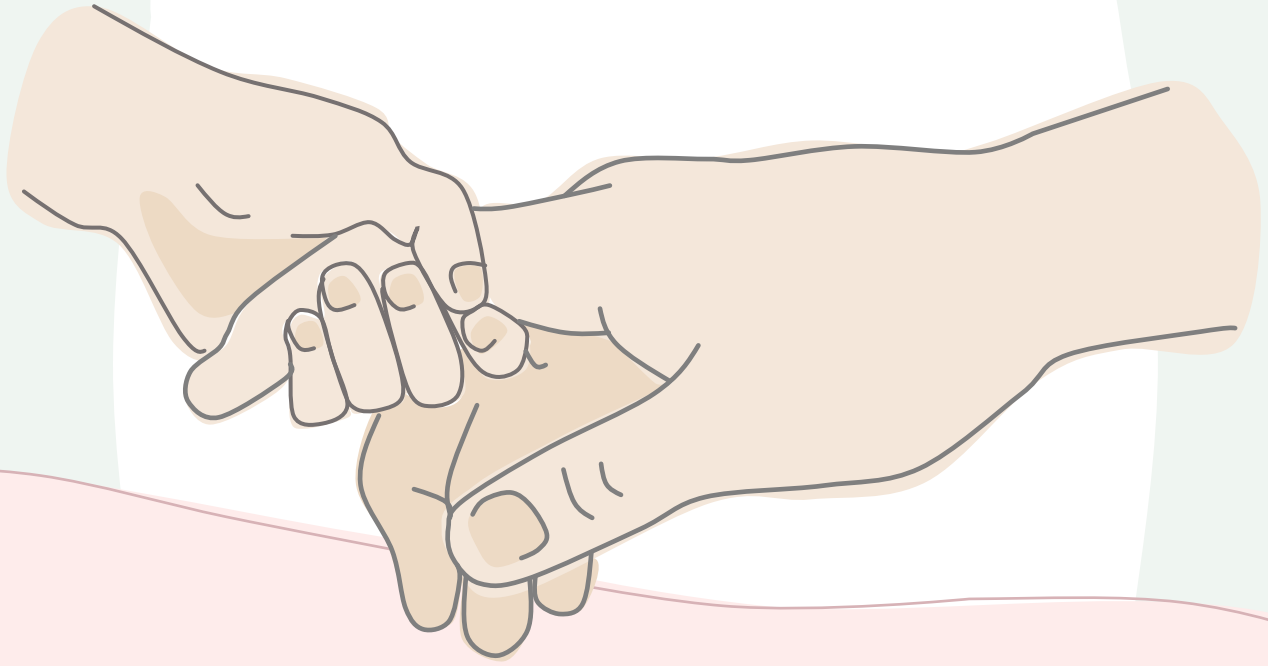
OSCON

BOOK OF ABSTRACTS

PEDIATRICS

Oscon Student Congress



30TH MARCH - 1ST APRIL 2023

5TH INTERNATIONAL TRANSLATIONAL MEDICINE CONGRESS OF STUDENTS AND YOUNG PHYSICIANS

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BOOK OF ABSTRACTS

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GENERAL INFORMATION

DATE

MARCH 30TH - APRIL 1ST , 2023

VENUE

FACULTY OF CIVIL ENGINEERING
AND ARCHITECTURE OSIJEK

VLADIMIRA PRELOGA 3, OSIJEK

TOPIC

PEDIATRICS

GUEST ATTENDANCE POLICY

ALL REGISTERED PARTICIPANTS ARE WELCOMED TO ALL EVENTS AND LECTURES. WEARING OFFICIAL CONFERENCE BADGES IS OBLIGATORY FOR ENTERING ANY EVENTS.

LANGUAGE

ENGLISH

WELCOME MESSAGE

OSCON

welcome

WELCOME MESSAGE FROM

THE PRESIDENT OF THE ORGANISING COMMITTEE

Dear colleagues,

It is my great honor and privilege to welcome you on the fifth edition of Osijek Student Congress - OSCON 2023. The main goal of OSCON is to provide a place for acquiring new knowledge and skills, making new acquaintances, overcoming the fear of presenting at a scientific conference, and encouraging the scientific component of medicine, which is often neglected. The youngest members of our society are the ones who need our attention and care the most, thus the theme of this year's OSCON is "Pediatrics". As future healthcare workers, it is our responsibility to enable a better tomorrow for everyone through continuous education and self-improvement.

I would like to take this opportunity to thank the Dean of School of Medicine Osijek and all professors for their help and support in organization. Special thanks must be given to the entire Organising and Scientific Committee for all the hard work they have put in this year's congress and for the many tasks they have managed to successfully fulfill.

We are more than happy to welcome you and we hope you will have a pleasant and useful time!

Nika Pašeljić

THE PRESIDENT OF THE SCIENTIFIC COMMITTEE

Dear colleagues,

on behalf of the Scientific Committee, I would like to welcome you all to our fifth OSCON Congress. The global theme is Translational Medicine, which is based on collaboration between fundamental and clinical research for faster and more effective implementation of discoveries in clinical practice. The main topic is "Pediatrics", and in line with that, we have tried to gather the greatest lecturers and design twelve workshops in which you will have the opportunity to learn or further improve your practical skills with the help of expert leaders.

We also invite you to submit and present your research, but above all, we invite you to have fun and relax in our friendly atmosphere! I am looking forward to meeting you at this Congress and wish you a very successful one!

Ivana Jurić

THE PRESIDENT OF THE STUDENT COUNCIL

Dear participants, partners and associates,

it is a great honor and privilege to welcome you to the jubilee, fifth, Osijek Student Congress - OSCON. Year after year, OSCON offers us the opportunity for scientific, professional and personal growth and development. With the thought of growth and development, this year we have chosen Pediatrics as a broad and comprehensive branch of medicine in which many of us find inspiration. I hope that this, like the previous OSCON, will provide you with a lot of knowledge and useful experiences!

I would like to take this opportunity to thank everyone who was in OSCON before us and wish good luck and success to those who come after us. Through the years of work, OSCON has become a tradition of our Faculty, which was made possible by all the members of the Organizing committee, as well as all of you as the most important part of the Congress.

I hope that this OSCON will open up some new opportunities and sights for you and that you will join us in the coming years!

Luka Medić

about us

ABOUT US

OSCON

Faculty of Medicine

The Faculty of Medicine of University of Osijek is the youngest medical faculty in Croatia. It was officially opened in 1968 as a branch of the School of Medicine in Zagreb, and in 2018 it celebrated 20 years as the independent medical faculty. The largest and main base of the faculty is the University Hospital Centre Osijek. The Faculty of Medicine in Osijek is the only medical faculty in Croatia that shares the same campus with its main teaching base, which is located within the University Hospital Centre complex.

Apart from a three-year undergraduate programme and two-year graduate study programmes (Biomedical-Laboratory Technologies) and a six-year long first-degree study programme in Medicine, the Faculty of Medicine offers several postgraduate specialist study programmes and doctoral study programme. The aim is to provide students the highest level of knowledge and training adequate for the professions they are pursuing.

The Faculty of Medicine Osijek has defined main research areas and has been profiled by several interdisciplinary groups that link basic and clinical studies (translational medicine). We would also like to point out that, our two professors' emeriti Antun Tucak and Savo Jovanović contributed to the faculty with their work and effort

University of Osijek

The Josip Juraj Strossmayer University of Osijek is a university located in Osijek, making it the flagship institution of higher education in Slavonia, and one of the largest and oldest universities in Croatia. It was founded in 1975 and it is organized in 12 faculties, 4 departments and one academy. University is a medium-size in comparison to other European Universities. It is ranked as the Croatia's fourth best university among the 49 ranked institutions of tertiary education from the country.

University of Osijek has been developing into a modern European institution of higher education, and it is becoming a regional centre of knowledge, research and excellence. All efforts are directed towards the constant increase of teaching and studying quality.

The University offers a high student standard concerning accommodation, learning facilities and other student services. Also, did you know that the city of Osijek is known as the city of students?

City of Osijek

Osijek is a modern Central European city with 17 city parks and gardens which make Osijek one of the greenest cities in Croatia. The City of Osijek is also famous for secession (a variation of art nouveau). The promenade along the Drava river is one of the longest walking trails in Croatia. Given the city of Osijek's long history, there's a variety of sights such as Tvrda, a fortified part of the city from the 18th century.

Some of the most valuable examples of Baroque architecture in Croatia, such as the statue of Holy Trinity and General's-headquarters are located in Tvrđa and printed on 200 kuna bills.

The tradition of higher education in Osijek exists since 1707 and today our university with its 17 faculties and departments is one of the most important scientific centres in Croatia.

According to the latest official figures, University of Osijek has around 18 000 students enrolled in. Some of the notable people that lived in Osijek are two Nobel laureates in Chemistry. Lavoslav Ružička was awarded in 1939 and Vladimir Prelog in 1975. Both of them finished their secondary education in Osijek.

Croatia

Croatia is a country on the north-western edge of the Balkan peninsula and has a population of 4,05 million people and covers an area of 56,594 km². Five countries border Croatia: Bosnia and Herzegovina, Hungary, Montenegro, Serbia, and Slovenia, and it shares a sea border with Italy. The country offers a long coastline with over a thousand islands along its coast at the Adriatic Sea (Mediterranean Sea), a variety of medieval towns and villages, and a pleasant Mediterranean climate.

The capital of Croatia is Zagreb, placed in the northwest of the country. Croatia's second-largest city is Split, situated on a peninsula in the southern part of Adriatic Sea. Remaining two largest cities are the Port of Rijeka located on the northern shore of the Adriatic Sea and Osijek in the far east of Croatia. Other well-known towns include Dubrovnik, Makarska, Poreč, Rovinj, Opatija and Zadar. Croatia has declared its independence of Socialist Federal Republic of Yugoslavia (SFRY) in 1991.

The Croatian War of Independence started right after that, ending four years later with Croatia as a victor. Despite Croatia's hard history that has left enormous consequences on the country, it could not affect on Croatia's natural beauty that contains some of the prettiest natural wonders in the world! Alongside with its natural beauty, culture. Cultural Heritage and beautiful coastline are only some of the reasons why Croatia is certainly worth visiting.

programme

PROGRAMME

OSCON

MARCH 30th
THURSDAY

09:00 - 11:00	**REGISTRATIONS** HALL
11:00 - 12:00	**OPENING CEREMONY** HALL 0.2
12:00 - 13:00	**SESSION I.** HALL 0.2
12:00 - 12:30	ASSIST. PROF. KSENIJA ROMSTEIN, PHD
12:30 - 13:00	PROF. SREĆKO GAJOVIĆ, MD, PHD
13:00 - 14:00	**BUFFET LUNCH** RESTAURANT
14:00 - 16:00	**STUDENT SESSION I.** HALL 0.2 HALL II.52
16:00 - 18:00	**WORKSHOPS I.**
	TAKE MY BREATH AWAY (III.45)
16:00 - 17:00	NEURON MISCOMMUNICATION (0.2)
17:00 - 18:00	I KNOW THE (ULTRA) SOUND OF YOUR HEART (III.46)
	SATURDAY NIGHT FEVER (II.52)

MARCH 31st

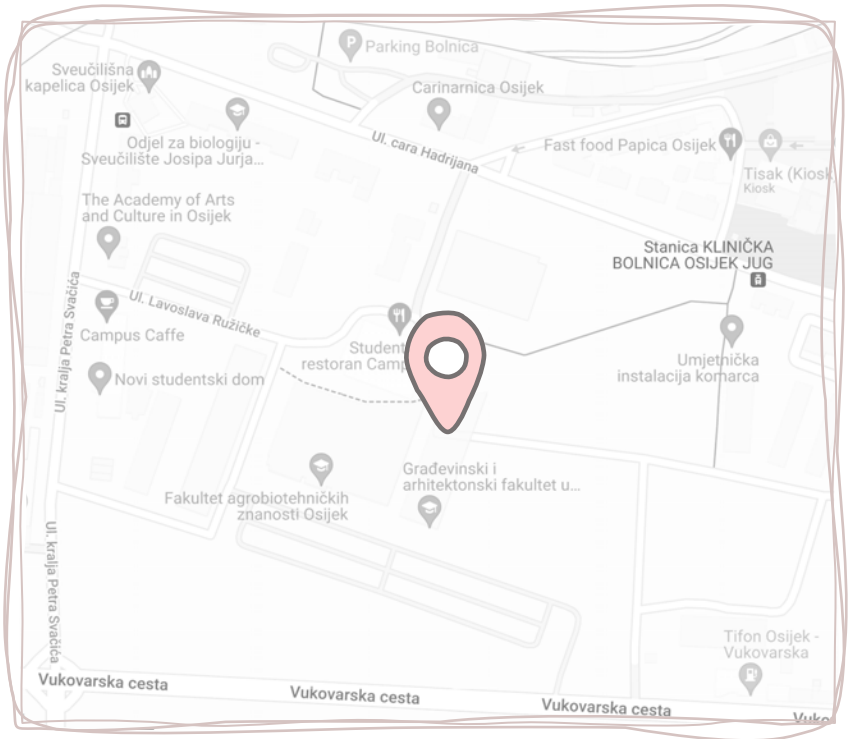
FRIDAY

09:00 - 13:00	**STUDENT SESSION II.** HALL 0.2 HALL II.52
13:00 - 14:00	**BUFFET LUNCH** RESTAURANT
14:00 - 15:00	**SESSION II.** HALL 0.2
14:00 - 14:30	IVA BILANDŽIJA KUŠ, SPEC. MED. BIOCHEM.
14:30 - 15:00	PROF. JELENA ROGANOVIĆ, MD, PHD
16:00 - 18:00	**WORKSHOPS II.** GOLDEN HOUR (III.45)
16:00 - 17:00	HOW TO BECOME A SUCCESSFUL VAMPIRE (0.2)
17:00 - 18:00	THE PALS FUNDAMENTALS (III.46) HOT SPOT (II.52)
20:00	**PUB QUIZ** PUB & RESTAURANT BROKO (TRG BANA JOSIPA JELAČIĆA 6)

APRIL 1st
SATURDAY

09:00 - 10:00	**STUDENT SESSION III.** HALL 0.2 HALL II.52
10:00 - 11:30	**SESSION III.** HALL 0.2
10:00 - 10:30	ASSIST. PROF. IVA HOJSAK, MD, PHD
10:30 - 11:00	DARJAN KARDUM, MD, PHD
11:00 - 11:30	ASSIST. PROF. ANDREA ŠIMIĆ KLARIĆ, MD, PHD
11:30 - 12:30	**STUDENT SESSION IV.** HALL 0.2 HALL II.52
12:30 - 14:30	**WORKSHOPS III.** 911... WHAT'S YOUR EMERGENCY? (III.45)
16:00 - 17:00	I SPY WITH MY LITTLE EYE (0.2)
17:00 - 18:00	KINDER SURPRISE (III.46) SMALL TALK (II.52)
14:30 - 15:00	**CLOSING CEREMONY** HALL 0.2
21:00	**CLOSING PARTY** FRANZ KOCH, TVRĐA

OSCON 2023 VENUE LOCATION



FACULTY OF CIVIL ENGINEERING AND ARCHITECTURE OSIJEK

VLADIMIRA PRELOGA 3, OSIJEK

LECTURERS

OSCON

lectures

Jelena Roganović

PROF. JELENA ROGANOVIĆ, MD, PHD

Prof. Jelena Roganović, MD, PhD, is a pediatric oncologist and hematologist, head of the Department of Hematology, Oncology and Clinical Genetics and head of the Department of Pediatrics at the Faculty of Medicine, University of Rijeka. She graduated from the Faculty of Medicine in Rijeka, the first in her generation, and received the University Award for the best student. She completed postgraduate studies in General Pathophysiology and Developmental Medicine and in 1985 defended her master's thesis „The role of cholinergic neurotransmission in the hypothalamus in the regulation of body temperature in rats".

Since passing the specialist exam in pediatrics, she has been working in pediatric hematology and oncology at the Pediatric Clinic of Clinical Hospital Centre Rijeka. In 1997, she defended her doctoral dissertation, and in 2002, she received the title of primarius. Prof. Roganović is the author of numerous teaching texts and scientific and professional papers, as well as a reviewer of several university manuals, textbooks and over 50 domestic and foreign scientific journals. She is a member of several commissions and working groups of the Ministry of Health and domestic and international professional societies (International BFM Study Group, SIOPE – European Society for Pediatric Oncology, Executive Board of the PanCare organization, EuNet-INNOCHRON, Committee for Pediatric Oncology, etc.).

Her current research interest is focused mainly on the pathogenesis of chronic neutropenia in children. She is particularly interested in the identification of cellular, molecular, immune, and genetic mechanisms underlying different types of chronic neutropenias in children.

Srećko Gajović

Prof. Srećko Gajović, MD, PhD, was born in 1964 in Zagreb. He graduated from the Faculty of Medicine in Zagreb, where he finished his doctorate in 1993. He completed his postdoctoral training at the Max Planck Institute for Biophysical Chemistry in Göttingen, Germany, and at the International Institute for Genetic Engineering and Biotechnology in Trieste, Italy.

As a full professor with a permanent title in the Department of Histology and Embryology at the Faculty of Medicine of the University of Zagreb, and head of the Department of Neurogenetics, Medical Genetics and Regenerative Neuroscience at the Croatian Institute for Brain Research, he teaches at the University of Zagreb and the University of J. J. Strossmayer in Osijek, in graduate and doctoral studies. In his research, he studied the differentiation of embryonic stem cells into nerve cells. He was the first to bring genetically modified mice to Croatia, in which he himself participated. He was the coordinator of the European project GlowBrain, with which he established a preclinical platform for in vivo imaging of small laboratory animals (GlowLab) with magnetic resonance (7T) and optical imaging of bioluminescence. Today, his main scientific interest is brain recovery after a stroke.

He is one of the founders of the international interdisciplinary network Navigating Knowledge Landscapes, which considers how to communicate innovative knowledge in a digital society and also a member of the European Academy of Sciences and Arts, and the International Academy of Sciences and Arts in Bosnia and Herzegovina.

PROF. SREĆKO GAJOVIĆ, MD, PHD

Iva Hojsak

ASSIST. PROF.
IVA HOJSAK, MD, PHD

Assist. Prof. Iva Hojsak, MD, PhD, is a paediatric gastroenterologist, a Head of Paediatric clinic and Deputy Director of Children's Hospital in Zagreb. She graduated and got PhD at the University of Zagreb Medical School.

She has published over 200 scientific and expert works and is an associate of more than 15 international and national projects. She is also a project manager of Croatian scientific foundation. She has been listed in 2% of the most cited world scientists (Stanford University). Dr. Hojsak is co-editor of the Journal of Pediatric Gastroenterology and Nutrition, Clinical Nutrition and BMC Pediatrics. She is a member of the Porto IBD Group of the European Society for paediatric gastroenterology, hepatology and nutrition (ESPGHAN) and a mentor in Young Investigators Forum of the ESPGHAN.

From 2017 to 2020, she was a member of the ESPGHAN Management Board as secretary for education, as well as a member of the ESPGHAN Board of Nutrition Committee from 2016 to 2020.Her most important clinical and scientific interest are chronic inflammatory bowel disease, intestinal failure, clinical nutrition and probiotics.

Andrea Šimić Klarić

ASSIST. PROF. ANDREA
ŠIMIĆ KLARIĆ, MD, PHD

Assist. Prof. Andrea Šimić Klarić, MD, PhD is an associate professor at the Department of Pediatrics at the Faculty of Medicine in Osijek. She was born in Požega, where she finished elementary school. She studied at the Faculty of Medicine in Zagreb, where she graduated in 1999 as one of the top 10% students.

After graduation, she started working at the General County Hospital in Požega. In 2003, she completed the postgraduate study „Protection of Mother and Child" and a year later enrolled in the doctoral study Biomedicine and Science at the Faculty of Medicine, University of Zagreb. In 2005, she passed the specialist exam in pediatrics at the Clinic for Children's diseases. She completed several postgraduate courses - in 2007, a postgraduate course in electroencephalography in Ljubljana, a postgraduate course „Transcranial Doppler in the assessment of cerebral circulation" at Clinical Hospital Centre Sestre milosrdnice in Zagreb, a postgraduate course in brain ultrasound and a course in advanced life support techniques for children (EPLS, European Pediatric Life Support).

Šimić Klarić is the author and co-author of several scientific papers and congress abstracts and a member of the Academy for Developmental Rehabilitation and the Croatian Society for Child Neurology. She is currently employed as a pediatrician in the Children's Disease Service of the Hospital in Požega, and since 2011 she has been a part of the Department of Pediatrics at the Faculty of Medicine in Osijek.

Ksenija Romstein

ASSIST. PROF.
KSENIJA ROMSTEIN, PHD

Ass. Prof. Ksenija Romstein was born on May 4, 1977, in Osijek, where she completed primary and secondary medical school. After finishing high school, she enrolled in the study of Preschool Education and completed it in 1999. 2003 she completed the Study of Educational Rehabilitation at the Faculty of Education and Rehabilitation of the University of Zagreb.

From 2001 to 2003, she worked as a defectologist, and from 2003 to 2006 as an educator in the SOS children's village in Ladimirevci. Since September, 2006, she has worked at the Faculty of Educational Sciences. She received her doctorate in 2014, in the field of special pedagogy, at the Faculty of Philosophy of the University of Zagreb. She is continuously improving her professional skills and in 2020 she defended her specialist thesis in the post-graduate specialist study "Early intervention in educational rehabilitation".

She is a licensed Marte Meo practitioner, has completed professional training, and holds certificates for conducting PECS Level 1 and 2, Teacch, ADOS-2, etc. She speaks English (C1) and German (B1/B2). Ass. Prof. Romstein is a collaborator on several projects, and from 2020 also a collaborator on the Croatian Science Foundation project "Models of response to the educational needs of children exposed to the risk of social exclusion - MORENEC" (supervisor: Prof. D. Bouillet, Ph.D., Faculty of Teachers in Zagreb). She is a member of the Croatian Chamber of Educational Rehabilitators, the International Society of Early Intervention, and Children of Prisoners Europe.

Darjan Kardum

Darjan Kardum, MD, PhD, completed residency in general pediatrics at University Hospital Centre Osijek in 2012 after graduating from Faculty of Medicine in Osijek in 2007. He completed his neonatology residency in 2016. From 2012 to 2022 he worked at Neonatal Intensive Care Unit at Department of Pediatrics, University Hospital Center Osijek.

He finished his PhD study at University of J. J. Strossmayer in Osijek in 2020 with his doctoral thesis "Factors influencing mortality and morbidity in very low birth weight neonates".

Since 2022 he works as a consultant in Pediatric Intensive Care Unit at University Hospital Centre Osijek. His research passion are advancment of respiratory care of very preterm infants, prevention of accidental hypothermia after delivery in preterm neonates and implementation of non-invasive critical congenital heart screening.

His wish is to encourage younger colleages to research and publish. For the last 6 years he has worked as an instructor in Newborn Life Support courses.

DARJAN KARDUM,
MD, PHD

Iva Bilandžija Kuš

IVA BILANDŽIJA KUŠ, SPEC. MED. BIOCHEM.

Iva Bilandžija Kuš, specialist in Medical Biochemistry and Laboratory Medicine, graduated from the Faculty of Pharmacy and Biochemistry, University of Zagreb in 2013. Since 2016 she has been working at the Unit for laboratory diagnostics for inherited metabolic disorders and newborn screening, Department of Laboratory Diagnostics, University Hospital Centre Zagreb in Croatia.

Her main professional interests include laboratory diagnostics in metabolic disorders and newborn screening, as well as optimization of laboratory processes. She has published several scientific and professional papers as a co-author and first author, several congresses abstracts and participated as a lecturer on several national conferences in the field of Laboratory Medicine.

She is the member of the Croatian paediatric society, Section for metabolic diseases. She is a collaborator on the project "The selective screening of CLN1 and CLN2 from the Republic of Croatia, Slovenia, Serbia, Bosnia and Herzegovina and Macedonia" She received a research grant from the Croatian society of medical biochemistry and laboratory medicine 2022. for project „Vanillactic acid and vanillylmandelic acid - new biomarkers in diagnostics of Aromatic L-amino acid decarboxylase deficiency".

workshops

WORKSHOPS

OSCON

I KNOW THE (ULTRA) SOUND OF YOUR HEART

WORKSHOP LEADER: Dragan Novosel; MD

INTRODUCTION: Cardiac ultrasound, also known as echocardiography, refers to the ultrasound imaging of a very fast-moving complex organ positioned deep within the body - the heart. We use it to investigate systolic and diastolic function, cardiac output and valve function, heart structure and size, speed and direction of blood flow in the heart…

WORKSHOP DESCRIPTION: Move beyond the theoretical knowledge and build your confidence to perform and interpret cardiac ultrasound. Master your spatial reasoning skills to get the best image possible for diagnosis – our cardiologist will lead you through every step of it.

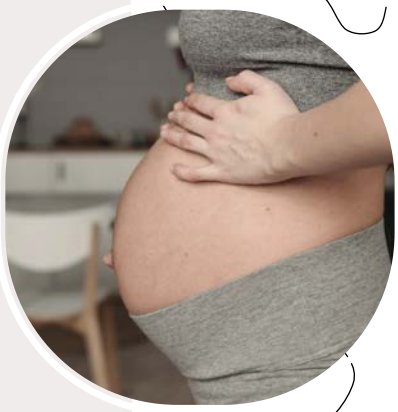
TAKE MY BREATH AWAY

WORKSHOP LEADERS: Ana Cicvarić; MD

INTRODUCTION: Every doctor must intubate at least once in a lifetime. To do it right, you need to know all the steps of intubation. However, it is a technique you can master only with as much practice as you can get. Sometimes, the tube is misplaced in the esophagus instead of the trachea. It is important to know how to check if we are in the right place and what to do if we are not.

WORKSHOP DESCRIPTION: It is even okay if you make a mistake, our workshop leaders will be with you every step of the way and teach you how to do it right. This is very beneficial for you because when the right time comes, you will know how to intubate and, possibly, save a life.

KINDER SURPRISE



WORKSHOP LEADERS: Ivan Vilović; MSc

INTRODUCTION: How will you react when a pregnant woman starts to deliver a baby in front of your eyes outside a hospital? You are called to help and make sure that both mom and baby are fine and healthy, but what can you do with so little equipment in the emergency vehicle? Are you ready to panic, if not you should be, but there is a bright side, some tricks can be learned, are you ready to learn them all of them?

WORKSHOP DESCRIPTION: In this workshop participants will learn what kind of equipment they have in the ambulance vehicle and what can they do when facing baby delivery in the vehicle. They will have the opportunity to learn and practice common and uncommon situations of baby delivery without help from a hospital, how should they react, and how to take care of both mother and baby.

THE PALS FUNDAMENTALS

WORKSHOP LEADERS: Ema Poznić; MD, Nora Pušeljić; MD

INTRODUCTION: Do you want to learn about pediatric life support? We present to you a workshop where you will enhance your practical skills with simulations and broaden your understanding of PALS (Paediatric Advanced Life Support) with lectures and skill stations.

WORKSHOP DESCRIPTION: Come and enrich your basic life support knowledge with this workshop! It is even okay if you make a mistake, our workshop leaders will be with you every step of the way and teach you how to do it right. This is very beneficial for you because when the right time comes, you will know how to intubate and, possibly, save a life.

I SPY WITH MY LITTLE EYE

WORKSHOP LEADERS: Vesna Ćorluka; MD

INTRODUCTION: Ophthalmologists are the only practitioners medically trained to diagnose all eye and visual problems and provide treatment and prevention of medical disorders of the eye, including surgery. Many of us attended the entire ophthalmological examination only when we were the ones needing it. It's time to try another role and learn the steps of a proper eye examination.

WORKSHOP DESCRIPTION: During this workshop, you will practice and learn the basics of ophthalmological examination: examination of visual acuity, anterior segment, fundus and other with the help of basic aids from the ophthalmology clinic.

SATURDAY NIGHT FEVER

WORKSHOP LEADERS: Luka Švitek; MD

INTRODUCTION: It's again Saturday night, and again you are the doctor on call. As always, parents are scared because their child is still having fever, even now, seven days since it started. This is a regular, everyday scenario for every pediatrics and infectious diseases specialist and resident. But what would you do?

WORKSHOP DESCRIPTION: In this workshop, different cases of febrile patients will be presented, and you will be the one to solve them. You will learn how to approach a febrile patient. Laboratory findings, X-rays, and all the necessary documentation will be presented, so you (or we) will be able to make a diagnosis.

GOLDEN HOUR

WORKSHOP LEADERS: Josipa Glavaš; MD

INTRODUCTION: Polytrauma is the leading cause of mortality in people under the age of 45 and is the third cause of mortality in the general population. Traffic accidents are the leading cause of polytrauma. Polytraumatized patients represent one of the biggest challenges in treatment and require a multidisciplinary approach.

WORKSHOP DESCRIPTION: At the workshop, we will go over the rating scales used in polytraumatized patients, and the treatment of polytraumatized patients in the acute period after the injury – „golden hour".

911 ... WHAT'S YOUR EMERGENCY?

WORKSHOP LEADERS: Nora Pušeljić; MD, Paula Ivanšić; MD

INTRODUCTION: What to do when parents call 911 for their child? Will you treat them the same as adults? How to quickly calculate doses? What to do until arriving at the hospital?

WORKSHOP DESCRIPTION: Our pediatricians will guide you step by step from the moment you find the child until the ambulance arrives at the hospital. You will find out how to act in the case of an asthma attack, convulsive status, anaphylaxis and shock.

HOT SPOT

WORKSHOP LEADERS: Ivana Lenz; MD

INTRODUCTION: A worried parent enters your office holding a crying baby in her arms. The baby is agitated, struggling with a high fever and the parent seeks your help to relieve the baby's symptoms. Once you start examining the baby, you come to an unexpected discovery and your internal alarm goes off. The baby has a rash, or is it maybe just something similar? What could have caused it and how to lower the fever?

WORKSHOP DESCRIPTION: The workshop offers you a chance to learn about febrile rashes in pediatric population and how to process them in order to come with the correct diagnosis. With helpful examples and clinical cases, you will learn about the cues you need to look for and questions to ask in order to differentiate between different causes of febrile rash and help your patient.

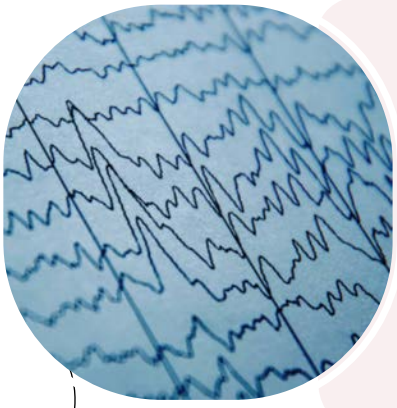
HOW TO BECOME A SUCCESSFUL VAMPIRE

WORKSHOP LEADERS: Petar Šušnjara; MSc, Luka Tomaš; Marija Ganjto

INTRODUCTION: Venipuncture is the collection of blood from a vein which is usually done for laboratory testing. It seems like a simple procedure but... What if something goes wrong? What if you miss the vein? What if you don't collect enough amount of blood or if you mix blood samples and vacutainers? Answers on this and many other questions you willbe ableto findout on the Venipuncture workshop!

WORKSHOP DESCRIPTION: Exercise of venipuncture on the artificial and human hand. Presentation of interesting case reports with the opportunity to solve intriguing problems through a quiz.

NEURON MISCOMMUNICATION



WORKSHOP LEADERS: Martina Kos; MD

INTRODUCTION: The brain consists of nerve cells that communicate with each other through electrical activity. When one or more parts of the brain has a burst of abnormal electrical signals that interrupt the normal ones, a seizure occurs. General symptoms or warning signs of a seizure sometimes include very subtle changes in child's behaviour. Do you know how to recognize them?

WORKSHOP DESCRIPTION: During the workshop you will get a chance to learn about epileptic seizures ih children and how to react to them. By looking at different types of seizures, you'll learn to differentiate healthy motor development patterns from patterns that can be a warning. Train yourself to notice different kinds of, more or less, subtle signs and recognize an epileptic seizure when it occurs.

SMALL TALK

WORKSHOP LEADERS: Vedrana Kuti; mag. praesc. educ.

INTRODUCTION: How to stimulate language development in preschool children? What are the developmental components prerequisite for reading and writing? In what way can we nurture and encourage language development in kindergarten and at home?

WORKSHOP DESCRIPTION: Dive into the magical world of letters, words, and stories; and discover an unobtrusive approach to encouraging proper speaking as well as pre-reading and pre-writing skills using developmentally appropriate tasks, play, and picture books.

