechanical ventilatory support and intravenous administration of immunoglobulins and acyclovir due to high viremia. Her pulmonary condition gradually improved and she was successfully extubated five days later and discharged 20 days after the admission with a favorable outcome. Nevertheless, she was followed up for the next 4 weeks, receiving oral acyclovir as secondary prophylaxis.

CONCLUSION: VZV causes a variety of complications in immunocompromised. The emphasis of this case is on testing and vaccination against VZV in immunocompromised patients who have not had a primary VZV infection and also a reminder that the use of ocrelizumab (anti-CD20) can lead to severe viral infections.

CR72

Outpatient treatment of pulmonary embolism in a previously healthy adult

Marina Nađ[a], Mladen Pospišil[b]

[a]University of Zagreb, School of Medicine

[b]University Hospital Centre Zagreb

Marina Nađ 0000-0003-1356-7551, Mladen Pospišil 0000-0002-9462-2593

DOI: https://doi.org/10.26800/LV-146-supl2-CR72

KEYWORDS: CT pulmonary angiogram, pulmonary artery, pulmonary embolism, rivaroxaban

Pulmonary embolism is a severe medical condition characterized by a thromboembolic occlusion of the pulmonary arterial system and due to its variable clinical presentation the conclusive diagnosis is often missed or delayed.

We report a 45-year-old male patient who was admitted to the emergency room with dry cough, pleuritic pain, tachycardia and tachydyspnea. No significant abnormalities were noted in patient's history except an ongoing lower leg immobilization which was applied four weeks prior to the admission. Initial lab results

showed elevation of D-dimers without other pathological findings. Initial electrocardiogram reported sinus tachycardia and chest x-ray showed no signs of pneumonia or cardiomegaly thus CTPA was performed. CT pulmonary angiogram showed filling defect of right pulmonary artery, both its lobar and almost all segmental branches. It, also, showed filling defects of segmental branches of the left lower lobe. Emboli origin was confirmed to be the venous system of the right lower leg seen on sonogram as an incompressible superficial femoral vein filled with hypoechoic mass. No signs of right heart failure were observed on CTPA or POCUS and no elevation of cardioselective biomarkers was detected. The eligibility for outpatient treatment was inspected with Hestia criteria and PESI score which classified patient's pulmonary embolism as low mortality risk. The patient was discharged with a recommendation of taking rivaroxaban 15 mg bid for three weeks followed by 20 mg qd up to three months.

Outpatient treatment of PE is safe and more cost-efficient than hospitalization and should be practiced more if eligible.

CR73

Hyperbaric oxygenation in the treatment of complex regional pain syndrome

1. Ana Pejić (0000), 2. Anja Žurić (0009-0003-8624-8882), 3. Iva Sabljić (0000), 4. Matilda Sabljak (0000-0002-4433-2635) [Izlažući autor]

1. Polyclinic Slavonija

2. Institute for Emergency Medicine of Šibenik Knin County

3. Health Center Vukovar

4. School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR73

KEYWORDS: Athletic Injuries, Complex Regional Pain Syndrome, Hyperbaric Oxygenation, Pain Management

Abstract:

INTRODUCTION/OBJECTIVES: Complex Regional Pain Syndrome (CRPS), also known as Sudeck atrophy, is a disorder that usually occurs as a complication after trauma or surgical procedures. The main symptoms include pain in the extremities, changes in skin color, hyperhidrosis, swelling, and abnormal motor activity. The disease progresses through three stages: acute, dystrophic, and atrophic. Treatment options include pain therapy, physical therapy, and hyperbaric oxygen therapy (HBOT), a medical treatment in which the patient breathes 100% oxygen under pressure.

CASE PRESENTATION: This case presents a 28-year-old patient diagnosed with Sudeck atrophy secondary to minor sport-related trauma of the left foot. The patient was treated initially with plaster fixation for four weeks. Following plaster removal, the patient experienced pain, edema, changes in skin color, and increased local body temperature. A computed tomography (CT) scan revealed bone demineralization of tarsal and proximal metatarsal bones. The patient underwent 20 sessions of HBOT. After four weeks of HBOT, the patient experienced reduced pain, decreased swelling, and normalization of skin color.

CONCLUSION: Sudeck atrophy can occur as a complication following bone fractures. Early recognition of CRPS is crucial in clinical management. HBOT represents an effective treatment modality for CRPS.

CR74

Congenital midline cervical cleft: a case report

1. Mihovil Penavić (0000-0003-4455-9968) 2. Ruža Grizelj (0000-0001-6077-9878) 3. Ratko Prstačić (0000-

0003-3623-3562)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. Department of Pediatrics, University Hospital Centre Zagreb, Zagreb, Croatia; School of Medicine, University of Zagreb, Zagreb, Croatia 3. Department of ENT–Head and Neck Surgery, University Hospital Centre Zagreb, Zagreb, Croatia; School of Medicine, University of Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR74

KEYWORDS: Branchial Region, Congenital Abnormalities, Hamartoma, Plastic Surgery Procedures, Newborn

Abstract:

INTRODUCTION/OBJECTIVES: Congenital midline cervical cleft (CMCC) is a rare congenital neck anomaly. Its most widely accepted cause is an impaired fusion of the branchial arches. It is usually detected at birth as a defect of the anterior part of the neck, with a nipple-like projection at its cranial part, and a fistula or a sinus at its caudal part. Treatment involves complete surgical excision and closure with Z-plasty.

CASE PRESENTATION: A two-day-old male neonate was examined due to a tumor formation located in the midline of the neck. The tumor was 2,5x0,5 centimeters in diameter, pedunculated, moderately hard upon palpation, and surrounded by an erythematously altered skin area. An ultrasonic neck examination revealed no communication to the thyroid and no other abnormalities. A CMCC was suspected, so an excision of the exophytic part was performed. During surgery, a sinus was observed in the caudal part of the cleft, but without communication with the other structures. The excised part was confirmed as a hamartoma upon histopathological examination. Twenty months later, a second-act surgery was performed: an ellipsoid excision of cleft skin and subcutaneous fibrous cord closed with a double Z-plasty. Upon the 19-month follow-up examination, there was no restriction on neck extension and the esthetic appearance was satisfactory.

CONCLUSION: Although a congenital midline cervical cleft is a very rare condition, it should be suspected when a cervical defect with typical characteristics is observed in a neonate. The cleft must be excised completely and the skin reconstructed with Z-plasty to avoid neck contraction.

CR75

Dermatomyositis as a paraneoplastic syndrome in breast cancer

Authors: Karlo Petković[1], Zdeslav Strika[1], Jasenka Markeljević[1,2] (Mentor)

1 - University of Zagreb, School of Medicine, Zagreb, Croatia

2 - Division of Clinical Immunology and Rheumatology, Department of Internal Medicine, Clinical Hospital Center: Sisters of Mercy, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR75

KEYWORDS: breast cancer, dermatomyositis, erythema, lymph nodes, paraneoplastic syndrome

BACKGROUND: Breast cancer is a heterogeneous disease with various clinical presentations. In this case, we explore a dermatomyositis (DM) in underlying breast cancer. The incidence of DM is around 1/100,000, with most cases being idiopathic. However, in approximately 15–30% of adult-onset DM cases, an underlying malignancy can be the cause of a paraneoplastic syndrome presenting as DM.

CASE PRESENTATION: A 37-year-old female presented with erythema, pruritus, facial edema, and a butterfly pattern erythema on her face. She reported a 15 kg weight loss over the past year, accompanied by fatigue, chills, muscle aches, and hair loss. Initial evaluation raised suspicion for dermatomyositis, myositis component was ruled out, due to normal creatine phosphokinase levels and electromyoneurography findings. Surprisingly, skin histopathology yielded no evidence of the dermatitis component of dermatomyositis. Further investigations, including a postcontrast CT of the thorax, abdomen, and pelvis, revealed a hypervascular mass in the left mamma and opacified nodules in the left axilla. Ultrasound-assisted biopsies

confirmed a neoplasm in the mamma and a lymph node with an asymmetrically thickened cortex, indicative of breast cancer. Despite the absence of tumor marker CA 15-3 elevation, the diagnosis was breast cancer with dermatomyositis as a paraneoplastic syndrome.

CONCLUSION: This case underscores the diagnostic complexities of breast cancer, urging clinicians to consider atypical presentations. In atypical presentations of breast cancer, a comprehensive approach involving dermatological, radiological, and pathological assessments is crucial. This case emphasizes the necessity of a holistic diagnostic strategy and highlights the significance of interdisciplinary collaboration for accurate diagnosis and optimal patient management.

CR76

Managing severe hypertriglyceridemia in pregnancy: challenges and threats

1. Paula Petrić (0009-0007-5854-1079) [Izlažući autor] 2. Petra Prebeg (0009-0005-5013-8272) 3. Vesna Gašparović-Elveđi (0000-0002-0960-3989)

1. School of Medicine University of Zagreb 2. School of Medicine University of Zagreb 3. KBC Zagreb, Department of Gynecology and Obstetrics

DOI: https://doi.org/10.26800/LV-146-supl2-CR76

KEYWORDS: hypertriglyceridemia, plasmapheresis, pregnancy

Abstract:

INTRODUCTION/OBJECTIVES: Moderately increased plasma triglyceride and LDL-cholesterol concentrations are usually well tolerated during pregnancy. In the case of genetic metabolism disorders, these concentrations may increase above 11.3 mol/L, resulting in acute pancreatitis with up to 20% maternal morbidity and mortality rate, as well as the risk of hyperviscosity syndrome and preeclampsia.

CASE PRESENTATION: Thirty-year-old primigravida at 34 gestational weeks was referred to Gynecology Department of KBC Zagreb because of laboratory findings that showed severe hyperlipidemia – plasma total cholesterol level of 11.7 mmol/l and triglyceride level of 25 mmol/l. The patient's family history was positive for early cardiovascular disease. The patient was euglycemic and laboratory test results for assessment of renal and hepatic functions were unremarkable. Hepatic ultrasonography showed a 3 mm hyperechoic structure in the gall bladder indicative of cholesterolosis. No clinical signs of pancreatitis were found and amylase and lipase serum levels were within normal range. Despite the treatment with a hypolipemic diet and additional intravenous insulin, the patient's serum triglyceride levels required plasmapheresis sessions. Five plasmapheresis procedures in total were performed over a three-week period. During the whole time of hospitalization, the patient's obstetric status was unremarkable. At 38+3 gestational weeks patient gave birth to a healthy female neonate. Following delivery, a spontaneous decrease in triglyceride and total cholesterol plasma levels was noticed.

CONCLUSION: Inappropriate treatment of hypertriglyceridemia in pregnancy may lead to severe complications, resulting in high maternal and fetal morbidity rates. Risk and benefit evaluation of plasmapheresis in pregnancy should be based on individual presented patients and considered as a potential treatment method.

CR77

Unmasking Cardiac Amyloidosis: A Case Report of a Former Professional Athlete

1. Ivan Raguž (0009-0006-9224-6869) 2. Loren Serdarević (0000-0002-8806-2382) 3. Adrijan Repušić (0009-0004-3257-8189) 4. Nikola Bulj (0000-0002-7859-3374)

1. School of Medicine, University of Zagreb 2. School of Medicine, University of Zagreb 3. School of Medicine, University of Zagreb 4. Department of Cardiology, University Hospital Centre “Sestre Milosrdnice” ; School of Medicine, University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR77

KEYWORDS: Amyloidosis, Familial; Cardiomyopathy, Restrictive; Echocardiography

Abstract:

INTRODUCTION/OBJECTIVES: Cardiac amyloidosis, an uncommon manifestation of the systemic infiltrative disease amyloidosis, is the leading cause of restrictive cardiomyopathy. This condition is characterized by the extracellular deposition of insoluble proteins. The two most common forms impacting the heart are amyloid light chain (AL), composed of monoclonal light chains produced by abnormal plasma cells, and amyloid transthyretin (ATTR) amyloidosis, marked by the deposition of either normal or mutated transthyretin proteins, therefore categorized as senile or familial.

CASE PRESENTATION: A 50-year-old former professional athlete, with a family history of sudden cardiac death and amyloidosis, reported activity intolerance, along with symptoms of peripheral neuropathy and irritable bowel syndrome. The echocardiogram revealed increased myocardial wall thickness and a reduced base-to-apex global longitudinal strain. Notably, the apical strain was preserved, showing a classic “cherry on top” appearance, pathognomonic of cardiac amyloidosis. Serum protein electrophoresis excluded the AL form. Bone scintigraphy demonstrated reduced tracer uptake in the bones and diffusely increased uptake in the heart, findings consistent with ATTR amyloidosis. Hereditary subtype was confirmed through genotyping. Initiation of heart failure therapy resulted in a slight improvement in symptoms. However, a year later, the disease progressed with exacerbation of symptoms, necessitating the inclusion of tafamidis in the treatment plan.