E - POSTER PRESENTATIONS

OSCON

BASIC SCIENCE

BS01 A new potential therapeutic target in inflammatory retinopathy

Inez Bosnyak, Alexandra Vaczy, Balazs Meresz, Dorottya Molitor, Bela Kocsis, Tamas Atlasz, Dora Reglodi

BS02 Isolation of lipid rafts before and after the myelination process in the brain of a genetically modified mouse Siat8a

Ana Mitka, Mateo Ćupić, Josip Grbavac, Marija Heffer, Barbara Viljetić

BS03 Examination of lymphocyte composition and activation during antigen-specific tolerance induction in a mouse model of rheumatoid arthritis

Fatima Petruska, Katalin Olasz

BS04 Isolation of lipid rafts before and after the myelination process in the brain of the wild-type mouse C57Bl6

Petar Vranjić, Mihaela Ilijašević, Mladen Vuković, Marija Heffer, Barbara Viljetić

BS05 Distribution of complex gangliosides before and after the myelination process in wild-type mouse C57Bl6 brain

Mladen Vuković, Martina Matanović, Petar Vranjić, Marija Heffer, Barbara Viljetić

CASE REPORT

CR01 Hypercalcemia of malignancy in two patients with chronic lymphatic leukemia

Adriana Adamović, Tin Gabrić, Ivona Adamović, Rajko Kušec

CR02 Fetal tuberous sclerosis with cardiac rhabdomyomas: A case report

Shibel Ageel, Samir Almasri, Aleksandra Vejnović, Žaklina Tatić-Stupar, Tihomir Vejnović

CR03 Rapunzel syndrome: A rare form of gastric trichobezoar

Shibel Ageel, Romero Abo El Assal, Riah Abo El Assal, Radoica Jokić

CR04 Addressing health literacy - a patient's ignorance of herb tea risk

Lea Arambašić, Zara Miočić, Petra Galić, Mario Špoljarić, Anja Milobara Mandić, Lada Zibar

CR05 Severe hypercalcemia in infant with Williams syndrome – case report

Miana Arapović, Marko Banković, Tea Barunčić, Ivona Butorac Ahel

CR06 Stress-induced analgesia in a patient involved in a car accident

Tea Banić, Marina Baran, Tea Mikula

CR07 Morel-Lavallee lesion in children – Case report

Marko Banković, Miana Arapović, Tea Barunčić, Suzana Sršen Medančić

CR08 Injury of the brachial artery as a complication of pediatric supracondylar humerus fractures – case report

Tea Barunčić, Miana Arapović, Marko Banković, Marinko Filipović

CR09 Craniopharyngioma: identification, treatment and postoperative follow-up

Ruža Bašić, Luka Tomaš, Romana Marušić, Barbara Bačun, Tajana Turk, Dunja Degmečić, Tatjana Bačun

CR10 Generalized emphysema as a cause of hemodynamic instability: A case report

Karla Bodakoš, Marko Mešin, Blaž Dumančić, Laura Zahirović, Marija Trconić, Slavica Kvolik

CR11 Tuberculose meningoencephalitis in a patient on immunosuppressive therapy

Sara Bonet, Ena Kolak, Anamarija Soldo-Koruga, Dario Sabadi

CR12 Hemorrhagic stroke caused by bacterial endocarditis: a case report

Marijan Borić, Martina Britvar, Dino Papišta, Ivona Jutriša, Andrija Meštrović, Gordana Sičaja, Hrvoje Budinčević

CR13 Juvenile polyposis in 8-year-old boy - what should we know about genetics?

Klara Bosnić, Ljubica Odak, Marta Živković Njavro, Klara Živković, Iva Tokić, Katarina Vulin, Iva Hojsak

CR14 Cerebral Salt Wasting Syndrome following Head Injury in a Child - Case Report

Mislav Božić, Marko Galić, Ivana Brlić, Barbara Kokić, Valentina Kećkeš, Petar Šušnjara, Tihana Nađ

CR15 Orbital cellulitis caused by GABHS as a complication of primary VZV infection in 8-year-old child

Tomislav Brajković, Krunoslav Budimir, Marija Bukvić, Marija Ćorić, Leo Markovinović

CR16 Extramedullary disease in multiple myeloma – still difficult to treat in the era of new drugs

Tomislav Brajković, Krunoslav Budimir, Marija Bukvić, Marija Ćorić, Josip Batinić

CR17 A case report of Moyamoya syndrome in a 4-year-old

Alojzija Brčić, Klara Bosnić, Katarina Božić, Vlasta Đuranović

CR18 Cerebrovascular insult presenting as encephalitis

Ivana Brlić, Maja Burda, Lucija Kadleček, Valentina Kećkeš, Barbara Kokić, Zvonimir Popović

CR19 Autopsy findings in differentiating natural from violent death: a case report

Martina Britvar, Dino Papišta, Marijan Borić, Josipa Dujmić, Ivona Jutriša, Boris Dumenčić

CR20 Sinus histiocytosis mimicking lung carcinoma

Krunoslav Budimir, Marija Ćorić, Tomislav Brajković, Marija Bukvić, Mateja Janković Makek

CR21 Right Hepatic Artery Pseudoaneurysm: a rare cause of gastrointestinal obscure hemorrhage

Krunoslav Budimir, Tomislav Brajković, Marija Ćorić, Marija Bukvić, Neven Baršić

CR22 Neonatal presentation of glucose-6-phosphate dehydrogenase deficiency

Bruno Bumči, Antonio Kovačević, Marko Burić, Diana Turjak, Lucija Čolaković, Mia Edl, Krešimir Milas

CR23 Brain developmental anomaly - colpocephaly, corpus callosum agenesis and hippocampal malrotation as part of the 22q11.21 microduplication syndrome phenotype

Marko Burić, Bruno Bumči, Mia Edl, Lucija Čolaković, Silvija Pušeljić

CR24 Early diagnosis and successful treatment of critical coarctation with percutaneous transcatheter balloon dilatation in a newborn – a case report

Barbara Bzik, Jurica Jambrović, Neven Čače

CR25 Left bundle branch pacing (LBBP) as a new treatment method for left bundle branch block (LBBB) – a case report

Barbara Bzik, Sandro Brusich

CR26 The Importance of Accurate Diagnosis in Myeloproliferative Disorders

Laura Čajo, Katarina Domjanović, Niko Grebenar, Ana Šmit, Ines Jakšić, Ante Lončar

CR27 Microwave ablation of solitary kidney multifocal renal cell carcinoma

Lucija Čolaković, Bruno Bumči, Mia Edl, Marko Burić, Tajana Turk

CR28 Endoscopic ultrasound-guided drainage of pancreatic walled-off necrosis and LAMS (lumen-apposing metal stent) placement: a case report

Antonia Čubranić, Krsto Dominković, Aleksandar Čubranić

CR29 A case report of a patient with Leigh syndrome due to mtDNA mutation

Klara Miljanić, Lucija Didović, Lea Klepač, Nedjeljka Zrno, Tamara Žigman, Ivo Barić, Danijela Petković Ramadža

CR30 Forgotten by the law: Are we prepared for every scenario?

Lucija Didović, Ivan Samardžić Ilić, Goran Arbanas

CR31 Pallister-Hall syndrome- a case report

Matej Dobrošević, Vinko Michael Dodig, Lara Fotez, Katja Dumić Kubat, Sanda Huljev Frković

CR32 Immune thrombocytopenia after COVID-19 vaccination

Lorena Dolački, Ana Đuran, Josip Prnjak, Katarina Bojanić

CR33 Schwannoma of the tongue in a young female: A case report

Krsto Dominković, Antonia Čubranić, Marko Velepič

CR34 Nephrectomy after renal trauma in a pediatric patient: a case report

Katarina Domjanović, Laura Čajo, Niko Grebenar, Tomislava Tretinjak, Ana Šmit, Ana Marković, Iva Mijatović

CR35 Effectivness of intravesical BCG therapy in recurrent tumor of the transitional epithelium in the prostatic part of the urethra

Josipa Dujmić, Inga Jutriša, Ivona Jutriša, Martina Britvar, Marijan Borić, Dino Papišta, Ivan Radoja

CR36 Clinical manifestations of syndromic childhood-onset SLE

Klara Đambić, Marissa Bura, Dora Čeč, Marija Palčok, Ivona Franjić-Tubić, Mateja Batnožić Varga

CR37 Fabry disease in a kidney transplant patient

Sara Đukić, Barbara Havliček, Ena Kolak, Sara Bonet, Anamarija Soldo-Koruga

CR38 Granulomatosis with polyangiitis presenting with progressive hearing loss and facial paralysis

Martina Đuras, Stjepan Galić, Lara Fotez, Andro Košec

CR39 Toxic Shock Syndrome caused by an escalating, previously localized soft tissue infection in a female patient: a case report

Ivan Đureković, Robert Gečević, Andrej Dubić, Tomislav Radočaj

CR40 Transition from pediatric nephrology care to a nephrologist for adults from a patient's perspective

Mia Edl, Lucija Čolaković, Marko Burić, Bruno Bumči, Lada Zibar

CR41 Clival osteomyelitis complicating retropharyngeal abscess in a child

Lucija Ercegovac, Tea Kržak, Alen Gabrić, Lara Fotez, Lorna Stemberger Marić

CR42 FreeStyle Libre Flash Glucose Monitoring System in pregnant women with latent autoimmune diabetes mellitus of adults

Lucija Firi, Kristina Steiner, Helena Horvat, Josip Grbavac, Lucija Todić, Silvija Canecki-Varžić, Ines Bilić-Ćurčić

CR43 Cytokine hemoperfusion in acute myopericarditis

Lucija Firi, Helena Horvat, Josip Grbavac, Maja Pavlovsky, Lucija Todić, Domagoj Loinjak

CR44 Progression of Raynaud's Syndrome to Auto-amputation of Distal Phalanges of Hands

Lara Fotez, Matej Dobrošević, Martina Đuras, Lucija Ercegovac, Lucija Fotez, Mirna Matišić, Dubravka Bobek

CR45 Fabry Disease: A Diagnostic Challenge with a Treatable Outcome

Alen Gabrić, Tea Kržak, Stjepan Galić, Tin Gabrić, Tonko Gulin

CR46 Liver Transplantation Using an Asymptomatic SARS-CoV-2-positive Donor

Tin Gabrić, Adriana Adamović, Lucija Ercegovac, Nikola Soboćan

CR47 Idiopathic ketotic hypoglycemia in a 7-year-old patient

Petra Galić, Iva Prelec, Lea Arambašić, Zara Miočić, Dora Galić, Ivana Šimić, Vesna Bilić-Kirin

CR48 The nonspecific onset of Multiple sclerosis in a 16-year-old patient

Petra Galić, Iva Prelec, Zara Miočić, Lea Arambašić, Luka Medić, Anja Milobar-Mandić, Tea Mirošević Zubonja

CR49 Chronic Autoimmune Thyroiditis as a Rare Cause of Pericardial Effusion: A Case Report

Stjepan Galić, Alen Gabrić, Martina Đuras, Matias Trbušić

CR50 Bilateral Acute Subdural Hematoma following Head Trauma in a Child - Case Report

Marko Galić, Mislav Božić, Stipe Vidović, Alen Rončević, Nenad Koruga

CR51 Monkeypox cases at Clinical Medical Center of Osijek

Dorian Garac, Mirela Okolić, Fran Popović, Bernarda Berišić, Mihaela Zloja, Ilija Rubil, Dario Sabadi

CR52 Extremely rare extraintestinal manifestation of Crohn's disease in the neck region

Robert Gečević, Josipa Dropuljić, Ivan Đureković, Ivica Lukšić, Marko Tarle

CR53 Endobronchial ultrasound-guided transbronchial fine needle aspiration (EBUS-TBNA): Trapped lung syndrome in a patient with non-Hodgkin lymphoma

Robert Gečević, Grgur Salai, Darjan Ranilović, Ivan Marasović, Damir Vukoja, Đivo Ljubičić

CR54 Innovative pooled genome analysis – example of a child with torsion dystonia type 1

Petra Gojković, Mario Ćuk

CR55 Vertical transmission of SARS-CoV-2 from infected pregnant mothers to neonates in General County Hospital Vinkovic

Petra Gojković, Marija Jurković

CR56 Case report: When is the right time for deep brain stimulation in segmental dystonia?

Gracia Grabarić, Jakob Nemir, Nataša Klepac, Romana Perković, Fran Borovečki

CR57 Pulmonary embolism of a forty-one-year-old female patient: a case report

Niko Grebenar, Laura Čajo, Katarina Domjanović, Tomislava Tretinjak, Ines Jakšić, Ana Šmit, Ante Lončar

CR58 Multisystem Inflammatory Syndrome in Children (MIS-C) associated with COVID-19

Petra Guljaš, Marija Magdalena Purgar, Alina Boris, Leon Perić, Petar Šušnjara, Tihana Nađ

CR59 Fetal seizures and intracranial hemorrhage

Helene Marie Heuchert, Franciska Čurčić, Roland Haase

CR60 Overgrowth syndromes: case of megalencephaly-capillary malformation-polymicrogyria syndrome (MCAP)

Tali Horvat, Emio Halilović, Sanda Huljev Frković

CR61 Myelin oligodendrocyte glycoprotein antibody disease

Laura Ivanović Martić, Borna Katić, Mirela Okolić, Tena Zovkić, Dorian Garac, Martina Kos

CR62 Behavioral approach to the treatment of a child with separation anxiety disorder: a case report

Ines Jakšić, Ante Lončar, Ivo Vincetić, Lucija Janjalija, Ana Marković, Iva Mijatović

CR63 Renal artery stenosis that caused hypertension in a 15-year-old boy: a case report

Ines Jakšić, Ante Lončar, Ana Marković, Iva Mijatović, Ivo Vincetić, Lucija Janjalija

CR64 Bernard-Soulier syndrome

Katja Jankov, Karmen Jeričević, Daniel Turudić, Ernest Bilić

CR65 Myhre syndrome – rare conective tissue disorder characterised by progressive fibrosis: a case report

Lucija Janjalija, Nikola Krmek, Suzana Bitanga, Danijela Petković Ramadža

CR66 Chronic duodenal obstruction after duodenal atresia repair: a case report

Karmen Jeričević, Katja Jankov, Nora Knez, Dino Papeš

CR67 Ovarian hyperstimulation syndrome in a patient with functional gonadotropinoma

Vita Jugovac, Iva Mažić, Tina Dušek

CR68 Van Wyk-Grumbach syndrome – a rare manifestation of a common disease

Vita Jugovac, Iva Mažić, Katja Dumić Kubat

CR69 Metastatic prostate cancer in a patient with clinical presentation of bilateral nephrolithiasis: a case report

Ivona Jutriša, Inga Jutriša, Josipa Dujmić, Dino Papišta, Martina Britvar, Marijan Borić, Ivan Radoja

CR70 Ingestion of a button battery with the development of complications in the form of a gastric ulcer and its therapy

Gordana Kačavenda, Miljana Poparić, Jela Tošić

CR71 Chronic aortic dissection of the Stanford A type with aneurysm of the ascending aorta

Lucija Kadleček, Ivana Brlić, Valentina Kećkeš, Barbara Kokić, Igor Lekšan

CR72 Unclassified mixed tumor of germ cells and gonadal stroma: a case report

Dora Karl, Ivan Radoja, Romana Marušić, Vaso Žarkić

CR73 Treatment challenges in adult atopic dermatitis – case report

Valentina Kećkeš, Ivana Brlić, Maja Burda, Lucija Kadleček, Barbara Kokić, Maja Tolušić Levak

CR74 Persistent rightsided atelectasis in an infant

Marija Mateja Kokanović, Lucija Lizatović, Dorotea Lošić, Ana Majstorović, Lara Paić, Tia Poštić, Matej Šapina

CR75 Endocrine dysfunction in pembrolizumab treated oncology patient

Barbara Kokić, Ivana Brlić, Maja Burda, Valentina Kećkeš, Lucija Kadleček, Silvija Canecki – Varžić

CR76 Esophageal atresia as life-treathening condition – case report

Maja Kos, Maja Zaninović

CR77 Spinal epidural abscess in a patient with sepsis

Andrea Kostić, Matea Kostić, Goran Pavliša

CR78 Pulmonary manifestations of rheumatoid arthritis: a case report

Matea Kostić, Andrea Kostić, Antonija Gračanin, Manuela Bajan, Ana Gudelj Gračanin

CR79 Two cases of complicated pneumonia in children caused by beta haemolytic Streptococcus type A

Antea Kršek, Srđan Banac, Lara Batičić

CR80 MODY or Gestational diabetes: The diabetes paradox

Luka Kusić, Andrija Labaj, Fran Popović, Alina Boris, Ema Schönberger, Silvija Canecki-Varžić, Ines Bilić-Ćurčić

CR81 Multiple myeloma presented as tumorous mass: a case report

Dorian Laslo, Matea Zidar, Vlatka Periša

CR82 Corticobasal degeneration and Alzheimer's disease overlap syndrome: a case report

Ante Listeš, Kaja Lukač, Marinko Kljajić, Zvonimir Popović

CR83 The influence of unbalanced chromosomal distribution on the child's phenotype: a case report

Ante Lončar, Ines Jakšić, Ana Marković, Iva Mijatović, Zdravko Grnja, Ivo Vincetić, Lucija Janjalija

CR84 Osteosarcoma in a 15-year-old boy which presented with weight loss: a case report

Ante Lončar, Ines Jakšić, Ivo Vincetić, Ana Marković, Iva Mijatović, Zdravko Grnja

CR85 Acute exacerbation of chronic respiratory insufficiency in a pediatric patient with Prader-Willi syndrome: A case report

Daniela Lucić, Ivona Radovanić, Darija Vidić, Marija Žgela, Mirjana Turkalj, Ivana Marušić, Romana Gjergja-Juraški

CR86 Traumatic ureteropelvic avulsion - case report

Kaja Lukač, Bojan Sudarević

CR87 Treatment of vulgar psoriasis in children: a case report

Kristina Lukačević, Melita Vukšić Polić

CR88 Syncope as the first sign of gastrointestinal bleeding: Report of one case

Domagoj Majetić, Justina Mihaljević, Leon Perić, Matea Petrinović, Petar Vranjić, Mladen Vuković

CR89 Just flu? High, prolonged fever in a child during winter - Case report

Stela Majetić, Jura Kunšt, Marijan Frković

CR90 Autism spectrum disorder with macrocephaly and severe intellectual disability as a clinical presentation of microdeletion syndrome 17q12

Toni Maloča, Anja Štefić, Iva Prelec, Jelena Pokos, Domagoj Soldo, Nikolina Zagorac, Silvija Pušeljić

CR91 Autism spectrum disorder with cognitive impairments as a clinical presentation of microduplication syndrome 5q35.3

Toni Maloča, Anja Štefić, Iva Prelec, Marina Neferanović, Jelena Miletić, Petra Markuš, Silvija Pušeljić

CR92 11□-hydroxylase deficiency – a rare case of congenital adrenal hyperplasia in two brothers

Lucija Mandić, Marija Palčok, Dario Mandić

CR93 From acute B-lymphoblastic leukemia to lung transplantation

Stela Marković, Toni Matić

CR94 Middle ear as a transmission route of streptococci to cerebellum

Stela Marković, Andro Košec

CR95 Extraintestinal manifestations of inflammatory bowel disease

Romana Marušić, Adriana Levaković, Željka Dragila, Dora Karl, Marija Olujić, Andreja Bartulić

CR96 From perianal abscess to Crohn's disease: a case report

Tena Matek, Zrinjka Mišak

CR97 A complicated Epstein-Barr reactivation in a fourteen-year-old girl

Tena Matek, Barbara Mikuc, Lorna Stemberger Marić

CR98 Surgical Application of Human Amniotic Membrane in Ocular disease due to dental complications - case report

Lucija Matić, Stipe Vidović, Suzana Matić, Barbara Bačun, Petra Raguž, Dora Galić, Nika Pušeljić

CR99 Hiatal hernia as the cause of stenocardia

Andrija Matijević, Grgur Matolić, Danijel Mikulić, Filip Miočinović, Leo Matijašević

CR100 Antrochoanal polyps in children

Iva Mažić, Vita Jugovac, Jura Kunšt, Mia Mihaljević, Gorazd Poje

CR101 The importance of toxicology in diagnostics of afebrile seizures in children

Iva Mažić, Vita Jugovac, Irena Senečić-Čala

CR102 Bronchus suis in a patient with gunshot wound due to attempted suicide: a case report

Marko Mešin, Blaž Dumančić, Karla Bodakoš, Marija Žgela, Ingrid Prlić Seršić, Slavica Kvolik

CR103 Severe head trauma in a child that resulted in an incredible recovery

Justina Mihaljević, Dragana Bekić, Matea Petrinović, Leon Perić, Domagoj Majetić, Petra Raguž

CR104 From sleepwalking to oligodendroglioma

Justina Mihaljević, Dragana Bekić, Matea Petrinović, Leon Perić, Domagoj Majetić, Klara Ormanac

CR105 Multidisciplinary approach in the treatment of suicide of a minor patient: a case report

Iva Mijatović, Dalibor Divković, Ana Marković, Ines Jakšić, Ante Lončar, Katarina Domjanović

CR106 Kinesitherapy modalities in the treatment of a child with spina bifida

Danijel Mikulić, Andrija Matijević, Leo Matijašević, Filip Miočinović, Grgur Matolić, Marta Tučkar, Valentina Matijević

CR107 Multisystem inflammatory syndrome in patient with Adult-onset Still's disease as a result of COVID-19; case report

Jelena Miletić, Ana Marija Masle, Toni Maloča, Marina Neferanović, Iva Prelec, Anja Štefić, Jasminka Milas-Ahić

CR108 Oncofertility procedures in atypical endometrial hyperplasia

Anja Milobara Mandić, Petra Galić, Lea Arambašić, Siniša Šijanović

CR109 Panic attack in the emergency department

Filip Miočinović, Danijel Mikulić, Grgur Matolić, Leo Matijašević, Andrija Matijević, Ivana Srzić

CR110 Aneurysmosis: a case report

Zara Miočić, Lea Arambašić, Petra Galić, Mario Špoljarić, Stjepan Ištvanić, Veronika Šikić, Tomislav Ištvanić

CR111 Deep brain stimulation in a patient with severe disorder of consciousness

Rebeka Nađ, Damir Mihić, Mirela Okolić, Luka Ileš, Marta Poje

CR112 Myelomeningocele in a patient with Gabriele-de Vries syndrome

Rebeka Nađ, Ante Nevešćanin, Nenad Koruga

CR113 Complex regional pain syndrome: a case report

Marina Neferanović, Marta Milošević, Anja Štefić, Jelena Miletić, Toni Maloča, Iva Prelec, Ozana Katarina Tot

CR114 Cytokine adsorption in patients with Still's disease and ARDS

Mirela Okolić, Marta Poje, Laura Ivanović Martić, Tena Zovkić, Dunja Zeljković, Dorian Garac, Damir Mihić

CR115 Unrecognized left ventricular non-compaction cardiomyopathy

Mirela Okolić, Laura Ivanović Martić, Borna Katić, Rebeka Nađ, Dragan Novosel

CR116 X-linked retinoschisis followed by a chronic cystoid macular oedema in an adolescent boy – case report

Marija Olujić, Ivana Šimić, Romana Marušić, Marta Bolješić, Marko Sablić, Antonio Kokot, Slaven Balog

CR117 Best vitelliform macular dystrophy in a male patient with an adult onset – case report

Marija Olujić, Marko Sablić, Marta Bolješić, Ivana Šimić, Romana Marušić, Slaven Balog, Antonio Kokot

CR118 Refractive errors and periorbital edema associated with Epstein-Barr virus infectious mononucleosis: a case report

Katarina Opačak, Dino Papišta, Marin Šutalo

CR119 Post-resuscitation central diabetes insipidus

Klara Ormanac, Petra Raguž, Eleonora Strujić, Matea Petrinović, Justina Mihaljević, Josip Kajan, Darija Venžera Azenić

CR120 A successful surgical reconstruction of aortic dissection in a patient with prior hypertension

Dorian Osterreicher, Stela Kraus, Dominik Seletković, Petra Jurić, Josip Grbavac, Lea Paradinović, Stjepan Cvetković

CR121 Peripheral facial paralysis and unilateral anterior uveitis *associated with COVID-19 infection: a case report*

Dino Papišta, Martina Britvar, Marijan Borić, Josipa Dujmić, Katarina Opačak, Vlatka Brzović Šarić, Hrvoje Budinčević

CR122 Diabetic ketoacidosis during pregnancy

Lea Paradinović, Marija Trconić, Maja Pavlovsky, Fran Popović, Kristina Steiner, Silvija Canecki-Varžić, Ines Bilić – Ćurčić

CR123 Severe hyponatraemia and autoimmune polyglandular syndrome type 2

Mara Paravić, Maja Nemet, Anton Pulić, Andrej Rubeša, David Rumora, Paula Stepanić, Ivona Butorac Ahel

CR124 From recurrent intermediate bilateral uveitis to vision loss: macular edema case report

Vedrana Pavlović, Mihael Kolar, Goran Dabić, Maja Lagator, Valentina Kurevija, Leon Perić, Marija Jelić Vuković

CR125 Atypical presentation of the triple-negative breast carcinoma: a case report

Vedrana Pavlović, Lucija Todić, Ivana Jurić, Nika Pušeljić, Josipa Flam

CR126 Severe lower gastrointestinal bleeding in a 57-year-old male: a Case Report

Maja Pavlovsky, Marija Trconić, Lucija Firi, Lea Paradinović, Domagoj Vidanec, Dejan Hil

CR127 Acute appendicitis at 34 weeks gestation: a Case Report

Maja Pavlovsky, Marija Trconić, Lucija Firi, Lucija Todić, Domagoj Vidanec, Dejan Hil

CR128 Parathyroid adenoma presenting with dysphagia – a case report

Mirta Peček, Marko Margetić, Siniša Stevanović

CR129 Case report: Neuroimaging features of idiopathic intracranial hypertension in pediatric patient

Leon Perić, Robert Rončević, Zdravka Krivdić Dupan, Dunja Čokolić-Petrović, Jelena Metikoš, Nenad Koruga, Alen Rončević

CR130 Stanford type A extensive aortic dissection: a case report

Leon Perić, Matea Petrinović, Justina Mihaljević, Domagoj Majetić, Alina Boris, Marta Bolješić, Fran Popović

CR131 Treatment of craniopharyngioma

Karlo Petković, Zdeslav Strika, Jelena Juri Mandić

CR132 Hirschsprung's disease – Case Report

Dora Petričević, Lea Paradinović, Ivan Prošić, Fran Popović, Vedrana Pavlović, Dino Šola, Dejan Hil

CR133 From suspected nephrolithiasis to hereditary thrombophilia

Matea Petrinović, Justina Mihaljević, Leon Perić, Dragana Bekić, Petra Raguž, Domagoj Majetić

CR134 Pulmonary embolism as the background of post-traumatic subarachnoid hemorrhage

Matea Petrinović, Justina Mihaljević, Leon Perić, Klara Ormanac, Domagoj Majetić, Fran Popović

CR135 Extracorporeal blood purification in patient with HELLP syndrome

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A new potential therapeutic target in inflammatory retinopathy

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Introduction: Retinal inflammation may lead to visual impairment, even blindness in most severe cases. Pituitary adenylate cyclase activating polypeptide (PACAP) is a neuropeptide, which has strong neuroprotective and general cytoprotective effects. It can also be found in the eye and it is involved in several ocular processes. Three receptors can be distinguished, however the specific PAC1 receptor plays the key role in its protective mechanisms. Our aim is to investigate the effectiveness of a specific, exogenous PAC1 receptor agonist agent, maxadilan, in inflammatory retinopathy.

Materials and methods: Inflammation was induced by bacterial lipopolysaccharide in mice. Maxadilan was administered by intravitreal injection. Optical coherence tomography was used to follow the changes in thickness of all retinal layers. Change of ganglion cell number was evaluated after toluidin blue staining. Electroretinography provided functional information. Expression level of forty different types of cytokines was also analyzed.

Results: Our data show that maxadilan is able to prevent the decrease of the outer nuclear layer, outer plexiform layer, inner nuclear layer, inner plexiform layer and the photoreceptor layer. In addition, it improves the functional outcome. Significant ganglion cell degeneration was observed in inflamed group. However, ganglion cell number remained similar to control group after maxadilan treatment. Based on our results, PAC1 receptor-mediated signaling pathways significantly influence the level of several cytokines and chemokines.

Conclusions: The specific, exogenous PAC1 receptor agonist maxadilan prevents the morphological and functional damage in inflammatory retinopathy. Based on our results PAC1 receptor is a new possible therapeutic target in this disease.

Keywords: inflammatory retinopathy, PACAP, PAC1 receptor

BS02

Isolation of lipid rafts before and after the myelination process in the brain of a genetically modified mouse Siat8a

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Introduction: Lipid rafts are membrane microdomains enriched in glycosfinolipids, fosfolipids, saturated long-chain fatty acids, and cholesterol. Gangliosides, sialic acid-containing glycosphingolipids, play an important role in the organization of lipid rafts. St8Sia1 knockout mice are genetically altered and lack the b-series of gangliosides. To elucidate the importance of gangliosides in lipid rafts and their effects on myelin microdomain organization, St8Sia1 mice with a gene defect in the synthesis of complex gangliosides were used for this study.

Materials and methods: Brains from St8Sia1 knockout mice (KO) of different ages were used for this study: before (at 5 days of age), during (at 15 days of age), and after completion of the myelination process (at 30 days of age). Lipid rafts were isolated by ultracentrifugation in a sucrose gradient. After isolation, lipid raft composition was determined by Western blot using antibodies for rafts and nonrafts (flotillin and transferrin) and markers for myelination (MAG, MBP). Membrane analysis was performed using Fiji software.

Results: There was a statistically significant difference in the expression of flotillin and transferrin proteins between all three age groups of mice, but they were also present in almost all fractions and not in the marker-specific fraction.

Conclusion: Isolation of lipid rafts revealed changes during brain development and differentiation in St8Sia1 KO mice.

Keywords: flotillin, lipid rafts, myelin, transferrin, St8Sia1 knockout mice

BS03

Examination of lymphocyte composition and activation during antigen-specific tolerance induction in a mouse model of rheumatoid arthritis

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Introduction: Rheumatoid arthritis (RA) is a systemic autoimmune inflammatory disease that affects the peripheral joints. To better understand the disease, several animal models have been created, of which proteoglycan aggrecan-induced arthritis (PGIA) is the most similar to the human disease. In the case of a known autoantigen, it was possible to induce antigen-specific tolerance in several experimental autoimmune models using peptide vaccination. A T-cell receptor transgenic mouse strain (TCR-TgA) is available in our laboratory, whose T-cells recognize the dominant arthritogenic "5/4E8" epitope (70ATEGRVRVNSAYQDK84) on the G1 domain of the proteoglycan molecule and show increased sensitivity to PGIA.

Materials and methods: During our experiments, TCR-TgA mice were vaccinated with palmitoylated peptide "ATEGRVRVNSAYQDK" 2 weeks before PGIA induction. Untreated TCR-TgA mice were used as controls. After the peptide treatment, during arthritis induction, we collected blood 4 times in each group, and lymphocyte composition of the blood and the expression of activation markers were determined by flow cytometry.

Results: In mice treated with the peptide, the development of the disease was delayed and its severity was significantly lower compared to control mice. In accordance with the clinical picture, an increased number of regulatory T-cells (Tregs) and a decreased activation of T helper cells were measured after the peptide treatment.

Conclusion: Based on our experiments, vaccination with the ATEGRVRVNSAYQDK peptide seems promising in the treatment of RA.

Keywords: autoimmunity, rheumatoid arthritis, tolerance induction

BS04

Isolation of lipid rafts before and after the myelination process in the brain of the wild-type mouse C57Bl6

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Introduction: Myelin is an insulating sheath that wraps around axons with a unique structure of lipids and proteins. Among the numerous proteins, proteolipid protein (PLP), myelin basic protein (MBP), 2',3'-cyclic nucleotide phosphodiesterase (CNPase), and myelin-associated glycoprotein (MAG) are characteristic for myelin. Lipid rafts are membrane microdomains enriched in cholesterol and sphingolipids that function as platforms that concentrate and segregate proteins in the outer leaflet of the membrane. Their proper assembly is therefore required for the structure and organisation of myelin. The aim of this study was to isolate lipid rafts from brains of C57Bl6 wild-type mice (WT) before (at 5 days of age), during (at 15 days of age), and after completion of the myelination process (at 30 days of age) and to determine the expression of myelin markers in lipid rafts.

Materials and methods: Brain samples from C57Bl6 wild-type mice of different ages were used for the study. Lipid rafts were isolated from the brainstems by ultracentrifugation in sucrose gradient. The composition of the obtained fractions was determined by Western blot using flotillin and transferrin as raft and nonraft markers, and MAG and MBP as myelin markers.

Results: The study showed a statistically significant difference in the expression of flotillin, transferrin and MBP proteins in the brainstem of mice at 5, 15 and 30 days of age.

Conclusions: According to our results, the composition of lipid rafts in mouse brainstem changes during development and differentiation.

Keywords: flotillin, lipid rafts; myelin; MAG; MBP; transferrin

BS05

Distribution of complex gangliosides before and after the myelination process in wild-type mouse C57Bl6 brain

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Introduction: Gangliosides, complex molecules belonging to the family of glycosphingolipids, contain a lipid anchor (ceramide) and a hydrophilic carbohydrate chain with one or more sialic acids. Together with cholesterol and membrane proteins, gangliosides form lipid rafts, specific signaling microdomains in the membrane. The correct assembly of lipid rafts is required for the proper structure and organization of myelin. Therefore, the aim of this study was to determine the distribution of complex gangliosides before (at 5 days of age), during (at 15 days of age), and after completion of myelination (at 30 days of age) in the brain of a wild-type C57Bl6 mouse.

Materials and methods: Brain tissue from wild-type mice at 5, 15, and 30 days of age was used. Immunohistochemistry was performed using the primary antibodies for the complex gangliosides GM1, GD1a, GD1b, and GT1b and the myelin markers CNPase, MAG, and MBP. The distribution of myelin markers and complex gangliosides was examined in two brain regions: pedunculus cerebellaris inferior (ICP) and corpus callosum (CC).

Results: The results showed a statistically significant difference for all myelin markers in both regions except MBP in the ICP area. For the complex gangliosides, the greatest change is seen between 5-day-old mice compared with 15- and 30-day-old mice.

Conclusion: The distribution of complex gangliosides on myelin sheaths in lipid rafts increases during the myelination process in the brain of wild-type C57Bl6 mice. Myelin marker expression also changes in 5-day-old mice compared with 15- and 30-day-old mice.

Keywords: corpus callosum; gangliosides; lipid rafts; myelin sheath; pedunculus cerebellaris

OSCON

CR

CASE REPORT

CR01

Hypercalcemia of malignancy in two patients with chronic lymphatic leukemia

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Introduction: Hypercalcemia of malignancy (HCM) is a paraneoplastic syndrome most commonly presented in patients who have advanced-stage malignancies and predicts a poor prognosis. It occurs in up to 30% of patients with malignancy, but with the exception of multiple myeloma very rarely in other hematological neoplasms. The most common mechanisms include parathyroid hormone–related peptide (PTHrP), osteolytic cytokine, and excess ectopic 1,25-dihydroxy vitamin D production.

Case report: The first patient was a 63-year-old female who was referred to hematology due to suspected leukemia. During hospitalization, extremely high hypercalcemia of 3,69 mmol/L was verified. Primary hyperparathyroidism was ruled out. A month later, she was diagnosed with chronic lymphocytic leukemia (CLL) with hypercalcemia and multiple osteolysis. She was then treated with 4 cycles of obinutuzumab and pamidronate for hypercalcemia with normalization of calcemia and hematological remission that was of short duration. Relapse with hypercalcemia despite treatment led to fatal outcome few months later. The second patient was a 53-year-old female who after ten years of being diagnosed with CLL presented with hypercalcemia of 4,18 mmol/L and poor general condition. MSCT showed tumor in the posterior mediastinum histologically confirmed as small lymphocytic lymphoma (SLL), signifying leukemia relapse. She was successfully brought into remission with normalization of calcemia with bruton-kinase inhibitor ibrutinib, which she receives continuously with regular controls.

Discussion:HCM is most common in patients with multiple myeloma, primary breast and lung cancer. However, as presented here, HCM can also occur in patients with CLL, as rare but significant clinical complication.

Keywords: chronic lymphocytic leukemia, hypercalcemia of malignancy, ibrutinib, obinutuzumab, parathyroid hormone-related peptide

CR02

Fetal tuberous sclerosis with cardiac rhabdomyomas: A case report

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Introduction: Tuberous sclerosis is a genetic disease caused by mutations in the TSC1 and TSC2 genes, resulting in the formation of hamartomas throughout the body. In fetal tuberous sclerosis, cardiac rhabdomyoma is important sign that can be detected prenatally, and the postpartum prognosis is poor. Our goal is to show the importance of prenatal diagnostics in cases such as tuberous sclerosis in pregnancy.

Case report: A 21-year-old female, after ultrasonographically detected fetal cardiac malformations, was admitted to the department of Obstetrics and gynecology in Novi Sad, Serbia. Clinical, laboratory, and ultrasonographic examinations were done after which the ethical commission allowed the procedure of feticide and induction of preterm labor with prostaglandins. Autopsy identified cardiac rhabdomyomas as the main cause of fetal death, while biopsy of the placenta and gynecologic and obstetric examination of the mother were without significant findings. Mother's history was significant for previous fetal intrauterine death five years ago as well as a family history of type I and II diabetes mellitus. Oral glucose tolerance (OGTT) test was advised and the mother was released with the prescription of appropriate post-partum and post-abortion medications and further check-ups were scheduled.

Conclusion: In pregnancy complicated by fetal tuberous sclerosis, the fetus should undergo prenatal echocardiography and if possible magnetic resonance imaging for evaluation of other fetal structures such as the brain or kidneys. This case shows the value of regular antenatal check-up in pregnant women.

Keywords: tuberous sclerosis, rhabdomyoma, pregnancy

CR03

Rapunzel syndrome: A rare form of gastric trichobezoar

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Introduction: Rapunzel syndrome is a rare form of gastric trichobezoar which is found in patients suffering from psychiatric disorders such as trichotillomania and trichophagia. Those disorders result in pulling and swallowing of hair, thereby leading to a formation of an undigestible gastric mass. Our goal was to show the importance of considering psychiatric symptoms in surgery, as well as to show the significance of endoscopic procedures.

Case report: An 18-year old female patient presented to the pediatric gastroenterohepatology department in Novi Sad, Serbia with symptoms of abdominal pain, vomiting, and a palpable bulge in the epigastric region. History showed that the patient has a habit of pulling and swallowing her hair, which was confirmed by a psychological report. Gastroscopy was done and a trichobezoar was found inside the stomach, in a form of a hard mass, protruding into the duodenum as well. The patient was admitted to the pediatric surgery department where operative treatment was induced. Firstly, laparoscopic gastrotomy with subsequent extirpation was attempted, but due to the size of the trichobezoar, the procedure was switched to laparotomy and a 25 centimeter long trichobezoar was extracted. The surgery went well and the patient was admitted to the intensive care unit.

Conclusion: Even in surgical patients, psychological/psychiatric symptoms shouldn't be ignored, since they can be the main cause of the disease, such as in this case. This case also shows the significance of endoscopic procedures, without which the final diagnosis wouldn't be possible to make.

Keywords: gastroscopy, laparotomy, trichobezoar

CR04

Addressing health literacy - a patient's ignorance of herb tea risk

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Introduction: Alternative remedies for health problems could result in inhibition of liver enzymes. Kidney transplant patients' immunosuppressive (IS) regimens include calcineurin inhibitors (CNI), substrates for cytochrome P-450. Beside potent IS effect, CNIs are neurotoxic and nephrotoxic. We present a case of simultaneous pancreas kidney transplantation (SPKT) patient with nephrotoxicity resulting of mallow tea inhibition of tacrolimus (TAC) metabolism.

Case report: A 40-year-old male SPKT patient came for an outpatient check-up. His clinical and overall state was good, and laboratory findings showed slight increase in serum creatinine (from 109 µmol/L two months ago to 140 µmol/L), which required further monitoring. Repeated laboratory findings were significant for TAC serum concentration of 26 µg/L (target 5 - 5.9). He claimed taking prescribed dose of the drug, having his blood sampled before the morning dose (1.5 mg at 8 am + 1 mg at 8 pm) and denied any change in other medication. Patient was advised to pause the drug. The following day TAC concentration was 15.7 µg/L. By that time, he admitted drinking mallow tea (Malvae folium) for three previous weeks, which he considered good for health. He stopped the tea intake and within next few days continued the TAC therapy with serum concentration within the therapeutic range (5.3 µg/L) and decrease in serum creatinine (129 µmol/L two weeks after stopping the tea).

Conclusion: Health (il)literacy affects patients' compliance to medical treatment. Mallow tea is a potent inhibitor of CYP3A4 and thus affects TAC metabolism, which in high concentration could lead to life threatening side effects.

Keywords: health literacy; kidney transplantation; tacrolimus

CR05

Severe hypercalcemia in infant with Williams syndrome – case report

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Introduction: Williams syndrome (WS) is a rare multisystem genetic disorder characterized by distinctive facial features, congenital heart disease, gastrointestinal manifestation, renal and skeletal anomalies and infantile hypercalcemia. The incidence of hypercalcemia in WS varies between 5 and 50%. The aim of this case report is to emphasize the importance of early detection and treatment of hypercalcemia in patients with WS in order to avoid fatal consequences.

Case report: A 10-month-old male infant, previously diagnosed with WS, was referred to a pediatric nephrologist due to recurrent urinary tract infections. He had one month history of failure to thrive, irritability, polyuria, polydipsia and significant weight loss (> 10% of his body weight). Laboratory tests revealed severe hypercalcemia at 4.27 mmol/l (normal range 2.15-2.80 mmol/l) and high urinary calcium/creatinine ratio 4.8 (normal range 0.68-2.20). Serum intact parathyroid hormone (PTH) was suppressed, and serum levels of phosphorus and 25-OH vitamin D were normal. Renal ultrasound showed bilateral nephrocalcinosis. Upon admission, intravenous hydration and furosemide failed to yield a significant fall in serum calcium. A single dose of zoledronic acid decreased serum calcium to a normal level in 24 hours. The patient was released home with a recommendation for calcium-restricted diet and maintained normal serum calcium level at one year of follow-up.

Conclusion: Hypercalcemia should not be overlooked in any patient who has WS. Early identification of hypercalcemia in these patients may avoid the risk of severe complications like nephrocalcinosis.

Keywords: hypercalcemia, nephrocalcinosis, Williams syndrome

CR06

Stress-induced analgesia in a patient involved in a car accident

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Introduction: Pain is the most common reason why patients seek medical help. This subjective symptom of illness directs attention to the affected organs. Certain traumatic conditions can cause stress-induced analgesia, which reduces pain response via the descending inhibitory pain pathway.

Case report: An 18-year-old male patient was involved in a car accident and was examined by the emergency medical service (EMS). Before the EMS arrived, the patient went to a nearby house. He reported losing consciousness. He could not reconstruct the event and admitted to having a couple of alcoholic drinks earlier in the evening. On inspection, a laceration was visible supraorbitally and on his chin. He complained of chest pain under the left rib cage. The skin was red in that area and was sensitive to palpation. The abdomen was tense. The patient reported pain in his left shoulder. The patient was immobilized on the longboard and given oxygen therapy. He was then immediately transported to the nearest local hospital. The CT scan showed a ruptured spleen, and the patient underwent emergency surgery.

Conclusion: Despite severe injuries, the patient first walked to a nearby house where he weakened. Care should be taken when assessing injuries based on pain. In highly stressful conditions, stress-induced analgesia can occur, which can mask the severity of the injury. If the seriousness of the injury is not recognized in time, it can threaten the patient's life.

Keywords: analgesia; pain; splenic rupture

CR07

Morel-Lavallee lesion in children – Case report

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Introduction: Morel- Lavallee lesion (MLL) is a post-traumatic soft-tissue injury that causes separation of subcutaneous tissue from the deep fascia. The newly created cavity is filled with hemolymphatic fluid. This rare condition may be challenging to diagnose, and late treatment may lead to the infection and necrosis of the surrounding tissue. This case report shows the importance of early diagnosis and treatment of MLL to prevent negative outcomes.

Case report: A 14-year-old girl was presented to the emergency department due to the pain and swelling over right thigh region after fall injury. Upon admission, X-ray showed no signs of fracture and patient was referred to ultrasound due to susceptive quadriceps muscle rupture. The first ultrasound showed hyperechoic subcutaneous hematoma without any muscle lesions. Ten days after, control ultrasound showed separation of cutis and subcutis from the muscle fascia. This finding reveals the diagnose of MLL. She was admitted to the Department of Pediatric surgery where she underwent hematoma incision. The patient was dressed with vacuum assisted closure (VAC) dressing for 10 days. She was discharged with transportable negative pressure wound therapy (NPWT) device and with precise instructions, strict rest recommendation and analgetics as needed. The wound fully healed after 2 weeks, but due to small hematoma she was regularly controlled and full regression of the injury was in 2 and half months.

Conclusion: MLL is a rare condition and should not be overlooked. With experienced radiologists, diagnosis can easily be confirmed with ultrasound even though MRI is diagnostic imaging modality of choice. In this case, early diagnosis and treatment with VAC device led to faster recovery and better results.

Keywords: Morel-Lavallee lesion, Subcutaneous hematoma, Vacuum assisted closure

CR08

Injury of the brachial artery as a complication of pediatric supracondylar humerus fractures – case report

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Introduction: Supracondylar humerus fracture is the commonest upper extremity fracture in children associated with complications. One of the possible complications are injuries of brachial artery, and while most pediatric patients did not present symptoms of critical limb ischemia, the diagnosis and the treatment are challenging and time-consuming. Consequently, the aim of this case report is to recognize and start treating vascular injuries in fracture as soon as possible to prevent the development of chronic complications.

Case report: A 6-year-old girl was jumping on the trampoline when she fell and injured her left hand. She came to the pediatric emergency clinic showing clinical symptoms of supracondylar fracture and the diagnosis was later confirmed by X-ray. However, the patient's hand became cold, pale and pulseless, so angiography was urgently performed. According to the angiography, brachial artery was compressed during the fracture and there was no sign of circulation distal of the fracture requiring an urgent surgical intervention. The fracture was reduced and stabilized with cross Kirschner wires, followed by the vascular procedure, in which the vascular surgeon urgently performed decompression, vascular repair and reconstruction of the artery. Shortly after the operation, the distal pulse of the hand was palpable, the temperature and color of the hand returned to normal and capillary filling was restored.

Conclusion: In cases with supracondylar fracture of the humerus followed with suspected vascular compromise, further examination should be done immediately. Long-term vascular sequelae can be prevented with an early stabilization of the fracture and repair of the brachial artery.

Keywords: brachial artery, complication, supracondylar distal humerus fracture, vascular injury

CR09

Craniopharyngioma: identification, treatment and postoperative follow-up

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Introduction: Craniopharyngiomas account for about 1.2% to 4.6% of all intracranial tumors. Their proximity to vital structures such as the hypothalamus-pituitary axis and the optic apparatus presents a great challenge in treatment. Neurosurgery carries a high risk of numerous endocrinological and neurological consequences such as blindness and panhypopituitarism.

Case report: We present a 67-year-old patient who started neurological treatment for headaches, visual disturbances, and drifting to the right side. A magnetic resonance imaging (MRI) scan of the pituitary gland revealed an enlarged, cystically altered pituitary gland measuring 18x17x14mm, with the infundibulum pushed to the right and the chiasm cranially suppressed. Ophthalmological examination revealed a concentric narrowing of the visual field, and endocrinological examination proved a non-functional adenoma with a compressive effect, and operative treatment was indicated. Endoscopic endonasal ablation was done and the diagnosis of craniopharyngioma was performed. Deterioration of vision in both eyes was noticed early postoperatively, and an acute ischemic lesion of the chiasm was determined by additional MRI. She received glucocorticoid therapy and partial recovery of vision followed. After three months, the MRI showed no residual tumor. Postoperative treatment indicated a loss of function of the cells of the anterior and posterior lobes of the pituitary gland and permanent replacement therapy with hydrocortisone, levothyroxine, and desmopressin was required.

Conclusion: Even though craniopharyngioma is a benign tumor, long-term follow-up by a multidisciplinary team is essential, given the wide range of complications, including visual impairment, endocrinological and neurological consequences, and deterioration of quality of life.

Keywords: optic nerve; panhypopituitarism; pituitary neoplasms

CR10

Generalized emphysema as a cause of hemodynamic instability: A case report

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Introduction: Chronic obstructive pulmonary disease (COPD) leads to obstruction of the airways and includes chronic bronchitis and emphysema of the lungs. Pulmonary emphysema can rupture often resulting in a pneumothorax. Subcutaneous emphysema is the presence of air or gas in the subcutaneous tissues of the body.

Case report: A 54-year-old male patient was treated at the emergency department because he was found at home on the floor with external signs of trauma. Upon arrival, the patient is conscious, contactable, oriented, Glasgow coma score 15, spontaneous breathing, oxygen saturation 86% with blood pressure 110/60. The patient suffers from COPD and hypertension. Physical examination revealed whole body subcutaneous emphysema with diffuse tenderness on palpation. A CT scan showed serial rib fracture on the right side, subcutaneous emphysema, and pneumothorax. A thoracic drain and subcutaneous needles were placed immediately. A respiratory failure and hypotension occurred thereafter. Pulmonary embolism was excluded. Significant pneumomediastinum was visible, that could have caused compression of the superior vena cava and pulmonary veins. The patient was intubated and more subcutaneous needles were placed for air drainage. Respiratory improvement gradually occurred after assisted manual air decompression. The patient got extubated and breathed sufficiently with an oxygen mask. Upon discharge, the patient was well, with oxygen supplemented via nasal cannula. On auscultation a harsh breathing noise with bilateral diffuse bronchial whistles and prolonged expiration was heard.

Conclusion: An extensive pulmonary and mediastinal emphysema may induce hemodynamic instability. Emergency air drainage by placing drains and subcutaneous needles can restore hemodynamic stability.

Keywords: hemodynamic instability, pulmonary emphysema, subcutaneous emphysema

CR11

Tuberculose meningoencephalitis in a patient on immunosuppressive therapy

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Introduction: Tumor necrosis factor alpha (TNFα) blockade is an effective treatment in immune-mediated inflammatory diseases (IMIDs). However, TNFα is a key cytokine in the host's protective defense against Mycobacterium tuberculosis, which makes patients treated with corticosteroids or other immunosuppressive therapy particularly at risk and in need of appropriate screening for tuberculosis (TB). TB meningoencephalitis is the most severe, life-threatening form of TB and usually carries subacute or chronic form.

Case report: A 53-year-old was admitted under suspicion of meningoencephalitis due to progressive worsening of the general condition, febrility, headache, somnolence, and positive meningeal signs. Patient was previously treated with methotrexate, sulfasalasine and adalimumab for rheumatoid arthritis (RA). For the past month, he was complaining of general weakness, muscle pain and was febrile on several occasions so RA therapy was seized. Cerebrospinal fluid (CSF) analysis showed lymphocytic pleocytosis, proteinorachia, hypoglycorachia and elevated lactates. Magnetic resonance imaging (MRI) of the brain showed multiple lesions with discrete post-contrast imbibition in places, which differentially could correspond to an inflammatory disease of the central nervous system. Thorax computed tomography (CT) showed small diffuse nodular changes. QuantiFERON-TB test was performed and suggested M. tuberculosis as a possible cause which was confirmed by GeneXpert PCR of CSF. During hospitalization, the patient was initially treated with antituberculotics parenterally. After discharge, he proceeded with oral therapy for a year with a good clinical response and recovery.

Conclusion: Immunosuppression increases the risk of reactivation of a latent tuberculosis infection (LTBI), which leads to the development of the disease. Diagnosis of LTBI and preventive treatment are important as they can significantly reduce the risk of the disease and prevent its outbreak.

Keywords: immunosuppressive therapy, latent tuberculosis infection, meningoencephalitis, QuantiFERON-TB

CR12

Hemorrhagic stroke caused by bacterial endocarditis: a case report

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Introduction: Stroke is a serious life-threatening medical condition that occurs when the blood supply to part of the brain is cut off. Endocarditis is a rare and potentially fatal infection of the inner lining of the heart and it is most commonly caused by bacteria.

Case report: We present a case of a 41-year-old male who presented himself with fever and confusion. Blood tests revealed elevated C-reactive protein and liver enzymes. Neurological examination did not show pathological signs. Computed tomography of the brain showed left occipital intracerebral hematoma with frontotemporal subarachnoid hemorrhage. During hospitalization he became septic with tachycardia and developed icteruse. Echocardiography showed a floating formation in the area of the posterior cuspis of the mitral valve with consequent significant mitral regurgitation. Staphylococcus aureus was isolated in blood culture. An infectious disease specialist was consulted and targeted antibiotic therapy with ceftriaxone and fluoxacilline was started. In the meantime he developed peripheral edema. A follow-up magnetic resonance imaging of the brain revealed brain abscesses localized left occipital in the area of previous intracerebral hemorrhage and right frontal. Cardiac surgeon was consulted and a transfer was planned for operative treatment of mitral valve vegetations. Further regression of the described lesions was monitored with brain magnetic resonance.

Conclusion: Septic emboli can lead to the formation of brain abscesses. In our case, infective endocarditis was initially manifested by an intracerebral hematoma underlying a septic embolism, which should be considered in febrile patients.

Keywords: bacterial endocarditis, endocarditis, hemorrhagic stroke, stroke

CR13

Juvenile polyposis in 8-year-old boy - what should we know about genetics?

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Introduction: Juvenile polyposis is a rare hereditary disorder characterized by multiple hamartomatous polyps in the gastrointestinal tract. Usually, most individuals develop symptoms by the age of 20 but there is a large variability in the onset and number of polyps. Juvenile polyposis follows an autosomal dominant inheritance pattern and it is related to an increased malignant risk and several other disorders.

Case report: Eight-year-old boy presented with recurrent hematochezia. Comprehensive gastrointestinal evaluation revealed multiple polyps in the colon. A pathohistological analysis showed a diagnosis of juvenile polyposis. His family history was unremarkable, with no history of polyps or gastrointestinal tumors. After initial family history and clinical evaluation, genetic testing of patient and parents using exome sequencing has been performed using Illumina TruSight One Kit, and the results were interpreted in relation to databases. The genetic testing found a heterozygous nonsense variant of the SMAD4 gene, c.302G>A, p.(Trp101Ter), classified as pathogenic. The same variant was found in the patient's healthy mother. Pathogenic variants in the SMAD4 are associated with both juvenile polyposis and hereditary hemorrhagic telangiectasia syndrome (multiple abnormalities in blood vessels).

Conclusion: Genetic testing enabled precise determination of hereditary disorder as well as identification of relatives at risk. When combined with clinical evaluation, genetic testing provides the creation of personalized management plan for these patients.

Keywords: juvenile polyposis, genetic testing, hereditary disorders

CR14

Cerebral Salt Wasting Syndrome following Head Injury in a Child - Case Report

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Introduction: Cerebral salt wasting (CSW) is a potential cause of hyponatremia in the setting of central nervous system (CNS) trauma. CSW is characterized by hyponatremia with elevated urine sodium and hypovolemia. We report a 3-year-old male child with head injury and CSW managed successfully with hypertonic saline infusion.

Case report: We present a case of 3-year-old boy who was admitted to the Children's Intensive Care Unit due to vomiting, severe hyponatremia and impaired consciousness. On admission, he is pale, somnolent, sleepy, hypotensive, bradycardic and has muscle cramps. Due to the anamnestic information about head trauma, a magnetic resonance imaging (MRI) of the brain was performed, which was normal with a presence of small arachnoid cyst. In the laboratory findings, urine osmolality and sodium in urine are elevated, along with decreased serum values and decreased serum osmolality. The initial sodium is 117 mmol/L, which is approached by giving hypertonic saline with the continuation of the isotonic solution. The applied measures correct the state of consciousness two hours after arrival and the clinical symptoms of hyponatremia disappear. The boy is discharged home on the sixth day of hospitalisation after endocrinological, neuropediatric and nephrological examination.

Conclusion: CSW should always be considered whenever a clinician encounters hyponatremia in patients with cerebral traumas. One can diagnose CSW in hyponatremic patients with decreased volume of extracellular fluid. Increased urinary sodium and urate excretion and high urine osmolality with polyuria support the diagnosis. Mineralocorticoids can be an effective drug in the management of CSW apart from saline infusion.

Keywords: cerebral salt wasting, hypertonic saline, hyponatermia

CR15

Orbital cellulitis caused by GABHS as a complication of primary VZV infection in 8-year-old child

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Introduction: Complications of primary varicella in children can include bacterial superinfection, with group A beta-hemolytic streptococcus (GABHS) being the most common causing organism. GABHS superinfection usually causes skin and soft tissue infections, bacteremia, pyogenic arthritis, and toxic shock syndrome. We show a patient with an unusual location of GABHS superinfection, presenting as orbital cellulitis. Orbital cellulitis refers to infections located posteriorly to the orbital septum, involving orbit contents. It is most commonly caused by local spread of S. pneumoniae from ethmoid sinusitis.

Case report: Previously healthy 8-year-old male patient, febrile (38 °C) for seven days since the start of typical varicella exanthem, presents with a completely closed, swollen red right eye. Extraocular movements were intact on both eyes, with round pupils reactive to light. Skin examination revealed scarlatiform rash on the trunk area and multiple varicella lessions, most of them in the crust phase. CT imaging found right eye preseptal edema, and right ethmoid sinuses filled with dense inflamed collection spreading into the fat tissue in the medial part of the orbit, revealing the diagnosis of orbital cellulitis. The nasopharyngeal aspirate was performed and came positive for GABHS, sensitive to penicillin.

Conclusion: Invasive GABHS should be considered in children with VZV who manifest fever beyond the fourth day of the exanthem appearance. After obtaining the blood culture samples, empiric antibiotic treatment sholud be initiated against GABHS and S. aureus.

Keywords: group A beta-hemolytic streptococcus, preseptal cellulitis, sinusitis

CR16

Extramedullary disease in multiple myeloma – still difficult to treat in the era of new drugs

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Introduction: Multiple myeloma is a plasma cell neoplasm. It manifests with a wide range of clinical presentations, including bone lessions, hypercalcemia, renal failure and bone marrow failure. When clonal plasma cells grow at anatomical sites distant from the bone marrow, it is referred to as extramedullary disease (EMD). We present a patient suffering from skin EMD.

Case report: 63-year-old female patient presented with intense pain in left hip region,with no history od trauma. MRI showed acetabulum fracture and soft tissue mass,verified as plasmocytoma after ultrasound guided biopsy.CT found multiple lessions located in bones, lungs, liver and subcutaneous fat tissue. Serum protein analysis confirmed presence of monoclonal IgG lambda and bone marrow aspiration showed 40% infiltration with plasma cells. Diagnosis of multiple myeloma, R-ISS(Revised International Staging System) stage 3 was established. Induction therapy was VRD regimen (bortezomib, lenalidomide, dexamethasone) and radiotherapy of EMD (total dose of 8 Gy). Reevaluation showed very good partial response and autologous stem cell were collected. Just before planned autologous stem cell transplant (ASCT), new skin lessions appeared. Biopsy was performed and patohystological analysis confirmed atypical plasma cell infiltration, indicating EMD. Second line of treatment combined daratumumab with DA-EPOCH (dose adjusted etoposide, prednisone, vincristine, cyclophosphamide, doxorubicin) protocol which resulted in complete remission. Treatment was continued with tandem ASCT. Unfortunately, one months after second ASCT, the same skin lessions reappeared and relaps was confirmed.

Conclusion: despite new effective drugs, extramedullary disease in multiple myeloma is still difficult to treat condition, with short remission periods and poor prognosis. There are still no hard evidence or recommendations on how to treat EMD.

Keywords: autologous stem cell transplant, extramedullary disease, multiple myeloma

CR17

A case report of Moyamoya syndrome in a 4-year-old

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Introduction: Moyamoya is a progressive occlusive cerebral arteriopathy that is increasingly recognized as a cause of stroke in adults and children. It is named after the appearance of extensive collateral circulation that develops within the brain tissue ("moyamoya" means "puff of smoke" in Japanese) seen on digital subtraction angiography. When associated with a systemic disease it is called Moyamoya syndrome. Symptoms include headache, seizures, focal deficits, developmental delays, visual disturbances, etc. Antithrombotic therapy and surgical direct and indirect revascularization are used in treatment.

Case report: A 4-year-old girl with a history of neurofibromatosis type 1 presented with an epileptic status and ischemic attacks while crying at our clinic. Radiological findings on MRI showed a pial angiomatosis in the left frontotemporal region, and MR angiography showed numerous collaterals in the basal ganglia. DSA revealed bilateral stenosis of the cerebral arteries. Treatment included aspirin, anticonvulsive drugs and surgical intervention. The surgery involved direct revascularization by connecting the superficial temporal artery to the middle cerebral artery, and indirect revascularization using the EDAS (encephaloduroarteriosynangiosis) method, connecting the superficial artery to the brain's outer layer called dura. Despite the treatment, there remained seizures.

Conclusion: Early diagnosis and treatment are crucial for patients with moyamoya disease and syndrome. This case report emphasizes the importance of raising awareness and the ongoing need for research and new findings about this relatively unknown disease in order to improve patient outcomes.

Keywords: arteriopathy, moyamoya, neurofibromatosis type 1

CR18

Cerebrovascular insult presenting as encephalitis

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Introduction: Cerebrovascular insult (CVI) is one of the leading causes of death and disability worldwide. Symptoms may vary, depending on the size and position of the affected area of the brain. The purpose of this case report is to delineate challenges in diagnosis of CVI.

Case report: We present a case of a 65-year-old man with many comorbidities: arterial hypertension, aortic valve stenosis, aneurysm of ascending aorta, dyslipidemia and type II diabetes. He was admitted due to persistent right frontoparietal headache and left sided supranuclear facial palsy in neurological exam. Brain MRI showed changes indicating probable encephalitis, with glial tumor in differential diagnosis. Analysis of CSF revealed high leukocyte and lymphocyte count with elevated proteins, also suggesting encephalitis. He received ex iuvantibus antibiotic therapy after which he felt better. However, upon further examination of cerebrospinal fluid (CSF), no bacterial, viral or fungal agent could be proven. The patient was discharged with a recommendation for a follow-up and control magnetic resonance imaging (MRI), which later displayed definitive signs of ischemic stroke with secondary hemorrhage. The patient's comorbidities were identified as a probable cause. The patient subsequently underwent replacement surgery of the aortic valve and is now better, with no neurological deficit.

Conclusion: CVI can sometimes present with changes on radiological exams and in CSF similar to encephalitis and tumor. Different diagnostic methods are important to set the correct diagnosis because treatment can differ. Sometimes patient follow-up and control MRI scan can show a subtle difference that can help in diagnosis.

Keywords: cerebrovascular insult, encephalitis, MRI

CR19

Autopsy findings in differentiating natural from violent death: a case report

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Introduction: Forensic pathology is a medical speciality where the area of specific application is the examination of people who die suddenly, unexpectedly or violently. The forensic pathologist is an expert in determining cause and manner of death.

Case report: We present a case of a 76-year-old male who was found unconscious by his son. He was brought to the ER in cardiopulmonary arrest with immeasurably low temperature (<35°C). CPR was unsuccessful and the patient died. Due to suspicion of hypothermia and neglect, the State Attorney's Office was notified. A forensic medical autopsy was ordered due to suspected violations of the Constitution and the Criminal Code of the Republic of Croatia. Autopsy, performed as a part of university's exercise in forensic medicine, found dark purple death spots, which were the first sign that the cause of death probably wasn't hypothermia. Further examination showed hydrothorax, large ascites and extremely dilated heart that weighted 475 grams. Heart section revealed massive myocardial infarction and coronary atherosclerosis. Gaster section showed no Wischnewsky spots that are pathognomonic sign of hypothermia. Histopathological examination confirmed that it was myocardial infarction. Specific autopsy findings and histopathological examination reaffirmed myocardial infarction as cause of death and ruled out any signs of violence and neglect.

Conclusion: In this case report we wanted to show how forensic pathology has a big impact on both clinical and judicial system. With specific autopsy findings, forensic pathology helps in distinguishing natural from violent death.

Keywords: autopsy, death, forensic medicine, myocardial infarction

CR20

Sinus histiocytosis mimicking lung carcinoma

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Introduction: Sinus histiocytosis is a rare, self-limiting disorder of unknown etiology, predominantly affecting lymph nodes with extranodal involvement in some cases. It represents benign histiocytic proliferation characterized by a prolonged clinical course with occasional exacerbation and remission phases, combined with non-specific infiltrations visualized by X-ray.

Case report: A routinely done chest X-ray in a 61-year-old asymptomatic female smoker (40 pack/years), showed a nodular infiltrate in the right upper lobe. On a computed tomography (CT) scan, the infiltrate was later described as a solid tumor with no signs of hilar and mediastinal lymphadenopathy. Initial fiberoptic bronchoscopy work-up yielded no diagnosis, while her lung function was within the normal limits. Hereafter, a positron emission tomography and computed tomography (PET-CT) scan was done and showed a marginally spiculated nodular lesion without significant fluorodeoxyglucose (FDG) metabolism. A CT-guided transthoracic needle biopsy was done, but no specific diagnosis was made. However, cytological analysis of samples collected during radial probe endobronchial ultrasound (REBUS) raised suspicion of adenocarcinoma cells. Thus, right upper lobectomy and mediastinal lymphadenectomy were indicated. Post-operative histology finding from resected material detected sinus histiocytosis in 31 lymph nodes and local necrotizing pneumonia with small abscesses surrounded by connective tissue that had been previously described as infiltrate or tumor.

Conclusion: Invasiveness of lung resection depends on properly taken samples through a variety of methods for histopathological assessment. Despite all of these sampling methods, misinterpretation still occurs.

Keywords: carcinoma; histiocytosis; lobectomy

CR21

Right Hepatic Artery Pseudoaneurysm: a rare cause of gastrointestinal obscure hemorrhage

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Introduction: A pseudoaneurysm represents arterial dilatation with vessel wall disruption due to injury from inflammation, infection, trauma, or connective tissue disease. Right hepatic artery pseudoaneurysm is a rare entity in which most cases occur after biliary surgery.

Case report: A 60-year-old male patient was urgently hospitalized due to massive hematochezia which led to hypotension (80/50 mmHg) and loss of consciousness. Cholecystectomy with choledochojejunal anastomosis (in 2020) was reported from the patient's medical documentation. The initial laboratory examination showed a low hemoglobin concentration (87 g/L). Blood-covered colon and terminal ileum mucosa with clots in places were visualized during colonoscopy, but with no evidence of a bleeding source. The initial emergency regimen included nothing by mouth, 500 mL of 0,9% NaCl, 4 x 10mEq of KCl, pantoprazole amp. iv. 2x1, vitamin K1 amp. iv., O_2 3L/min through the nasal catheter, and 2 erythrocyte concentrates. Recovering hemoglobin values were noticed, but he suddenly began to be hemodynamically unstable on the sixth day of the follow-up. The radiology department was consulted to perform transfemoral digital subtraction angiography in which they found a pseudoaneurysm (12 x 6 mm) in the right liver lobe that was subsequently coiled with the sandwich technique.

Conclusion: Even though small bowel hemorrhage occupies a tiny part of all the other causes of gastrointestinal bleeding, it can be a life-threatening condition diagnosed and treated sometimes only by interventional radiology methods. Earlier biliary surgical procedures in anamnesis should raise suspicion of vascular malformations.

Keywords: angiography; hematochezia; pseudoaneurysm

CR22

Neonatal presentation of glucose-6-phosphate dehydrogenase deficiency

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Introduction: Glucose-6-phosphate dehydrogenase (G6PD) deficiency can cause a range of symptoms including neonatal hyperbilirubinemia, acute hemolysis and chronic hemolysis, although persons affected may also be asymptomatic. Acute hemolysis of this X-linked inherited disorder is caused by an exposure to oxidative stressors such as infection, oxidative drug or fava beans. This case describes presentation of G6PD deficiency in a neonate.