CONCLUSION: Cardiac amyloidosis is often overlooked as an underlying cause of heart failure. It is crucial to consider it in the differential diagnosis, particularly when there are symptoms of other systemic manifestations and a positive family history. This consideration allows for the timely use of specific medications like tafamidis.

CR78

Cholesteatoma imitating squamous cell carcinoma of the temporal bone - a rare case report

1. Monika Ranogajec (0009-0007-0326-1184) 2. Lea Hasnaš (0009-0004-4456-0605) 3. Jakov Ajduk, ass. prof., MD, PHD (0000-0003-3648-0280)

1. School of Medicine, University of Zagreb 2. School of Medicine, University of Zagreb 3. Department of Otorhinolaryngology and Head & Neck Surgery; University Hospital Centre ,,Sestre Milosrdnice’’; School of Medicine, University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR78

KEYWORDS: Carcinoma, Squamous Cell; Cholesteatoma; Ear, Middle; Temporal Bone

Abstract:

INTRODUCTION/OBJECTIVES: Temporal bone squamous cell carcinoma is one of the rarest malignant neoplasms affecting the head and neck area. Despite available treatment options, the survival rate remains poor. On the contrary, cholesteatoma is a fairly frequent benign epidermal cyst of the tympanic membrane, characterized by a low recurrence rate depending on the surgical technique employed. To date, only a handful of cases connecting the two conditions have been reported.

CASE PRESENTATION: In October 2023, a patient presented to the emergency ENT clinic with classical symptoms of Bell’s palsy, which had been ongoing for three days, alongside left-sided otalgia. The patient had a past medical history of recurrent chronic infections of the middle ear, later attributed to a cholesteatoma

which was pathohistologically confirmed. Accordingly, she received a left canal wall down tympanoplasty in May 2023. Five months after surgery, an otoscopy in the ER showed a radical cavity filled with soft tissue and purulent otorrhea. A subsequent MRI scan pointed to a lesion destroying the base of the temporal pyramid and spreading to the jugular foramen and sigmoid sinus. Revision tympanomastoidectomy was performed. A tissue sample taken for pathohistology revealed squamous cell carcinoma. The outcome stays uncertain as the patient has not attended the follow–up appointment.

CONCLUSION: This case report strongly suggests the need for further research on the correlation between cholesteatoma and squamous cell carcinoma of the temporal bone. Due to potential simultaneous appearance and similar symptoms, accurate distinction is crucial, since early recognition of the carcinoma could lead to a better prognosis.

CR79

Case report of a patient with wide regular QRS complex tachycardia

1. Petra Relota (0000-0001-8660-6043) [Izlažući autor] 2. Karla Schwarz (0000-0001- 9278-660X) 3. Loren Serdarević (0000-0002-8806-2382) 4. Eva Stanec (0009-0008- 4683-5448) 5. Tomislav Letilović (0000-0003-1229-7983)

1. School of medicine University of Zagreb 2. School of medicine University of Zagreb 3. School of medicine University of Zagreb 4. School of medicine University of Zagreb 5. Department of Cardiology, Clinical Hospital Merkur; School of medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR79

KEYWORDS: Differential Diagnosis, Electrocardiography, Tachycardia

Abstract:

INTRODUCTION/OBJECTIVES: Wide regular QRS complex tachycardia is the most common presentation of ventricular tachycardia but differential diagnosis also includes supraventricular tachycardia with aberration or bundle branch block (BBB), supraventricular tachycardia with QRS prolongation caused by an IC antiarrhythmic drugs, and supraventricular tachycardia with preexcitation. There are several published algorithms and criteria (eg. Brugada) for distinguishing the origin of tachycardia with the wide regular QRS complex.

CASE PRESENTATION: A 63-year-old male patient presented to the ER due to dyspnea and fatigue. ECG showed wide QRS complex tachycardia with a heart rate of 140/min. Positive concordance and QRS duration indicated Ventricular Tachycardia (VT), but the patient also had some criteria characteristic for supraventricular origin of tachycardia (absence of AV dissociation). Echocardiography revealed systolic and diastolic dysfunction. A diagnostic coronarography was done which revealed triple vessel disease. These clinical findings, along with the electrocardiographic criteria proposed a high possibility of VT. After the patient's tachycardia was refractory to drugs, electrical cardioversion was performed and an electrophysiology study was initiated. Atrial flutter with rate-dependent left-BBB tachycardia was diagnosed followed by ablation of the cavotricuspid isthmus.

CONCLUSION: Most of the published criteria available today have high specificity but low sensitivity (20-50%) for diagnosing VT. This means that even in the absence of diagnostic features for VT, there is no way to be certain that the arrhythmia has a supraventricular origin, and therefore it is better to treat them like VT until proven otherwise. Our patient with intertwining pathologies is a great example of how the differential diagnosis can be indistinctive in tricky circumstances.

CR80

Acute ankle sprain leading to chronic ankle instability

1. Matilda Sabljak (0000-0002-4433-2635) [Izlažući autor], 2. Iva Sabljić (0000), 3. Anja Žurić (0009-0003-8624-8882), 4. Ema Grba (0009-0008-0277-1008)

1. School of Medicine University of Zagreb

2. Health Center Vukovar

3. Institute for Emergency Medicine of Šibenik Knin County

4. Institute for Emergency Medicine of Osijek Baranja County

DOI: https://doi.org/10.26800/LV-146-supl2-CR80

KEYWORDS: Ankle Injuries, Ankle Joint, Immobilization, Sprains and Strains

Abstract:

INTRODUCTION/OBJECTIVES: An acute ankle sprain is a frequent injury to the musculoskeletal system. It is usually caused by excessive load on the ankle in plantar flexion and inversion. Ankle sprains are classified into three grades based on the degree of ligament damage: sprain, partial tear, and full tear.

CASE PRESENTATION: A 26-year-old male sustained a left ankle injury during a football match, experiencing severe pain and inability to stand. The mechanism of injury involved inversion, dorsal flexion, and axial compression. According to Ottawa guidelines, an X-ray of the left ankle in the emergency room was performed and didn't show any signs of a bone lesion. Ultrasound imaging (US) showed a ruptured anterior talofibular ligament (ATFL) and torn calcaneofibular ligament (CFL), which, according to the classification of ankle sprains, suggested a grade 3 lesion. He was treated conservatively following the RICE (rest, ice, compression, elevation) protocol, but immobilization was applied only from the third week after injury. Immobilization and offloading crutches were then prescribed for 6 weeks, followed by physical treatment. At the control examination 6 months after the injury, full recovery was not achieved. The orthopedist reported instability of the injured ankle and palpable soreness around the medial malleolus. Ankle stabilization surgery is being discussed as the treatment of choice.

CONCLUSION: Inadequate or delayed treatment of grade 3 ankle sprain may lead to chronic ankle instability. Thus, in this case, we wanted to emphasize that early immobilization is crucial in its treatment.

CR81

Minor tuberosity osteochondroma fracture leading to isolated subscapularis muscle tear - surgical treatment

1. Domagoj Sajfert (0009-0000-6367-1264) 2. Ante Stojanović (0009- 0009-9310-4426) 3. Ivana Sajfert (0009-0000-6972-2093) 4. Hrvoje Pitlović (mentor, 0009-0001-8947-5306)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. School of Medicine, University of Zagreb, Zagreb, Croatia 4. School of Medicine, Josip Juraj Strossmayer University in Osijek, Osijek, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR81

KEYWORDS: Osteochondroma; Rotator Cuff; Shoulder fractures; Suture Anchors

Abstract:

INTRODUCTION/OBJECTIVES: Osteochondroma is the most common benign bone tumor, consisting of an outlaying cartilage on a bony base. Common predilection sites are the distal metaphysis of the femur and the proximal metaphyses of the tibia, fibula, and humerus. It is scarcely seen on the minor tuberosity of the humerus, the insertion point of the subscapularis muscle tendon.

CASE PRESENTATION: An 18-year-old patient presented pain in the left shoulder. Six weeks prior, he fell from

a motocross bike. Active abduction of the arm was limited to 110 degrees. The Napoleon and Lift-off tests were positive. CT and X-ray images of the shoulder showed a fracture of the osteochondroma of the proximal humerus with avulsion of the subscapularis muscle. An open shoulder operation was performed, ablating the osteochondroma of the left proximal humerus and reinserting the tendon of the left subscapularis muscle using bone anchors. The postoperative treatment included analgesics, low-molecular-weight heparin, and cryotherapy. On the six-month follow-up, the patient showed a full range of motion with minor weakness in internal rotation.

CONCLUSION: A patient having pain in the shoulder with loss of internal rotation paired with a history of trauma should be suspicious of isolated subscapularis muscle tear. Osteochondroma can cause pain in the shoulder due to impingement of nearby structures, or as in this case resemble mechanical weakness with a heightened risk of fracture. Therefore, proper radiological evaluation is needed. Open surgery of the shoulder has shown to be a successful treatment.

CR82

Superior vena cava syndrome caused by Hodgkin lymphoma

1. Marko Sinjeri (0009-0001-2881-2735) 2. Radovan Radonić (/)

1. School of Medicine University of Zagreb 2. Division of Intensive Care Medicine, Department of Internal Medicine, University Hospital Center Zagreb, School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR82

KEYWORDS: BEACOPP protocol; Hodgkin disease; Superior vena cava syndrome

Abstract:

INTRODUCTION/OBJECTIVES: Superior vena cava (SVC) syndrome manifests due to obstruction of the SVC, caused by external compression or venous thrombosis. Typical symptoms include head and neck swelling, upper extremity edema, headaches, syncope from increased intracranial pressure, cough, and stridor. However, nearly half of SVC syndrome cases present with nonspecific symptoms like dyspnea and edema. We present a case of SVC syndrome in a 23-year-old female with Hodgkin lymphoma

CASE PRESENTATION: A 23-year-old female presented to a regional hospital with dyspnea, orthopnea, productive cough, and macular rash. She also reported night sweats and an unintentional 13kg weight loss over 10 months. A contrast-enhanced computed tomography scan revealed a large mediastinal mass measuring 16cm in diameter, compressing the heart and SVC, with bilateral pleural effusions. Echocardiography showed pericardial effusion with partial collapse of the right atrium. She was transferred to the KBC Zagreb, Department for Intensive Care Medicine for further management. Bilateral thoracic and pericardial drainage of hilous effusions led to clinical improvement. Percutaneous biopsy of the intrathoracic tumor confirmed classic Hodgkin lymphoma-nodular sclerosis. Treatment with the BEACOPP protocol followed by 30 Gy radiation therapy of the mediastinal mass was initiated

CONCLUSION: In this case SVC syndrome associated with hilous pleural and pericardial effusions was caused by mediastinal Hodgkin lymphoma. Despite Hodgkin lymphoma affecting mediastinal lymph nodes, the mechanism of hilous effusions remains unclear, however, it was most likely caused by impaired lymph drainage due to elevated venous pressure and/or tumor infiltration. The diagnosis has a high likelihood of a favorable outcome

CR83

Challenges of Inflammatory bowel disease treatment in pregnancy – case report

1. Stjepan Skok (0009-0003-9666-4126) 2. Doris Čeović (0009-0000-5833-8395) 3. Marija Kostanjski (0009-

0002-8853-7277) 4. Tajana Filipec Kanižaj (0000-0002-7025- 0932)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. Faculty of Medicine, University of Rijeka, Rijeka, Croatia 4. Gastroenterology and hepatology department, Clinical Hospital Merkur, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR83

KEYWORDS: Adalimumab; Azathioprine; Inflammatory bowel diseases; Pregnancy

Abstract:

INTRODUCTION/OBJECTIVES: Inflammatory bowel disease (IBD) typically occurs in young adults in their prime reproductive years. In the pregnant population, active IBD and side effects of therapy are associated with a higher incidence of adverse pregnancy outcomes, including intrauterine growth retardation, preterm birth, stillbirth, and miscarriage. This article examines a pregnant patient with IBD and the intricacies of managing a patient's condition during pregnancy.

CASE PRESENTATION: In 2009, a 35-year-old female patient was diagnosed with Crohn's disease (CD) in the terminal ileum and underwent a right-sided hemicolectomy due to intestinal perforation caused as a complication after induction with steroid therapy. Azathioprine was started as CD maintenance in 2011 but stopped in 2016 due to deep remission. The patient's CD was silent until 2021, when symptoms, MR enterography, and fecal calprotectin indicated active CD at surgical anastomosis. Before planning biologic therapy, the patient became pregnant and experienced worsening symptoms. Because of the risks of complications, only an intestinal ultrasound was performed, confirming further worsening of inflammation. Adalimumab (pregnancy category B) was started in December 2022, improving symptoms and reducing fecal calprotectin levels. The patient had a cesarian section in April 2023 with no postpartum complications for her or the child.

CONCLUSION: This case report highlights the complexities and challenges associated with managing IBD during pregnancy, underscoring the necessity for a multidisciplinary approach to ensure both maternal and fetal health. It also highlights the need for ongoing research and development of guidelines to optimize the care of pregnant patients with IBD.