Case report: Neonate (36+3) born after diagnosis of oligohidramnion with neonatal jaundice and blood loss. At 3 hours after birth, the first cycle of 4-hour phototherapy because of hyperbilirubinemia and antibiotic therapy was initiated. Due to worsening of hyperbilirubinemia, the newborn was transferred to KBC Osijek. In the ICU it received Octagam 2 times, micro blood transfusion and phototherapy for 3 days. Icterus disappeared, but hemolytic anemia persisted. No bleeding was confirmed. On the fifth day of life, due to fever antiobiotic therapy was initiated and 10 days later was discharged from the hospital and prescribed Legofer. At a follow-up 2 weeks later, the control CBC worsened and he was hospitalized, hemolysis parameters were negative and G6PD activity was reduced. Further diagnostics confirmed G6PD deficiency as the cause of the hemolytic anemia. The mother was advised to avoid oxidative stress factors in foods and medications, and to continue treatment with Legofer.

Conclusion: This case demonstrates that G6PD deficiency is not only caused by oxidative stress factors, but can also present as severe hemolytic anemia in neonates.

Keywords: Glucose-6-phosphate dehydrogenase, heamolytic anemia, neonatal anemia

CR23

Brain developmental anomaly - colpocephaly, corpus callosum agenesis and hippocampal malrotation as part of the 22q11.21 microduplication syndrome phenotype

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Introduction: 22q11.21 microduplication syndrome is a rare genetic condition associated with mild dysmorphia, microcephaly, stunted psychomotor development, short stature, hypotonia and intellectual disabilities. This case presents a female newborn with 22q11.21 microduplication syndrome with all its clinical features.

Case report: We are presenting a 16 month old female patient, born from first, uncomplicated pregnancy at term from nonconsanguineous parents birth weight of 2830 g and Apgar score of 5/7 was with neonatal urosepsis. Contrast-enhanced voiding urosonography (ceVUS) examines confirmed bilaterall vesicoureteral reflux (VUR). Neurological examination revealed global hypotonia. Magnetic resonance imaging (MRI) of the brain diagnosed colpocephaly, agenesis of the corpus callosum, and hippocampal malrotation. Facial dysmorphia, somatic and psychomotor retardation with associated developmental defects suggests a genetic basis for the disorder. Karyotyping is normal, and Chromosomal Microarray Analysis (CMA) revealed three copies of the 2Mb genome in the 22q11.21 region, affecting a total of 82 genes, 13 of which were described as pathogenic and a diagnosis of microduplication syndrome was made.

Conclusion: 22q11.2 duplication is inherited in AD and affects the same region as in DiGeorge syndrome. Its clinical significance has not been fully elucidated, but it is known that the 22q11.2 genomic region contains several large segments of LCR (low copy number repeats) duplications that act as mediators for non-allelic homologous recombination and promote the occurrence of microdeletions and microduplications.

Keywords: Chromosome duplication, gene duplication, child

CR24

Early diagnosis and successful treatment of critical coarctation with percutaneous transcatheter balloon dilatation in a newborn – a case report

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Introduction: Aortic coarctation is a congenital cardiac anomaly affecting approximately 4 in 10,000 live births. The resultant narrowing of the aorta imposes increased afterload on the left ventricle, leading to systemic hypertension in the upper and hypotension in the lower half of the body. Coarctation is a significant etiology of neonatal heart failure, shock, and multi-organ dysfunction, making it a pediatric emergency. Herein, we present a successful case of percutaneous balloon dilatation in a neonate with critical aortic coarctation.

Case report: A 10-day-old male neonate presented with a disturbed general condition, tachypnea, dyspnea, and cyanosis. The neonate had a history of meal refusal and decreased diuresis on the preceding day. Physical examination revealed tachycardia, hypertension in the upper extremities, unmeasurable blood pressure in the lower limbs, and absent peripheral pulses. Laboratory investigations were notable for metabolic acidosis with elevated lactate levels. Chest radiography demonstrated cardiomegaly. Echocardiography and CT (computer tomography) aortography confirmed the diagnosis of critical coarctation of the aorta distal to the left subclavian artery, which precipitated cardiac decompensation. After achieving hemodynamic stabilization with inotropes and diuretics, an urgent percutaneous balloon dilatation was performed via femoral access. Follow-up CT aortography showed normalized blood flow across the isthmus and descending aorta.

Conclusion: Coarctation of the aorta should be suspected in neonates who present with cardiogenic shock. Percutaneous balloon dilatation is a promising treatment modality for critically ill neonates and should be considered as a viable therapeutic option.

Keywords: balloon angioplasty, coarctation of the aorta, congenital heart defects

CR25

Left bundle branch pacing (LBBP) as a new treatment method for left bundle branch block (LBBB) – a case report

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Introduction: Left bundle branch pacing (LBBP) is an innovative pacing modality that delivers physiological pacing while preserving electrical synchrony of the left ventricle. This report aims to present LBBP as a viable treatment method for a patient with mildly reduced ejection fraction and complete left bundle branch block (LBBB).

Case report: A 71-year-old patient presented with dyspnea and palpitations. An electrocardiogram confirmed diffuse disease of the conduction system, LBBB, and PR prolongation. Additionally, an echocardiogram revealed a reduced ejection fraction of 45%, necessitating the implantation of an electrostimulator. An atrial electrode was introduced via the cephalic vein and positioned in the auricle of the right atrium. Subsequently, a ventricle electrode was introduced through the left axillary vein, and after mapping the area of the left bundle branch, it was gradually inserted into the septum until stimulation of the left bundle branch with a narrow QRS complex was achieved. Both electrodes were connected to the DDDR (dual-chamber rate-modulated) electrostimulator, which achieved stimulation of the conduction system with an appropriate stimulus threshold. The chest X-ray confirmed the appropriate placement of both electrodes, while the echocardiogram showed an improvement in the ejection fraction to 50%. Following implantation, the patient was asymptomatic, cardiacally compensated, and normotensive.

Conclusion: In conclusion, LBBP is a promising physiological pacing technique with the potential to correct classical LBBB. It is a promising alternative for patients with bradyarrhythmia and heart failure. As such, it has the potential for widespread clinical application.

Keywords: bundle branch block, cardiac arrhythmias, cardiac pacing

CR26

The Importance of Accurate Diagnosis in Myeloproliferative Disorders

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Introduction: Myeloproliferative disorders are a group of blood disorders that result in an overproduction of blood cells, and platelets by the bone marrow. These disorders if not treated can cause complications such as blood clots, anemia, and enlargement of the spleen.

Case report: A 49-year-old female patient presents to the gynecologic outpatient clinic with complaints of abdominal pain and swelling. An ultrasound examination revealed the presence of ascites in the pelvic cavity and enlarged ovaries. Further evaluation revealed splenomegaly. The patient underwent a bilateral hysterectomy with adnexectomy, and the histological examination did not reveal any malignant cells. The patient then sought further evaluation at another clinic, where an ultrasound examination confirmed thrombosis of the portal vein, as well as thrombosis of the upper mesenteric and splenic veins. Re-canalization was executed, and the ascites was punctured again. The patient was initiated on anticoagulation therapy with Clexan and underwent hematological analysis, which revealed a mutation in the JAK 2 gene and heterozygosity for the factor V Leiden mutation. After several months, the patient returned for a follow-up examination, during which her anticoagulation therapy was adjusted due to epistaxis. The patient was also approved for pegylated interferon treatment in a day hospital for a final hematologic diagnosis of a chronic myeloproliferative disorder and received intravenous treatment with Ferinject.

Conclusion: Due to the rarity and difficulty in diagnosing myeloproliferative disorders, prompt and accurate diagnosis is crucial before therapeutic decisions are made to avoid unnecessary procedures and negative outcomes."

Keywords: anticoagulant treatment, myeloproliferative disorder, thrombosis

CR27

Microwave ablation of solitary kidney multifocal renal cell carcinoma

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Introduction: Microwave ablation (MWA) is an image guided percutaneous interventional radiology technique used for definitive treatment of small renal tumors (stage T1a). Technique uses electromagnetic waves for generating thermal energy which causes coagulation necrosis. Ablation can be performed under computerized tomography (CT) or ultrasound guidance. Main advantages of MWA comparing to open surgery are faster recovery, shorter hospitalization, lower procedural cost and kidney preserving procedure.

Case report: A 76-year-old female patient with a history of breast cancer and right sided nefrectomy due to renal carcinoma 25 years ago presents with multiple left kidney lesions. MRI showed three lesions with inhomogeneous postcontrast opacification on the convexity of renal cortex characterized as multifocal renal cell carcinomas. Open surgery would result in nephrectomy, therefore the patient was reffered to interventional radiologist for MWA . With patient under general anesthesia, microwave ablation antenna was under CT guidance navigated to each lesion and ablation was performed with a power of 100 W and duration of three minutes for each lesion, resulting in adequate zone of ablation. The patient was discharged the following day, without any discomfort or complications. Control CT showed appropriate ablation zones without sings of contrast opacification indicating no residual tumor tissue.

Conclusion: Microwave ablation is a minimally invasive technique that has been established as an efficient alternative solution in the treatment of renal cell carcinomas. It is especially useful in cases with solitary kidney lesions as a nephron-sparing technique with similar survival rates as partial or radical nephrectomy.

Keywords: Microwave ablation, renal cell carcinoma, solitary kidney

CR28

Endoscopic ultrasound-guided drainage of pancreatic walled-off necrosis and LAMS (lumen-apposing metal stent) placement: a case report

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Introduction: Walled-off pancreatic necrosis is a mature, encapsulated collection of necrosis and a local complication of acute pancreatitis that appears more than four weeks after the onset of pancreatitis. The following case demonstrates how endoscopic ultrasound-guided drainage and LAMS placement can be used to treat walled-off necrosis successfully.

Case report: A 54-year-old male was admitted to the Department of Gastroenterology due to epigastric pain and reliable laboratory findings indicating acute pancreatitis. Abdominal MSCT revealed changes suggestive of severe acute pancreatitis, including necrosis of more than 50% of the parenchyma, an acute necrotic collection compressing the stomach, and splenic vein thrombosis. After a collection puncture and evacuation of 440 ml of liquid content, supportive therapy, and antibiotic therapy, the patient was discharged from the hospital. Follow-up was maintained, and octreoide therapy was started due to the elevated amylase level in the collection. MRCP revealed walled-off necrosis compressing the stomach and duodenum. It was decided to perform endoscopic ultrasound-guided drainage and the LAMS placement. Despite antibiotic prophylaxis, inflammatory parameters increased, and the patient developed a temperature of 40 °C. A necrosectomy was done after balloon dilatation of the LAMS and aspiration of 1000 mL of contents. Following the stabilization of inflammatory parameters and the regression of walled-off necrosis on ultrasound, the LAMS was removed.

Conclusion: Although drainage can be performed surgically or percutaneously, the endoscopic approach is considered the first-line treatment. Its aim is to resolve walled-off necrosis and thus relieve symptoms and complications.

Keywords: acute pancreatitis, drainage, gastroenterology, stent, ultrasound-guided

CR29

A case report of a patient with Leigh syndrome due to mtDNA mutation

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Introduction: Leigh syndrome (LS) is a severe neurodegenerative disorder caused by disturbed mitochondrial energy production which is caused by mutations of >90 genes. About 20% of patients have mtDNA mutation. LS usually presents in early childhood as subacute necrotizing encephalopathy characterized by psychomotor regression, dystonia, bulbar palsy, and respiratory failure, resulting in severe disability or death. Neuroimaging hallmarks are bilateral symmetrical lesions of the basal ganglia, brainstem, and cerebellum.

Case report: A 15-month-old boy, a child of healthy and unrelated parents, developed weakness, ataxia, and left-sided hemiparesis after a febrile infection. Brain MRI revealed bilateral hyperintense changes on T2-weighted and FLAIR images of the striatum, frontal mesencephalon, and corticospinal pathway, with diffusion restriction. A metabolic work-up was done and the results were normal, except for mildly elevated lactate in cerebrospinal fluid (2.60 mmol/L). As clinical and neuroimaging findings were indicative of LS, whole exome sequencing was performed and revealed m.14487T>C mutation in the MT-ND6 gene with the level of heteroplasmy >99%. Further family testing showed that the mother harbored that mutation, as well as his brother who had m.14487T>C mutation in homoplasmy.

Conclusion: Leigh Syndrome is a devastating neurometabolic disease presenting in early childhood. In some patients, it is caused by mutations in mtDNA which is transmitted by maternal inheritance. Depending on the mutational load, patients may be asymptomatic or have different clinical symptoms, while patients with LS have >90% mutational load. Understanding mtDNA characteristics inheritance is important for identifying family members at risk and proper genetic counseling.

Keywords: Leigh syndrome, maternal inheritance, mtDNA, mutational load, subacute necrotizing encephalopathy

CR30

Forgotten by the law: Are we prepared for every scenario?

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Introduction: According to the Act on the protection of persons with mental disorders in Croatia, involuntary hospitalization for those found not guilty by reason of insanity may last the longest as the maximum prison sentence for the committed offense. When this period has passed the patient can no longer be hospitalized in a psychiatric institution. A problem arises for patients who have not gained insight into their mental disorder creating a high risk of non-adherence to their prescribed therapy and repetition of the crime.

Case report: In 2009 a 43-year-old man was convicted of murder. A psychiatric evaluation ordered by the court revealed that the patient had committed the act during a psychotic episode and was therefore tried as not guilty by reason of insanity. Criminal law states that he cannot be subjected to prosecution and is ordered to be treated in a psychiatric hospital rather than serving a sentence in prison. During his treatment for the past 13 years, the patient has not developed any insight into his disorder or his wrongdoing. Considering his symptoms and significant cognitive decline, it is predicted that this patient will never develop insight nor oblige to his therapy once out of the institution. His symptoms will inevitably return, and he will once more pose a danger to both himself and society.

Conclusion: There has been an oversight in both Act on the protection of persons with mental disorders and Criminal law for those not suitable to be reintegrated into society after the legal involuntary psychiatric treatment expires.

Keywords: Criminal laws, forensic psychiatry, insanity defense, involuntary commitments, patient nonadherence

CR31

Pallister-Hall syndrome- a case report

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Introduction: GLI3 gene plays role in sonic hedgehog signalling. Haploinsufficiency of GLI3 causes variable alterations in gene expression during development leading to autosomal dominant Pallister – Hall syndrome (PHS). Typical phenotype includes polydactyly with midline defects (imperforate anus, bifid epiglottis, panhypopituitarism, hypothalamic disorganization and hamartoma).

Case report: We report on a boy born at term with birth weight 2870 g, birth length 47 cm and Apgar score 8, 8. Multiple congenital anomalies including palatoschisis, choanal stenosis, micropenis, cryptorchism, anal atresia and poly/syndactyly were observed at birth. He also had dysplastic right kidney and 11 ribs on left side. Initial diagnosis was VACTERL association. Recurrent hypoglycaemias prompted additional workup including brain magnetic resonance imaging (MRI) and verified hypothalamic hamartoma and ectopic posterior pituitary which led to diagnosis of PHS. Molecular testing proved heterozygous nonsense mutation in GLI3 gene (c.2437C>T,p.Gln813Ter). Two days after birth bipolar colostomy was formed. Substitution with growth hormone and levothyroxine were introduced at the age of two months leading to cessation of hypoglycaemias. At the age of one year anorectoplasty was performed. Termino-terminal anastomosis of colon was formed at the age of 2 years. On follow up visit at the age 2 years he is in overall good condition with moderate growth and developmental delay.

Conclusion: PHS is a rare malformation syndrome with only about 100 reported cases worldwide. Because of phenotypic similarity in can easily be mistaken with VACTERL association. Precise molecular testing leads to early diagnosis, timely introduction of treatment and better outcome.

Keywords: Hypothalamic hamartoma; Pallister-Hall Syndrome; Polydactyly; Rare Diseases

CR32

Immune thrombocytopenia after COVID-19 vaccination

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Introduction: Hematologic disorders such as immune thrombocytopenia (ITP) and vaccine-induced immune thrombotic thrombocytopenia (VITT) are described as a rare side effect related to adenoviral vector vaccine. ITP occurs up to 27 days after vaccination and it's estimated incidence 1.13 cases per 100,000 doses. It usually presents with low platelet count causing petechiae and ecchymoses on the skin and spontaneous bleeding to the mucous membranes.

Case report: A 72-year-old woman presented with spontaneous bruising a few weeks following COVID-19 vaccination. Her past medical history included ischemic heart disease and dyslipidemia. Physical examination findings included petechiae and ecchymoses over her arms and abdomen. Laboratory tests showed significant low platelet count of $20x10^9$/L and the patient was sent to further diagnostic procedures. Serology tests for multiple viruses were negative as well as antiplatelet antibodies. Bone marrow aspiration was also performed showing normal platelets production. The patient was started on oral methylprednisolone (32 mg) for 16 weeks until platelet count showed gradual recovery and was given instructions to go to the ER in case of severe bleeding. Follow-up was planned once a month. After 16 months platelet count was $113x10^9$/L which implies mild chronic thrombocytopenia; however, the patient is well and doesn't take steroids anymore.

Conclusion: COVID-19 vaccination is important step in preventing disastrous effects of the pandemic; however, side effects should be well documented and treated properly. In 10-30% of ITP cases, antiplatelet antibodies cannot be proven and the diagnosis is often made by excluding other causes.

Keywords: COVID-19 vaccination, side effect, thrombocytopenia

CR33

Schwannoma of the tongue in a young female: A case report

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Introduction: Tongue schwannoma, also known as neurilemmoma, is a benign, usually solitary and encapsulated tumor formed by Schwann cells. Because of the rarity of tongue schwannomas, they are usually not part of the differential diagnosis of tongue masses. The following is a case of a young female patient with schwannoma arising from the base of the tongue.

Case report: A 25-year-old female presented with an enlarging mass and swelling in her tongue which she noticed a few months before coming for examination. Physical examination revealed a mass in the base of the tongue. MRI revealed an encapsulated mass on the right side of the tongue, with a size of 60x44,5x46,5 mm, pushing the lingual septum to the left and narrowing the air space between the right tonsil on the back. The patient had undergone tracheostomy and transoral excision of the tumor, with preservation of overlying mucosa. On gross examination, tumor was well incapsulated and well vascularized, solid and firm, with small bleeding areas. During surgery, frontal part of the tumor was excised and sent for intraoperative histopathological examination, thus the capsule had to be disrupted. Microscopically, both intraoperative and definite histopathological examination confirmed it was schwannoma. Six months after surgery, no signs or symptoms of recurrence were detected.

Conclusion: Tongue schwannoma is a relatively rare tumor of head and neck. Patients usually present with painless mass anywhere in the tongue. Transoral excision is the standard treatment of schwannoma of the tongue.

Keywords: Lingual, MRI, schwannoma, tongue.

CR34

Nephrectomy after renal trauma in a pediatric patient: a case report

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Introduction: Renal trauma can result in injury to the parenchyma or renal vasculature causing bleeding or damage to the collecting system with possible urine leakage. In this case report, the kidney was badly damaged and due to profuse bleeding, it was necessary to perform a nephrectomy.

Case report: A nine-year-old patient fell and injured himself while running. After arriving home from school, he reported feeling pain in lumbar region. He vomited four times and didn't urinate. In the hospital, laboratory urinalysis showed signs of hematuria. An abdominal ultrasound revealed hyperechoic structure, corresponding to a contusion or laceration of the right kidney. Computer tomography (CT) scan showed a parenchymal defect in the frontal part of the upper and middle third of the right kidney. The patient was prepared for an emergency surgery in which the right retroperitoneal space was excised. A rupture was found in central part of the right kidney, which was then cut in half, reveling kidney laceration. Because of profuse bleeding an emergency nephrectomy was performed. There were no complications during the surgery. While in hospital, patient was hemodynamically stable, with regular diuresis and stable blood counts. The inflammatory parameters were slightly elevated. The patient was recommended to rest and take probiotics. Cefixime was prescribed for six days. Regular check-ups with urologist were also recommended.

Conclusion: Renal injuries can have serious consequences. It is important to detect signs of kidney damage because they can lead to internal bleeding resulting in organ failure, coma and ultimately death.

Keywords: hematuria, nephrectomy, renal injury

CR35

Effectivness of intravesical BCG therapy in recurrent tumor of the transitional epithelium in the prostatic part of the urethra

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Introduction: Papillary urothelial carcinoma is a type of bladder cancer. It usually starts in urothelial cells in the bladder lining. Urothelial cells also line the urethra, ureters, and kidneys. Low-grade papillary urothelial carcinomas have the lowest risk of progression to invasive disease of all the superficial tumor types, with 50–70% recurrence rate after transurethral resection of bladder tumor.

Case report: We present the case of a 69-year-old male with recurrent low-grade urothelial carcinoma of the bladder and the prostatic part of the urethra. Transurethral resection of bladder tumor was performed in 2020. One year after TURBT, ultrasonography showed a suspicious right-sided proliferation of the lateral wall measuring two centimeters. Urethrocystoscopy revealed three renal calculi with base fused to the bladder mucosa and two papillary tumors in the prostatic part of the urethra measuring three millimeters. Atypical cells of the transitional epithelium were found in cytological analysis of urine. Afterwards, a resection of papillary tumors was performed and ordered for pathohistological analysis. Biopsy samples revealed a tumor tissue with multiplied, well-differentiated atypical urothelial cells that occasionally covered villous structures. In June and July of 2022 patient received six doses of intravesical Bacillus Calmette-Guerin immunotherapy. A follow-up urethrocystoscopy showed no signs of recurrence.

Conclusion: Intravesical BCG immunotherapy is undoubtedly the most successful treatment for tumor of the transitional epithelium because of high recurrence rate. When BCG immunotherapy is applied as a liquid through a catheter, it supports eradication of the cancer cells by improvement of activity of the immune system cells.

Keywords: BCG, bladder cancer, immunotherapy

CR36

Clinical manifestations of syndromic childhood-onset SLE

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Introduction: Systemic Lupus Erythematosus (SLE) is a multisystemic autoimmune disease. About 15-20% of symptoms start during childhood, which is referred to as childhood-onset SLE (cSLE). cSLE has a more severe clinical picture than SLE and affects more organs.

Case report: We present the case of a now 21-year-old female who was diagnosed with cSLE at the age of 15 years. The patient was born from a normal pregnancy. Hypotonia and poor weight gain due to slow feeding habits were noticed soon after delivery. Further diagnostic procedures revealed an atrial septum defect and non-specific metabolic disorder. Due to the phenotypical characteristics of mucopolysaccharidosis and unproven congenital syndrome, psychomotor and somatic development were delayed. At the age of 15, she was referred to the hospital with fever, inappetence, and weight loss, swelling of the knees, numerous hematomas, and petechiae. Laboratory findings showed positive antinuclear antibodies (ANA), anti-dsDNA, anti-histone, antiphospholipid antibodies(aPL), anticardiolipin (aCL), and lupus anticoagulant (LAC) and C3 and C4 were low. Considering these symptoms and laboratory results the patient fulfilled the criteria for SLE. Later she developed grand mal seizures and renal disorder. Also, eye involvement occurred in form of amblyopia, cataract, and torsional nystagmus. She has been on various pharmacological therapies including immunomodulatory therapy, antihypertensives, antiepileptics, and bisphosphonate. Due to the progression of the disease, the patient is still actively monitored.

Conclusion: cSLE is a chronic progressive autoimmune disease whose prevalence is increasing. It only partially explains the complex phenotype of this patient.

Keywords: autoimmune diseases, lupus erythematosus, mucopolysaccharidosis

CR37

Fabry disease in a kidney transplant patient

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Introduction: Fabry disease (FD) is a rare X-linked lysosomal storage disorder caused by a deficiency of the enzyme α-galactosidase A. FD causes glycolipids, such as globotriaosylceramide (Gb3), to accumulate in the vascular endothelium of kidneys, central and peripheral nervous system, heart and skin, thereby triggering inflammation and fibrosis. FD is presented, depending on whether it is a man or a woman, with a wide spectrum of heterogeneously clinical signs and phenotypes.

Case report: We present a 63-year-old female patient with late-onset FD. Ever since her young adult age she had proteinuria and later on was diagnosed with diabetes mellitus type 2 and hypertension for both of which she was receiving treatment. In 2008. she was diagnosed with chronic glomerulonephritis (GN) due to which she started hemodialysis and received a kidney transplant two years later. Within a year after receiving kidney transplant, GN reoccurred and the patient was tested for numerous causes, including FD for which, she was positive. On brain magnetic resonance imaging (MRI), non-specific demyelination zones and scar-gliotic changes, were observed as part of vascular encephalopathy in the frontal and occipital regions of the brain, as well as signs of hypoperfusion of the brain. Based on these findings, the patient was candidate for enzyme-replacement therapy (agalsidase alfa – Replagal). At the time of diagnosis, she had no significant neurological symptoms.

Conclusion: Even though FD is a rare condition it should be considered in cases of unexplained GNs. This highlights the importance of multidisciplinary approach in order to diagnose the patient as early as possible and start the treatment. An earlier start of treatment can contribute to a better prognosis.

Keywords: agalsidase alfa, Fabry disease, kidney transplant, vascular encephalopathy

CR38

Granulomatosis with polyangiitis presenting with progressive hearing loss and facial paralysis

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Introduction: Granulomatosis with polyangiitis (GPA) is an autoimmune disease affecting small to medium-sized blood vessels, with a predilection for the respiratory system and kidneys, presenting with otologic symptoms only in a few cases documented to date.

Case report: A 62-year-old man presented to our otorhinolaryngology department with acute-onset left-sided facial paralysis, House-Brackmann grade I/VI. In the last month, the patient has been experiencing progressive conductive hearing loss in his left ear, with no prior otologic symptoms. Computed tomography imaging (CT) ruled out acute cerebrovascular disease and revealed fluid-filled mastoid cells with likely cholesteatoma of the left ear. His chest X-ray was normal. The patient was treated with intravenous methylprednisolone and ceftriaxone, and underwent a left-sided tympanomastoidectomy with facial nerve decompression, after his facial paralysis worsened to IV/VI over several days. The temporal bone was full of granulation tissue. Afterward, the patient reported progressive conductive hearing loss in his right ear. Hearing loss and facial paralysis persisted and he reported to our department complaining of fevers up to 38°C lasting a week. His chest CT scan revealed multiple focal nodules of variable shapes and sizes in addition to a paraaortic mass. The findings were suggestive of granulomatosis with polyangiitis. The patient was admitted to the hospital for further immunological treatment and recovered well in a week.

Conclusion: GPA should be considered as a potential cause of progressive facial nerve paralysis when otologic symptoms are abrupt. This case underlines the importance of an ENT (ear-nose-throat) specialist recognizing early symptoms of the disease and starting the appropriate therapy.

Keywords: Facial paralysis; granulomatosis with polyangiitis; hearing loss

CR39

Toxic Shock Syndrome caused by an escalating, previously localized soft tissue infection in a female patient: a case report

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Introduction: Toxic shock syndrome (TSS) is a serious complication of an invasive group A streptococcus (GAS) infection. After systemic spreading from the primary infection site, patients develop severe hypotension and end-organ damage caused by cytokine surge. We present a patient who developed septic shock and TSS as a result of an untreated paronychium of the left hand three days earlier.

Case report: A 32-year-old female patient presents to the emergency department (ED) with fever, altered consciousness, inappetence, visible edema, cyanotic discoloration and hemorrhagic blisters of the left hand and forearm. Clinical examination revealed hypotension, tachycardia and tachypnea. Laboratory results showed elevated inflammatory markers and hypoglycemia. The patient was admitted to the intensive care unit (ICU) following development of septic shock. Surgical debridement and fasciotomy of the left forearm were performed by a vascular surgeon. Broad spectrum ceftriaxone therapy was initiated, which escalated to meropenem, clindamycin and flucloxacillin to ensure aerobic and anaerobic coverage. Norepinephrine and vasopressin were required to maintain hemodynamic stability. The patient was intubated and placed on mechanical ventilatory support. Bacterial culture results indicated an undergoing Streptococcus pyogenes infection. Flucloxacillin was replaced with crystalline - penicillin and the patient was transferred to the central ICU for further treatment.

Conclusion: TSS is a rapidly progressing condition with severe end - organ damage potential. Hypotension caused by this syndrome is often difficult to treat. Prompt recognition of the condition along with surgical debridement, timely broad spectrum antibiotic therapy initiation and hemodynamic support is the mainstay of TSS treatment.

Keywords: fasciotomy, hypotension, sepsis, toxic shock

CR40

Transition from pediatric nephrology care to a nephrologist for adults from a patient's perspective

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Introduction: The importance of the transition from pediatric to adult healthcare for chronic conditions is increasingly recognized, with no universal consensus on preparation or organization. Transition is often associated with interruption in follow-up, insufficient support, and patient, family, or physician dissatisfaction. We describe a patient's perspective during this transition in the Croatian system.

Case report: We interviewed a 20-year-old male patient with a history of chronic nephritis. He was 14 when diagnosed with the disease and started chronic dialysis at the age of 18. He received a kidney transplant recently (aged 20). Aged 17, he began attending check-ups independently and transitioned to adult care aging 18. He was not informed about the transition until after his referral. Preparations were only made upon arrival at the adult ward, where possible differences were explained. He described the transition as very abrupt and not well-planned. He felt frustrated due to the frequent change of physicians during check-ups, who failed to provide a clear explanation of diagnosis and treatment. Repeated recounting of his medical history was inefficient and time-consuming. He felt better during pediatric care, where his overall well-being was the focal point, and attended to by a single doctor who appeared fully dedicated. In contrast, adult care focused solely on individual medical problems and involved multiple specialists who seemed to lack adequate attention.

Conclusion: The patient's testimony confirmed a clear need for a structured and organized transition that emphasizes coordination from pediatric to adult care in Croatia to ensure the continuity of healthcare and improvement of clinical outcomes.

Keywords: end-stage renal disease, nephrology, pediatrics, renal replacement therapy, transition to adult care

CR41

Clival osteomyelitis complicating retropharyngeal abscess in a child

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Introduction: Clival osteomyelitis is an uncommon and possibly life-threatening condition in children and adults. The disease is usually challenging to recognize due to the lack of specific symptoms.

Case report: We present a 6-year-old boy admitted with left-side torticollis, headache, and a 2-day duration of fever. Laboratory results showed increased CRP (95,2 mg/L) and negative group A streptococcus throat swab. Due to positive meningeal signs at admission, a lumbar puncture was performed and ruled out the inflammatory process of the central nervous system. Computed tomography (CT) scan of the head and neck showed an osteolytic lesion in the clivus and fluid collection at the prevertebral retropharyngeal space (40x17x40mm) indicating retropharyngeal abscess that led to clival osteomyelitis. Adenoidectomy and surgical drainage of the spot were performed. Microbiological analysis of intraoperative samples revealed the growth of Streptococcus intermedius and Staphylococcus aureus. Infection was initially treated with clindamycin and cefazolin and then with penicillin G and amoxicillin (according to antibiotic susceptibility), respectively, for 6 weeks. The patient was discharged with routine clinical, laboratory, and magnetic resonance imaging (MRI) results.

Conclusion: Even though base skull osteomyelitis is rare, this unusual condition must be considered in the differential diagnosis of patients with a subtle and nonspecific clinical presentation with persistent headaches, as well as a complication of retropharyngeal abscesses. Multidisciplinary management is necessary to ensure rapid improvement and complete healing. Early diagnosis and proper treatment could reduce morbidity and mortality risk.

Keywords: Osteomyelitis; Retropharyngeal abscess; Torticollis

CR42

FreeStyle Libre Flash Glucose Monitoring System in pregnant women with latent autoimmune diabetes mellitus of adults

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Introduction: Freestyle Libre Flash Glucose Monitoring System (FGM) enables patients with diabetes mellitus (DM) better plasma glucose (PG) management by reporting daily glucose patterns, glucose trends and time spent in glucose level target (TIR). Since DM poses a great risk to the pregnant mother and developing fetus, patients are recommended to monitor frequently to help maintain good PG control and reduce the risk of adverse outcomes.

Case report: We present a case of a 37-year-old woman who was diagnosed with latent autoimmune diabetes mellitus of adults (LADA) in 2014. The patient was treated with intensified insulin therapy (degludec, fast aspart) and metformin. Frequent hypoglycemic events and a mild neuropathy entitled her to FGM system in 2019. In preconception time FGM has shown well regulated DM with average glucose (AG) 6.3 mmol/L, estimated glycated hemoglobin (eHbA1c) 5.6%, TIR 88%, time below range (TBR) 6%, time above range (TAR) 6%. With pregnancy in plan, patients therapy changed to insulin analogues detemir and aspart. In 2020, during pregnancy, the settings of FGM system changed to more strict values - TIR 3.9-7.8 mmol/L and TIR > 70%. During pregnancy the patient kept adequately glucoregulated with TIR 95%, TBR 1%, TAR 4%, AG 6.7 mmol/L and eHbA1c 5.8%. In November 2020 the patient gave birth to a healthy newborn without any complications.

Conclusion: As preconception time and pregnancy require strict glucoregulation, FGM system helps to manage DM more effectively in order to reduce possible risks to mother and child.

Keywords: Diabetes mellitus, LADA, Pregnancy

CR43

Cytokine hemoperfusion in acute myopericarditis

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Introduction: Cytokine overproduction plays an important role in the severity of inflammatory diseases. Continuous renal replacement therapies (CRRT) can remove inflammatory cytokines from the circulation using convection and adsorption (blood purification). One type of CRRT is continuous venovenous hemodiafiltration (CVVHDF) with hemadsorption which is an extracorporeal method of blood purification that combines the principles of hemodialysis (convection method) and hemadsorption using special dialysis filters. The aim of this case report is to show the results of using cytokine hemoperfusion (CH) in a critical patient who presented with acute myopericarditis (AMP) and cardiogenic shock (CS).