CR84

Extraskeletal osteosarcoma in a 50-year-old female with an undiagnosed Paget's disease

1. Leo Spaseski (0009-0007-8903-0220) [Izlažući autor] 2. Milena Bogojevska Doksevska (/) 3. Milan Samardziski (/) 4. Teodora Todorova (/)

1. School of Medicine, University of Ss. "Cyril & Methodius" - Skopje 2. University Clinic for Orthopedic Surgery-Skopje 3. University Clinic for Orthopedic Surgery-Skopje 4. University Clinic for Orthopedic Surgery-Skopje

DOI: https://doi.org/10.26800/LV-146-supl2-CR84

KEYWORDS: Paget's disease of bone, Osteosarcoma, Tc99m, Spinal anesthesia, Bone resorption, Fractures

Abstract:

INTRODUCTION/OBJECTIVES: Paget's disease of bone (PDB) is a focal disorder of bone metabolism characterized initially by an increase in bone resorption, followed by a disorganized and excessive formation of bone, leading to pain, fractures, and deformities. The incidence of osteosarcomas complicating PDB is remarkably rare in the general population.

CASE PRESENTATION: In this report, we present the case of a 50-year-old female patient who was presented at the clinic complaining of a growing painful mass with a diameter of approximately 3 centimetres in her left calf. An ultrasound was performed, which showed a heterogeneous but predominantly hypoechoic mass with

increased vascularization, followed by an MRI. The patient was scheduled for surgery. Excision of the mass under spinal anaesthesia was performed, and the wound was closed in layers. After two weeks, the pathology evaluation presented with extraskeletal osteosarcoma. General metastasis follow-up was performed with chest and abdominal CT, which showed no abnormalities. On a bone scan with Tc99m, an increased uptake on the left iliac bone was noticed, which was highly suggestive of Paget's disease. Another surgery was performed with a wide excision of the wound as well as a biopsy of the iliac wing. The pathological specimen was free of cancerous cells, and Paget's disease was confirmed. On a 9-month follow-up examination, an ultrasound was performed, and no local recurrences were noticed.

CONCLUSION: Extraskeletal osteosarcoma accompanied by Paget's disease is a rare find. Ultrasound, MRI, and biopsy are required for the diagnosis. The accurate diagnosis of extraskeletal osteosarcoma is important as it has a different regimen of treatment with a poorer prognosis compared to primary osteosarcoma of the bone.

CR85

Unconventional Metastasis: Rare Presentation of Endometrial Carcinoma in the Humerus with Spontaneous Osteolytic Lesion Resolution

1. Ante Stojanović (0009-0009-9310-4426) 2. Domagoj Sajfert (0009-0000-6367-1264) 3. Jan Čavar (0009-0009-7008-5381) 4. Martin Matošić (0009-0006-2912-579X) 5. Hrvoje Pitlović (mentor) (0009-0001-8947-5306)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. School of Medicine, University of Zagreb, Zagreb, Croatia 4. School of Medicine, University of Zagreb, Zagreb, Croatia 5. School of Medicine, Josip Juraj Strossmayer University in Osijek, Osijek, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR85

KEYWORDS: endometrial neoplasms, humeral fractures, neoplasm metastasis, osteolysis

Abstract:

INTRODUCTION/OBJECTIVES: One of the rare atypical sites of metastasis of endometrial carcinoma is bones (pelvic bone and spine). This case report presents a patient with an exceptionally rare site of metastasis of endometrial carcinoma, characterized by the unexpected behavior of an osteolytic lesion—spontaneous healing without oncological therapy.

CASE PRESENTATION: A fifty-nine-year-old patient was admitted in 2017 due to metrorrhagia. Gynecological examination confirmed endometrial neoplasm. She also complained of a sensation of swelling in the left arm with pain, and shortly after hospitalization, a deformity occurred. An X-ray revealed a diaphyseal fracture of the humerus with osteolytic lesions. Due to the unexpected site of endometrial carcinoma in the humerus, a biopsy of the lesion was performed to eliminate the possibility of concurrent occurrence of another neoplastic disease. While awaiting the biopsy results, the patient's left arm was immobilized. Biopsy results confirmed the metastasis of endometrial carcinoma. During preoperative preparation for fracture stabilization, spontaneous healing of the fracture was observed, leading to stabilization (without any prior intervention). The patient was further directed to hysterectomy and adnexectomy, receiving oncological therapy. Subsequent monitoring concluded that the patient's condition improved. In the follow-up, the patient appeared in good condition, without signs of progression of the primary disease, as confirmed by oncological examination.

CONCLUSION: It is unexpected to see endometrial carcinoma metastases in the humerus. There are very few cases in the literature with the same site of metastasis, and what makes this case extremely rare is the fracture healing without oncological therapy, despite the osteolytic nature of the metastasis.

CR86

Case report: Incidentally found tumor of the aortic valve

1. Matija Šego (0009-0007-6619-8952), 2. Anđela Šimunović (0009-0008- 1095-690X), 3. Zvonimir Marko Škugor (0009-0009-6043-1519), 4. Zrinka Planinić (0000-0001-8664-3338), 5. Edvard Galić (0000-0002-5707-0961)

1. School of Medicine University of Zagreb 2. School of Medicine University of Zagreb 3. School of Medicine University of Zagreb 4. Department of Cardiovascular Diseases, Clinical Hospital Sveti Duh, Zagreb 5 . Department of Cardiovascular Diseases, Clinical Hospital Sveti Duh, Zagreb; School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR86

KEYWORDS: Aortic Valve, Cardiac Papillary Fibroelastoma, Cardiology, Echocardiography

Abstract:

INTRODUCTION/OBJECTIVES: Primary heart tumors, although rare and mainly asymptomatic, are usually benign, but can lead to serious consequences due to their location and embolic risk. This case report presents a patient with an incidental echocardiographic finding of the aortic valve mass.

CASE PRESENTATION: The 75-year-old female asymptomatic patient with previously known history of atrial fibrillation and ischemic stroke was admitted to the cardiology department after an outpatient echocardiographic finding of the aortic valve mass. Transthoracic echocardiography (TTE) showed a mobile, pedunculated, hyperechoic, round mass measuring 9x12 mm on the aortic side of the right coronary cusp with no repercussion on the valve function. Differential diagnoses included papillary fibroelastoma as the most likely one, since thrombus (anticoagulated with apixaban) and vegetation (no fever, blood cultures negative, preserved valve function) did not match the clinical presentation.

Previously performed TTEs did not describe any mass on the aortic valve. Considering the history of basal cell carcinoma, a whole-body multislice computer tomography (MSCT) was performed revealing no signs of malignancy. MSCT coronary angiography showed 50% stenosis of the proximal left anterior descending artery (LAD), but low calcium score. She was discussed by the multidisciplinary heart team and due to high embolic risk was referred for urgent surgical excision of the mass. Pathohistological examination confirmed the diagnosis of papillary fibroelastoma.

CONCLUSION: Papillary fibroelastoma, despite its rarity, should be considered as a potential diagnosis of cardiac masses. Although this tumor is benign and often asymptomatic, urgent surgical removal is recommended to prevent tumor-related complications.

CR87

High-risk pregnancy in a female patient suffering from the post-operative pulmonary complications

1. Anđela Šimunović (0009-0008-1095-690X) 2. Tomo Trstenjak (0000-0002-2306-802X) 3. Matija Šego (0009-0007-6619-8952) 4. Vesna Elveđi-Gašparović (0000-0002-0960-3989)

1. School of Medicine University of Zagreb 2. School of Medicine University of Zagreb 3. School of Medicine University of Zagreb 4. Department of Gynecology and Obstetrics, University Hospital Centre Zagreb; School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR87

KEYWORDS: Cachexia, high-risk pregnancy, IUGR

Abstract:

INTRODUCTION/OBJECTIVES: A high-risk pregnancy involves increased health risks for the pregnant person, fetus, or both. In this case, the elevated risk level is attributable to a pre-existing medical condition stemming from complications following spine surgery. Close monitoring is crucial to minimize the chance of complications.

CASE PRESENTATION: A 40-year-old primigravida with a history of right lower lobe atelectasis, lumbar scoliosis, and cachexia was admitted to the Department of Gynecology and Obstetrics due to Intrauterine Growth Restriction (IUGR). Her initial diagnosis revealed severe thoracic scoliosis, leading to a surgical intervention. Post-surgery, the frequency and severity of infections increased, resulting in multiple hospitalizations annually. In 2017, she faced a massive pulmonary embolism and was a candidate for right pneumonectomy, but the operation was canceled due to an alarmingly low body mass index (BMI). It's noteworthy that underweight and extremely low body fat in women is associated with ovarian dysfunction and infertility. Nevertheless, our patient experienced a spontaneous pregnancy despite being severely underweight. During the pregnancy, she underwent hospitalization twice for rehabilitation procedures, including deep breathing exercises, incentive spirometry, supplemental oxygen administration, chest drainage, and parenteral antibiotic therapy. Underweight status contributed to intrauterine growth restriction (IUGR) due to insufficient nutrient intake. Consequently, the patient received parenteral nutrition and close monitoring up until delivery.

CONCLUSION: The aim of managing a high-risk pregnancy is to optimize health outcomes for both the expectant individual and the fetus. The elevated risk in this pregnancy resulted from reduced pulmonary function and cachexia, requiring close patient observation.

CR88

Unmasking the silent invader: a case report of mandibular odontogenic myxoma requiring postoperative reconstruction

Irena Valek[1] 0009-0005-7503-7267; Kristijan Goldašić[1] 0009-0001-6637-5345; Josip Biočić [2,3] DMD, PhD 0000-0002-8459-5042; Goran Batinjan [3] DMD, PhD 0000-0002-3925-285X; Emil Dediol[1,3] MD, PhD 0000-0002-2397-6298

[1] School of Medicine, University of Zagreb

[2] School of Dental Medicine, University of Zagreb

[3] Department of Maxillofacial and Oral Surgery, University Hospital Dubrava

DOI: https://doi.org/10.26800/LV-146-supl2-CR88

KEYWORDS: dental implants, maxillofacial prosthesis, myxoma, oral surgical procedures

Odontogenic myxomas are rare benign tumors that originate from mandibular soft tissues. They present diagnostic and management challenges due to their infiltrative growth and recurrence potential. Early detection and comprehensive surgical treatment are essential for optimal outcomes.

A 27-year-old female sought a second opinion for a previously histologically diagnosed mandibular odontogenic myxoma. Clinical presentation included mandibular puffiness on the left side with a same-sided post-biopsy mental nerve sensory deficit. Cone beam computerized tomography showed lobular bony transparency in alveolar regions from the lower right second incisor to the lower left third molar. Maxillofacial and oral surgeons performed tumor enucleation, alveotomy of teeth 33, 34, 35, 36, and apicotomy of tooth 37. Postoperative healing was unremarkable. During post-surgical follow-up at 15 months post-procedure, significant alveolar ridge atrophy of the mandible was noted presenting a contraindication for dental implants. Augmentation and reconstruction with iliac crest bone graft and xenograft were done and reinforced with titanium mesh. Early post-surgery recovery proceeded without incident and included prophylactic antibiotic coverage with amoxicillin-clavulanic acid (2x875mg+125mg) and metronidazole (3x400mg). Finally, after complete graft healing, the oral surgeon placed dental implants, and the prosthetist did a final prosthesis.

In summary, effective management of odontogenic myxomas demands a collaborative effort, emphasizing a timely diagnosis, precise surgical approach, and attentive postoperative care. This case highlights the critical role of multidisciplinary teamwork in achieving optimal patient outcomes and improving quality of life through comprehensive treatment strategies that encompass a less invasive surgical approach and reconstruction enabling a complete return of function.

CR89

Surprises along the way – managing a preterm infant with meningomyelocele and its complications

1. Luka Varmuž (0009-0008-9213-2719) [Izlažući autor] 2. Kristijan Goldašić (0009-0001-6637-5345) 3. Nada Sindičić Dessardo, MD, PhD (0000-0003-1882-0704) 4. Ruža Grizelj, MD, PhD (0000-0001-6077-9878) 5. Dorotea Ninković, MD, PhD (0000-0002-4239-519X)

1. School of Medicine, University of Zagreb 2. School of Medicine, University of Zagreb 3. Neonatal Intensive Care Unit, Department of Pediatrics; University Hospital Centre Zagreb; School of Medicine University of Zagreb 4. Neonatal Intensive Care Unit, Department of Pediatrics; University Hospital Centre Zagreb; School of Medicine University of Zagreb 5. Neonatal Intensive Care Unit, Department of Pediatrics; University Hospital Centre Zagreb; School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR89

KEYWORDS: Arnold-Chiari malformation, hydrocephalus, meningomyelocele, noninvasive ventilation

Abstract:

INTRODUCTION/OBJECTIVES: Meningomyelocele is a spinal cord defect that arises from incomplete closure of the neural tube. It is often associated with multiple neurological, nephrological, orthopaedic, and gastrointestinal problems.

CASE PRESENTATION: A male preterm infant with a prenatally diagnosed lumbosacral meningomyelocele was delivered via c-section at the gestational age of 36 weeks due to abnormal cardiotocographic findings. After primary resuscitative measures, he was transferred to the intensive care unit. Surgical repair of the meningomyelocele was performed on the day of delivery. Brain ultrasound revealed Arnold Chiari malformation type 2 and hydrocephalus for which ventriculoperitoneal drainage was inserted. After extubation, the patient began experiencing apnoeic episodes and respiratory difficulties. Continuous aminophylline infusion (0.2-0.4 mg/kg/h) and respiratory support with high-flow nasal catheter were initiated which unfortunately did not lead to improvement of pulmonary atelectasis. Therefore, fiberendoscopy and bronchoscopy were performed revealing tracheomalacia. Brain magnetic resonance imaging showed posterior cranial fossa volume reduction with brain stem compression. Finally, a multidisciplinary team (MDT) was put together including neonatologists, pulmonologists, an otorhinolaryngologist, neurosurgeons, geneticists, and nephrologists. The MDT concluded non-invasive ventilation and peroral theophylline should be introduced, a contrast-enhanced voiding urosonography ought to be done for evaluation of new-onset neurogenic bladder, and genetic workup was advised.

CONCLUSION: In conclusion, a complicated patient entails a collaborative approach and a high level of teamwork. This patient, who ended up thriving and now continues to develop normally, gives affirmation to the role of different specialties and how, together, they vastly improve quality of life and provide more insight than a single provider approach.

CR90

Congenital Muscular Ventricular Septal Defect as a Rare Cause of Heart Murmur in Adults – Case Report

1. Ivo Vučko (0000-0002-8468-4539) [Izlažući autor] 2. Marko Vujanović (0009-0004-7081-5704) 3. Matej Martinović (0009-0000-7857-6243) 4. Tomo Svaguša (0000-0002-2036-1239)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. School of Medicine, University of Zagreb, Zagreb, Croatia 4. Department of Cardiology, University Hospital Dubrava, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR90

KEYWORDS: Heart Murmur; MRI Scan; Transthoracic Echocardiography; Ventricular Septal Defect;

Abstract:

INTRODUCTION/OBJECTIVES: Ventricular septal defects (VSDs) are the second most common heart anomaly in adults. There are two main types of VSDs: membranous, which stands for 80% of all cases, and muscular (trabecular), which accounts for up to 15%. Their clinical significance underlies the fact they form a shunt between a left and a right ventricle, which can lead to serious hemodynamic disorders.

CASE PRESENTATION: A 46-year-old patient presented with a holosystolic murmur, rated 3 out of 6, whose punctum maximum is above Erb's point. No signs of cyanosis or cardiopulmonary decompensation were found. He was not aware of any other conditions, but at admission, he had high blood pressure (156/97 mmHg). Echocardiography was done. In the transition from the middle to the distal third of the interventricular septum, the muscular VSD was presented, with a left-to-right flow, and measured pressure gradient of 100 mmHg. A ratio of pulmonary (Qp) to systemic (Qs) flow was measured at 1.6, which is considered significant. All four chambers were dilated, along with eccentric hypertrophy of the left ventricle. The systolic function of the left ventricle was preserved, in opposition to first-degree diastolic dysfunction. He was later referred to an MRI of the heart, which only reaffirmed the initial findings, showing a 2 mm VSD, but with a different Qp/Qs ratio, now equaling 1.1.

CONCLUSION: Most of the VSDs spontaneously close during the first year of age, but some of them require closure procedures. If the Qp/Qs ratio is larger than 1.5, the defect should be closed.

CR91

Stuttering as a rare presentation of a Wilson disease: a multidisciplinary approach

1. Marko Vujanović (0009-0004-7081-5704) [Izlažući autor] 2. Ivo Vučko (0000-0002-8468-4539) 3. Gordana Sičaja (0000-0002-5666-7934) 4. Filip Ernoić (0009-0006-0676-8733)

1. School of Medicine, University of Zagreb, Zagreb, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. Department of Neurology, University Hospital Sveti Duh, Zagreb, Croatia 4. Department of Gastroenterology and Hepatology, University Hospital Sveti Duh, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-CR91

KEYWORDS: Hepatolenticular Degeneration; Penicillamine; Stuttering; Tremor; Wilson's Disease

Abstract:

INTRODUCTION/OBJECTIVES: Wilson's disease, also known as hepatolenticular degeneration, is an inherited autosomal recessive disorder of copper transport, characterized by the accumulation of copper in the liver, brain, cornea, and other tissues. It can manifest with a range of symptoms, from asymptomatic elevated liver enzymes to neurological-psychiatric disorders.

CASE PRESENTATION: A 47-year-old patient presented to a neurologist due to action tremors in both hands persisting for the past 6 months. He has had a history of stuttering since childhood. A broad diagnostic work-up was performed, which included MSCT of the brain, EEG, ECG, and blood tests. Because of the decreased values of serum ceruloplasmin (0.154 g/L) and elevated values of copper in 24-hour urine (3.29 µmol/24h), Wilson's disease was suspected, and the patient was referred to a gastroenterologist for further evaluation. Genetic testing proved the mutation of the ATP7B gene, and an ophthalmological examination revealed Kayser-Fleischer rings in both eyes, which fulfilled the criteria for establishing a diagnosis. Dietary recommendations to avoid copper-rich foods and therapy with D-penicillamine were provided. A follow-up examination after 3 months showed a significant improvement in stuttering. However, laboratory findings indicated significant myelosuppression with leukopenia (Leu: 2.1x10^9/L) and thrombocytopenia (Trc: 62x10^9/L) as a side effect of penicillamine therapy. Therefore, penicillamine was replaced with zinc therapy.

CONCLUSION: The etiology of non-specific symptoms, such as stuttering, often remains undetected for years. A multidisciplinary approach is important to detect the underlying disease and start treatment immediately. Treatment with penicillamine should be carefully monitored.

CR92

Late reactivation of pulmonary tuberculosis in oncological patient masked by COPD exacerbation and pneumonia

1. Ana Marija Zdilar (0000-0002-1360-3826) [Izlaui autor] 2. Sara Komljenovi (0000- 0002-0323-078X) 3. Juraj Jug (Mentor) (0000-0002-3189-1518)

1. School of Medicine University of Zagreb 2. School of Medicine University of Zagreb 3. Health center Zagreb-West

DOI: https://doi.org/10.26800/LV-146-supl2-CR92

KEYWORDS: Immunocompromised Host; Lymphadenopathy; Pneumonia; Pulmonary Disease, Chronic Obstructive; Tuberculosis

Abstract:

INTRODUCTION/OBJECTIVES: Tuberculosis is an airborne chronic, progressive, infectious disease caused by Mycobacterium tuberculosis, primarily affecting the lungs. The infection leads to active disease in only 5-10% of the infected, while the active disease is prone to reactivation, despite the treatment.

CASE PRESENTATION: A 77-year-old patient was admitted to the Emergency Department due to dyspnea, productive coughing, febrility, and use of accessory respiratory musculature. He suffers from COPD, arterial hypertension, and dementia. Two months prior, MSCT and biopsy confirmed laryngeal carcinoma. Additionally, a suspicious mass of the lower right lung lobe with mediastinal and hilar lymphadenopathy was detected on MSCT. Upon admission, further diagnostic evaluation was performed, including sampling of the sputum for the microbiological analysis, due to suspected pneumonia and COPD exacerbation. The results came positive for M. tuberculosis. Anamnestically, there was no mention of the prior disease in his medical documentation. Subsequently, he was discharged from the hospital before the microbiologic findings, further exposing his family to the risk of acquiring the infection. As a result of further investigation, it was discovered that he was treated for the disease 30 years ago. The patient was readmitted to the hospital and antituberculous drugs were applied, as well as chemoprophylaxis for his family.

CONCLUSION: Diagnosing tuberculosis is challenging for clinicians, owing to its broad differential diagnosis and non-specific symptoms, often overlapping with other diseases. It is important to be aware that tuberculosis may reactivate even decades later, especially in immunocompromised, which poses a threat to the patients community.

CR93

Challenges in Prenatal Diagnosis: A Case of Holoprosencephaly Associated with Atypical Genetic Syndrome

1. Lea Župan (0009-0001-9420-7437) [Izlažući autor] 2. Ivana Marinović (0009-0000-5846-5108) 3. Ivanka Bekavac Vlatković (0000-0001-7561-9770)

1. School of Medicine University of Zagreb 2. School of Medicine University of Zagreb 3. Department of Obstetrics and Gynaecology; University Hospital "Sveti Duh"; School of Medicine University of Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-CR93

KEYWORDS: Chromosome Deletion; Holoprosencephaly; Nuchal Translucency Measurement; Prenatal Diagnosis;

Abstract:

INTRODUCTION/OBJECTIVES: Holoprosencephaly (HPE) is a congenital brain malformation caused by incomplete forebrain division resulting in neurological sequelae and midline facial anomalies such as microphthalmia, cyclopia, cleft lip and palate, orbital hypotelorism, and proboscis. Although trisomy 13 is the most common etiology of HPE, there are rare cases where HPE is associated with other genetic syndromes.

CASE PRESENTATION: A 28-year-old primigravida was referred to our clinic at 30 weeks gestational age (GA) due to a potentially high-risk pregnancy. Third-trimester ultrasonography revealed a monoventricular cerebral cavity and fused thalami indicating holoprosencephaly, whereas unclear visualization of the nasal vestibulum and nostrils implied potential facial dysmorphia. During first-trimester ultrasonography, an increased NT thickness of 5mm was observed, suggesting possible chromosomal and structural defects. Despite the recommendation, the patient declined additional prenatal testing at that time. The significance of the major fetal anomalies was thoroughly discussed with the patient multiple times, emphasizing potential risks. Amniocentesis was performed at 31 weeks of GA solely for diagnostic purposes, respecting the patient's decision not to interfere with the pregnancy. Chromosomal microarray analysis identified a deletion of gene copy 18p11.32-11.31, indicating de Grouchy syndrome type 1. At 36 weeks of GA, labor was induced following fetal demise. The postmortem examination confirmed previously documented fetal anomalies, including conspicuous lateral nasal proboscis.

CONCLUSION: This case highlights the significance of comprehensive prenatal assessments using ultrasonography scans for a better understanding of conditions related to chromosomal abnormalities, malformations, and genetic syndromes. It also emphasizes their role in effectively communicating the complexities of such conditions to patients.

OR01

Antibiotic-loaded cement spacer in the treatment of the hip periprosthetic joint infection

Afan Ališić[1], Filip Habeković[2], Ivan Bohaček[1,2], Tomislav Smoljanović[1,2]

1 - School of Medicine, University of Zagreb, Zagreb, Croatia

2 – Department of Orthopaedic Surgery, University Hospital Centre Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-OR01

KEYWORDS: arthroplasty; hip replacement; prosthetic infection;

INTRODUCTION: Periprosthetic joint infection (PJI) after total hip arthroplasty (THA) is a devastating complication with infection rates up to 1.4%. The standard method for eradicating the infection is the two-stage procedure with or without the implantation of an antibiotic-loaded cement spacer (ALCS) before reimplantation. Outcomes of patients with hip PJI treated with the ALCS are presented.

MATERIALS AND METHODS: Patients who underwent two-stage revision THA for PJI with an ALCS at the Department of Orthopaedic Surgery, University Hospital Centre Zagreb were retrospectively reviewed.

RESULTS: Four patients underwent the two-stage procedure, which included extraction of the infected hip implants, thorough debridement, insertion of a vancomycin-loaded hand-made cement spacer reinforced with cerclage wire, flow drainage, a course of intravenous antibiotics, and delayed reimplantation following eradication of the infection. Two patients had acute (1 and 2 months), one delayed (9 months) and the last one had late onset of the PJI (2.5 years). The average period between the two stages of the procedure was 11 months (range 7 to 18 months). Follow-up since the reimplantation was on average 24 months (range 6 to 41 months). During the follow-up, no reinfection or loosening was found. All patients are subjectively well and advised to continue physical therapy.

CONCLUSION: Two-stage revision with implantation of ALCS has shown to be an effective treatment for hip PJI. Benefits of ALCS use include local application of antibiotics, maintenance of bone gap and muscle tension, decrease of empty space within the joint and facilitation of the implant reimplantation upon infection eradication.

OR02

A survey of protective effect of melatonin against trifluoperazine-induced genotoxicity in peripheral blood lymphocytes via micronucleus assay

Sahar Behzad, Pharm.D. student (presenter), Dr Masoumeh Rabiee, Pharm.D.