Case report: We present a case of 43-year-old patient who was hospitalized at the Department of cardiovascular diseases due to suspicion of acute coronary syndrome. An urgent coronary angiography was performed to rule out obstructive coronary disease, showing 55% stenosis of the left anterior descending artery. Laboratory parameters and echocardiography indicated the development of AMP. Despite this, there was a worsening of patient's clinical condition in terms of CS with acute kidney injury. Patient was transferred to the intensive care unit, received vasoactive support, but due to haemodynamic instability, oliguria and laboratory signs of SIRS, CH was performed using CVVHDF with cytokine adsorbent membrane. This resulted in recovery of renal function, decreased inflammatory parameters, and improvement of left ventricle (LV) systolic function. In the further course of hospitalization, the patient was hemodynamically stable, cardiac compensated, and clinically better. Last echocardiography control showed full recovery of the LV systolic function, with minimal pericardial effusion.

Conclusion: The use of CH can result in clinical improvement and hemodynamic stabilization of patients with AMP and CS.

Keywords: cytokine hemoperfusion, acute myopericarditis, cardiogenic shock

CR44

Progression of Raynaud's Syndrome to Auto-amputation of Distal Phalanges of Hands

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Introduction: Raynaud's phenomenon (RP) is a clinical syndrome manifested by pain, tingling, and finger discoloration due to arterial vasospasm in fingers. It appears as the initial stage of Systemic Sclerosis (SS) development or as an isolated syndrome.

Case report: A 50-year-old female patient presents with finger discoloration (blue, white) and tingling of both hands precipitated by exposure to cold. The diagnosis of RP is established by diagnostic processing. After a month, she reports burning, sleep-depriving pain in her hands which is reduced by analgesic therapy, and discoloration progression to dark color. On Color Doppler Ultrasound, changes in vessel walls are described as tortuous, corresponding to vasculitis. Capillaroscopy objectifies flow reduction in peripheral arteries, avascular necrosis in both 2nd fingers, and hemosiderin deposits in nail beds of the 3rd-4th finger of the right hand and the 2nd-4th finger of the left hand, corresponding to early SS pattern. Therefore enoxaparin treatment and Oxygen Barotherapy (HBOT) (2.2 bar/60 minutes) are started. At the follow-up in one month, the patient reports pain reduction. Clinical examination reveals dry gangrene and necrotic demarcation in distal phalanges of the 3rd-4th finger of the right hand and the left 2nd finger, without necrosis progression. Digital plethysmography shows flattened flow curves on all fingers, and blood tests eliminate SS suspicion. After the surgical removal of demarcated phalanges, the postoperative course was regular, and the patient recovered.

Conclusion: It is important not to underestimate the seriousness of this relatively common syndrome, and to emphasize early diagnosis and treatment to reduce complications.

Keywords: amputation; avascular necrosis; distal phalanges; Raynaud phenomenon

CR45

Fabry Disease: A Diagnostic Challenge with a Treatable Outcome

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Introduction: Fabry disease is a progressive, X-linked inherited disorder with multisystem involvement, including cardiac, renal, neurologic, and dermatologic manifestations. It is a lysosomal storage disorder that results in a deficiency in the enzyme alpha-galactosidase A, which leads to the accumulation of lysoGb3. Due to random X-chromosome inactivation, female heterozygotes have a mosaic genotype, and based on the number of affected cells, they may present as asymptomatic or exhibit a severe phenotype commonly seen in affected males.

Case report: A 59-year-old woman was referred to a nephrologist due to hypertension, albuminuria (170 mg/24 h), and elevated creatinine levels without any complaints. Albuminuria and renal insufficiency were attributed to uncontrolled hypertension. During routine checkups, her albuminuria increased to 497 mg/24 h. A kidney biopsy was performed, which raised suspicion of Fabry disease. At that time, the patient also recalled experiencing acroparesthesias in her hands and feet. The patients' sample was sent for genetic analysis, which verified two heterozygous mutations of the GAL gene with decreased enzyme activity and increased levels of lysoGb3, confirming Fabry disease. As part of the diagnostic workup, echocardiography was performed, which revealed heart affection as well. Enzyme replacement therapy (ERT) was initiated, and the patient was started on aglasidase alfa 11.5 mg intravenously every two weeks. The patient was regularly checked up, and a significant improvement was observed in the course of the 4-year treatment, with her proteinuria decreasing within normal ranges.

Conclusion: Fabry disease is a rare cause of nephropathy, and if left untreated, it could lead to end-stage renal disease. Thanks to current therapeutic options (ERT and migalastat) the disease can be effectively treated.

Keywords: Chronic Kidney Disease; Enzyme Replacement Therapy; Fabry Disease; Proteinuria

CR46

Liver Transplantation Using an Asymptomatic SARS-CoV-2-positive Donor

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Introduction: During the SARS-CoV-2 pandemic, the number of liver transplants (LT) decreased significantly worldwide due to stricter guidelines pertaining to the restriction of organ procurement from COVID-19-infected donors. The intention was to reduce the potential spread of infection among the staff and organ recipients in the early stages of the pandemic. Following such strict guidelines may have unintentionally led to higher mortality in end-stage liver disease patients on the waitlist.

Case report: A 59-year-old male was scheduled for an elective LT. The patient was diagnosed with decompensated ethyl cirrhosis and a 21x3 mm hepatocellular carcinoma (HCC) located between the VII and VIII hepatic segments. The patient had to undergo destaging by one cycle of transcatheter arterial chemoembolization (TACE) so as to stay within the Milan criteria for LT. A matching liver in optimal condition was then procured from a recently deceased donor, who posthumously tested positive for SARS-Cov-2 despite not having previously shown any symptoms of infection. The patient was informed of the circumstances of the operation and gave his fully informed consent. Surgeons performed the LT without complications.

Conclusion: In the past year in Croatia, the number of LT has halved due to circumstances mentioned at the beginning of the report. The case above is the first such operation performed in Croatia. The absence of confirmed COVID-19 infections and complications in the recipient is congruent with the conclusions of the newest reviews and studies, which suggest updating the current solid-organ-transplant guidelines concerning mild COVID-19-positive donors.

Keywords: COVID-19; Donor Selection; Liver transplantation; SARS-CoV-2; Tissue donors;

CR47

Idiopathic ketotic hypoglycemia in a 7-year-old patient

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Introduction: Idiopathic ketotic hypoglycemia is a state of reduced plasma glucose concentration with elevated blood or urine ketones. Moreover, it is considered the most frequent cause of hypoglycemia in children.

Case report: We present a 7-year-old girl with idiopathic ketotic hypoglycemia. In September 2017, the patient was hospitalized due to suspected hypoglycemia measured during an acute respiratory infection.The patient was treated multidisciplinary. Since then, the patient has been referred to a psychologist, neurologist, cardiologist, endocrinologist, and gastroenterologist. Despite extensive treatment, the cause was not established. Also, genetic processing did not find a cause that would indicate why is the patient having episodes of hypoglycemia, therefore, a diagnosis of idiopathic ketotic hypoglycemia was made.It was advised that the patient has three meals and two snacks, but she is often not cooperative with meals and refuses certain foods. The biggest problem is occasional hypoglycemia, which most often occurs in the morning. The mother keeps a diary of glycemia. The blood sugar is the lowest in the morning and blood sugar ranges from 1.2 to 6.4 mmol/L. When she has hypoglycemia, she sometimes is disoriented and has tremors and fumbles.

Conclusion: Despite the diagnosis, the patient is developing properly somatically, cognitively, and socially. It is necessary to continue the diet consisting of three main meals and two snacks. The last meal must be rich in complex carbohydrates and should be taken before bed. In cases of increased effort and infections, it is necessary to add maltodextrin to the diet.

Keywords: Croatia, Hypoglycemia, School-age population

CR48

The nonspecific onset of Multiple sclerosis in a 16-year-old patient

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Introduction: The number of cases of multiple sclerosis (MS) in the pediatric population is small but it has been increasing over the past two decades. Only around 3 to 10% of patients with MS are present under 16 years.

Case report: We present a 16-year-old girl who was admitted to the neuropediatric department because of hypoesthesia on the back of both legs, from the gluteal region to the heels and a weakened sensation in the perineum area. Electromyography findings suggest a severe chronic well-compensated radicular lesion of L4-5 and S1 bilaterally. Magnetic resonance imaging (MRI) of the LS spine was performed, which showed minimum protrusion at levels L4-5 and S1 and no definite signs of compressive radiculoneuropathy at any level. Surgery wasn't indicated, but conservative treatment by a physiatrist. She underwent physical therapy, but unfortunately, reported worsening symptomatology. A repeated MRI was done and only showed mild regressive protrusion of the intervertebral disk at levels L5- S1. Considering the still present complaints, the neurosurgeon ordered a brain MRI. MRI showed demyelinating lesions, which suggested MS. Also, the patient had infectious mononucleosis, which is a significant risk factor for the development of MS. Regarding the active demyelination zones, the patient is indicated for pulse corticosteroid therapy. Furthermore, the diagnosis of relapse remitting MS was established and she started immunomodulatory therapy.

Conclusion: Although this case pointed all along to lumbar radiculopathy, it shows us that we need to consider diagnoses that are not as typical as MS in children.

Keywords: Infectious mononucleosis, Intervertebral Disc Displacement, Multiple sclerosis

CR49

Chronic Autoimmune Thyroiditis as a Rare Cause of Pericardial Effusion: A Case Report

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Introduction: Pericardial effusion is an accumulation of fluid in the pericardial space. The most common causes include infection, malignancy, autoimmune and metabolic disorders, trauma, and heart failure. Patients may experience symptoms such as dyspnea, chest pain, heart palpitations, lightheadedness, and syncope. The most serious complication is cardiac tamponade, which can be life-threatening.

Case report: A 70-year-old female was admitted to the Emergency Department complaining of lower leg edema and exertional dyspnea that had persisted for a year. The patient's medical history included Parkinson's disease, partial epilepsy, hyperlipidemia, and normocytic anemia. The electrocardiogram showed sinus bradycardia with low voltage and repolarisation disturbances. The chest X-ray revealed rounded lateral heart contours and a globular heart configuration, raising suspicions of pericardial effusion. Transthoracic echocardiography revealed a circular pericardial effusion measuring 15 mm with visible fibrin deposits around the right ventricle and signs of a partial collapse of the right atrium and ventricle. The ejection fraction was 70%. The patient was hemodynamically stable. Acute pericarditis was suspected as the primary cause, and treatment was started with nonsteroidal anti-inflammatory drugs. However, thyroid function testing revealed high levels of thyroid-stimulating hormone (35.605 mIU/L) and low levels of triiodothyronine (2.1 pmol/L) and tetraiodothyronine (1.1 pmol/L). Neck ultrasonography, positive thyroid peroxidase (TPO), and thyroglobulin (Tg) antibodies confirmed the diagnosis of chronic autoimmune thyroiditis. The therapy was switched to levothyroxine.

Conclusion: Although a rare cause, hypothyroidism shouldn't be overlooked and must be tested for in patients with pericardial disease, as it can easily be treated with thyroid replacement therapy.

Keywords: Hashimoto Disease; Hypothyroidism; Pericardial Effusion; Thyroiditis

CR50

Bilateral Acute Subdural Hematoma following Head Trauma in a Child - Case Report

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Introduction: An acute subdural hematoma (aSDH) is a rapid accumulation of blood in a subdural space most often resulting from serious head injuries in elderly patients. aSDH is relatively uncommon in children, with reported incidence of about 20 cases per 100000 children. Herein, we describe the effective neurosurgical treatment of a pediatric patient with bilateral aSDH following head trauma.

Case report: A 9-year-old boy was urgently admitted to the hospital due to severe head trauma from falling down the stairs. Upon arrival at the hospital, the boy was unconscious, unresponsive, and had a Glasgow Coma Scale (GCS) score of 8. An emergency Computed Tomography (CT) scan of the head revealed a compressive right-sided aSDH and non-compressive left-sided aSDH, fractured right parietal bone, and edema in both cerebral hemispheres. The neurosurgeon performed an urgent decompressive craniectomy and external ventricular drainage with intracranial pressure monitoring, together with antiedema therapy. After the procedure, the patient was hospitalized at the pediatric intensive care unit. A 1-day postoperative CT scan showed satisfactory decompression and ventricular drainage placement. The patient was lightly sedated for the next three days, after which he started the recovery and rehabilitation without any complications. On the 12th day after a follow-up CT scan which showed satisfactory postoperative results, he was discharged home fully conscious and in good verbal contact with GCS score of 15.

Conclusion: The survival rate of aSDH depends on many factors such as the severity of the bleed, the patient's age and health, and access to prompt medical care. aSDH is relatively uncommon in children with varying outcomes, which mostly depend on urgent CT scan and the time until adequate treatment.

Keywords: acute subdural hematoma, decompressive craniectomy, external ventricular drainage, head trauma

CR51

Monkeypox cases at Clinical Medical Center of Osijek

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Introduction: Since more cases appeared in European countries in May 2022, the importance of monkeypox clinical recognition becomes more important. Preliminary research indicates that these cases belong to West African variant of the virus associated with milder disease, lower mortality and limited transmission.

Case report: In this case report we are presenting four patients with monkeypox who were treated in our hospital. In the epidemiological anamnesis three of them mentioned risky sexual relations that preceded the appearance of symptoms, while one patient was infected by her partner. Except general prodromal signs of infection, patients had regional lymphadenopathy and significant skin rashes with centripetal expansion at the genital region, face, scalp and extremities which indicates sexual transmission of the virus. Skin changes over time included enanthema, maculopapular lesions, vesicles and crusts at the end that fell off by themselves. The woman also had aphthous changes at the buccal mucosa and vaginal discharge. The diagnosis was established by Real-time polymerase chain reaction (RT-PCR) analysis of skin lesions and urine. Three out of four patients in our case report were young men, which is typical for this epidemic in Europe, while one of them is a member of man who have sex with men (MSM) population who has been on antiretroviral therapy for last two years. Patients were treated supportively under the epidemiologist supervision.

Conclusion: We would like to emphasize the importance of differential diagnosis of monkeypox in patients who are presented with similar clinical manifestations and belong to the risk population. Prophylactically vaccination should also be considered in patients at risk of infection.

Keywords: monkeypox, risk factors, skin rashes, vaccination.

CR52

Extremely rare extraintestinal manifestation of Crohn's disease in the neck region

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Introduction: Crohn's disease, also called regional enteritis or ileitis, is a lifelong form of inflammatory bowel disease (IBD). Extraintestinal manifestations of inflammatory bowel disease (IBD) can involve almost every organ system. In this case report we presented a very rare case of a patient with an extraintestinal manifestation of Crohn's disease in the head and neck region.

Case report: A 29-year-old female patient, diagnosed with Crohn's disease at the age of 3, clinically presented with a lump on the left side of the neck (region II/III). Initially, Crohn's disease was treated using aminosalicylates, corticosteroids, antibiotics, and biological therapy such as adalimumab. The presentation of Crohn's disease in exacerbation phases sometimes involves having 50 watery stools a day. Extraintestinal manifestations of Crohn's disease such as enteropathic seronegative spondyloarthritis, clubbed fingers, slowed growth and anemia were also present. A recently acquired neck lump was evaluated. Diagnosis included an ultrasound examination showing a 3cm x 1,7cm large formation with calcifications. Multislice computed tomography (MSCT) showed possible hemangioma and fine needle aspiration resulted in a possible lateral cervical cyst. The biopsy showed granulomatous inflammation as an extraintestinal manifestation of Crohn's disease. Combined therapy was introduced (methylprednisolone, metronidazole, ciprofloxacin) and the lump successfully decreased.

Conclusion: Extraintestinal manifestations of Crohn's disease can involve nearly any organ system, such as musculoskeletal, hepatobiliary, renal, and others, in this particular case as a rare head and neck region manifestation in which a multidisciplinary approach is often needed. The clinical appearance of distant Crohn's disease can vary and a biopsy is required to confirm the diagnosis.

Keywords: Crohn disease, enteritis, inflammatory bowel diseases

CR53

Endobronchial ultrasound-guided transbronchial fine needle aspiration (EBUS-TBNA): Trapped lung syndrome in a patient with non-Hodgkin lymphoma

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Introduction: Trapped lung or non-expandable lung (NEL) describes a condition of the lung characterized by the inability of the lung to expand and fill the thoracic cavity. It most often occurs as a secondary process due to malignant pleural effusion, endobronchial obstruction, and chronic pleural inflammation with consequential dyspnoea. In this case report, we presented a patient with trapped lung syndrome as a result of malignant pleural effusion.

Case report: A 65-year-old male patient was diagnosed with B-cellular non-Hodgkin lymphoma at the age of 63. The initial medical evaluation suggested significant mediastinal lymphadenopathy. Further multislice computed tomography (MSCT) investigations showed signs of pleural effusion and fibrothorax with an ipsilateral mediastinal shift. Accordingly, an endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) was performed. The results of cytological analysis of 4 samples obtained from pre-tracheal and subcarinal lymph nodes confirmed mediastinal non-Hodgkin lymphoma. Moreover, the results of the spirometry examination showed severely damaged respiratory function with FEV1 (forced expiratory volume in one second) of 41% and FVC (forced vital capacity) of 36%. Surgical exploration of the intrathoracic findings was considered too perilous to perform. As a result of the underlying condition, the patient passed away at the age of 67.

Conclusion: Lymphomas, including both Hodgkin's disease and non-Hodgkin's lymphoma, are known to have a significant role in developing malignant pleural effusions that can lead to trapped lung syndrome if recognized late. The only available therapy for non-expandable lungs is a complete surgical decortication by removing fibrous tissue that has abnormally formed around the lung, but the risks and benefits of this procedure are to be evaluated individually.

Keywords: endoscopic ultrasound-guided fine needle aspiration; lymphoma, non-Hodgkin; mediastinal neoplasms; pleural effusion, malignant

CR54

Innovative pooled genome analysis - example of a child with torsion dystonia type 1

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Introduction: Torsion dystonia type 1 (DYT1) is an early-onset isolated dystonia. Dystonic involuntary muscle contractions causing posturing or irregular tremor of a leg or arm are the most common findings. DYT1 is inherited in an autosomal dominant manner with reduced penetrance. Offspring of an affected individual or of an asymptomatic individual known to have a TOR1A pathogenic variant have a 50% chance of inheriting the variant and, if inherited, a 30% chance of developing clinical findings. It typically presents in childhood or adolescence.

Case report: We present a 13-year-old boy with unclarified tics, involuntary head movements, occasional dysarthria, unusual night breathing pattern and positive family history. His symptoms started when he was 10 as spontaneous head jerks that got stronger after playing video games. Then he suffered from viral meningitis which led to significant exacerbation of his clinical picture. It was noticed that exacerbations are more expressed in more concrete physical activity. His paternal grandfather had similar difficulties.

Conclusion: By clinically considering the genotype, the monoallelic mutation in the TOR1A gene in the context of the patient's phenotype and positive family history, we conclude that this probably pathogenic variant is the cause of torsion dystonia type 1. Treatment includes oral anticholinergics, baclofen and benzodiazepines. Botulinum toxin injections for treatment of focal symptoms can be used. If oral medications and botulinum toxin injections do not provide sufficient control of symptoms, surgery enabling deep-brain stimulation (DBS) of the globus pallidus internus (GPi) should be considered.

Keywords: dystonia, mutation, tic, tremor

CR55

Vertical transmission of SARS-CoV-2 from infected pregnant mothers to neonates in General County Hospital Vinkovci

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Introduction: Vertical transmission of an infectious pathogen occurs from the mother to the fetus during antepartum and intrapartum periods, or to the neonate during postpartum period via the placenta, body fluid contact during childbirth or through breastfeeding. The main binding receptor for SARS-CoV-2 is the angiotensin-converting enzyme 2 (ACE2) receptor whose expression is seen in numerous tissues that directly communicate on with a developing pregnancy: syncytiotrophoblast, cytotrophoblast, endothelium, vascular smooth muscle, ovaries, uterus and vagina.

Case report: Three vaginaly born term neonates (one female, two males) diagnosed with SARS-CoV-2 infection due to vertical transmission were presented. Diagnostic method was real-time quantitative reverse transcriptase PCR (rRT-PCR). Mothers were diagnosed with SARS-CoV-2 infection before labor induction and neonates between 24 and 36 hours of life. Only one mother did not have any symptoms, but she had a high viral load detected by rRT-PCR. Her neonate was the only patient who developed clinical symptoms: mild upper respiratory infection with serous secretion and fever of up to 38.2°C. All patients were breathing spontaneously and had good prognosis after a mean duration of hospitalization of 7 days.

Conclusion: Newborns born to mothers who are positive for SARS-CoV-2 are at risk for vertical transmission and should be monitored closely. Though medical management mainly includes only supportive care, parents should be encouraged to get vaccinated in order to protect their newborn from the possibility of developing acute respiratory failure.

Keywords: SARS-CoV-2, perinatal infection, vertical transmission

CR56

Case report: When is the right time for deep brain stimulation in segmental dystonia?

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Introduction: Dystonias cause involuntary contractions of the musculature resulting in repetitive movements or abnormal postures, with or without tremor. We are presenting a patient with post-traumatic segmental dystonia. After numerous treatment attempts, the patient has had deep brain stimulation (DBS) device implanted.

Case report: Patient, a 71-year-old male, an academic painter, presented with severe segmental dystonia of the right elbow and hand with contractures and dystonic tremor. He complained of pain and edema of the hand. The etiology of his condition was postoperative median nerve damage. Botulinum toxin therapy, clonazepam, and pregabalin administration were all unsuccessful so DBS was suggested. MSCT was made on the day of the operation to determine stereotaxic points. An electrode was placed in the internal globus pallidus. Its position was confirmed in another MSCT and the pulse generator was placed subcutaneously under his collarbone. There weren't any complications. Ten days after, the generator was turned on. With the changes in the setting, the patient's speech improved and we observed slight differences in the affected muscles. The patient has a follow-up scheduled in 2-3 months.

Conclusion: Pain relief and muscle relaxation should improve the patient's quality of life but full hand function is questionable. Unfortunately, results of the DBS treatment for secondary dystonia, not only vary significantly between different types of dystonia but also, the evidence is very limited because of the small number of patients with these conditions in the literature. More research in this field is needed.

Keywords: deep brain stimulation, dystonia, functional neurosurgery

CR57

Pulmonary embolism of a forty-one-year-old female patient: a case report

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Introduction: A pulmonary embolism is a blockage of an artery in the lung, typically caused by a blood clot that develops in a blood vessel in the body, most commonly the deep veins of the legs. This case report shows a female patient's diagnostic workup and treatment of a pulmonary embolism.

Case report: A forty-one-year-old woman was admitted to the hospital due to pain under the right rib cage spreading to the right side of the back, which worsened when she inhaled. She reported constant pain spreading from her scapula to her right kidney. She had been admitted to the emergency room a month prior due to the same symptoms. At that time nephrolithiasis was suspected, and she was given a combination of amoxicillin and clavulanic acid. The pain went away and did not return until recently. After that, an abdomen ultrasound was performed and it showed no pathological indications. Then, the X-ray of the thoracic organs and a CT angiography of the pulmonary arteries were performed and revealed hypodense thrombotic content in the right pulmonary artery, more pronounced in the central and lower lobe, as well as thrombotic content in the branches of the left lower lobe, indicating a pulmonary embolism on both sides. She was treated with low-molecular-weight heparin and other supportive therapy during her hospitalization, and her condition improved.

Conclusion: It is important to learn and recognize a pulmonary embolism's symptoms to be able to react promptly and prevent further complications.

Keywords: Pulmonary artery, pulmonary embolism, thrombosis

CR58

Multisystem Inflammatory Syndrome in Children (MIS-C) associated with COVID-19

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Introduction: MIS-C is increasingly common in children after recovery from COVID -19 and is associated with significant complications. The most common clinical manifestations include fever, gastrointestinal symptoms, skin rash and cardiac dysfunction. In more severe cases, cardiac decompensation or systemic organ failure occurs due to the inflammation..

Case report: An 11-year-old boy was admitted to the pulmonology department, three weeks after his second bout with COVID-19. He was admitted because of increased temperature, 39.5°C, four days ago, enlarged lymph nodes on the left side of the neck, and a maculopapular rash on the medial sides of the upper legs. Other symptoms include raspberry tongue, injected conjunctivae, and hyperemic pharynx. Initially, the symptoms suggested Kawasaki disease. Laboratory findings show an increase in inflammatory parameters with leukocytosis and an increase in urea, troponin, and IL-6. Cardiac ultrasound shows a dilated left ventricle and markedly weakened systolic function of the left ventricle, the coronary arteries are not affected and a diagnosis of myocarditis was made. Therapy consisted of MG 2g/kg, corticosteroids, dobutamine with furosemide, acetylsalicylic acid and antimicrobial therapy. After treatment, the systolic function of the 1st ventricle recovered completely and the patient made a full recovery.

Conclusion: Since MIS-C has become very common in the pediatric population, and is often confused with Kawasaki disease, it is necessary to draw attention to therapeutic principles in the direction of symptom development (fever, lymphadenopathy, skin changes, rash, mucosal changes) and involvement of organic systems.

Keywords: COVID-19, children, myocarditis, a multisystem inflammatory syndrome in children (MIS-C)

CR59

Fetal seizures and intracranial hemorrhage

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Introduction: Hemophilia A is a coagulopathy, that arises due to an X-linked recessive genetic deficiency of Factor VIII. It is characterized due to spontaneous and longer bleeding. Factor VIII is produced by endothelial cells in the liver and takes part in secondary hemostasis.

Case report: A mature male neonate was noted with fetal seizures 24 hours postnatal, more detailed tonic-clonic twitching of the left arm and both lower extremities, and a drop in oxygen saturation to 74% and livid lips. He was immediately transferred to the neonatal intensive care unit. Further examination using Amplitude-integrated electroencephalogram (EEG), Ultrasound and Magnetic resonance imaging (MRI) revealed a right intracranial hemorrhage. Initially, obtaining a family medical history was challenging due to language barriers due to the patient's migrant background. However, later it was revealed that the patient's maternal uncle suffered from Hemophilia A. Extended coagulation laboratory tests showed an elevated partial thromboplastin time (PTT) value of 139.1 sec (reference value: 31.1-36.6 sec) and a low factor VIII value: <1%. These results confirmed the diagnosis of Hemophilia A. The patient received therapy with Factor VIII substitution. At the time of the case report, the treating physicians are looking for long-term therapy due to formed inhibitory antibodies against Factor VIII.

Conclusion: This report highlights the importance of effective communication between healthcare providers and patients or family members, particularly in cases where there may be language barriers or a migrant background. Furthermore, it illustrates the importance of a thorough medical history and understanding basic inheritance rules in the diagnostic process.

Keywords: Hemophilia A, intracranial hemorrhage, seizures

CR60

Overgrowth syndromes: case of megalencephaly-capillary malformation-polymicrogyria syndrome (MCAP)

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Introduction: Megalencephaly-capillary malformation-polymicrogyria syndrome (MCAP) is a rare multiple-malformation syndrome characterized by primary megalencephaly, focal or generalized somatic overgrowth and asymmetry, cutaneous capillary malformations, distal limb anomalies, and neurological abnormalities. It is one of several overgrowth syndromes caused by mutations in the PIK3CA gene, together known as the PIK3CA-related overgrowth spectrum (PROS).

Case report: The patient is a girl born at 35 weeks of gestation with hydrocephalus, postaxial hexadactyly on the hands and feet, syndactyly of the 2nd and 3rd finger on feet, and nevi flammei. At the age of 3 years, she was referred to the geneticist due to macrocephaly, high forehead, frontal bossing, and multiple cutaneous hemangiomas. She had muscular hypotonia with speech and motor delay. Because of PROS suspicion, appropriate sample was obtained by buccal swab. Genetic testing detected mosaicism for PIK3CA mutation. As supportive treatment, a hexadactyly surgery and ventriculoperitoneal shunt implantation were performed. Today's, new treatment - PIK3-inhibitor alpelisib has been approved specifically for the reduction of overgrowth, vascular lesions, and other functional complications. It is still unknown whether this drug will have any treatment effects for the neurologic manifestations of PROS.

Conclusion: PROS includes a group of genetic disorders that leads to overgrowth of various body parts due to mutations in the PIK3CA gene. The clinical presentation of PROS is variable with respect to tissue types and affected organs, so a sample for genetic testing should be taken from the affected area. Treatment typically involves a multi-disciplinary approach, including newly introduced targeted treatment options.

Keywords: Capillary hemangioma, hydrocephalus, megalencephaly, PIK3CA protein, human

CR61

Myelin oligodendrocyte glycoprotein antibody disease

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Introduction: Myelin oligodendrocyte glycoprotein (MOG) antibody disease is an autoimmune disorder characterized by antibodies against MOG, leading to paralysis or vision loss. It involves demyelination in the optic nerve or spinal cord. The symptomatology is the same as multiple sclerosis, acute disseminated encephalomyelitis (ADEM), and neuromyelitis optica spectrum disorder, and the only specific diagnostics is a serological antibody test. Our goal is to emphasize this new, rare condition that affects only 1.6 per million people.

Case report: We present a 9 - year old male patient with developmental difficulties. The patient was admitted to the ER with severe headache, fever, behavioral changes, ophthalmoplegia, tonic seizures, and unresponsiveness. Laboratory results showed increased inflammatory parameters. Lumbar puncture revealed leukocytosis and high protein and glucose levels. The immediate therapy included anticonvulsives, analgesics, oxygen therapy, glucose saline, ceftriaxone, and aciclovir. Computed tomography was normal, but magnetic resonance imaging showed signal hyperintensity, which reflects damage to the white matter and subcortical nuclei, along with thickening of the cortex and possible venous congestion. These findings are typical ADEM manifestations. When microbiological tests came back negative, methylprednisone was included in therapy. Finally, MOG antibody test results came and were positive. The previous intravenous therapy was switched to peroral doses of prednisone. The patient fully recovered after 2 weeks and was discharged home.

Conclusion: MOG antibody disease is a quite new autoimmune disorder with non-specific symptoms. However, it is important to differentiate it from other similar diseases since it is completely curable. Most patients will recover after the first treatment and have no relapses.

Keywords: ADEM, demyelination, MOG antibody

CR62

Behavioral approach to the treatment of a child with separation anxiety disorder: a case report

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Introduction: Separation anxiety disorder is the fear of being separated from the main person the child is attached to, which is inappropriate for the child's stage of development. This case report shows a successfully treated child with separation anxiety disorder.

Case report: A mother brought her seven-year-old son to the pediatric clinic, stating that the child resisted attending school. After three days in a row, the child did not want to stay at school without his mother. After the mother left him, the child would scream and throw himself on the floor. The physician sent the child for diagnostic treatment by a psychiatrist, where a diagnosis of separation anxiety disorder was established. The mother noticed that a similar situation occurred when she would leave the child in the care of the child's grandparents, but the child would calm down after a while when his attention was occupied. The child was treated by behavioral therapy, where frequent separations were systematically carried out, and the mother was counseled about determination during separation from the child. After ten days of behavioral therapy, the child successfully began to separate from his parents after going to school, and there was no need for anxiolytic treatment. Since children with this diagnosis are prone to relapses, parents were advised about behavioral therapy during the holidays.

Conclusion: Separation anxiety disorder is a severe problem for a child's mental health. If the problem is approached correctly, it can cure the patient completely without needing anxiolytic drugs.

Keywords: Anxiolytic, mental health, separation anxiety disorder

CR63

Renal artery stenosis that caused hypertension in a 15-year-old boy: a case report

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Introduction: Secondary hypertension is a type of hypertension for which the cause is known. This case report presents an adolescent with hypertension caused by renal artery stenosis.

Case report: A 15-year-old male teenager came to the family medicine office complaining of a headache in the back of his head that had been going on for a few weeks. He also stated that he was getting tired quickly and could not perform the activities he used to do without problems. The patient's blood pressure was measured at 165/90 mmHg. Blood laboratory findings were satisfactory. The ECG (electrocardiogram) was normal, without ST-segment elevation and signs of cardiac hypertrophy or cardiac axis deviation. Thyroid hormones were within reference values. No congenital heart anomalies were not detected on the echocardiography. During abdominal ultrasound, a color-doppler examination of the renal arteries revealed reduced hemodynamics through the left renal artery. Thus, the diagnosis of secondary hypertension with renal artery stenosis was established. The patient was given antihypertensive therapy with a combination of ACE (angiotensin-converting enzyme) inhibitors and calcium channel blockers. After two months, a procedure using the Seldinger technique was scheduled, after which normal blood flow through the left renal artery was established, and the patient's blood pressure values were back to normal. The patient no longer needed to use antihypertensive therapy.

Conclusion: If a young person is diagnosed with hypertension, it is crucial to look for the cause because, in that case, secondary hypertension can be cured.

Keywords: Blood flow, renal artery stenosis, secondary hypertension

CR64

Bernard-Soulier syndrome

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Introduction: Thrombocytopenia in children is defined as a platelet count below $150x10^9$/L. We can differentiate between mild (<140 $x10^9$/L), moderate (100 $x10^9$/L), and severe (51 to 21 $x10^9$/L) thrombocytopenia according to platelet count. The most common causes of thrombocytopenia can be impaired platelet production, increased platelet destruction (e.g., immune-mediated, drug-induced, thrombotic microangiopathy or mechanical), or platelet sequestration and trapping. Bernard-Soulier syndrome (BSS) is a rare autosomal recessive coagulation disorder characterized by macrothrombocytopenia and excessive or prolonged bleeding following minor injury.