Dr Mehdi Evazalipour, Assistant Professor of Biotechnology, Department of Pharmaceutical Biotechnology, School of Pharmacy, Guilan University of Medical Sciences

Dr Ehsan Zamani, Assistant Professor of Pharmacology and Toxicology, School of Pharmacy, Guilan University of Medical Sciences

DOI: https://doi.org/10.26800/LV-146-supl2-OR02

KEYWORDS: Melatonin/ Trifluoperazine/ Oxidative Stress/ DNA Damage

INTRODUCTION: Trifluoperazine, a widely prescribed antipsychotic for schizophrenia, has been linked to genotoxicity and oxidative damage through apoptosis induction and DNA repair inhibition. Melatonin, an endogenous hormone with antioxidant properties, presents a potential countermeasure against these effects. This study aims to investigate melatonin's protective role against trifluoperazine-induced oxidative genotoxicity.

OBJECTIVE: This study seeks to evaluate the efficacy of melatonin as an antioxidant agent in mitigating oxidative-induced genotoxicity caused by trifluoperazine in human lymphocytes. The objective is to explore the therapeutic potential of melatonin in alleviating adverse effects associated with prolonged trifluoperazine use.

MATERIALS AND METHODS: Human lymphocyte samples from a healthy male volunteer were divided into negative control, cisplatin, trifluoperazine (50 and 100 µM), and trifluoperazine-melatonin (100 µM) groups. Micronucleus assay was employed to assess genotoxicity, while lipid peroxidation and glutathione oxidation were measured to evaluate oxidative damage.

RESULTS: Trifluoperazine-exposed groups exhibited significant increases in micronuclei, glutathione oxidation, and lipid peroxidation compared to controls ($P<0.01$). Treatment with melatonin significantly reduced micronuclei, glutathione oxidation, and lipid peroxidation in trifluoperazine-exposed groups ($P<0.05$).

CONCLUSION: Trifluoperazine induces genotoxicity through oxidative stress pathways, while melatonin demonstrates a notable antioxidant effect in ameliorating such damage. Co-administration of melatonin with antipsychotics like trifluoperazine may offer therapeutic benefits by mitigating oxidative-induced

genotoxicity. These findings underscore the potential of melatonin as an adjunctive therapy to attenuate adverse effects associated with long-term antipsychotic use in schizophrenia management.

OR03

Comparative Assessment of NO-System Modulators in Mitigating Aminoglycoside-Induced Nephrotoxicity in Rats and stable gastric pentadecapeptide BPC-157 therapy

1. Dorian Dulčić (0009-0005-6432-1131) 1. Jelena Marušić (0009-0000-0699-696X) 1. Ivan Cepanec (0000-0002-6698-137X) 1. Predrag Sikirić

1. Department of Pharmacology, School of Medicine, University of Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-OR03

KEYWORDS: aminoglycosides, nitrous oxide, BPC-157, renal injury, pharmacology

Abstract:

INTRODUCTION/OBJECTIVES: Aminoglycosides are the leading cause of drug-induced nephrotoxicity with gentamicin at the forefront of causing nephrologic side effects. The objective of this study is to demonstrate that BPC-157, an NO-system modulator, preserves renal function more effectively than other NO-system modulators, such as L-arginine and L-NAME, following aminoglycoside-induced nephrotoxicity.

MATERIALS AND METHODS: 100 mg/kg gentamicin was administered intraperitoneally to male Wistar albino rats. Simultaneously, therapeutic groups received tested substances, while control groups received saline solution. Therapeutic groups recieved different assortments of substances: BPC-157, L-arginine (200 mg/kg), L-NAME (5 mg/kg) or both L-arginine (200 mg/kg) and L-NAME (5 mg/kg). After eight days, the rats were anesthesized using ketamine (100 mg/kg) and had their blood drawn. Creatinine and urea serum levels were determined from each blood sample to assess renal functionality and therapy effectiveness in alleviating drug-induced renal dysfunction.

RESULTS: In the groups treated with BPC-157, urea and creatinine serum levels were significantly lower compared to other groups, indicating superior preservation of glomerular filtration. BPC-157 therapy consistently resulted in the lowest levels of metabolites present in serum, with L-NAME therapy consistently providing the second lowest values. Conversely, L-arginine therapy showed negligible effect, with serum values indicating similar urea and creatinine levels to the control groups. Notably, combining L-arginine and L-NAME led to a drastic increase in urea and creatinine levels, indicative of renal failure.

CONCLUSION: BPC-157 demonstrates superior renal protection compared to L-arginine, L-NAME and their combination in treating aminoglycoside-induced nephrotoxicity.

OR04

Survey study: Medical student-run Public Health Journal Club

Karla Kroflin [a], Karla Lužaić [a], Kristina Krstanović [a], Bruno Korać [a], Sanja Musić Milanović [a,b]

[a]School of Medicine, University of Zagreb,Croatia; [b] Health Promotion Division, Croatian Institute of Public Health; University of Zagreb, School of Medicine, Andrija Štampar School of Public Health, Croatia.

ORCID numbers: Karla Kroflin 0000-0002-9722-5606, Karla Lužaić 0000-0002-3132-8944, Kristina Krstanović 0000-0001-5225-3593, Bruno Korać 0009-0007-9651-8603, Sanja Musić Milanović 0000-0003-4643-1052.

DOI: https://doi.org/10.26800/LV-146-supl2-OR04

Keywords: medical students; public health; medical education; research

Abstract

INTRODUCTION: The Public Health Journal Club was developed by the Croatian Medical Students International Committee with the aim of motivating colleagues to actively discuss articles and public health challenges. This study aimed to analyze the participation of students in a Journal Club in regard to students' attitudes, self-perceived knowledge, and skills in the area of public health and research. The study also aimed to determine whether there are differences in attitudes towards the importance of prevention, self-assessed understanding of research methodology, and frequency of reading papers in the groups before and after the Journal Club. Our third aim was to review the project implementation process.

METHODS: All participants were medical students. The Journal Club covered ten important public health topics in ten one-hour discussions from November 2021 to June 2022. Data were obtained through a pre- and post-assessment survey.

RESULTS: Students had a higher self-assessed understanding of research methodology after participating (p=0.023). Moreover, 81.8% of survey respondents reported that it was easier to interpret articles and 90.9% of respondents reported that they would like to take an elective course similar to Journal Club. 38.5% of participants noted that they agreed and 61.5% strongly agreed that presenting in the Journal Club improved their public speaking skills.

CONCLUSION: Students developed more positive attitudes toward public health and research, as well as improved knowledge and skills in these areas. The described Journal Club was perceived as an effective educational activity by the participants and its re-use in different medical areas and specialties should be considered.

OR05

Prevalence of Borrelia burgdorferi s.l. antibodies in patients with neuroinvasive disease in Croatia

Lukas Librić[1] (0009-0009-7913-9729)**,** Jelena Jakšić[1] (0000-0002-3520-296X), Tatjana Vilibić Čavlek[1,2] (0000-0002-1877-5547)

[1]School of Medicine, University of Zagreb

[2]Croatian Institute of Public Health

DOI: https://doi.org/10.26800/LV-146-supl2-OR05

KEYWORDS: Borrelia burgdorferi sensu lato, Croatia, Epidemiology, Lyme Neuroborreliosis

INTRODUCTION/OBJECTIVES: Lyme borreliosis (LB) is a tick-borne zoonosis caused by different genospecies of the Borrelia burgdorferi sensu lato (s.l) complex. Ixodes ricinus is the main tick vector for Borrelia spp. in Europe. The main clinical presentation of LB is erythema migrans, while the involvement of the central nervous system (neuroborreliosis) occurs in up to 15% of untreated patients. This study aimed to analyze the prevalence of B. burgdorferi s.l. antibodies in patients with neuroinvasive disease in Croatia.

MATERIALS AND METHODS: A total of 776 patients (539/69.5% males and 237/30.5% females) tested from 2017 to 2023 were included in the study. IgM and IgG antibodies to B. burgdorferi s.l. were detected in serum and cerebrospinal fluid samples using an enzyme immunoassay (ELISA) with confirmation of IgM/IgG-positive samples by immunoblot assay.

RESULTS: Acute neuroborreliosis was detected in 8 (1.0%) patients presented with meningitis (N=6) and meningoencephalitis (N=2). All patients were males with a median age of 42 (IQR=27-63) years. Previous exposure to B. burgdorferi s.l. (IgG seropositive) was documented in 76 (9.8%) patients. Although females showed higher seroprevalence (28/11.8%) than males (48/8.9%), this difference was not statistically significant (p=0.209). Seroprevalence increased with age (p=0.003), varying from 0 (0%) in the <20 age group to 24 (14.6%) in the 60-69 age group, and remained stable thereafter. Acute infections and IgG seropositive patients were detected most frequently in northwestern and northeastern continental regions.

CONCLUSION: The presented results showed that LB is widespread in continental Croatia. Older age is a risk factor for B. burgdorferi IgG seropositivity.

OR06

The histological aspect of pentadecapeptide BPC 157 on the healing of tracheocutaneous fistula in rats

1. Marjeta Linarić Lipnjak (0009-0009-0778-3582) [Izlažući autor] 1. Hrvoje Vraneš (0000- 0003-3544-8385) 1. Matej Lacković (0009-0001-1830-5916) 1. Predrag Sikirić

1. Department of Pharmacology, School of Medicine, University of Zagreb, Zagreb, Croatia 2. Department of Pharmacology, School of Medicine, University of Zagreb, Zagreb, Croatia 3. Department of Pharmacology, School of Medicine, University of Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-OR06

KEYWORDS: BPC 157, histology, fistula, pharmacology

Abstract:

INTRODUCTION/OBJECTIVES: Tracheocutaneous fistula, occurring in 13-43% of pediatric cases post-decanulation, is a common tracheotomy complication. The cytoprotective stable gastric pentadecapeptide BPC 157 has shown an impact on the healing of gastrocutaneous, colocutaneous and oesophagocutaneous fistulas. Based on these findings, we focused on the histological aspect of BPC 157 on the healing of tracheocutaneous fistula in rats.

MATERIALS AND METHODS: A tracheal defect was made and attached to the skin edges of the anterior side of the neck of Albino Wistar rats. Rats were euthanized seventh postoperative day and fistula specimens were harvested. Tissue epithelialization, presence of inflammatory cells, presence of necrosis and formation of granulation tissue were then analyzed in the assessment of fistula healing. The control group was then administered drinking water p.o./ saline 5ml/kg/day i.p. Treated animals were administered BPC (10 µg/kg, 12 ml/rat/day) p.o./i.p. and BPC 157 (10 ng/kg, 12 ml/rat/day) p.o./i.p. RESULTS: Histological preparations of the control group on the fifth postoperative day revealed an open fistulous channel with granulation tissue, edema and mixed inflammatory infiltration. By the seventh day, a well-formed fistulous canal with two epithelial types was observed. In the BPC 157 treated group, edema was significantly reduced. By the 7th day, the fistulous canal closed with granulation tissue, occasionally with epithelialization.

CONCLUSION: BPC 157 positively influenced tracheal and skin defect healing, promoting fistula closure, suggesting BPC 157 involvement in tracheocutaneous fistula healing.

OR07

Resective epilepsy surgery after stereo-electroencephalography in presurgical assessment of pharmacoresistant refractory magnetic resonance-negative epilepsy: case series

Helena Ljulj[1], Vlatko Šulentić[2], Jakob Nemir[3]

[1]*School of Medicine, University of Zagreb, Croatia*

[2]*Department of Neurology, Clinical Hospital Center Zagreb, Croatia*

[3]*Department of Neurosurgery, Clinical Hospital Center Zagreb, Croatia*

DOI: https://doi.org/10.26800/LV-146-supl2-OR07

KEYWORDS: Drug Resistant Epilepsy; Electrodes, Implanted; Electroencephalography; Stereotaxic Techniques;

OBJECTIVE: Stereo-electroencephalography (SEEG) is a promising preoperative invasive monitoring tool for identifying epilepsy focus of pharmacoresistant refractory magnetic resonance imaging (MRI)-negative epilepsy. Emphasis is placed on patients for whom noninvasive preoperative diagnostic tools have failed to define the previously mentioned.

METHODS: A retrospective chart review was performed to identify patients who underwent surgical epilepsy resection and preoperative SEEG depth electrode placement between January 2021 and January 2024. Inclusion criteria included pharmacoresistantance and lack of visual hallmarks on MRI. Patient demographics, surgical variables, and seizure outcomes (Engel class) were evaluated.

RESULTS: Five male patients were identified, ranging in age from 28 to 53 years (mean 40±10 years). Seizure semiology, onset age and antiepileptic therapy (AET) varied. The number of AETs prior to surgery ranged from 2 to 5 (median 4). Number of placed depth electrodes ranged from 7 to 13 (median 10). Lesionectomy was planned based on ictal focus; one patient underwent middle temporal gyrus lesionectomy and four patients underwent amygdalohippocampectomy. At the longest follow-up of 36 months (mean 24±12 months), four patients had Engel class I, and one patient had Engel class II outcome.

CONCLUSION: This case series serves to illustrate the role of SEEG as a potentially effective invasive monitoring tool for detection of MRI-negative, drug-resistant epilepsy focus. It addresses treatment challenges, providing hope for patients for whom noninvasive preoperative diagnostic tools were inadequate in defining the epilepsy focus and thereby the neurosurgical resection target area.Cabbage Leaves as a Traditional

OR08

Examining Faecal Pellet Structure as a Potential Early Predictor of Parkinson's Symptoms in 6-OHDA Rat Model

Pavel Markovic[1], Stela Ilijas[1], Mihovil Joja[4,5], Melita Salkovic-Petrisic[1,2], Jan Homolak[1,2,3]

1 Department of Pharmacology, University of Zagreb School of Medicine, Zagreb, Croatia; 2 Croatian Institute for Brain Research, University of Zagreb School of Medicine, Zagreb, Croatia; 3 M3 Research Center, Excellence Cluster 'Controlling Microbes to Fight Infections' (CMFI), Interfaculty Institute of Microbiology & Infection Medicine Tübingen (IMIT), Eberhard Karls University & University Hospital Tübingen, 72076 Tübingen, Germany; 4 Department of Infection and Immunity, Luxembourg Institute of Health, Esch-sur-Alzette, Luxembourg; 5 Faculty of Science, Technology and Medicine, University of Luxembourg, Esch-sur-Alzette, Luxembourg

DOI: https://doi.org/10.26800/LV-146-supl2-OR08

KEYWORDS: alpha-synuclein; image processing, computer-assisted; neurodegenerative disorder; Parkinson's disease; disorder, functional gastrointestinal; biochemical marker.

INTRODUCTION/OBJECTIVES: This study aimed to conduct a morphometric analysis of fecal pellets in the prodromal phase of PD using a rat model of the disease induced by bilateral intrastriatal administration of 6-hydroxydopamine.

MATERIALS AND METHODS: The study was conducted on fecal pellets collected over a 24-hour period, 2 weeks after model induction before the onset of clear motor symptoms measured by the rotarod test. Fecal pellets from each animal were individually weighed before and after drying to determine water content, scanned with a high-resolution camera, and ground for subsequent biochemical analysis. Morphometric analysis of fecal pellets was conducted using BioVoxxel Toolbox in ImageJ and R. After grinding samples were

subjected to biochemical analysis of lipids (Sudan black lipid blot 1), redox homeostasis (nitrocellulose redox permanganometry 2, 2,2'- Azinobis(3-Ethylbenzthiazoline-6-Sulfonate) 3, catalase/peroxidase), and mucin content(Alcian blue).

RESULTS: Morphometric analysis revealed subtle differences but was not sufficient to reliably identify animals at risk for developing motor deficits after intrastriatal administration of 6-OHDA. Biochemical analyses of fecal pellets were more powerful predictors of the development of motor symptoms.

CONCLUSION: Morphometric analysis of 24-hour fecal pellets is not sufficiently sensitive to reliably identify animals at risk for developing motor deficits after bilateral intrastriatal administration of 6-OHDA, possibly because of insufficient degeneration of nigro-vagal pathway and the consequent absence of the pronounced gastrointestinal dysfunction. Fecal pellets are potentially a valuable source of information regarding gastrointestinal redox, metabolic, and motor dyshomeostasis and should be further investigated in other models of PD.

OR09

Effects of lateral episiotomy on the emergence of anal incontinence during the first postpartum year in primiparas: prospective cohort study

1. Aleksandra Martinko (0009-0001-9204-7185) [Izlažući autor] 2. Saša Mađar (0009-0003-7893-4372) 3. Krešimir Živković (0000-0002-0754-5164)

1. School of Medicine University of Zagreb 2. School of Medicine University of Zagreb 3. Department of Gynecology and Obstetrics, University Hospital "Sveti Duh"

DOI: https://doi.org/10.26800/LV-146-supl2-OR09

KEYWORDS: episiotomy, fecal incontinence, labor, obstetric, primiparity

Abstract:

INTRODUCTION/OBJECTIVES: While commonly conducted, there is a lack of sufficient data regarding the impact of lateral episiotomy on pelvic floor function. The purpose of this study is evaluation of the impact of lateral episiotomy on the incidence of anal incontinence (AI) in primiparas after vaginal delivery.

MATERIALS AND METHODS: The study design is a prospective cohort study. The primiparas were divided into two groups. The first group consisted of women who gave birth with lateral episiotomy, while the second group included women who gave birth with an intact perineum or with perineal tears of first and second degree. Assessments of AI were performed at 5 and 8 months after vaginal birth using Wexner Fecal Continence Grading Scale questionnaire.

RESULTS: The results revealed no significant differences in rate of anal incontinence between the groups at the two time points. Examining the general rate of positive responses, regardless of the total points, reveals that 13% of women in the episiotomy group and 18% in the perineal rupture group had anal incontinence at the first examination, indicating no significant difference. Upon the second examination, the percentage of women with a positive Wexner questionnaire decreased to 8% in the episiotomy group, while remaining at 18% in the perineal rupture group, with the frequencies of questionnaire points levelling off.

CONCLUSION: Lateral episiotomy has a neutral effect on the onset of anal incontinence in primiparous women in the first year after deliver

OR10

The role of stable gastric Pentadecapeptide BPC-157, L-Arginine and L-NAME in enhancing rib fracture healing in rats

Nika Miladin[1] (0009-0008-0625-6644), Luka Kalogjera[1] (0000-0002-1703-0033), Andrej Vrdoljak[1] (0009-0007-4588-964X), Predrag Sikirić[1]

[1]Department of Pharmacology, School of Medicine, University of Zagreb, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-OR10

KEYWORDS: BPC 157, pharmacology, radiology, rib fracture

Abstract:

INTRODUCTION/OBJECTIVES: Serial rib fractures can precipitate significant complications such as acute respiratory distress syndrome and pneumonia. The entire fracture healing process is primarily managed through rest and analgesic measures. Our study investigated the impact of BPC-157, L-arginine and L-NAME on the formation of adhesions in the endothoracic fascia, increased bone callus formation and earlier healing of fractured ribs.

MATERIALS AND METHODS: Male Wistar rats were anesthetized and superficial back muscles were laterally displaced exposing the dorsal aspect of the ribs, followed by vertical transection of the 8th-10th ribs. Treated animals received BPC-157 via intraperitoneal injections (10 µg/kg and 10 ng/kg) immediately post-surgery, followed by daily oral administration. Control groups were administered 5 ml/kg of saline intraperitoneally post-surgery, alongside access to clean drinking water ad libitum. To assess interaction with the nitric oxide system, L-NAME (5 mg/kg/day intraperitoneally) and/or L-arginine (100 mg/kg/day intraperitoneally) were administered alone or with BPC-157 to distinct animal groups.

RESULTS: Observations after 20 days, macroscopically and radiographically, yielded the following findings. Groups treated with BPC-157 alone or in combination with L-arginine and/or L-NAME exhibited minimal macroscopic adhesions. Conversely, the group treated with L-NAME demonstrated the most pronounced adhesion separation. Furthermore, radiographic evaluation revealed a complete union of bone fragments without visible fracture cracks in the group treated with BPC-157 alone or in combination with Larginine and/or L-NAME, whereas only initial callus formation was discernible in other groups.

CONCLUSION: The administration of BPC-157 reduced the formation of adhesions in the endothoracic fascia, enhanced bone callus formation and accelerated the healing process of fractured ribs.

OR11

Does ChatGPT-4 Succeed in ECG Interpretation: Friend or Foe to Cardiologists?

1. Mihovil Santini (0000-0002-1428-4484) [Izlažući autor] 2. Jakov Santini (0009-0003-1376-0957) 3. Andrej Novak (0000-0002-7828-4870) 4. Ante Lisičić (0000-0002-4365-9652) 5. Ivan Zeljković (0000-0002-4550-4056)

1. Department of Cardiology, General Hospital Zadar, Zadar, Croatia 2. School of Medicine, University of Zagreb, Zagreb, Croatia 3. Department of Cardiology, University Hospital Dubrava: Zagreb, Croatia 4. Department of Cardiology, University Hospital Dubrava: Zagreb, Croatia 5. Department of Cardiology, University Hospital Dubrava: Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-OR11

KEYWORDS: Arrhythmias, artificial intelligence, cardiology, electrocardiography

Abstract:

INTRODUCTION/OBJECTIVES: Artificial intelligence (AI) and large language models are increasingly being tested for medical purposes, especially in clinical settings, and one of the most well-known is OpenAI's ChatGPT-4. Recent explorations have considered using ChatGPT to answer medical questions, and the new ChatGPT-4 also allows graphical inputs, which could aid medical doctors in interpreting electrocardiograms (ECGs) in everyday practice. AI-powered ECG interpretation has shown promising results. However, whether

ChatGPT4's interpretation of ECGs is comparable to that of experienced cardiologists has yet to be established. We sought to test whether ChatGPT-4 could analyze and interpret ECGs similarly to experienced cardiologists.

MATERIALS AND METHODS: We tasked ChatGPT-4 with interpreting 12-lead ECGs from 150 patients included in our prospective CaRD registry (NCT06090591), presenting with various cardiac pathologies, including acute coronary syndrome, arrhythmias, conduction abnormalities, pacemaker rhythms, and normal ECGs. Four experienced cardiologists reviewed the ECG interpretations provided by ChatGPT-4.

RESULTS: ChatGPT-4 demonstrated low overall accuracy in interpreting ECGs, with only 24% of the most likely diagnosis being correct. ChatGPT-4 performed the best when interpreting normal ECGs with sinus rhythm, achieving a 62% accuracy rate, followed by 17%, 10%, and 7.3% for ECGs with arrhythmias, acute ischemic changes, and conduction abnormalities or pacing rhythms, respectively.

CONCLUSION: ChatGPT-4 exhibited very low accuracy in interpreting different categories of pathology in a 12-lead ECG, yielding less than 20% success rate. While the use of AI in medical diagnostics is an appealing concept in theory, the results suggest that, in its current state, ChatGPT-4 would not provide significant aid to experienced cardiologists in clinical settings.

LR01

Associations between Genetic Mechanisms and Oral Isotretinoin Therapy: A Review of Literature

1. Eva Brenner (0000-0002-6638-2967) [Izlažući autor] 2. Luka Bulić (0000-0001-6522-891X) 3. Marin Cvitić (0000-0001-6438-5980) 4. Aurora Vareško (0009-0001-0350-7793) 5. Suzana Ožanić Bulić (0000-0002-1871-826X)

1. School of Medicine, University of Zagreb 2. School of Medicine, University of Zagreb

3. School of Medicine, University of Zagreb 4. School of Medicine, University of Zagreb

5. Pediatric Dermatology Clinic, Department of Pediatrics, Children's Hospital Zagreb

DOI: https://doi.org/10.26800/LV-146-supl2-LR01

KEYWORDS: Epigenomics, Isotretinoin, Metabolism, Pharmacogenetics

Abstract:

INTRODUCTION/OBJECTIVES: Isotretinoin (ISO) is an oral medication commonly used for the treatment of severe acne. It prevents the formation of comedones by inducing apoptosis in sebaceous glands and reducing hyperkeratinization. With the revolution of genomics research in modern medicine, several studies have investigated the pharmacogenetic and epigenetic properties of this drug.

MATERIALS AND METHODS: An extensive search of the PubMed and Scopus databases was conducted with the keywords "genetic" and "isotretinoin". A total of six published papers investigating this specific topic were included in this review.

RESULTS: Where pharmacogenomics is concerned, certain single nucleotide polymorphisms (SNPs), such as in the apoE gene, have been associated with a strong ISO lipid-elevating effect. A 4-year study observed that hyperresponsive patients were more likely to develop hypertriglyceridemia, hypercholesterolemia, and truncal obesity after ISO therapy. After genetic testing, a close association with apoE SNPs was confirmed. Other studies observed varying ISO plasma levels after the same dose, depending on CYP26 SNPs. Epigenetic effects of ISO include upregulation and downregulation of gene activity. One study mentioned an inducing effect on the CYP3A enzyme, opening the possibility for interference with other drug metabolisms. Another noticed an altered regulation in the GATA2, C4BPA, CCR5, DEFA3, ELANE, MMP9, and RPS4Y1 genes, postulating the aforementioned genes as a genetic background for ISO-induced acne aggravation.

CONCLUSION: The current literature on this topic is scarce and it should be investigated further. A better understanding of the genetic mechanisms modified by ISO treatment could lead to the development of

personalized treatment protocols and avoidance of adverse reactions.