Case report: We present a child with BSS first diagnosed at an early age. Upon diagnosis, he had multiple hematomas on the extremities with spontaneous anterior epistaxis several times a month without nose trauma or respiratory tract infection. Epistaxis was treated with direct compression and daily 4x500 mg tranexamic acid tablets. Anterior nasal packing is also an option in cases where the aforementioned treatment doesn't stop the bleeding. Due to his frequent epistaxis, he developed normocytic iron deficiency anemia (hemoglobin 111 g/L, ferritin 7.7 µg/L). As his platelet count remained 50 $x10^9$/L throughout the follow-up period, he received multiple platelet transfusion treatments (irradiated and leukocyte-poor platelet concentrates) and subsequently developed antithrombotic alloantibodies. Due to eye trauma at the age of 14 years, he developed hyphema and secondary glaucoma.

Conclusion: In children with BSS, it is necessary to avoid trauma because they are prone to severe bleeding. All healthcare providers should be included in preventive care for these patients and their families.

Keywords: Bernard-Soulier syndrome, epistaxis, macrothrombocytopenia, thrombocytopenia

CR65

Myhre syndrome – rare conective tissue disorder characterised by progressive fibrosis: a case report

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Introduction: Myhre syndrome is a multisystem connective tissue disorder characterized by dysmorphia, bone dysplasia, cardiovascular, respiratory, and gastrointestinal complications. Progressive fibrosis occurs spontaneously, following trauma or invasive medical procedures. The disease is caused by gain-of-function mutations of SMAD4 gene encoding protein important for transcription and tumor suppression.

Case report: The female patient is a second child of healthy and unrelated parents with unremarkable family history. Pregnancy was complicated by intrauterine growth retardation. Delivery was on term, birth weight was 2350 g (Z -1,95), with birth length of 43 cm (Z -3,22). Dysmorphic features were noticed at birth (broad nasal bridge, narrow palpebral fissures, midface hypoplasia) and a heart defect was diagnosed (dysmorphic and stenotic aortic valve). Later she was diagnosed with mild intellectual disability, short stature, hearing and vision impairment and therefore was followed multidisciplinary. Diagnostic workup, including molecular cariogram, didn't reveal the diagnosis. Around the age of nine years, she developed pericardial effusion, prompting further diagnostics. Whole exome sequencing detected a known pathogenic mutation in the SMAD4 gene c.1499T>C (p.Ile500Thr) and the diagnosis of Myhre syndrome was established.

Conclusion: Patients with Myhre syndrome may have life-threatening fibrosis. It is essential to limit tissue trauma and use a conservative approach whenever possible. Special care is needed when planning intubation due to possible consecutive tracheal stenosis, as well as other invasive or surgical procedures. Phenotypic features are rather characteristic but genetic testing is needed to confirm the diagnosis and to provide optimal patient management.

Keywords: aortic stenosis, growth disorder, Myhre syndrome

CR66

Chronic duodenal obstruction after duodenal atresia repair: a case report

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Introduction: Congenital duodenal atresia commonly presents with bilious vomiting and a distended upper abdomen in the early postpartum period. Diamond shaped duodeno-duodenostomy is the standard surgical procedure with excellent results and long-term outcomes.

Case report: A preterm male neonate with Down syndrome was treated for duodenal atresia 24 hours after birth. On laparotomy, long atresia of the 2nd and 3rd segments of the duodenum was verified. After maximal Kocher maneuver, standard duodeno-duodenal anastomosis was not possible due to the long gap between the healthy proximal and distal segments of the duodenum. Instead, duodeno-jejunal anastomosis was formed. Early postoperative period was uneventful. Due to gastroesophageal reflux, oral intake was maintained through a nasogastric tube. Nevertheless, weight gain was inadequate, and recurrent bilious vomiting was noted six months after the surgery. Ten months after the surgery, the upper GI series showed slow emptying of the duodenum without clear obstruction, and revisional surgery was indicated. A very dilated, locally adhered blind loop of the jejunum was found, which caused the intermittent obstruction. The duodeno-jejunal anastomosis was patent and normal in diameter. The blind loop of the jejunum was separated from the liver, pancreas, and inferior vena cava and resected. Postoperatively, the nasogastric tube was removed, and the patient is tolerating oral feeding and has gained significant weight.

Conclusion: Duodeno-duodenostomy is preferred over duodeno-jejunostomy for duodenal obstruction treatment. Blind jejunal loop after duodeno-jejunostomy elongates and dilates during growth and may lead to blind loop syndrome or intermittent obstruction.

Keywords: blind loop syndrome, Down syndrome, duodenal atresia

CR67

Ovarian hyperstimulation syndrome in a patient with functional gonadotropinoma

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Introduction: Functional gonadotropinomas are infrequent findings in pituitary adenomas and secrete biologically active gonadotropins, usually follicle-stimulating hormone (FSH). They are primarily macroadenomas. Clinically, they typically present with menstrual irregularity and ovarian hyperstimulation syndrome, testicular enlargement in males, or isosexual precocious puberty in children.

Case report: The patient is a 32-year-old female referred to the gynecologist because of irregular menstrual cycles ranging from 30 to 45 days, low abdominal pain, and bloating. Gynecological ultrasound found enlarged ovaries containing multiple large cysts. Left ovary measured 6.8x5.2 cm and the right ovary 8.2x4.6 cm, resembling the ovaries found in ovarian hyperstimulation syndrome. An endocrine evaluation revealed a high blood concentration of estrogen (5502 pmol/L), unsuppressed FSH (4,7 U/L), and suppressed luteinizing hormone (LH; 0,1 U/L). A pituitary MRI (magnetic resonance imaging) revealed a macroadenoma measuring 12 mm in diameter on the right side of the pituitary gland. The patient underwent surgical resection of the tumor. Tumor histology was consistent with pituitary adenoma, and immunohistochemistry showed positive staining for FSH. After one year of follow-up, the patient has regular menstrual cycles and normal pituitary function.

Conclusion: Functional gonadotropinomas are one of the rarest adenomas of the pituitary gland. Given their rarity, they can be easily overlooked in patients with irregular menstrual cycles, leading to late diagnosis and tumor growth, thus making the surgery more evasive.

Keywords: functional gonadotropinoma, gonadotropins, irregular, ovarian hyperstimulation syndrome

CR68

Van Wyk-Grumbach syndrome – a rare manifestation of a common disease

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Introduction: Van Wyk-Grumbach syndrome (VWGS) is a rare manifestation of protracted hypothyroidism, characterized by multicystic ovaries, delayed skeletal growth, and isosexual precocious puberty. The pathophysiology includes a complicated interaction between different hypothalamic-pituitary hormonal axes.

Case report: The patient is an eight-year-old girl directed to a pediatric endocrinologist because of hypothyroidism and obesity (height -3.6 SD, weight + 1.8 SD). She was born from an uncomplicated pregnancy with normal psychomotor development. In the past year and a half, she started to gain weight, her growth slowed down, and she was more tired and unable to withstand physical effort. Two months prior, she had menarche. Clinical examination revealed typical symptoms of hypothyroidism: dry skin, thin hair, myxedema, and bradycardia (58 bpm). Breasts were Tanner 3, with no axillary or pubic hair. The bloodwork showed extremely high thyroid stimulating hormone (TSH; >100 mIJ/L, ref. 0.5-5.2), low free thyroxine (fT_4; 2.6 nmol/L, ref. 1-19.5), positive anti-TPO (thyroid peroxidase), high estradiol (72 pmol/L, ref. < 32 pmol/L) and prolactin (45 ug/L, ref. < 20 ug/L) with normal gonadotropins. Bone age was delayed – 2 years. Pelvic ultrasound showed an enlarged uterus with thickened endometrium (5 mm) and bilaterally enlarged multicystic ovaries. Such presentation led to a diagnosis of Van Wyk-Grumbach syndrome. Levothyroxine was introduced, which led to stopping peripheral precocious puberty and "catch-up" growth. The following year, her height increased by 15 cm, and her weight was reduced by 10 kg.

Conclusion: It is essential to keep VWGS in mind for a young patient with hypothyroidism and precocious puberty.

Keywords: hypothyroidism, isosexual peripheral precocious puberty, levothyroxine, Van Wyk-Grumbach Syndrome

CR69

Metastatic prostate cancer in a patient with clinical presentation of bilateral nephrolithiasis: a case report

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Introduction: Metastatic prostate cancer is an advanced-stage prostate cancer that has spread to distant sites or to the lymph nodes. Prostate cancer is one of the most common types of cancer. Typical symptoms are dysuria, blood in the urine or semen and painful ejaculation.

Case report: We present the case of a 62-year-old male who was admitted for examination due to dull periumbilical pain and significant weight loss. X-ray imaging revealed a left-sided perivesical ureterolith. Ultrasonography showed retroperitoneal lymphadenopathy with bilateral obstructive uropathy, second degree dilatation of the duct system of the right kidney and third degree of the left kidney, without determining signs of nephrolithiasis. Due to hydronephrosis, he was redirected for the placement of a double-J stent, which was performed successfully on the right side. Computed tomography and magnetic resonance imaging of the abdomen and pelvis revealed pathologically enlarged lymph nodes and sclerotic changes in the pelvic bones. Magnetic resonance imaging showed enlarged left lobe of the prostate and obliterated border between the central and peripheral zones with disruption of the posterolateral external fibromuscular sheath and part of the stroma. A prostate biopsy was performed, and biopsy sample came back positive for cancer. Blood test results showed significantly elevated (477ng/mL) prostate-specific antigen. The patient was scheduled for bilateral subcapsular orchidectomy.

Conclusion: We presented a case report of metastatic prostate cancer with atypical clinical presentation of bilateral nephrolithiasis. Comprehensive diagnostics is crucial to determine valid diagnosis and to start appropriate treatment.

Keywords: metastasis, nephrolithiasis, prostate cancer

CR70

Ingestion of a button battery with the development of complications in the form of a gastric ulcer and its therapy

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Introduction: Button batteries are found in many household electronics and toys. In pediatric population, button battery ingestions have been on the rise in the past 10 years and it remains a health hazard to children. The higher risk is if the battery is in children <6 years of age and >20mm in diameter impacted in oesophagus and it should be removed instantly.

Case report: We report the case of a two-year-old child hospitalized because of ingestion of two button batteries and vomiting two times after it. On admission, native abdominal X-ray has shown two round shadows of metal intensity 12mm in diameter. Urgent upper endoscopy was performed - batteries were not found in upper part of gastrointestinal tract but it revealed area of eroded mucosa covered with fibrin deposits along the greater curvature of stomach, 2 cm x 2 cm, with no signs of active bleeding. Treatment with nil per os regimen, parenteral nutrition, pantoprazole and antibiotic started, together with sucralfate via nasogastric tube. Child was in a good condition and three days after eliminated batteries in the stool. Control upper endoscopy showed healing of stomach mucosa. Enteral intake started and it was dismissed home with advised treatment: pantoprazole oral suspension and a diet. In further visits, there were no gastrointestinal signs of illness.

Conclusion: Ergent removal is necessary in case of disk batteries in the esophagus, as well in the stomach if it is symptomatic patient, child under 5 years or in case of concomitant magnets or multiple disc batteries ingestion.

Keywords: button battery; endoscopy; gastric ulcer

CR71

Chronic aortic dissection of the Stanford A type with aneurysm of the ascending aorta

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Introduction: Aortic dissection is a very serious, urgent condition that often ends in death. The aortic endothelium is torn and blood rushes through the tear, causing the inner and middle layers to split.

Case report: 56-year-old male patient, with no history of cardiovascular diseases, in last few months has noticed fatigue during physical exertion with lack of air. The patient is admitted to cardiology via emergency admission due to cardiac decompensation. Ultrasound of the heart was performed, showing dilatation of ascending aorta with diameter of 76 mm, dilatation of the left atrium and ventricle which are consequently overloaded with ejection fraction of 27%. Intraluminal partition was present at 20 mm from the root of the aorta, therefore, dissection was suspected. CT angiography showed dissection of the Stanford A type and fusiform aneurysm of the ascending aorta with a diameter of 78 mm and a length of 9 cm. Dunbar syndrome of the origin of the truncus celiacus due to truncus celiacus compression by the medial arcuate ligament was also seen. The patient was urgently transferred to the cardiac surgery department and prepared for high EuroSCORE surgery. The ascending aorta was reconstructed with a supracoronary graft and the aortic valve was replaced with a mechanical prosthesis.

Conclusion: Patients who have survived an undiagnosed and untreated acute dissection face a great risk of ascending aortic aneurysms on the basis of the dissection and threatening rupture and heart failure due to often residual aortic insufficiency.

Keywords: aneurysm; left ventricular hypertrophy; aortic dissection

CR72

Unclassified mixed tumor of germ cells and gonadal stroma: a case report

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Introduction: Neoplasms of the testis comprise a morphologically and clinically diverse group of tumors. They can be divided into germ cell tumors and non-germ cell tumors. Germ cell tumors are relatively rare (1-2%). The most common presentation of testicular tumor is a painless testicular mass. Sex cord/stromal tumors are rare, comprising approximately 4% of testicular neoplasms. Ninety percent of these tumors are benign, and 10% are malignant.

Case report: We present a 60-year old male who initially presented in 2007. with asymptomatic scrotal swelling that lasted for 2 months. On palpation, the right testicle was hard and minimally painful. Ultrasound of the scrotum showed the right testicle with a centrally positioned hypoechoic heterogeneous formation with a diameter of 25.7 mm. LDH, AFP and BHCG values were normal. Radical orchidectomy of the right testicle was performed. The material was sent for pathohistological diagnosis to the Department of Pathology in Osijek, and also in Zagreb for consultation. Pathohistological diagnosis revealed that it was a unclassified mixed tumor of germ cells and gonadal stroma. No additional treatment was needed. The patient is now in a good general condition, without recurrence of the disease, and is regularly monitored by a urologist at the hospital in Vukovar.

Conclusion: Radical inguinal orchiectomy is the initial treatment of choice. Due to the rarity of this type of tumor and lack of data in scientific literature, additional research is needed to determine the best treatment methods.

Keywords: germ cell and embryonal, neoplasms, orchiectomy, sex cord-gonadal stromal tumors

CR73

Treatment challenges in adult atopic dermatitis – case report

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Introduction: Atopic dermatitis (AD) is a chronic inflammatory skin disease characterized by redness, crusting, irritation and itching. It is common for AD to appear in childhood, but it can occur at any age. Treatment involves the use of topical immunomodulating and oral immunosuppressive agents. The aim of this report is to present the challenges in the treatment of adult AD.

Case report: A 33-year-old male was hospitalized at the Department of Dermatology and Venereology in 2019 due to a severe form of AD, presenting with facial erythema, infiltrated patches on the extremities and trunk and marked itching of the skin. Treatment with topical corticosteroids and oral antihistamines was started with minimal therapeutic response. From 2019 to 2022, he received intramuscular and oral corticosteroids on several occasions with a satisfactory but short-term clinical response. From April 2022 to September 2022, he received oral cyclosporine with a partial clinical response. In November 2022, the patient was started on upadacitinib (Rinvox), a JAK (Janus kinase) inhibitor recently approved in Croatia for the treatment of severe AD. A complete resolution of symptoms with no major side effects was achieved after only three months of treatment.

Conclusion: Treatment for AD must be tailored to each patient. Only through in-depth research into the etiology and novel treatments can we achieve complete regression of symptoms and an improvement in the quality of life of patients with severe forms of AD.

Keywords: Atopic Dermatitis, Eczema, Treatment

CR74

Persistent rightsided atelectasis in an infant

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Introduction: Atelectasis is a condition in which the lungs completely or partially collapse due to various reasons. Treatment depends on the cause and severity and extent of the collapse, with bronchoscopy being a rescue modality, reserved for special cases in the pediatric population. We present an infant with persistent atelectasis which successfully underwent bronchoscopic treatment, after failure of conservative management.

Case report: A six-month-old female infant was admitted to our Pediatric Intensive Care Unit (ICU) due to bronchiolitis induced imminent respiratory failure. The patient was previously hospitalized due to an wheezing episode which did not indicate the possibility of pulmonary atelectasis. At the time of admission, the patient presented with diffuse wheezing during lung auscultation. The patient was treated with standard ICU treatment which included oxygen support, extensive bronchodilatators and corticosteroid therapy. Lung imaging showed rightsided apical atelectasis. Despite the provided treatment, the patient's condition did not improve, and on serial imaging studies, atelectasis persisted. To exclude airway foreign body, bronchoscopy was performed. No obstruction was observed, and a segmental lavage followed by insufflation was performed, which resulted in immediate improvement of the radiological findings. The patient was shortly after transferred to the pulmonology department, after which she was discharged home in good condition.

Conclusion: Bronchoscopic treatment of atelectasis in children is an uncommon procedure. However, due to its high diagnostic and therapeutic yield, it remains one of the rescue methods in the treatment of persistent atelectasis.

Keywords: pulmonary atelectasis, pediatric flexible bronchoscopy, pedicatric neonatal intensive care unit

CR75

Endocrine dysfunction in pembrolizumab treated oncology patient

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Introduction: If not promptly recognized, endocrine dysfunction can be life-threatening. Pembrolizumab reduces the risk of cancer spreading, growing, or getting worse. It is a humanized monoclonal anti-PD1 (Programmed Cell Death Protein 1) antibody that has been extensively investigated in numerous malignancies. The blockade of PD1 is an important immunotherapeutic strategy for cancers. But it can cause a lot of side effects including endocrine dysfunction.

Case report: We present a 64–year-old female patient who was diagnosed with sigmoid colon adenocarcinoma with metastases two and half years ago. She is treated with FOLFIRI (folinic acid, fluorouracil and irinotecan) regimen and pembrolizumab. Two weeks after the introduction of pembrolizumab she was admitted to the emergency room because of vomiting, nausea, polydipsia and polyuria. Laboratory findings revealed hyperglycemia, her blood glucose level (BGL) was 56.8 mmol/L, and diabetic ketoacidosis (pH 7.125, bicarbonates 7.4 mmol/L, pCO_2 3.12 kPa, anion gap 20.7 mmol/L). She was transferred to the Department of Endocrinology because of newly diagnosed diabetes mellitus and diabetic ketoacidosis (DKA) and treated with insulin. She was also diagnosed there with suppressed TSH (thyroid stimulating hormone), but still normal values of thyroid hormones. She continued her oncology treatment.

Conclusion: During treatment with pembrolizumab, side effects can occur and should be treated as early as possible. Endocrine dysfunction, if untreated, can lead to a lethal condition. This case report shows how this medicine may reduce the risk of cancer spreading, but can also cause various dysfunctions.

Keywords: diabetes mellitus, diabetic ketoacidosis, pembrolizumab

CR76

Esophageal atresia as life-treathening condition – case report

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Introduction: Esophageal atresia (EA) refers to a congenitally interrupted oesophagus. It can be associated with a proximal or distal tracheoesophageal fistula (TEF). The aims are to emphasize the importance of prompt diagnostic evaluation and management of EA and TEF.

Case report: A term male newborn presented with drooling and excessive frothy oral secretions. Antenatally the mother was diagnosed with polyhidramnios and gestational diabetes. After birth the newborn was breasted once, few hours later, examination showed stable vital signs, but on auscultation the presence of crackling sounds was found. An orogastric tube was unable to be passed into the stomach, so the diagnosis of EA was suspected. Furthermore, the presence of gastrointestinal aeration in the next X-ray suggested the existence of a TEF. The following day he was operated successfully, where the congenital defect was corrected with end-to-end anastomosis of proximal and distal talus and ligation of the fistula. Enteral feeding was started and gradually increased till the total daily intake was achieved. On the 9-th post-operative day, there was sudden worsening of the general condition of the newborn, due to respiratory distress in the form of tahypnoea, cyanosis and inaudible breathing noise over the right lung, so an urgent thoracentesis was indicated. The newborn was discharged home on day 25 of life.

Conclusion: This case demonstrates the importance of suspicion of EA with or without TEF, faced with a combination of persistent frothy oral secretions in a newborn. It is crucial to take medical assessment and include surgical treatment.

Keywords: esophageal atresia, pneumotorax, tracheoesophageal fistula

CR77

Spinal epidural abscess in a patient with sepsis

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Introduction: A spinal epidural abscess (SEA) is an infection that occurs in the epidural space, usually spanning 2 to 4 spinal segments. It is a rare condition with non-specific symptoms that may cause serious complications such as meningitis, irreversible neurological dysfunction, or death. Early diagnosis is important, and the most effective diagnostic method is magnetic resonance imaging (MRI).

Case report: A 58-year-old woman was admitted to the department of infectology due to increased inflammation parameters. The patient had a fever, lower back pain, dysuria, and myalgia. Her skin was pale, and her jugular veins collapsed without neck lymphadenopathy or positive meningeal signs. The MRI of the brain and spine was requested due to suspected meningoencephalitis. A widening of the anterior epidural space with liquid content was seen as hyperintensity in T2 and hypointensity in T1-weighted images from the foramen magnum to the L3/L4 region. The spinal cord was compressed and edematous. Additional MRI with contrast and diffusion-weighted imaging showed restricted diffusion by liquid content and peripheral enhancement. The finding was typical of an epidural abscess. The patient underwent conservative antibiotic treatment, and an MRI was repeated two weeks later. MRI showed regression of the abscess and morphological improvement. The spinal cord remained deformed in the C3 region, with an area of T2-hyperintensity, a sign of residual edema.

Conclusion: In patients with sepsis and back pain, SEA should be considered. It is a life-threatening condition, so prompt diagnosis with an MRI is crucial. Characteristic findings are T2-hyperintensitive content in epidural space, which restricts diffusion.

Keywords: epidural abscess, magnetic resonance imaging, sepsis, spinal cord

CR78

Pulmonary manifestations of rheumatoid arthritis: a case report

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Introduction: Rheumatoid arthritis (RA) is an autoimmune, systemic, inflammatory disease of unknown etiology that primarily affects synovial joints. The arthritis is typically symmetrical and usually leads, if uncontrolled, to the destruction of joints due to erosion of cartilage and bone, causing joint deformities. Systemic manifestations can be characterized by ocular, cardiac, or pulmonary involvement as well as peripheral neuropathy and vasculitis.

Case report: A 55-year-old woman was hospitalized for dyspnea, shortness of breath, and joint pain in the proximal interphalangeal joints, shoulders, right hip, and both knees. Ultrasound examination of the joints showed synovial hypertrophy, synovitis, and effusion as part of active RA. The rheumatoid factor was negative, and the anti-CCP test was in a normal range. CRP levels were raised, and the patient was diagnosed with seronegative rheumatoid arthritis. An echocardiogram was made, and no abnormalities were seen. A CT of the lungs was requested, where subpleural thickening with fibronodules up to 10 mm and the bilateral ground-glass opacity were visible. Also, there were striped pleural thickenings with infrahilar diffraction. The diffusion capacity for carbon monoxide (DLCO) was reduced. Glucocorticoid therapy was initiated with partial clinical improvement. Due to pulmonary manifestations of RA, interleukin-6 antagonist treatment is planned.

Conclusion: Rarely, rheumatoid arthritis can cause severe pulmonary manifestations. This possibility should always be considered in patients with arthritis followed by shortness of breath or dyspnea. Basic drug selection in the treatment of active rheumatoid arthritis is a challenge in everyday clinical practice.

Keywords: Immunotherapy, Lung Disease, Rheumatoid Arthritis

CR79

Two cases of complicated pneumonia in children caused by beta haemolytic Streptococcus type A

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Introduction: Beta hemolytic streptococci type A are known to cause scarlet fever and purulent angina. They are a rare cause of domicile pneumonia.

Case report: Two children 7 and 2 years old, were consecutively admitted to the Clinical Hospital Centre Rijeka, in a period of one month, with general symptoms of an acute infective disease together with general weakness, tachypnea and persistent cough. One patient also complained of pain in the lower abdomen and pelvis. After radiological, serological and microbiological examinations, a diagnosis of complicated pneumonia caused by beta-haemolytic Streptococcus type A (so-called pyogenic streptococcus) was established. Empiric antibiotic therapy was started with ceftriaxone. In both cases, a pleural effusion developed and pleural drainage was performed. Moreover, intrapleural administration of fibrinolytic was required in the second case. In both cases, the recovery phase lasted a very long time.

Conclusion: Group A streptococci rarely cause pneumonia but present a clinical challenge due to their strong virulence and difficult culture. The interesting aspect of this report is that two presented cases, of otherwise very rare pneumonia caused by pyogenic streptococcus, appeared consecutively in a short period of time and resulted in severe complicated pneumonia.

Keywords: Beta hemolytic streptococcus type A; complicated pneumonia; pediatrics; pulmonology; Streptococcus pyogenes

CR80

MODY or Gestational diabetes: The diabetes paradox

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Introduction: Maturity onset diabetes of the young (MODY) is a hereditary form of diabetes mellitus caused by autosomal dominant single gene mutations, which lead to ineffective insulin production and transport. The importance of MODY lies in the absence of typical symptoms and repeated misdiagnosis, which can lead to inappropriate therapy choices.

Case report: The patient with a history of elevated blood glucose levels since pediatric age was admitted to the Department of Endocrinology in Osijek several times during her regular checkups due to pregnancy. Firstly, a working diagnosis was type 2 diabetes mellitus due to the patient's age and clinical presentation, thus during three years, she was treated with basal-supported oral therapy (BOT). At the beginning of her pregnancy, former diabetic therapy was replaced with intensive insulin therapy. Throughout the pregnancy, she was well regulated with estimated hemoglobin A1c (eHBa1c) 5,3 % and time in range (TIR) 82-92 %. After the pregnancy, considering the anamnestic data MODY type 2 was suspected and since it does not require pharmacotherapy, it was discontinued.

Conclusion: It is estimated that around 1-2 % of women with MODY are misdiagnosed as gestational diabetes mellitus. Since gestational diabetes remains a significant risk factor for various pregnancy complications, it is important to rule it out first and then search for other possible causes of hyperglycemia occurring in pregnancy. Even though MODY rarely has any complications, it can cause difficulties in pregnancy, so starting proper insulin treatment can mitigate these risks and ensure safe parturition.

Keywords: diabetes mellitus, gestational diabetes, hyperglycemia, MODY

CR81

Multiple myeloma presented as tumorous mass: a case report

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Introduction: Multiple myeloma is a hematologic malignancy of plasma cells and usually affects a population above 60-years of age. It usually causes symptoms of tiredness, weight loss, fractures, kidney failure and recurring infections. Here, we presented unusually primary manifestation of multiple myeloma.

Case report: The patient is a 70-year-old man who presented with symptoms of tiredness, weakness, pain in the bones all over the body and a weight loss of 16 kg in the last 3 months. On the X-ray image, it was described tumorous mass on the left lung. Initial laboratory findings revealed anemia, hemoglobin was 87 g/l and c-reactive protein of 9,4 mmol/l. The CT-scan was performed the day after admission. The patient had bilateral pleural effusion, enlarged mediastinal lymph nodes, the largest was 7 mm. Lytic lesions were described in all of the bone structures of the thorax and thoracic vertebrae. In the left hemithorax was described mixed lytic/sclerotic mass with dimensions of 58x85 mm. Biopsy of the mass was performed and histologic analysis described plasma cell infiltration. The findings were suspected of multiple myeloma. Biochemical analysis of plasma proteins found 57,9 g/l IgA and 150 mg/l of kappa light chains with kappa/lambda ratio of 17,92. We performed sternal punction and ordered immunophenotyping and myelogram. In the sample was found 29% of atypical plasmic cells positive to CD138, CD38, CD56 and kappa light chains. It confirmed the diagnosis of multiple myeloma.

Conclusion: In this case report we wanted to show how hematologic malignances cause unspecific symptoms and atypical presentation. In order to set the right diagnosis of hematologic diseases, it is necessary to perform extensive laboratory analysis of the blood and histologic examination of bone marrow. In all cases where the patient has anemia and unspecific symptoms like in this case we should not forget to think about hematologic or oncologic disorders, especially in the older population of patients.

Keywords: Immunoglobulin light chains, Multyple myeloma, Plasma cells

CR82

Corticobasal degeneration and Alzheimer's disease overlap syndrome: a case report

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Introduction: Alzheimer's disease and corticobasal degeneration are separate clinical entities in a group of tauopathies, neurodegenerative diseases characterized by abnormal Tau protein deposition. While Alzheimer's disease is marked by cognitive deterioration and problems with memory, hallmarks of corticobasal degeneration are unilateral parkinsonism, dysarthria, postural instability, and myoclonus. Sometimes, these entities can overlap and cause neurodegenerative diseases difficult to diagnose.

Case report: We present a 53-year-old male patient who was admitted to the Department of Neurology UHC Osijek with extrapyramidal symptoms, involuntary muscle contraction, and dementia. In medical history, the patient had consumed alcohol frequently and was treated by a psychiatrist because of the psychogenic syndrome. A brain magnetic resonance imaging scan showed signs of corticobasal degeneration. In blood analysis, the patient had sideropenic anemia due to decreased levels of iron and hyperlipidemia. An electroencephalogram showed nonspecific changes. Neuropsychological testing detected cognitive impairment that can be attributed to dementia. Cerebrospinal fluid showed normal numbers of cells and normoproteinemia. Neurotrophic viruses and bacteria were not detected in cerebrospinal fluid. Additional analysis showed increased levels of Tau and pTau and low levels of beta-amyloid, which points to Alzheimer's disease. In the end, the patient was diagnosed with progressive neurodegenerative disease attributed to corticobasal degeneration – Alzheimer's disease overlap. Antiparkinsonic drugs, benzodiazepines, and physical therapy at home were introduced as his therapy.

Conclusion: Tauopathies present a wide range of symptoms that challenge clinicians to set appropriate diagnoses and therapy. It is important to think about possible overlap syndromes, especially when symptoms cannot be attributed to one disease alone.

Keywords: Alzhemier disease; corticobasal degeneration; overlap; Tau

CR83

The influence of unbalanced chromosomal distribution on the child's phenotype: a case report

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Introduction: Chromosomal abnormalities are a serious problem that can lead to phenotypic abnormalities or premature death. This case report shows its impact on a child's development.

Case report: In a pregnant woman in the 13th week of pregnancy, the hygroma of the fetal neck was verified by ultrasound. An amniocentesis was performed. In situ hybridization of amniotic fluid cell culture showed in 68% of metaphases a female karyotype with derived chromosome 13 due to translocation between chromosomes 6p and 13q. It was an unbalanced female fetal karyotype with partial trisomy 6pter-p21.32 and partial monosomy 13q34-qter in a mosaic distribution. The parents received genetic counseling and ultimately decided to keep the child. The child was born by cesarean section in the 41st week. After birth, phenotypic dysmorphisms such as inspiratory plagiocephalic head configuration, blepharophimosis, hypotelorism, mouth opening round and 1 cm wide, ankylosis of the temporomandibular joint and aglossia were noticeable. At birth, the child was respiratory and circulatory sufficient. On the fourth day of life, the child became respiratory unstable, frequent apneas developed, and stridor worsened. Nasotracheal intubation was attempted, and the airway was secured with a tube. The lungs expanded successfully, but an adequate saturation response did not occur. Bradycardia with asystole soon developed, and there was no response to resuscitation measures. Death due to cardiorespiratory failure occurred on the fifth day of the child's life.

Conclusion: Quality genetic counseling is vital so that parents know how to face the consequences that chromosomal pathology can bring.

Keywords: chromosomal translocation, phenotype, structural aberrations

CR84

Osteosarcoma in a 15-year-old boy which presented with weight loss: a case report

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Introduction: Osteosarcoma is a primary malignant bone tumor that mostly affects children aged 10 to 25. In most cases, osteosarcoma presents itself with pain and swelling, but this case report is about a young patient with osteosarcoma whose only symptom was weight loss.

Case report: A 15-year-old patient accompanied by his mother visited the family medicine office and stated that he lost weight unexpectedly in the last nine months, his appetite was preserved but he complained about fatigue. The physician eliminated type 1 diabetes by measuring blood sugar, and other laboratory findings concluded that it was not the case of an infectious disease. Due to suspicion of oncological disease, the physician sent him for an X-ray and bone scintigraphy. Scintigraphy showed an increased accumulation of radiopharmaceuticals in the area of the distal right femur, and a diagnosis of osteosarcoma was made. The tumor did not metastasize to the lymph nodes so the patient was sent to surgery, where an emergency amputation of the proximal right thigh was performed. Recovery was long but successful and the patient learned to walk with a new osseointegration prosthesis. The patient goes for a regular check-ups once a year to prevent disease relapse.

Conclusion: This case report has shown the importance of reaction to any suspicion of a malignant disease. If the physician did not react on time and begin treatment, the patient's chances of survival or recovery would decrease drastically.

Keywords: Amputation, bone cancer, osteosarcoma.

CR85

Acute exacerbation of chronic respiratory insufficiency in a pediatric patient with Prader-Willi syndrome: A case report

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Introduction: We report a case of a nine-year-old girl with Prader-Willi syndrome who is being monitored for recurrent bronchial obstructions, sleep apnea, and essential hypertension. Due to an acute exacerbation of chronic respiratory insufficiency, she was transferred to the intensive care unit.