LR02

Cabbage Leaves as a Traditional Remedy for Osteoarthritis and Mastitis: A Literature Review

1. Anton Malbašić (0000-0002-8699-8662), 2. Dora Cesarec (0000-0003-3250-8987), 3. Petar Gulin (0009-0007-5350-8130)

1. Zagreb County Health Centre, Velika Gorica, Croatia 2. Department of School and Adolescent Medicine, National Teaching Institute of Public Health Andrija Štampar; Zagreb, Croatia 3. Department of Otorhinolaryngology and Head and Neck Surgery, Clinical Hospital Dubrava, Zagreb, Croatia

DOI: https://doi.org/10.26800/LV-146-supl2-LR02

KEYWORDS: anti-inflammatory agents, analgesics, Brassica, mastitis, osteoarthritis

Abstract:

INTRODUCTION/OBJECTIVES: Cabbage leaves (CL) are a traditional remedy for various inflammatory conditions, especially osteoarthritis and mastitis. This review aims to summarize the current literature on the use of CL for these conditions. MATERIALS AND METHODS: A search was conducted on PubMed using the keywords “cabbage leaves” and “osteoarthritis” or “mastitis”. The search yielded 12 peer-reviewed articles in English, 4 relevant for osteoarthritis and 8 for mastitis. RESULTS: Two randomized controlled trials (RCTs) and two observational studies (OSs) showed that CL wraps reduced pain and swelling in patients with knee osteoarthritis, compared to placebo or usual care. Mean differences in pain scores were -1.4 (95% CI: -2.1 to -0.7) in one study and -1.8 (95% CI: -2.6 to -1.0) in another. Mean differences in swelling scores were -1.1 (95% CI: -1.7 to -0.5) and -1.3 (95% CI: -1.9 to -0.7). Six RCTs and two OSs showed CL as more effective than usual care in reducing breast engorgement and pain in lactating women. Mean differences in engorgement scores were -0.8 (95% CI: -1.2 to -0.4) in one study and -1.1 (95% CI: -1.6 to -0.6) in another. Mean differences in pain scores were -1.2 (95% CI: -1.8 to -0.6) and -1.4 (95% CI: -2.0 to -0.8). OSs suggested that CL extract had anti-inflammatory and analgesic effects in animal models. CONCLUSION: CL appear as a safe and effective treatment for osteoarthritis and mastitis, based on available evidence. However, the quality and quantity of the studies are limited, with underlying mechanisms not being fully understood, so further research is needed.

LR03

Anorexia nervosa and metabolic complications

1. Danijela Mosković (0000-0003-1691-6008) 2. Ema Reicher (0009-0004- 1024-0072) 3. Luka Pavlinac (0009-0003-2382-6163) 4. Mirta Peček (0000-0003-4350- 4025)

1. School of Medicine University of Zagreb 2. School of Medicine University of Zagreb 3. Health centre Zagreb 4. Institute of Emergency Medicine Virovitica-Podravina county

DOI: https://doi.org/10.26800/LV-146-supl2-LR03

KEYWORDS: anorexia nervosa, eating disorders, metabolic diseases, refeeding syndrome

Abstract:

INTRODUCTION/OBJECTIVES: Anorexia nervosa is an eating disorder characterized by an intense fear of gaining weight which leads to marked weight loss and malnutrition. The lifetime prevalence rates of anorexia nervosa might be up to 6.3% among females and up to 0.3% among males. It exhibits the highest mortality rate of all psychiatric disorders, as it may lead to significant psychopathology alongside life-threatening

medical complications. This review aims to highlight these issues, most of which might be resolved with adequate nutritional therapy and weight increase.

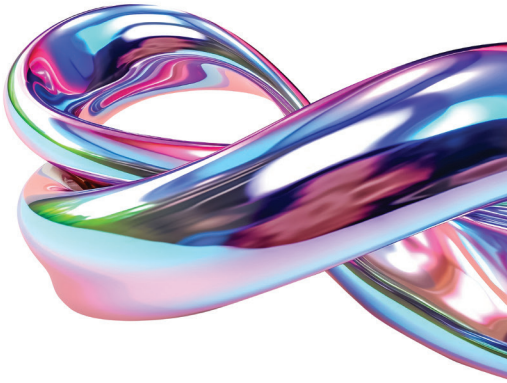
MATERIALS AND METHODS: The MEDLINE database was searched using the keywords: ''anorexia nervosa'' and ''metabolic complications''. 1078 papers were found.

RESULTS: Numerous simultaneous medical complications arise and intensify as the severity of the illness increases. Maintenance of physiological functions is altered due to various hormonal disturbances including growth hormone resistance, low insulin-like growth factor-1 levels, non-thyroidal illness syndrome, hypercortisolemia, altered lipid profile, and changes in appetite-regulating hormones. The consequences of the mentioned changes are hypothalamic amenorrhea, low bone mass, impaired bone microarchitecture, increased risk for fracture, as well as an increased cardiovascular risk. Feeding must be done gradually to avoid refeeding syndrome, acute hormonal-metabolic disturbance, characterized by hypophosphatemia, hypomagnesemia, hypokalemia, vitamin deficiency, disorders of glucose management, and fluid retention.

CONCLUSION: Anorexia nervosa extends beyond mental health conditions, leading to various metabolic disorders that require prevention. Additionally, it is essential to proceed with treatment cautiously to prevent refeeding syndrome and ensure optimal care for the patient.

Workshops





To shock or not to shock?

StEPP Society & Student Section for Cardiology

Matej Črep, Sara Maroević, Luka Misović, Fran Naletilić, Josip Bošnjak, Karolina Beg, Karlo Gjuras, Anamaria Yago

Ischemic heart disease is the leading cause of death in the world according to the WHO. Most of these deaths occur outside of the hospital which makes cardiac arrest one of the most important medical interventions that young doctors need to master before the beginning of their career in the outpatient emergency medical service. One of the key elements in increasing the survival rate of these patients is the chain of survival which consists of four links: early recognition, early cardiopulmonary resuscitation, rapid defibrillation, and advanced life support. In this workshop, our colleagues from the Students Section for Cardiology will go through the main rhythms associated with cardiac arrest. You will have the opportunity to learn and practice how to distinguish between shockable and non-shockable rhythms, as well as discern between different ways of cardioversion. After acquiring the necessary skills for early recognition of heart rhythms and cardiac arrest, Udruga StEPP will demonstrate how to perform high-quality cardiopulmonary resuscitation, how to deliver safe defibrillation, and continue with advanced life support measures. You are going to practice safe and quality defibrillation with other life support techniques using new and modern defibrillators and mannequins, giving you the most realistic feeling of a legitimate patient. After this workshop, you will be able to read and recognize heart rhythms on the monitor along with providing safe defibrillation and advanced life support measures. To shock or not to shock, that is the question. In this workshop, colleagues from the StEPP Society and the Students Section for Cardiology will teach you how to distinguish between shockable and non-shockable rhythms, as well as discern between different ways of cardioversion. Additionally, you will have the opportunity to practice safe and quality defibrillation with other life support techniques using new and modern defibrillators and mannequins, giving you the most realistic feeling of a legitimate patient.

Total CHARGE of the Hertz: ALS from two perspectives

Student Society for Emergency Medicine & Student Society for Anesthesiology

Lea Hasnaš, Lovro Mikulić, Iva Jurić, Vedran Jakšić, David Palijan, Luka Zvekić, Ana Katić, Dorotea Kozić

Our workshop delves into the vital (quite literally) topic of advanced life support (ALS). ALS is a need-to-know skill for every medical student, and we offer a comprehensive workshop with dual approach—ALS in prehospital and hospital settings.

The workshop will start with a brief theoretical segment using Powerpoint presentation. Subsequently, in the practical segment, students will be divided into two groups to illustrate the distinctions in life support between prehospital and hospital conditions. Following a short demonstration, students will have the opportunity to practice ALS.

ALS is an ever-changing skill, and the need for variations depends largely on the team members, conditions and available equipment. Consequently, the Emergency Medicine Section will in their practical portion showcase ALS in prehospital settings, which can be challenging due to working in smaller teams, limited equipment, location constraints, or the necessity for quick decision-making in unexpected situations. To address this, we plan to tailor our station by creating difficult scenarios, restricting equipment, and limiting the number of team members.

On the other hand, ALS in hospital settings provides access to a larger team and advanced equipment, allowing for higher-quality care. The Anesthesiology Section offers a comprehensive approach to learning how to maximize equipment utilization and establish effective communication within a larger team. The station will provide access to basic hospital equipment, a larger number of team members, and realistic hospital scenarios.

ALS is a skill that must be mastered, and by overcoming challenges in the face of emergencies, it becomes a life-saving proficiency.

CorTechs: Thinking outside the brain

Student Society for Innovation in Medicine, Student Society for Neuroscience & Students from The Faculty of Mechanical Engineering and Naval Architecture

Lovro Jančić, Konrad Alexander Kiss, Luka Zvekić, Nermina Kamarić, Pavel Marković, Melita Klaić, Helena Ljulj, Lucija Grbin, Petra Sučić, Petar Vučičević

Our student societies wanted to connect the magic of today's technology and innovations in medicine with the never-ending mysteries of the human brain. Ever wonder how our brain tells us to move a finger or how we're so precise in what we do? In our workshop, we're bringing technology to the forefront of medicine. While it may not be the most obvious pairing, we're confident that our collaboration can result in a new and unique experience for students. Our objective is to not only create a memorable workshop but also open doors for future ideas.

A butterfly in the sky — a gland in your neck

Students Society for Otorhinolaryngology and Head and Neck Surgery & Students Society for Radiology

Rea Novak, Anna Braniša, Marko Đurišević, Lukas Librić, Dora Kožul, Domagoj Vlahek, Krešimir Šofić

The thyroid gland, a butterfly-shaped organ situated in the neck, plays a crucial role in regulating metabolism and energy production. When assessing the gland, interdisciplinary collaboration between Otolaryngology (ENT) and Radiology is pivotal for comprehensive patient care. While ENT contributes to the assessment and treatment of thyroid disorders, either with medical or surgical interventions, radiology is crucial in diagnosing with imaging techniques such as ultrasound, computed tomography, and magnetic resonance imaging. Said teamwork ensures a comprehensive understanding of thyroid conditions, further optimizing patient outcomes through a combination of clinical expertise and advanced imaging technologies. The workshop will tackle the understanding of the most common thyroid conditions, further deepening the knowledge, along with hands-on course of the ultrasound imaging of the gland.

"Symphony of recovery" — an interdisciplinary approach to the treatment of ACL injury

Student Society for Orthopaedics and Traumatology & Student Society for Kinesitherapy

Klara Sabljak, Dario Smirnjak, Afan Ališić, Branimir Šušak, Karlo Ramljak, David Rošić

The anterior cruciate ligament (ACL) is highly susceptible to injury, especially among athletes engaged in agile movements, yet such injuries can also occur in the general population. This workshop, organized by the Student Society for Orthopedics and Traumatology in collaboration with the Student Society for Kinesitherapy, aims to familiarize participants with the anatomy of the ACL, the biomechanics of the knee joint, and the common pathology of ACL injuries, along with the rehabilitation process. The workshop begins with a brief theoretical overview, followed by a practical session. During this practical segment, participants undergo a clinical examination involving specific tests to diagnose knee joint pathologies. Additionally, participants will acquire knowledge about fundamental principles for treating ACL injuries. The workshop includes a practical demonstration of conventional treatment methods, such as manual therapy and kinesitherapy, and operative intervention for ACL injuries using a 3D-constructed model called "ORTHOdevice", which simulates arthroscopic conditions. The workshop is structured into stations, allowing participants to observe all previously mentioned techniques. After the workshop, participants will have a foundational understanding of the ACL structure, its pathology, and a general overview of the rehabilitation process.

Matters of the brain

Student Section for Oncology and Immunology & Student Section for Neurobiology

Lucija Rukavina, Eva Paponja, Petra Severović, Lucija Nevena Barišić, Mirna Rešetar, Leonarda Vlahov

Brain tumors are notorious for their poor prognosis and limited treatment options, leaving many patients without effective care. However, due to today's interdisciplinary approach to cancer research, precision medicine has emerged, playing a vital role in enhancing patient treatment. Through a case-based approach, we aim to introduce bioinformatics and computational analysis to emphasize their role in improving the outcomes of these patients.
As medical students already know, half of the diagnosis is made through performing a careful examination and thoroughly taking personal and family history. The Student Section for Oncology and Immunology will familiarize students with potential scenarios they may encounter in hospitals and guide them through all steps necessary to reach the diagnosis. However, when it comes to brain tumors, it gets more complicated and requires more complex analysis at the molecular level.
Advancements in scientific tools have allowed medical professionals to delve deep into the complexity of cancer, understanding its pathology and heterogeneity. In this workshop, the focus will be on

Gluten–Free Gourmet: MasterChef Edition

Student Section for Promoting Health and Healthy Lifestyle & PROBION

Petra Prebeg, Antonia Alfirević, Antonia Precali, Tena Stipić, Ema Zubović, Kristina Mikec

The "Gluten-Free Gourmet: MasterChef Edition" workshop consists of two parts: an introductory session and a cooking class. During the initial segment, participants will acquire comprehensive insights into Coeliac disease, encompassing its symptomatic manifestation, diagnostic procedures, and treatment modalities. This part will be facilitated by an expert and aims to provide foundational knowledge, awareness, and informed decision-making regarding dietary practices. Subsequently, the workshop seamlessly transitions into the practical dimension of a cooking class. Here, participants will engage in a culinary experience, mastering the art of preparing gluten-free meals. Additionally, the session provides a unique opportunity for participants to gain insights into the challenges encountered within professional kitchens, specifically in the context of crafting gluten-free culinary offerings. Through this workshop, participants not only enhance their practical culinary skills but also deepen their understanding of the complexities inherent in the professional culinary landscape. The workshop endeavors to empower individuals by equipping them with an understanding of Coeliac disease and concurrently enhancing their proficiency in crafting gastronomic delights free from gluten.