Case report: An X-ray showed bilateral decreased transparency of the lung parenchyma with pleural effusion. Also, laboratory inflammatory parameters were elevated. For that reason, ceftriaxone was empirically prescribed together with: salbutamol, ipratropium bromide, aminophylline, fluconazole, and methylprednisolone. Inhalation oxygen therapy through a mask was necessary. Laboratory blood analysis showed reduced oxygenation and hypercapnia. Follow-up X-ray findings did not show visible signs of infiltrates in the parenchyma. An electroencephalogram showed a drop in saturation by up to 73% during sleep. The patient was put on a non-invasive ventilation device, which improved oxygenation and reduced hypercapnia. Considering the positive effect, it is recommended for home therapy. Even though an X-ray examination of the lungs showed improvement, azithromycin was administered orally because of CRP (C-reactive protein) elevation. The treatment of essential hypertension was continued with furosemide and enalapril. The lipid profile indicated hypertriglyceridemia; therefore reduction diet with 1000 kcal/day was recommended.

Conclusion: Prader-Willi syndrome is a rare genetic disorder in which, among other things, growth and feeding disorders occur. As a result of hypotonia and obesity, hypoventilation syndrome and sleep apnea can develop, conditions that worsen during acute infections. Therefore, those patients are at higher risk for acute respiratory insufficiency.

Keywords: apnea; obesity; Prader-Willi syndrome; respiratory insufficiency

CR86

Traumatic ureteropelvic avulsion - case report

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Introduction: Uretral trauma (UT) is relatively rare because the ureters are mobile, small in size and protected by adjacent musculoskeletal structures. The most common cause of UT is iatrogenic, with about 71% as a result of ureterenoscopy. However, penetrating and blunt trauma can sometimes result in UT, where upper ureter is most commonly affected at the ureteropelvic junction (UPJ).

Case report: 66-year-old female patient was admitted at the Emergeny Department of Osijek University Hospital after she fell out from a tractor-trailer and it ran her over. She was pale and hypotensive, with hematoma on her right hip. Computed tomography scans showed fractures of the lower branch of the pubic bone and L2-L3 transverse processes, with extravasation of contrast at the right UPJ. Cystography and cystoscopy showed no signs of bladder trauma. Right retrograde ureteropyelography showed normal ureter opacification up to L4 vertebra, where extravasation of contrast occured, confirming the diagnosis of ureter avulsion at the UPJ. After consulting with abdominal and neurosurgeons and since no other internal organs were affected, urologists performed an emergency open surgery with lumbotomy incision. After tissue debridement on proximal and distal sites of the torn ureter, a tension-free termino-terminal uretero-pelviceal anastomosis was performed over a protective JJ stent and a drain was placed retroperitoneally. Postoperative ultrasound showed no dilatation of the collecting system nor retroperitoneal collection and serum creatinine was normal. Drain was removed after a few days. The patient was transferred to her local hospital, discharged after two weeks and JJ stent was removed six weeks after surgery.

Conclusion: Prompt UPJ avulsion diagnosis enables successful treatment and prevents complications, most severe being nephrectomy.

Keywords: JJ stent; ureteral avulsion; ureteral trauma

CR87

Treatment of vulgar psoriasis in children: a case report

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Introduction: Psoriasis is a chronic, systemic, inflammatory disease affecting approximately 1% of children. The choice of therapy depends on the severity of the symptoms; mild forms are usually treated locally, while more severe forms are treated with phototherapy, conventional systemic and biological therapy. This case report highlights the importance of early diagnosis and the beginning of treatment, as well as the existence of multiple therapy options.

Case report: We present a case of a fourteen-year-old boy suffering from psoriasis for the past 3 years. Psoriasis has been pathohistologically proven. The boy's mother and grandmother suffer from psoriasis. For the past 2 years, the patient has a generalized disease, followed by arthralgia. A rheumatologist has confirmed the diagnosis of psoriatic arthritis. The psoriasis has been treated locally; calcipotriol+betamethasone and betamethasone+salicylic acid and systemically; methotrexate maximally up to 15 mg once a week during 7 months and acitretin 25 mg dose daily since November last year until today. Considering that even with both therapies the disease has not been put under control (PASI 32 and CDLQI 18), the patient is a candidate for biological therapy.

Conclusion: The early onset of psoriasis has a great negative effect on psychosocial and physical development of a child. In order to prevent cumulative effects, regular monitoring and timely adjustment of therapy is crucial. Due to targeted treatment and excellent safety profile, biological therapy is becoming a more common choice of treatment of moderate to severe psoriasis in children.

Keywords: biological therapy, children, psoriasis

CR88

Syncope as the first sign of gastrointestinal bleeding: Report of one case

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Introduction: Gastrointestinal (GI) bleeding is potentially life-threatening condition. It can manifest as overt GI bleeding with hematemesis, melena or hematochezia, or as occult GI bleeding, with nonspecific symptoms.

Case report: A 70-year-old patient was brought to emergency department due to syncope. Upon arrival, the patient was hemodynamically stable, with no significant complaints. From medical history, a previously cured pulmonary embolism with thrombophilia is highlighted, for which the patient was on permanent anticoagulant therapy. Laboratory findings and X-ray of the heart and lungs were normal. During the observation, the patient had lost consciousness three times. ECG (Electrocardiography) monitor showed ventricular tachycardia; precordial thump was performed and patient started to cough up blood. CT (Computed Tomography) pulmonary angiography had been urgently performed and verified a distended esophagus and stomach, which were filled with heterodense contents. Due to CT findings, an urgent gastroscopy was performed: a 10 centimeters long laceration of the cardia with distal esophagus extension actively bled. The bleeding was stopped by adrenaline application and the placement of 13 hemostatic clips. After the procedure, the patient was placed in the intensive care unit. During the stay in the Intensive Care Unit, the course of the disease had worsened with the development of a septic condition. On the 18th day of the illness, despite all the treatment measures taken (hemodynamic support, broad spectrum antibiotics), cardiorespiratory arrest occurred.

Conclusion: Synkope can be the first sign of GI bleeding and which can, in a short period of time, lead to hemodynamic instability of the patient.

Keywords: gastrointestinal bleeding; GI bleeding; synkope

CR89

Just flu? High, prolonged fever in a child during winter - Case report

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Introduction: Increased body temperature in a child can indicate various pathological conditions. Despite the flu season during winter, other causes of acute fever must be closely evaluated in every child.

Case report: A 4-year-old boy was referred to the general hospital emergency room due to high fever lasting for 4 days, pain and swelling of the right knee, lasting for a couple of hours. Despite the increased C reactive protein over 150 mg/L, he was presumed to having flu and released with antipyretics. Next day, due to further progression of the symptoms, parents were advised to consult the clinical center. On the 7th day of disease, he was referred to the pediatric rheumatologist and was urgently admitted to the board. Large supra-patellar effusion was detected on right knee ultrasound, while skeletal scintigraphy revealed signs of inflammation in the right distal femur and the right knee. Because of the signs of acute osteomyelitis and septic arthritis, dual parental antibiotic treatment was started immediately. Two days later the boy became afebrile with slow reduction of knee inflammation, while laboratory parameters indicated recovery. Only throat smear came positive for Staphylococcus aureus. After 14 days of parental therapy, he was discharged with a recommendation of oral antibiotics for further two weeks.

Conclusion: Although increased body temperature in a child can primarily indicate viral infection, especially during the winter, all new symptoms must be closely evaluated as possible clues to the final diagnosis and appropriate treatment.

Keywords: fever, infectious arthritis, osteomyelitis

CR90

Autism spectrum disorder with macrocephaly and severe intellectual disability as a clinical presentation of microdeletion syndrome 17q12

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Introduction: Microdeletion syndromes are chromosomal disorders caused by microscopic deletions of neighboring genes of a certain part of the chromosome. 17q12 microdeletion syndrome is a rare genetic condition arising from the partial deletion of the long arm of chromosome 17, resulting in a variety of clinical phenotypes depending on the affected genes.

Case report: We are presenting a 5-year-old male patient, born from first, uncomplicated pregnancy at term from nonconsanguineous parents with perinatal risk factors present (respiratory distress syndrome, seizures, atrial septal defect, grade II peri-intraventricular hemorrhage). Phenotypically macrocephaly without other dysmorphic features. Psychomotor development normally until age 2 when a regression in social interaction and speech was noted, Autism spectrum disorder with severe intellectual disability was diagnosed in the third year of life. Array Comparative Genomic Hybridization shows an interstitial deletion chromosome 17q12 region size of 1404,932 kb. The region includes 19 OMIM genes, of which ZNHIT3, PIGW, ACACA and HNF1B are considered pathogenic. The mutation arose de novo.

Conclusion: In the DECIPHER databases, cases of deletions of similar size were mostly described as pathological. The difficulties in neurological development and behavioral disorders are likely caused by the deletion of genes LHX1 and ACACA, while haploinsufficiency of the HNF1B gene is associated with potential kidney function disorder and possible anomalies in the urinary tract. Hypomagnesemia and a later onset of MODY diabetes are also described as possible. Our patient is 5 years old and will need monitoring of kidney function and glycemia.

Keywords: autism, chromosome 17, microdeletion syndrome

CR91

Autism spectrum disorder with cognitive impairments as a clinical presentation of microduplication syndrome 5q35.3

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Introduction: Chromosomal duplications are associated with a series of genetic disorders. Chromosome 5q duplications, especially pure 5q35.3 microduplications, have rarely been reported in the literature. Clinical phenotypes usually depend on the region of chromosome duplicated, its size, and loci.

Case report: We are presenting 7-year-old female patient, born from first pregnancy, nonconsanguineous parents at term body weight 3000 g; without perinatal risk factors. Parents attended school according to a customized program of education; mentally ill relatives in the third generation. Phenotypically without elements of dysmorphic features, Motor development is orderly, with a significant delay in communication, social interaction and cognitive impairment, with stereotypes typically elements of autistic spectrum disorder. Array Comparative Genomic Hybridization shows a terminal duplication of the long arm of chromosome 5 in the q35.3 region with a size of 3224,814 kb, change was inherited from the mother. The duplicated region covers 34 Online Mendelian Inheritance in Man (OMIM) genes, of which the genes NHP2, PHYKPL, GRM6, ADAMTS2, LTC4S, SQSTM1 and FLT4 are associated with diseases

Conclusion: In the DECIPHER database, cases of duplication of equal size were mostly characterized as of unknown clinical significance or possibly pathogenic. The NSD1 gene, which is considered responsible for the clinical features of the 5q35 duplication, was not affected. Literature reports are rare, and most affected genes are associated with autosomal recessive inherited diseases. For now, this change can be characterized as of unknown significance, although interpreting the findings as part of clinical signs and family inheritance, it is possible that it can be pathogenic.

Keywords: autism, chromosome 5, microduplication syndrome

CR92

11β-hydroxylase deficiency – a rare case of congenital adrenal hyperplasia in two brothers

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Introduction: Congenital adrenal hyperplasia (CAH) is autosomal recessive disorder of adrenal steroidogenesis. More than 90% of CAH patients have 21-hydroxylase deficiency, while 5-8% have 11β-hydroxylase deficiency (11βOHD), with estimated prevalence of 1 in 100.000 live births.

Case report: We present two brothers with 11βOHD CAH. Younger brother was referred to endocrinologist at the age of 5 years due to peripheral precocious puberty (PPP). He had acne, pubic and axillary hair, tall stature and advanced bone age (12 years). Serum steroid profile revealed significantly increased levels of 11-deoxycortisol, 11-deoxycorticosterone (11-DOC) and androstenedione. These results are concordant with block in steroidogenesis caused by the non-functional 11β-hydroxylase enzyme, which plays important role in cortisol and aldosterone synthesis. Treatment with hydrocortisone was introduced immediately. After discovery of 11βOHD in younger brother, older brother (17-year-old) was examined and even higher levels of 11-deoxycortisol, 11-DOC and androstenedione were found. He had recently discovered hypertension, a frequent late complication of 11βOHD, caused by mineralocorticoid activity of accumulated 11-DOC.

Conclusion: These two patients are fifth and sixth patient with 11βOHD recorded in Croatia. Unlike girls who are severely virilized at birth, boys with 11βOHD do not show visible symptoms at birth, rarely develop adrenal crisis, and therefore are diagnosed late, mostly with symptoms of PPP. Also, most laboratories don't routinely measure 11-deoxycortisol and 11-DOC, which are essential for 11βOHD diagnosis. Early diagnosis and introduction of treatment in patients with 11βOHD is important in order to prevent consequences of hyperandrogenemia and hypertension.

Keywords: Congenital Adrenal Hyperplasia, Hyperandrogenism, Steroid 11-beta-hydroxylase

CR93

From acute B-lymphoblastic leukemia to lung transplantation

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Introduction: For patients with hematologic malignancies, allogeneic hematopoietic stem-cell transplantation (Allo-SCT) is a life-extending or curative treatment. Nevertheless, it's linked to a number of complications, including graft-versus-host disease (GVHD).

Case report: We present the case of a 12-year-old boy with acute B-lymphoblastic leukemia. Bone marrow puncture in October 2019 proved acute B-lymphoblastic leukemia of the "common" immunophenotype and treatment was started on the same day. The FISH method proved translocation t(9;22) and with PCR the fusion transcript bcr-abl1 was proven. He underwent an Allo-SCT from a related donor in April 2020. In December 2020, he was diagnosed with chronic GVHD of the skin, eyes, mucous membrane of the oral cavity, esophagus and lungs. In April 2021, he was hospitalized due to the deterioration of his general condition and the development of dyspnea. During his stay, he received immunosuppressive and immunomodulating therapy with antibiotic and symptomatic therapy. In July 2021, he was hospitalized for treatment of subcutaneous emphysema, pneumothorax and pneumomediastinum. Eventually therapy improved all organs affected with chronic GVHD except lungs where disease progressed and the patient ended up on mechanical ventilation. The patient was subsequently referred to the lung transplantation team. Bilateral lung transplantation was performed in December 2022- first lung transplantation in a child in Croatia. Currently, the patient is recovering from the procedure.

Conclusion: Lung transplantation can be an effective treatment in patients with pulmonary complications after Allo-SCT.

Keywords: leukemia, lung, stem cells, transplantation

CR94

Middle ear as a transmission route of streptococci to cerebellum

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Introduction: An otogenic abscess, that most frequently occurs in the temporal lobe and cerebellum, is one of the complications of otitis media. Fortunately, complications of otitis media are very rare because of the increasing use of antibiotics and the imaging modalities like CT and MRI.

Case report: A 12-year-old girl with a history of COVID-19 infection presented to the emergency department with symptoms of right ear otitis media. She underwent antrotomy and myringotomy due to the complexity of the inflammation. After the procedure, patient became somnolent. An MRI showed cerebellar abscess.A stereotactic suboccipital craniotomy was carried out by neurosurgeons, and a portion of the abscess was removed from the cerebellum. Patient then underwent another surgery performed by otorhinolaryngologists - an atticotomy and a full tympanomasteidectomy of the right ear was carried out. The abscess cavity was in the sigmoid sinus projection in the temporal bone. Pus was sampled for microbiological analysis. A small dura defect occurred in the abscess cavity and was appropriately repaired. Finally, a ventilation tube was placed through the right eardrum. Following the surgery, the patient was treated with IV antibiotics for 10 days, since Streptococcus pneumoniae was isolated from the pus sample.

Conclusion: With the assistance of MRI and swift response of the surgical teams, the complication in our patient was timely identified. Today, she is a healthy girl with no sequelae of the disease.

Keywords: abscess, cerebellum, otitis media, temporal bone

CR95

Extraintestinal manifestations of inflammatory bowel disease

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Introduction: Inflammatory bowel disease (IBD) is a chronic immune-mediated disorder comprised of Crohn's disease and ulcerative colitis. Extraintestinal manifestations (EIMs) are frequent and may occur before or after IBD diagnosis. Certain EIMs, such as peripheral arthritis and episcleritis, are frequently associated with active intestinal inflammation and usually improve by treatment of intestinal activity. Other EIMs like ankylosing spondylitis and uveitis are independent of intestinal disease activity.

Case report: We present a case of a 44-year-old female patient diagnosed with IBD in 2006. Due to constant exacerbations and numerous hospitalizations, a proctocolectomy with a temporary ileostomy was performed in 2010. After surgery, the gastroenterologist recommended using mesalazine, which she wasn't taking due to subjective well-being. In 2017, she was hospitalized at Dermatology Clinic due to ulcerations on her left lower leg, when a diagnosis of pyoderma gangrenosum was made. At the end of 2022, she was admitted to the Department of Gastroenterology for an exacerbation of IBD with extraintestinal manifestations including peripheral arthritis and ulcerations on the skin of the left hemiabdomen propagating to the skin of the back. She was treated with antibiotics, corticosteroids, aminosalicylates, and methotrexate. Infliximab was added to the treatment, but she developed an allergic reaction during the second administration. Then ustekinumab was introduced into the therapy, after which clinical improvement occurred.

Conclusion: IBD is a systemic disease in which multiple organs beyond the intestine may be affected. Careful screening for EIMs and early diagnosis are essential for preventing morbidity and improving quality of life.

Keywords: arthritis, inflammatory bowel disease, pyoderma gangrenosum

CR96

From perianal abscess to Crohn's disease: a case report

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Introduction: Crohn's disease is an autoimmune chronic inflammatory condition that affects the gastrointestinal tract, with prevalence higher among male children. Usually it presents with gastrointestinal symptoms, but it can also present only with perianal disease. At diagnosis, perianal abscesses and fistulas are present in 10-15% of pediatric patients.

Case report: A nine-year-old boy was admitted after complaining of perianal pain for a month. The diagnosis was a bilateral perianal abscess, which was treated surgically along with antibiotics. The boy had no other symptoms, he defecated regularly, did not have diarrhea, blood in stool or night stools. However, he was anemic, and his fecal calprotectin was high. Endoscopy was performed and he was diagnosed with Crohn's disease. Following the guidelines on the treatment of Crohn's disease in children, he was started on exclusive enteral nutrition to induce the remission and azathioprine to maintain it. He responded well to the treatment and during a month and a half his body mass index increased from 15.8 kg/m^2 to 17.0 kg/m^2. He has been in a stable remission for three years.

Conclusion: This is a case report on a boy with Crohn's disease who presented only with perianal abscess. As previously reported, 3% of children with perianal symptoms will later be diagnosed with Crohn's disease, so those symptoms should be investigated. This case confirms that enteral nutrition is an effective treatment for inducing remission in children by which the side effects of corticosteroids are avoided.

Keywords: Crohn's disease, exclusive enteral nutrition, perianal abscess

CR97

A complicated Epstein-Barr reactivation in a fourteen-year-old girl

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Introduction: Epstein-Barr virus (EBV) is usually acquired early in life and most commonly manifests as infectious mononucleosis. Central nervous system (CNS) complications of EBV infection occur in 1 to 18% of patients and include different neurological symptoms/syndromes.

Case report: A fourteen-year-old girl was admitted with fever, vomiting, headache, and positive meningeal signs. On the third day she became somnolent and three days after had a series of grand mal epileptic seizures treated with midazolam and levetiracetam. She had mononuclear pleocytosis in cerebrospinal fluid (960 cells per µl) and signs of meningitis and left temporal lobe encephalitis on MRI. All usual bacterial and viral causes of meningoencephalitis were negative and excluded. Serologic tests revealed positive EBV VCA IgG and EBNA antibodies in serum, indicating past infection, and EBV DNA was found in CSF using PCR (99500 copies of EBV per ml). Two weeks later, she developed paraparesis of both legs, retention of urine, arm weakness and started to have shallow breathing. Repeated MRI revealed Guillain-Barre syndrome (GBS) and she was treated with eight courses of total plasma exchange. Her neurological condition started to improve and six months later she had a completely normal neurologic examination.

Conclusion: Diverse CNS syndromes caused by EBV are reported. We presume that severe meningoencephalitis in this case was caused due to selective CNS reactivation of this virus. EBV can also cause a variety of immunologically mediated para/post-infectious neurologic syndromes such as GBS, as seen in our patient.

Keywords: Epstein-Barr virus, encephalitis, meningitis, Guillain-Barre syndrome

CR98

Surgical Application of Human Amniotic Membrane in Ocular disease due to dental complications - case report

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Introduction: Unrecognizable or untreated dental infection may result with serious eye complications such as uveitis, persistent corneal ulcer or perforation causing irreversible loss of vision and even eye loss. Root apices are proximal to adjacent muscle, connective tissue and sinuses and the most common route of spread is through the maxillary sinus into the inferior orbit. Dentists preventive strategies due to dental infection are of great importance in preventing rare but infaust eye complications.

Case report: A 60-year-old woman, urgently admitted on Department of Ophthalmology Osijek, Croatia on February 2023. She complained on left side facial and eye pain after severe toothache in the left upper jaw that she had one month prior admittion and for which she took only analgesics that provided temporary pain relief. Slit lamp examination revealed left eye paracentral corneal perforation, athalamia, diffuse conjunctival injection, ocular pain. Eye ultrasound was normal. Blood analysis -increased neutrophil counts. Patient had rheumatoid arthritis with previous peripheral corneal thinning. The left eye visual acuity was light perception. Eye movements were intact. Conjunctival and oral swab confirmed Streptococcus pneumoniae. Fortified tobramicyn with 1% atropine eyedrops were instilled ex iuvantibus together with oral acetazolamid, amoxicillin-clavulanic acid antibiotics and metronidazole for 7 days. A day after admittion, three layer amniotic membrane was urgently transplanted to close corneal perforation. Further examination found carious left maxillary 24 tooth which was tender on percussion associated with a draining sinus seen as periapical radiolucency. Extraction of the carious tooth was done under local anesthesia and jaw pain subsided within 4 days.

Conclusion. It is of big importance to recognize and properly treat dental infections. Although rare condition, corneal perforation from spreaded Streptococcus pneumoniae dental infection is vision threatening condition. Fortunatelly, amniotic membrane transplantation is effective surgical option for covering and healing corneal defects thus delaying need for urgent perforative keratoplasty.

Keywords: dental infection, corneal perforation, human amniotic membrane transplantation

CR99

Hiatal hernia as the cause of stenocardia

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Introduction: Chest pain is one of the most common complaints in the field of emergency medicine. There are different presentations of chest pain, one of them being stenocardia. Stenocardia is a compilation of symptoms that most often occur because of myocardial ischemia. Clinically, it is described as a dull retrosternal pressure or pain, often with radiation to the left side of the neck and the left arm. However, other pathological entities can cause similar clinical presentations.

Case report: We present a 43-year-old patient who presented with classic stenocardia: retrosternal pain with occasional radiation to the left side of the neck. The patient had no illnesses, except for a couple of psychiatric diagnoses. Initial ECG recording was normal, with slight tachycardia as the only finding. Blood results were within proper limits, with initial troponins within the reference levels. The patient was put under examination, and control troponins came back normal. As the stenocardia was still present, along with the tachycardia, a D-dimer test was made which came back positive. CT pulmonary angiography was made with the question of pulmonary embolism. The test came back negative for pulmonary embolism but showed a large (80mm) hiatal hernia as the accidental finding. An abdominal surgeon was consulted, and elective surgery was agreed upon.

Conclusion: Although classical stenocardia suggests coronary pathology, there are more plausible causes that need to be taken into mind when dealing with such patients. Our case showed the need for a proper medical diagnostic procedure, which can diagnose complex medical conditions in the emergency department.

Keywords: Chest pain, emergency medicine, hiatal hernia,

CR100

Antrochoanal polyps in children

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Introduction: Antrochoanal polyp (ACP) is a rare clinical entity, that makes only about 4% to 6% of all nasal polyps. It is a benign, usually unilateral, solitary polypoid lesion mostly arising from different sites of the antral mucosa. Thought to represent hypertrophic maxillary sinus mucosa herniating into the nasal cavity through the natural or accessory ostium. They occur most commonly in the pediatric age group.

Case report: In our case report we present a 15-year old boy with severe sleep apnea and snoring for the last year. Nasal endoscopy, MRI (Magnetic Resonance Imaging) and CT (Computed Tomography) scan showed a massive antrochoanal polyp. It origins in the left maxillary sinus, fills the nasopharynx, oropharynx and descends below the upper edge of the epiglottis. The polyp was 7×4×2 cm in size and the child weights only 23 kg. Functional endoscopic sinus surgery was chosen as the best form of treatment for this case. The postoperative recovery was normal.

Conclusion: Antrochoanal polyps are rare, but should be considered in the differential diagnosis for any child with nasal mass and symptoms of nasal obstruction, apnea, dysphagia, epistaxis and weight loss. A variety of pathological conditions may present with similar symptoms and physical findings. Therefore, the need for a careful history, nasal endoscopy, and radiologic work-up is of utmost importance.

Keywords: apnea, endoscopy, nasal polyps

CR101

The importance of toxicology in diagnostics of afebrile seizures in children

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Introduction: Intoxication is an important cause of mortality and morbidity in children. Seizures are one of the serious clinical conditions that may appear due to intoxication. It is hard to diagnose a seizure associated with intoxication if there is no history of drug intake. Therefore, one should be highly suspicious and consider intoxication as the possible cause of an afebrile seizure.

Case report: In our case report we present a 4-year-old female patient, who experienced a seizure that lasted for 20 minutes during which she was unconscious and unresponsive. Upon arrival of the ambulance, she threw up once. After that she became stable, except she was less articulate in communication and unbalanced while walking. In the hospital, physical and neurological status, laboratory findings and brain CT (computer tomography) scan were made, but showed no abnormalities. Due to the report of a doctor who saw a trace of pill in the vomited content, a toxicology test was performed. Toxicology test proved the psychotropic drug zolpidem in the urine sample.

Conclusion: One of the rare causes of seizures in pediatric age group is intoxication. Intoxication can cause serious clinical complications when not recognized on time. The possibility of intoxication should be considered when a child is presented with afebrile seizure, even if there is no history of drug intake. Also, an important note for parents is to keep medications out of reach for children.

Keywords: Afebrile seizures, intoxication, toxicology

CR102

Bronchus suis in a patient with gunshot wound due to attempted suicide: a case report

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Introduction: *Bronchus suis* ("pig bronchus") or tracheal bronchus is an anomaly in which the right upper lobe and its bronchus originate in the trachea, rather than distal to the carina with the incidence of 0.001% to 2%. Affected individuals may be asymptomatic or may have airway obstruction or recurrent pneumonia. Complications include obstruction of the tracheal bronchus with endotracheal intubations resulting in lobar collapse, pneumothorax, or inadequate mechanical ventilation.

Case report: The patient was admitted for a gunshot wound to the right chest after he attempted suicide by a firearm. He had an altered mental state, he was hemodynamically stable and intoxicated. Thoracic drainage was placed, he was intubated and received transfusion. The right thoracotomy and median laparotomy were made revealing that the bullet entered the third intercostal space, passed through the middle lobe of the right lung, the diaphragm, the liver, and stopped subcutaneously in the lumbar region. The bleeding was stopped, and all the layers were sewn up. The next day he was stable, but the weakened pattern of breathing on the right was auscultated. Radiological analysis showed a separate upper and lower lobe ventilation with low ventilation in the middle lobe, which seldom occurs in the standard anatomical lung structure. The working diagnosis was pleural effusion. Bronchoscopy was performed and showed the presence of anatomical variation - *bronchus suis*, which was important for the further course of treatment.

Conclusion: Anatomical variations can be confusing, lead to complications and misdiagnose, so we must consider them. Although very rare, we should consider *bronchus suis* if atypical ventilation distribution is seen on radiological imaging.

Keywords: Bronchus suis; gunshot suicide attempt; thoracotomy

CR103

Severe head trauma in a child that resulted in an incredible recovery

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Introduction: Head traumas represent injuries with a highly variable outcome, which is why it is very important to have a clearly defined guidelines at the emergency department in order to prevent serious complications.

Case report: In this case, we present a male patient, age of 9, who was brought to the emergency department after falling down the stairs. When he arrived at the emergency department, he was unconscious, immobilized by Shantz's collar. Pupils were wide, anisocoric, unreactive to light. He reacted to painful stimulus with flexion of the upper extremities and extension of the lower, with no eyes opening and verbal response. GCS was 5 (E1V1M3). The patient was adequately stabilised, the airway was secured by intubation according to the MILS protocol. Then a CT scan of the head and cervical spine was performed, and due to the subdural hematoma and fractures of the frontal, temporal and parietal bones on the right and a fracture of the dens axis, the neurosurgeon indicated an urgent operation. Under general endotracheal anesthesia, external drainage of cerebrospinal fluid and vacuum drainage was performed, along with removal of the intracranial hematoma by craniectomy. After the surgery, the patient was transferred to the intensive care unit. Gradually, on the fourth day of the stay the patient becomes verbally and motorically sufficient with discrete weakness of the left hand and instability when walking.

Conclusion: Children often recover very well even after severe head injuries, which is why it is very important to provide all the necessary care in a timely manner.

Keywords: craniectomy; head trauma; subdural hematoma

CR104

From sleepwalking to oligodendroglioma

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Introduction: Oligodendroglioma is a tumor that can occur in the brain or spinal cord. Signs and symptoms can include seizures and headaches. Weakness or disability can occur in the part of the body that's controlled by the nerve cells affected by the tumor.

Case report: In this case we present a male patient, aged 29, who was examined through the emergency department because of sleepwalking and suspected nocturnal epileptic seizures. Two months prior the examination he started waking up with sores all over his body and noticed bite marks on the tongue. The day before examination the patients parents noticed twitching and spasms of his limbs during sleep and could not wake him up easily. Urgent MSCT of the brain was performed, it showed a possible expansive process or arteriovenous malformation. A glial process of the brain has been confirmed by brain MRI and MRI angiography of intracranial blood vessels. Given its characteristics it corresponds to an oligodendroglioma. Considering the characteristics of the tumor process, its location and age of the patient, neurosurgeon recommended consulting operators at KBC Zagreb where the patient was accepted for further treatment. The course of the stay passed without complications, he had no new attacks. He was treated with saline infusions, antiepileptic drugs, corticosteroids, sedatives and analgesics as needed. Further processing and treatment at the Clinical Hospital Center Zagreb is required.

Conclusion: Brain tumors can present with various symptoms and appear even in young people. Neurological symptoms should be taken seriously and require an adequate diagnostic procedure.

Keywords: epileptic seizures; oligodendroglioma; sleepwalking

CR105

Multidisciplinary approach in the treatment of suicide of a minor patient: a case report

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Introduction: Suicide is the intentional taking of one's own life, and it's a serious public health problem. This case report will present the suicide attempt of a minor.

Case report: A 15-year-old boy was transported to the Emergency Department accompanied by an anesthesiologist after attempting suicide by jumping from a height of 10 m. He injured his head, left wrist, spine, and calcanei during the fall. A neurosurgeon operated on him due to compression fractures of vertebral bodies L-III, Th-XII, XI, and X with protrusion of the bone fragment into the spinal canal at the level of L-II by 10 mm, and fracture of trunk S-III and IV with the ventral displacement of the bone fragment of trunk S-III by 4 mm. All resulting in paraparesis of his lower extremities. He was transferred to the Department of Pediatric Surgery, where he started daily physical therapy (PT). After his general condition improved, an operation was performed to treat the multi-fragmentary fractures of both calcanei. An examination was done by a physiatrist who recommended in-patient PT. Under the supervision of a psychiatrist, the patient distanced himself from suicidal thoughts. Before discharge, the movements of the lower extremities were improving. Daily homecare and PT were required, as well as anti-decubitus care for paraplegia. Treatment continues in the form of in-patient rehabilitation in the facility.

Conclusion: Suicide is a growing health problem that requires all-inclusive care. Cooperation between multiple specialists is needed to treat both its causes and consequences.

Keywords: polytrauma, paraplegia, suicide

CR106

Kinesitherapy modalities in the treatment of a child with spina bifida

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Introduction: Spina bifida, a type of neural tube defect that affects the spine, is usually apparent at birth. Myelomeningocele is the most serious type. It causes damage to the spinal cord with consequences on the motor function of the limbs and function of the bladder and bowels. Surgery is performed to close the spine. Physical therapy is necessary in order to enable a somewhat normal life.

Case report: A two-month-old infant was brought by her mother for a physiatry examination. She was born with a myelomeningocele and successfully treated surgically after birth. Upon first inspection, she had deficient motor response. Spontaneous motility of the upper extremities was moderately presented, and the legs showed a severe paraparetic pattern with almost no movement. Physical therapy was started, specifically, combined Bobath and Vojta modalities, coordinated depending on developmental needs. A year and a half later, the follow-up showed great improvement. The child was able to seat herself deftly, taking a long sit on verbal stimulation. The patient was able to manipulate with both hands. She crawled reciprocally, quickly overcame obstacles and moved up the stairs. She verticalized herself in a standing position and started walking already at the age of 14 months, due to increased intensity of Vojta treatment modality.

Conclusion: The reported case is an outstanding example of significant progress, even when the diagnosis is severe. Early initiation of combined Vojta and Bobath treatment, leads to higher success rate and enables the child to develop faster and more efficient, both physically and mentally.

Keywords: Infant, Kinesitherapy Modalities, Myelomeningocele, Spina Bifida

CR107

Multisystem inflammatory syndrome in patient with Adult-onset Still's disease as a result of COVID-19; case report

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Introduction: Adult-onset Still's disease (AOSD) is a rare inflammatory disorder characterized by intermittent fevers, arthritis, and transitory rash. The specific symptoms and frequency of episodes vary and the progression of the disorder is difficult to predict.

Case report: A 26-year-old patient has been suffering from AOSD for many years, which she successfully controlled with tocilizumab. However, the patient omits the mentioned therapy for two months and falls ill with a COVID-19 infection, which has led to a Multisystem inflammatory syndrome in Adults (MIS-A). She presented to the hospital due to a fever, maculopapular rash, leg edema and arthralgia. Laboratory findings showed microcytic anemia, hyperferritinemia (ferritin 15,000) and elevated markers of inflammation. The patient was treated with tocilizumab, glucocorticoids, antibiotics and analgesics, but despite this, the condition worsened and she developed myopericarditis. A progression of rash and arthralgia was noted along with increases in ferritin (17,000), D-dimer (>33,800), and IL6 (10,100). Radiography was performed and showed bilateral basal inflammatory infiltrates. Due to that, the patient was treated with the method of continuous veno-venous hemodiafiltration (CVVHDF) with the aim of eliminating pro-inflammatory mediators. In addition, the patient received intravenous immunoglobulin (IVIG therapy), glucocorticoids, cyclosporine and anakinra. This therapy led to clinical improvement with a decrease in ferritin value to 300, and radiologically complete regression of pulmonary infiltrates and recovery of heart function was observed.