Breathe in, Burn out

Student section for psychiatry, EDUREHA & Hipok.art

Tea Plišić, Lorena Bencarić, Ema Zdunić, Lorena Loje, Mia Matea Velenik, Ana Vukoja

We are happy to introduce an expressive arts 'Breathe in, Burn out' workshop. We know burnout is the number one reason doctors, medical students, and similar professions seek help from a therapist. In this workshop you will have the opportunity to learn interesting and creative techniques for stress relief, meet an expert, and of course, have some fun in the process! All you need to fully enjoy this workshop is good will, openness to new experiences, and a sprinkle of healthy curiosity.

Genie in the Transcriptomic Bottle

Kamelija Horvatović, MD, MSc

Understanding and extrapolating relevant information from vast transcriptomic data generated by sequencing is crucial to be unbiased for adequately understanding the diseases in biomedical research. This workshop aims to provide an immersive exploration into the field of systems biology and medicine through the lens of Weighted Gene Co-expression Network Analysis (WGCNA).
This is a bioinformatics tool that identifies gene modules with similar expression patterns, aiding biomarker discovery and pathway analysis. In medicine, WGCNA unveils potential biomarkers for diseases, offering insights into molecular mechanisms and guiding targeted therapies. It facilitates patient stratification based on gene expression, identifying distinct subgroups within populations. This analytical approach enhances our understanding of disease dynamics and supports personalized medicine initiatives. Attendees will receive hands-on experience in constructing co-expression networks and extracting biomedically relevant information from an Alzheimer's disease dataset through a simple R pipeline.
The collaborative learning environment fosters interdisciplinary interactions, aligning with the theme of teamwork in bioinformatics advancement. Participants gain competitive skills for navigating the biomedical field's increasing demand for comprehensive data analysis.
The workshop entails hands-on experiences in constructing co-expression networks, targeting hub genes, delineating modular structures, and extracting biologically pertinent information on patient data from the Alzheimer's disease dataset. The workshop's emphasis on practical applications, coupled with the integration of diverse perspectives, aims to catalyze groundbreaking insights. In an era where interdisciplinary collaboration is paramount, "Bioinformatic Fun with Genetic Networks" provides a platform for attendees to actively participate, fostering a deeper understanding of transcriptomics and its implications in diverse biomedical contexts.

Whack–a–mole: When and how to perform a skin biopsy

Students Surgical Society & Students Society for Dermatovenerology

Filip Hrestak, Dea Maras, Maro Bjelica, Bruno Ban, Julija Žanetić, Ana Romac, Laura Rudelj, Dora Herceg

The workshop will begin with a presentation in which members of the Students Society for Dermatovenerology will elaborate on the characteristics of a skin lesion that should require a biopsy and connect the clinical examination signs to the most commonly found tumors of the skin. Afterward, the Students Surgical Society will explain the methods for acquiring a skin biopsy: primarily punch, incisional and excisional biopsy. The presentation is followed by a practical portion of the workshop in which the aforementioned biopsy methods are demonstrated by both societies in order for participants to try it themselves. A patient coming to a primary care physician with a concerning skin lesion is a common occurrence. Therefore, join us for this great workshop which will help you greatly in your everyday work as you learn to pinpoint a skin lesion that requires further evaluation and explain to your patient what awaits them during their visit to a secondary medical care facility or even to perform the biopsy yourself.

Unlocking the genetic mystery of rare diseases

Student's Line for Rare Diseases & Student's Section for Genetics of Biology Students Association

Hrvoje Blažević, Barbara Guštin, Tea Pavičić, Anamaria Yago, Ivana Padovan, Josipa Pečnik

Journey into the realm of rare diseases, where medical mysteries await discovery. Despite their scarcity, these conditions pose significant challenges and demand interdisciplinary collaboration between biology and genetics. Join our workshop as we navigate the complexities of rare diseases, exploring their genetic origins and fostering innovative solutions. Together, let's illuminate the path towards understanding and tackling these often overlooked ailments, shaping a brighter future for patients and researchers alike. In our workshop, we'll dive deep into the world of rare diseases, presenting intriguing cases for analysis and solutions. Through interactive sessions, participants will engage in problem-solving exercises, applying their knowledge of biology, genetics, and medicine in general to unravel the mysteries behind these elusive conditions. Following the case studies, biology students will guide attendees through manual genetic discovery techniques, shedding light on the underlying genetic factors contributing to rare diseases. By the workshop's end, participants will emerge equipped with the skills to identify, analyze, and address rare diseases from both clinical and genetic perspectives, paving the way for innovative solutions and advancements in medical research. After all, multidisciplinary collaboration of physicians, biologists, and other related experts is necessary to provide the patient with the best possible care.

Hormones gone wild

Student section for gynecology and obstetrics & Student section for endocrinology and diabetology

Sara Bedeniković, Marija Doronjga, Vita Guljaš, Aurora Vareško, Lara Pavlica, Ana Pavić

The workshop will consist of a competitive case analysis between three groups of participants (each will be a group of five). The leaders of the workshop will present three different cases that are related to both endocrinology and gynecology, and the participants will be given 30 minutes to prepare a diagnostic and treatment strategy for each case. At the end of the allotted time, each group will present their plans and be scored by a doctor who is a specialist. The group that gathers the most points will win the competition and will be given a prize appropriate to the year they are attending.

Mission Meetup

SOCIUS

Ana Krošl, Ivana Omelić

Given its title, this workshop addresses personal communication styles to boost participants' teamwork experience. For some teamwork has a positive note, but for others, teamwork can often represent an ''apple of discord". Hence, this workshop will focus on the latter to enrich participants' skills and draw their attention to their personal communication preferences. Since communication itself is often called the two-way street, this lecture will be held interactively. There are several elements important for teamwork that this workshop will cover. Firstly, the difference between listening to versus hearing others is a basic skill in day-to-day communication. However, hearing our colleagues and understanding their perspectives sets a cornerstone in personal and business connections. Another element important for teamwork is insights into personal communication patterns and how can we upgrade and transform them into our best allies in teamwork and beyond. Therefore, participants will have the opportunity to enrich their communication skills with new techniques and strategies that will be presented as well. Apart from the mentioned, since this is a reflective type of workshop and communicating can happen in complex settings, this workshop equips participants with a new set of skills on how to handle stressful situations, discuss different opinions, and enforce group cohesion in teams. All the above elements represent a well-needed, effective, and assertive group communication. Ultimately, this leads to a constructive communication style and avoidance of disputes.

Psychologist in the team of Dr. House

Psihomnia, Hexis & STUP

Anamarija Jelašić, Nika Širanović, Emma Konjević, Dora Pulanić

Teamwork is a collaborative effort of individuals working together towards a shared goal. This workshop is structured around 4 key parts focusing on different aspects of teamwork. First and foremost, we'll delve into the cornerstone of successful collaboration: communication skills. Given its pivotal role in team dynamics, effective communication is essential for fostering understanding, cohesion, and productivity within a team setting. We will also discuss processes that are happening among individual members and within a group as a whole. The next segment is inspired by the popular series Dr. House in which we will illustrate team issues and particularly conflict resolution. By dissecting scenarios from the show, we'll unpack strategies for identifying, addressing, and resolving conflicts constructively. Finally, the participants will find out what the characteristics of a high-performing team are and learn how to make their teams work more efficiently. Armed with the knowledge gained from this workshop, attendees will be equipped with practical tools and techniques to optimize team performance and drive results within their own professional contexts.

Clinical escape room

Student society for infectology & Student society for pediatrics

Dora Franciska Tuđman Šuk, Pia Kosanović, Lucija Dragošević, Lucija Relja, Iskra Šimpraga, Anja Kovačić, Iva Mandić, Petra Bolt

The "Infectious Escape Room" workshop presents an innovative educational approach to train future healthcare professionals in clinical diagnosis and medical procedures within a simulated, time-constrained environment. This workshop, designed for student participants, aims to enhance their critical thinking, teamwork and practical skills while addressing infectious disease scenarios. Participants are divided into teams, each tasked with navigating through a series of challenges simulating real-world medical scenarios. Within the confines of a simulated clinic room, teams must swiftly gather medical history, perform blood draws on mannequins, take swabs, and make accurate diagnoses —all while racing against the clock. The immersive nature of the escape room setting creates a high-pressure yet engaging atmosphere that mirrors the urgency and complexity of clinical practice. The workshop emphasizes interdisciplinary collaboration as team members leverage their diverse skills and knowledge to overcome the obstacles together. Effective communication, decision-making and adaptability are crucial as teams encounter unexpected twists and turns throughout the simulation. Additionally, participants are encouraged to apply evidence-based reasoning and clinical judgment in their diagnostic processes, promoting a holistic approach to patient care.
Feedback and guidance from experienced facilitators enrich the learning experience, providing participants with valuable insights and constructive critique. Post-workshop debriefings offer opportunities for reflection and discussion, allowing students to consolidate their learning and identify areas for improvement.
Overall, the "Clinical Escape Room" workshop offers an engaging and immersive platform for students to hone their clinical skills, foster teamwork, and prepare for the dynamic challenges of healthcare practice in infectious and pediatric disease management.

Take it Personal(ly): Genome to Drug

Croatian Pharmacy and Medical Biochemistry Students' Association & Student Association for Medical Genetics and Metabolism

Tin Šaban, Ilija Žuljević, Juraj Županić, Hrvoje Blažević, Chiara Krtak

Personalized medicine presents a fantastic opportunity to transform the traditional 'one size fits all' approach to diagnostics, drug therapy and prevention into a tailored, individualized strategy. Join us as we unravel the complexities of personalized medicine, exploring its significance and practical applications in modern medicine.
Firstly, we'll delve into the essence of personalized medicine, emphasizing its importance and the role of pharmacogenomics in tailoring treatment approaches to individual patients. Through engaging discussions, you'll gain insights into how genetic variations influence drug responses. As we navigate through a clinical case study with practical examples, witness the unfolding narrative of a patient presenting with vague symptoms, only to discover that traditional therapies are ineffective and how pharmacogenomics stands crucial in guiding treatment decisions and improving patient outcomes.
By the workshop's end, participants will leave with a comprehensive understanding of personalized medicine and pharmacogenomics, ready to shape the future of patient-centered care in their clinical practice.

Rise and Shine with Working in R

Andrea Gelemanović, PhD

At this workshop, participants will get to know what the R program is and all the opportunities that open up when it comes to it. What is the role of this program in statistical data analysis and how to create quality visuals for your research papers are some of the most important things you will be able to learn by participating in the workshop.

What do you do behind closed doors?

Inside Out (Promoting Mental Health) Project & Project "Relapse"

Matilda Sabljak, Marin Cvitić, Toma Perko, Ivan Petrik, Ozana Brkić

In a world of tags, alibis, and irresistible urges, it's a breeze to veer into habits that don't quite nourish our well-being. Admit it, as humans, we're all susceptible, and in this fast-changing world, we often meet our needs in all the wrong ways. Satisfaction might come via addictive paths, painting a vibrant but misleading picture of happiness, while also unlocking a Pandora's box of issues. We're all reliant on someone or something and these habits often thrive behind closed doors, in the comfort of our own space. So we pose the question: 'What's your go-to when no one's watching?' This workshop lays bare our vulnerabilities, addictions, and battles, peeling away the labels, norms, and stigmas that often compel us to bury our issues. It's not a walk in the park to air your needs for everyone to see, but through small steps, we can shed old beliefs and embark on a fresh journey of self-discovery. What secrets are you harboring within your walls?

Authors index

Powered by almagea®

AGROPOŠTA
PRIRODNI SIRUPI

AstraZeneca

HOME by Ciss

HRVATSKA LIJEČNIČKA KOMORA

KAVA KAVANA
ROASTERY SINCE 2018

Poliklinika Bolanča

REPROMED
Poliklinika za ginekologiju i reprodukcijsku medicinu

medical intertrade

medical intertrade

THE OLD LOCK-UP
ESCAPE ROOMS

PAPER & STUFF

MOJE MALO ZLATO
bez glutena
BEZ PROBLEMA


CROSS
SVEUČILIŠTE U ZAGREBU
MEDICINSKI FAKULTET
UNIVERSITAS STUDIORUM ZAGRABIENSIS
MDCLXIX
SZ
MEFZG
STUDENT
SKI ZBOR
SVEUČILIŠTA
U ZAGREBU
HRVATSKA LIJEČNIČKA KOMORA