Conclusion: Multisystem inflammatory syndrome (MIS-A) is a life-threatening complication of SARS CoV-2 infection. The goal of MIS-A treatment is to reduce inflammation throughout the body as quickly as possible and prevent organ damage.

Keywords: Adult-Onset, COVID-19, Still's Disease

CR108

Oncofertility procedures in atypical endometrial hyperplasia

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Introduction: Oncofertility is a new field of medicine that connects oncology with reproductive health in order to explore options for the reproductive future of cancer survivors.

Case report: We present a 38-year-old woman who has been unable to conceive for the past three years. Significantly, in February 2020, she was diagnosed with precancerous atypical endometrial hyperplasia and was treated with a levonorgestrel intrauterine device and Megestrol 320mg for a year. After the treatment, a biopsy and hysteroscopy of the endometrium were performed and the pathohistological findings were normal, without atypical hyperplasia. The patient went through the first in vitro fertilization (IVF) in Ljubljana. Controlled ovarian stimulation resulted in three oocytes, two of which were cryopreserved. Then one embryo transfer (ET) was performed, which didn't lead to pregnancy. After that, a frozen embryo transfer was performed two times, and both resulted in negative beta-human chorionic gonadotropin (beta-HCG). The next two fertilizations were done in Zagreb. With controlled ovarian stimulation, three oocytes were obtained, of which one ET was performed, but without success. After an examination at the Clinical Hospital Centre Osijek, IVF with controlled ovarian stimulation was agreed upon. During the puncture of the follicle, four oocytes were obtained by aspiration. After five days, the embryo transfer of two blastocysts was performed. This attempt resulted in positive beta-HCG levels.

Conclusion: Today, assisted fertilization procedure helps young cancer survivors to start a family and it is the future of reproductive medicine.

Keywords: atypical endometrial hyperplasia; fertilization in vitro; oncofertility

CR109

Panic attack in the emergency department

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Introduction: A panic attack is a sudden feeling of intense fear and anxiety which is accompanied by physical symptoms such as palpitations, chest pain, hyperventilation, shaking, etc. It typically lasts around 10 to 15 minutes. Panic disorder is an anxiety disorder that is characterized by a frequent occurrence of panic attacks.

Case report: A 68-year-old female presented to the emergency department (ED) with palpitations as her primary complaint. She felt an increased heart rate, unease, and paresthesia in her arms and legs. She denied ever having similar episodes. Her past medical history showed arterial hypertension, hysterectomy, and elbow fracture surgery. She was previously prescribed perindopril and nebivolol for hypertension and an unknown hypolipidemic. The patient was notably agitated and tachypneic. Physical examination revealed tachycardia and bilateral basal inspiratory crackles. Upon arrival at the ED, all vital signs were normal except the blood pressure measured 165/95 mmHg. Blood tests and chest x-ray results were unremarkable. The patient was given 500 mL of saline and 5 mg of oral diazepam and began feeling better. Having excluded any serious illness, the patient was diagnosed with a panic attack and was released from the ED.

Conclusion: A panic attack is not a life-threatening event, it's a diagnosis of exclusion. Patients with panic disorder frequently present to ED with alarming symptoms such as dyspnea or chest pain, which overlap with symptoms of more perilous acute illnesses, thus it is of utmost importance to first exclude any life-threatening condition.

Keywords: panic attack, panic disorder, emergency care, palpitations

CR110

Aneurysmosis: a case report

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Introduction: An aneurysm is the expansion of a blood vessel by more than 50% of the lumen. Arterial aneurysms are a relatively common cause of death and disability in elderly patients. Aneurysmosis is an extremely rare condition that refers to the appearance of multiple aneurysms in multiple locations in the body.

Case report: An eighty-one-year-old patient presented to a vascular surgeon for the first time due to acute ischemia of the left leg. According to diagnostics, the cause of ischemia is thrombosis of the large popliteal artery. A detailed examination revealed a thoracoabdominal aneurysm with a diameter of 7 cm, an aneurysm of the right common iliac artery 3.6 cm, left internal iliac artery 3.4 cm, left deep femoral artery 3 cm, right femoral artery 5.5 cm, right popliteal artery 3.1 cm, and a thrombosed aneurysm of the left popliteal 5 cm. Urgent revascularization of the left leg with femorocrural bypass and crural artery thrombectomy was performed. Aneurysmectomy and interpositum of the left deep femoral artery were performed in the same act. Given the anatomical conditions and size of aortic and iliac aneurysms, it is not possible to repair them due to the high surgical risk. Risk rupture of an aneurysm of this size is 30% per year.

Conclusion: In Croatia, there is no screening for aneurysms, so it is often for patients to first present to a vascular surgeon when they are already inoperable. Considering the increase in the life expectancy, it is necessary to introduce screening for these diseases as well.

Keywords: Aneurysm, Popliteal Artery Aneurysm, Thrombosis, Thrombectomy, Vascular surgical procedures

CR111

Deep brain stimulation in a patient with severe disorder of consciousness

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Introduction: Only a small amount of comatose patients return to their former levels of functioning. We present a case of a patient that suffered a cardiovascular infarction, which resulted in him being comatose and receiving deep brain stimulation therapy, consequently.

Case report: We report a case of 33-year-old men who was admitted to surgery department with a suspected appendicitis on August 9th. During induction of anesthesia for surgery, the patient had a cardiopulmonary arrest with successful resuscitation. After the procedure, the patient was transferred to the intensive care unit for further observation and treatment. Computed tomography (CT) of the brain showed diffuse cerebral edema, which was confirmed by magnetic resonance (MR) imaging. After 10 days, the patient is hemodynamically stable, separated from mechanical ventilation, in a state of vigilance coma. He was presented and accepted for the procedure of deep brain stimulation, which was performed in KB Dubrava two months after the cardiac arrest. After the DBS procedure, the patient was conscious, with bulbomotorical movements but without ability to make contact. The patient was transferred to a specialized institution for further rehabilitation.

Conclusion: Deep brain stimulation has provided significant clinical improvement in patients with a number of conditions, including comatose patients, Alzheimer and Parkinson. Further research and trials are necessary for its further potentially lifesaving use.

Keywords: comatose, cardiac arrest, deep brain stimulation

CR112

Myelomeningocele in a patient with Gabriele-de Vries syndrome

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Introduction: Myelomeningocele (MMC) is a neural tube defect with concomitant defect of the backbone and spinal canal. It is mostly presented after birth, although radiological follow-up during pregnancy and confirmation of the neural tube defect might lead to intrauterine surgery and neural tube closure, usually on 24th week of pregnancy. Otherwise, an urgent postpartum repair surgery is recommended. Most children with a myelomeningocele develop hydrocephalus, and develop tethered spinal cord, Chiari malformation and syringomyelia. Gabriele-de Vries syndrome (GADEVS) is a rare congenital autosomal dominant condition, leading to an intellectual disability and physical abnormalities.

Case report: We present a case of a newborn male patient with a MMC. Myelomeningocele was treated surgically immediately after birth. During the follow-up, facial dysmorphism, bladder and bowel incontinence and mildly delayed motor and speech development were observed. Also, our patient underwent ventriculo-peritoneal shunt. Congenital central nervous system disorders were also confirmed radiologically. Later whole-exome sequencing confirmed GADEVS.

Conclusion: Myelomeningocele surgery is repair of birth defects of the spine, and spinal membranes. The main goal is to establish and improve neurological functions of affected children and to avoid bowel and bladder dysfunction or mobility issues. Besides surgery, multidisciplinary team should be involved to increase the chances of clinical improvement.

Keywords: genome sequencing, myelomeningocele, neural tube defects

CR113

Complex regional pain syndrome: a case report

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Introduction: Complex regional pain syndrome is severely disabling condition characterized by chronic neuropathic pain that follows soft-tissue or bone injury (type I) or nerve injury (type II). Other manifestations include autonomic, motor and trophic changes. We present a patient with chronic pain, predominantly in the lower back and legs.

Case report: A 54-year-old female patient presented to the Department of pain menangment with chronic pain, predominantly in the lower back, legs and knees, and for the last two years also in the upper limbs. The pain was dull, constant and burning with the pain intensity of 8-9 on NPRS. On physical examination, legs were edematous, cold and marbled. Ataxic gait and anxiety were also present. Lumbosacral spine and knee x-rays showed advanced degenerative changes, the same as the cervical and lumbosacral spine MRI that revealed the signs of osteophytosis, abnormal curvatures of the spine and disc protrusions. Electromiography and electromioneurography of both legs and arms, together with clinical features, revealed the signs of radiculopathy. In the treatment algologist, neurologist, neurosurgeon, orthopedist, occupational therapist and psychologist were included. Among the various treatment techniques that were done, including pharmacotherapy, physical therapy, acupuncture and epidural steroid injection, the patient stated that the most effective method was acupuncture and this form of therapy was continued.

Conslusion: The diagnosis and treatment of complex regional pain syndrome are often difficult due to variety of pathophysiological mechanisms and clinical findings that are included, and therefore require an interdisciplinary and multimodal approach.

Keywords: complex, degenerative, multimodal treatment, neuropathic pain

CR114

Cytokine adsorption in patients with Still's disease and ARDS

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Introduction: Adult-onset Still's disease is a rare systemic inflammatory disorder characterized by high spiking fever, evanescent salmon pink rash, inflammatory polyarthritis and generalized lymphadenopathy with high ferritin and IL-6 (interleukin-6) serum levels. It is usually followed by myalgias, sore throat, splenomegaly, anemia and neutropenic leukocytosis.

Case report: We report a case of a 26-year-old woman who was diagnosed with Still's disease and started treatment with prednisone at the age of 21. Throughout the years, tocilizumab and methotrexate have been included in her therapy, but due to personal reasons, she wasn't using tocilizumab two months prior to the disease exacerbation. In the summer of 2022., she was hospitalized at Clinical Medical Center Osijek at the Rheumatology department due to the progression of primary disease after SARS-CoV-2 infection with a suspicion of Macrophage activating syndrome. She clinically manifested through maculopapular rash, edemas, arthralgias, sore throat and was immediately treated with tocilizumab and parenteral corticosteroids. Despite ordinated therapy, her condition kept progressing with increase in ferritin (41000ug/l) and IL-6 (10100ng/l), with the development of acute respiratory distress syndrome (ARDS). Because of that, she was transferred to Intensive care unit where she was additionally treated with extracorporeal cytokine adsorption (continuous veno-venous hemodiafiltration with adsorbing membrane for cytokines). After 24 hours of application of the mentioned method, the patient experienced a drop in the values of the parameters, improved oxygenation and resolution of ARDS.

Conclusion: Application of the cytokine adsorption method as an addition to standard medical treatment can contribute to better clinical outcomes in critically ill patients with Still's disease, especially those with ARDS.

Keywords: adult onset Still's disease, ARDS, cytokines

CR115

Unrecognized left ventricular non-compaction cardiomyopathy

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Introduction: Left ventricular non-compaction cardiomyopathy is a rare disease that lacks development of the myocardial trabeculae into compact layer. Instead of myocardium being firm and smooth, it becomes thick and spongy which causes combined systolic-diastolic dysfunction and arrhythmias.

Case report: We report a case of a 57-year-old patient who was directed to cardiology ambulance in June 2022. The referral was based on questionable electrocardiogram (ECG) which showed common ventricular extrasystoles during general medicine examination. The patient didn't suffer from cardiovascular diseases previously, although his father died at the age of 68 from acute myocardial infarction. He suffers from Charcot-Marie-Tooth's disease for which he has regular controls with neurologist. Due to this disease, patient is using a walker on everyday basis. Two years prior to the examination, the patient started feeling fatigue during everyday activities and pain due to the swelling of the lower limbs. He also stated problems with overnight breathing and sleeping on multiple pillows. Lab results (NT-pro-BNP (N-terminal pro Brain Natriuretic Peptide) =5151ng/L) and echocardiogram (ventricle ejection fraction at 20%) helped set the diagnosis of a heart failure with reduced ejection fraction. Magnetic resonance imaging (MRI) confirmed the diagnosis of left ventricular non-compaction cardiomyopathy. The patient started the treatment with eplerenone, sacubitril/valsartan and empagliflozin, which led to subjective improvement in his symptoms. Holter monitoring didn't record any malignant arrhythmias but because of the nature of the cardiomyopathy, the patient is recommended for cardiac resynchronization therapy defibrillator implantation. The progress of this disease will be continuously monitored with regular cardiology examinations.

Conclusion: Because of the patient's neurological condition and everyday use of a walker, heart failure symptoms caused by non-compaction cardiomyopathy have been unrecognized.

Keywords: Charcot-Marie-Tooth's disease, heart failure, non-compaction cardiomyopathy

CR116

X-linked retinoschisis followed by a chronic cystoid macular oedema in an adolescent boy – case report

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Introduction: X-linked retinoschisis (XLRS) is a genetic condition affecting males with an onset in first decades of life. The main symptom is reduced vision. Cause is a mutation in a gene on the X-chromosome called RS1 that encodes a protein retinoschisin, which develops and maintains the retina. Without it, layers of the retina split, inter-cell communication is disrupted and vision is lost.

Case report: In 2023, a 15-year-old male patient comes for an ophthalmological examination. Patient was diagnosed with bilateral XLRS at the age of six. Visual acuity is stable – right eye/left eye with correction: 0,9/0,8. Both eyes have rougher pattern maculae and increased reflex like cellophane maculopathy with associated radial striatal folds. In the right eye, a gigantic rupture of the surface sheet of the retina in the area from 9 to 3 o'clock is observed. Chronic cystoid macular oedema is monitored with optical coherence tomography - an oedematous macula with striae along with a slight tendency of increase in the thickness of the neurosensory retina. Treatment consisted of cyclic topical application of bromfenac sodium and dorzolamide chloride with oral administration of acetazolamid and potassium supplementation. Considering the stable visual acuity, triamcinolone has not yet been applied.

Conclusion: XLRS is a lifelong disease - visual acuity deteriorates during the first decades of life but remains relatively stable until the fifth decade. Regular controls are necessary to monitor the visual acuity of the patient and to apply the correct treatment in a timely manner in order to prevent a further decrease in visual acuity.

Keywords: macular oedema; optical coherence tomography; retinoschisis; X-linked genetic disease

CR117

Best vitelliform macular dystrophy in a male patient with an adult onset – case report

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Introduction: Best vitelliform macular dystrophy (BVMD) is a slowly progressive, hereditary retinal dystrophy involving the retinal pigment epithelium which leads to a characteristic bilateral yellow "egg-yolk" appearance of the macula, rarely unilateral. Primarily visual acuity is proper; afterwards decreases centrally with metamorphopsia. Inheritance is usually in autosomal dominant manner; nevertheless autosomal recessive inheritance may occur. Cause is a fault in a gene called BEST1.

Case report: 36-year-old male patient comes for an ophthalmological examination in 2022 since noticing decrease in left eye visual acuity during last year. Visual acuity - right/left eye without correction: 0,86/0,15. Macula of the right eye was proper with drusiform changes, while exudation with initial scarring and shortening were noticeable in left eye macula. Optical coherence tomography scans showed an accumulation of amorphous material in macula subretinally with detachment of neurosensory retina, subretinal fluid and formation of epiretinal membrane in the left eye. Fundus autoflorescence of the left eye revealed an autoflorescence blockage centrally in the macula - justified suspicion of BVMD. Patient was released with following recommendations: to perform fluorescein angiography, electrophysiological testing and genetic testing for BEST1-4 mutations. In case of a positive finding - genetic counselling for the patient, related to family planning, is necessary. If complications occur, i.e. choroidal neovascularization or exudative activity, anti-VEGF injections could be applied.

Conclusion: Currently no treatment for BVMD exists. Unilateral appearance is extremely rare. Regular examinations are important for monitoring the patient's condition and disease progression, aiming to prevent further deterioration of visual acuity by timely administering appropriate medications.

Keywords: macula lutea; optical coherence tomography; retina; vitelliform macular dystrophy

CR118

Refractive errors and periorbital edema associated with Epstein-Barr virus infectious mononucleosis: a case report

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Introduction: Infectious mononucleosis is a contagious disease accompanied by several pathogens in its etiology, with the most common one being the Epstein-Barr virus (EBV). Infection can range from asymptomatic to typical symptoms including sore throat, fatigue, fever, headache, cervical lymph node enlargement etc., lasting for several weeks. The aim of this case report is to highlight the rare symptoms of EBV infection.

Case report: We present the case of a 26-year-old female who was admitted to the Osijek Health Center for a follow-up examination due to an ongoing infectious mononucleosis disease. She had tested positive for EBV a week prior to her admission. Upon initial examination at the time, the disease presented with typical symptoms. New symptoms included periorbital edema with refractive errors resulting in blurry vision, that would worsen throughout the day. The patient was prescribed a diet and she voluntarily self-administrated dietary supplements. As the clinical laboratory test results showed improvement in the following weeks, the symptoms went away.

Conclusion: Possible complications pertaining to EBV induced infectious mononucleosis should be well documented and brought to attention for further studies. General practitioners should be conscious of these complications to better understand and predict the possible outcomes.

Keywords: Epstein-Barr virus, infectious mononucleosis, refractive errors

CR119

Post-resuscitation central diabetes insipidus

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Introduction: Diabetes insipidus (DI) is rare disorder that occurs in conditions of decreased release of antidiuretic hormone (ADH) or decreased response to ADH. Central diabetes insipidus after cardiac arrest occurs as a result of hypoxia and thus hypothalamic injury.

Case report: This case describes a 56-year-old patient that was admitted to intensive care unit of Clinical Hospital Centre Osijek after suffering out-of-hospital cardiac arrest.After cardiopulmonal resuscitation and upon arrival the patient was unconscious (GCS 3),intubated and mechanically ventilated. From available medical documentation, it was observed that the patient suffered from chronic gastritis, angina pectoris and dyslipidaemia.In 2017. he was diagnosed with stenosis of ramus intermedius coronary artery.The initial CT scan of the brain upon admission showed no signs of ischemia, haemorrhage or an expansive process.Three days following admission,the patient became hemodynamically unstable and unresponsive to volume replacement therapy, requiring high vasopressor doses. Control CT scan of the brain showed cerebral edema,ischemia and low density of the cortex,grey matter of basal ganglia and nucleus caudatus,and signs of overall global hypoxic ischemic encephalopathy.Five days following admission, diuresis incresed from 50-100ml to 200-300ml per hour,blood sodium levels measured up to 190 mmol/L,and desmopressin as a pharmacologic therapy for DI was administered.Unfortunately, due to severe brain ischemia and progressive hemodynamic instability,the patient suffered a fatal outcome.

Conclusion: Central DI is a rare complication of severe brain injury in cardiac arrest survivors, and a threatening sign linked to high mortality rates and poor outcomes.

Keywords: brain injuries, heart arrest, neurogenic diabetes insipidus

CR120

A successful surgical reconstruction of aortic dissection in a patient with prior hypertension

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Introduction: An aortic dissection is a serious condition in which a tear occurs in the inner layer of the aorta. Blood rushes through the tear, causing the inner and middle layers of the aorta to split (dissect).

Case report: A 45-year-old patient, prior asymptomatic and suffering from mild hypertension, regularly taking antihypertension therapy in form of an ACE (angiotensin converting enzyme) inhibitor. An ambulance was called due to severe chest pain and shortness of breath and was admitted to the emergency department in Osijek clinical hospital centre for further evaluation and treatment. After a quick examination and processing, aortic CT (computer tomography) angiography was conducted and revealed aortic dissection De Bakey type 1/Stanford A, starting from the aortal valve and ascending aorta, further spreading to the abdominal aorta and right external iliac artery. The patient was intubated and placed on mechanical ventilation, after which he was operated. A reconstruction of the ascending aorta via straight graft was conducted and was successful. The patient was hemodynamically stable and woke up the next day without neurological deficits and was extubated with a satisfactory peripheral saturation. He was rereleased after 14 days in good condition. The follow-up included regular antihypertension therapy while monitoring blood pressure, control chest X-ray, CT angiography and heart ultrasound, along with a stationary rehabilitation. He is currently in recovery, feeling well and without symptoms.

Conclusion: A quick reaction and diagnosis, skilful and experienced surgeon and a well devised follow-up are all required for a successful treatment of aortic dissection in patients with prior hypertension.

Keywords: angiography, aortic arch, cardiac surgical procedure, dissection

CR121

Peripheral facial paralysis and unilateral anterior uveitis associated with COVID-19 infection: a case report

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Introduction: Peripheral facial paralysis is a neurological disorder that causes paralysis or weakness on one side of the face. Anterior uveitis is an inflammation of the middle of the eye which, if left untreated, can lead to glaucoma, cataract or retinal edema, and may cause permanent loss of vision. The aim of this case report is to highlight potential post-COVID-19 complications.

Case report: We present the case of a 44-year-old male who was admitted to the Neurological Emergency Department with symptoms of right-sided facial paralysis, headache and lagophthalmos. He had tested positive for COVID-19 three weeks prior to his admission. Electromyography and blink reflex tests revealed a lesion of the right facial nerve. A biomicroscopic examination of the right eye showed mild conjunctival redness, an unstable tear film, and punctiform defects in the lower third of the corneal epithelium. Multiple keratic and pigmented precipitates were distributed over the central part of the cornea as well. Based on these clinical findings, a diagnosis of anterior uveitis in the right eye was made. The patient was treated with topical dexamethasone 0.1% and tropicamide, as well as intravenous methylprednisolone. A follow-up examination two weeks later showed that corneal epithelium had been repaired, and there were no signs of inflammation in the right eye.

Conclusion: Clinicians should be aware of the possibility of post-COVID-19 complications and that proper treatment can significantly reduce these effects. COVID-19 can also impact the facial nerve and ocular structures even after complete recovery has been achieved.

Keywords: anterior uveitis, COVID-19, peripheral facial paralysis

CR122

Diabetic ketoacidosis during pregnancy

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Introduction: Diabetic ketoacidosis (DKA) is an acute metabolic complication of diabetes mellitus, usually type 1 (T1DM), characterized by hyperglycemia, hyperketonemia and metabolic acidosis. Pregnant women are more susceptible to develop DKA because of respiratory alkalosis and increased anti – insulin hormones which both enhance insulin resistance. Maternal hyperglycemia and acidosis cause depletion of fetal circulating volume and fetal hypoxia, respectively.

Case report: We present a case of 26 – year – old woman diagnosed with DKA during her 11th week of pregnancy. In 2003 she was diagnosed with T1DM and since treated with intensified insulin therapy. Since 2018 she uses an insulin pump (IP) with Aspart and flash glucose monitoring system. The patient is inadequately glucoregulated and consequently diagnosed with diabetic neuropathy and retinopathy. In November 2021, 11 weeks pregnant, she was hospitalized cause of nausea, vomiting and DKA laboratory findings – ketones of 3,6 mmol/L, glycated hemoglobin 7,8%, plasma glucose 8,8 mmol/L, bicarbonates 22,6 mmol/L and glycosuria, ketonuria. For the therapy, IP was temporary extinct and she received 5% - glucose and potassium chloride solution, aspart, pantoprazole and metoclopramide IV. With glycemia regulated, IP was actuated. Till birth she had another DKA complicated with SARS-CoV-2 infection treated the same way. In March 2022 she prematurely delivered in 31st week of pregnancy by caesarian section with fetal hypoxia.

Conclusion: To conclude, DKA is life – threatening condition, especially in pregnancy with high rate of mortality and fetal hypoxia, as shown in this case. With adequate glucoregulation in preconception period and pregnancy earlier complications could be avoided.

Keywords: Diabetic ketoacidosis, Fetal hypoxia, Pregnancy, Type 1 Diabetes Mellitus

CR123

Severe hyponatraemia and autoimmune polyglandular syndrome type 2

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Introduction: Autoimmune polyglandular syndrome type 2 (APS-2) is an autoimmune endocrinopathy characterised by obligatory Addison's disease and either the occurrence of autoimmune thyroid disease, type I diabetes or the presence of both. The aim of this case report is to emphasize the importance of timely recognition and treatment of adrenal crises.

Case report: A 16-year-old girl presented to the emergency department with a four-day history of vomiting, fatigue and having experienced one presyncopal episode. Clinical examination revealed severe dehydration with signs of hypovolemic shock. Her blood chemistry was significant for severe hyponatraemia with sodium of 98□mmol/L (normal range 135–145 mmol/L), hypochloraemia with chloride of 74□mmol/L (normal range 95–106 mmol/L) and normal potassium. It was noted that she had slight hyperpigmentation of the skin. Subsequently, adrenal crisis due to Addison's disease was diagnosed on the basis of hyperpigmentation, low basal cortisol and high ACTH. She rapidly responded to stress dose hydrocortisone, followed by hydrocortisone and fludrocortisone replacement oral therapy. Further laboratory testing confirmed hypothyroidism due to autoimmune thyroiditis and levothyroxine was started. Concomitant Addison's and autoimmune thyroiditis led to a diagnosis of APS type 2.

Conclusion: A major reason why APS can have fatal outcomes is due to its late diagnosis, which is often after the adrenal crisis has already occurred. Hyperpigmentation, hyponatremia, hyperkalaemia and acidosis are the main complications that can help to recognize this disease.

Keywords: Addison's disease; autoimmune polyglandular syndrome; autoimmune thyroiditis

CR124

From recurrent intermediate bilateral uveitis to vision loss: macular edema case report

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Introduction: Inflammatory macular edema is characterized as intra-retinal or subretinal fluid accumulation in the macular region. It is the most common sight-threatening complication of uveitis that can potentially cause a permanent vision loss if it's not treated early on.

Case report: We present a 29-year-old woman patient with sudden visual loss on both eyes. She was previously healthy without any history of genetic or ocular problems, also denying any toxic intake. Laboratory tests showed normal parametars. After the ophtamological exam was performed, it was revealed that she was suffering from bilateral intermediate uveitis (IU). The initial optical coherence tomograms (OCT) of the macula were normal. After the systemic workup and due to the autoimmune nature of uveitis - showed from HLA (Human Leukocyte Antigens) tissue typing results, both oral and local corticosteroids were started. After a month and a half of gradual tapering, her clinical status improved and her visual acuity returned to normal. After three months of quiescent phase, our patient had reccurence of bilateral IU as well as vision loss. Periocular injections of corticosteroids were introduced, but there was no response nor clinical improvement after 14-days treatment. Control OCT was required and revealed bilateral macular edema. Intravitreal application of triamcolone acetonide was applied in order to avoid permanent visual loss. This caused a rise of intraocular pressure that was corrected with antiglaucoma medications. OCT showed normal appereance of the macular region and the patient regained normal visual acuity.

Conclusion: Due to complex workup and challenging diagnostic and therapeutic managment, upcoming data on pathogenesis, as well as new OCT devices, optimal algorithms and treatment strategies are neccesary for quality of life of uveitic patients.

Keywords: macular edema, uveitis

CR125

Atypical presentation of the triple-negative breast carcinoma: a case report

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Introduction: Breast cancer (BC) is the most frequent malignant disease in women and the leading cause of cancer-related deaths worldwide. It is usually presented as a tender palpabile mass, skin and nipple changes, local pain, etc. One of the specific subtypes of BC is a triple-negative breast cancer (TNBC), which does not express estrogen receptor (ER), progesterone receptor (PR) and human epidermal growth factor receptor 2 (HER-2). TNBC clinical features include high invasiveness as well as high metastatic potential, proneness to relapse, and poor prognosis.

Case report: We present a case of an otherwise healthy 59-year-old woman, admitted to Oncology Department, after she noticed enlargment of left supraclavicular lymph node. An ultrasound of the left supraclavicular and axillary region was performed, where morphological changes were observed. Cytological puncture of the enlarged node of the left axilla revealed metastasis of adenocarcinoma. Computed tomography (CT) showed enlargement of the left axillary lymph node with a radius of 3 cm, and hyperdense stroma of the upper lateral quadrant of the left breast. A breast ultrasound is indicated, which implied BI-RADS 0 (Breast Imaging Reporting and Data System), and therefore, required additional tests. After extirpation of the left axillary lymph node, its pathohistological findings revealed a metastasis of TNBC. Shortly after extirpation, our patient developed a palpable mass on the left breast. Due to the patohistological findings, ddAC/paclitaxel chemoteraphy protocol (dose-dense Adriamycin-Cyclophosphamide) was ordinated.

Conclusion: This case report shows an unusual breast cancer presentation pattern as well as challenging diagnostics path and its final diagnose. Our patient is currently on her third chemotheraphy cycle, so the further follow-up is yet to come.

Keywords: breast neoplasms, triple-negative breast cancer

CR126

Severe lower gastrointestinal bleeding in a 57-year-old male: a Case Report

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Introduction: Gastrointestinal bleeding is a common medical emergency with a significant associated mortality. We report a case of urgent surgical management of massive lower gastrointestinal bleeding, with unsuccessful endoscopic treatment.

Case report: A 57-year-old male presented to a general hospital due to rectal bleeding, where he was treated with transfusion of blood and blood products. The patients bleeding continued, so he was transferred to our hospital for further work up. His medical history was significant for an explosive abdominal injury in 1991. due to which he underwent several surgeries- firstly a Hartmann procedure and later a colorectal anastomosis formation. Upon the admission, a gastroscopy and colonoscopy were performed, but failed to detect the site of bleeding. He was hemodynamically unstable, hypotensive and severe anemia was noted in the laboratory findings. A CT angiography was performed and a bleeding neoplasm was suspected so he was transferred to the surgical department and underwent an emergency surgery. Intraoperative colonoscopy was performed and showed diverticula along the colon and signs of recent bleeding. He underwent total colectomy and ileostomy. Pathological examination of the resection specimen showed mucosal necrosis consistent with chronic ischemic colitis. Postoperatively, he was placed in the intensive care unit. The further postoperative course that took place at the Abdominal Surgery department was unremarkable and the patient was discharged in 9 days.

Conclusion: In case of severe rectorrhagia finding the site of the bleeding can be challenging. Endoscopy and a CT angiography are the first-line diagnostic methods for that purpose. In cases of recurrent bleeds and hemodynamic instability that occur despite nonoperative attempts to control bleeding, like in our case, a surgical intervention is indicated.

Keywords: Colectomy, Colitis, Gastrointestinal Hemorrhage

CR127

Acute appendicitis at 34 weeks gestation: a Case Report

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Introduction: Appendicitis during pregnancy is the most common cause of non-gynecological emergency surgeries. Pregnant women are, compared to the general population, more likely to experience perforation of the appendix which is associated with a high rate of maternal and fetal mortality. The aim of this case report is to present the characteristics and the diagnosis approach to this medical emergency.

Case report: A 34-year-old female at a gestational age of 34 weeks presented to the emergency department (ED) with acute epigastric pain, vomiting and diarrhea lasting 4 hours. The patient was so far healthy and the course of her pregnancy was normal. Her laboratory tests showed leukocytosis and her vital signs and other laboratoy values were within normal limits. Doctors suspected appendicitis so an ultrasound sonography (US) was performed, but the appendix was not visualized. US showed normal ovaries and confirmed a live intrauterine pregnancy. An urgent magnetic resonance imaging (MRI) of the abdomen was performed and showed a tortuous tubular structure with a diameter of 15 mm, raising from the bottom of the cecum, and a small amount of free fluid in the pelvis. The MRI findings confirmed the initial suspicion of appendicitis and the patient was admitted to the surgical service. Laparoscopic appendectomy was successfully performed and she was transfered to the Clinic for gynecology and obstetrics the following day.

Conclusion: A rapid and accurate diagnosis of appendicitis is particularly important in pregnant patients. Ultrasound serves as a quick initial tool but due to the difficulty in viewing the appendix in a pregnant patient using ultrasound, MRI is considered the best tool for diagnosis. Emergency appendectomy is the treatment of choice.

Keywords: Abdominal Pain, Appendectomy, Appendicitis, Pregnancy

CR128

Parathyroid adenoma presenting with dysphagia – a case report

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Introduction: The most typical cause of hypercalcemia is primary hyperparathyroidism. Adenoma, hyperplasia, or malignancy are possible causes of primary hyperparathyroidism. Patients with parathyroid adenoma may present with kidney stones, frequent urination, hoarseness, palpable neck mass, unexplained pain, nausea, vomiting, myalgia, abdominal pain, bone and joint pain, lethargy, depression or disorientation. This report aims to show the importance of diagnostic treatment for a patient with dysphagia.

Case report: A 62-year-old male with a history of total hip arthroplasty was referred to the hospital with chief complaints of vomiting, dysphagia, and 20 kg weight loss for two months. The laboratory investigation showed PTH level at 102 pmol/L, calcium at 4,12 mmol/L, and potassium at 3 mmol/L. For an initial evaluation, a neck ultrasound revealed a large, rounded, hypoechoic mass along and below the lower pole of the left thyroid lobe. The ultrasound-guided puncture was done and confirmed a parathyroid gland lesion. A neck CT scan was performed and it showed a mass (3,6×2,6×2,5 cm) behind the left thyroid lobe. During scintigraphy, there was an intensive uptake at the same localization which corresponded to a hyperfunctioning parathyroid gland. The patient underwent surgical excision of the left upper and lower parathyroid gland, with a simple postoperative course (PTH 4,54 pmol/L, calcium 2,25 mmol/L).

Conclusion: Although dysphagia is not a typical parathyroid adenoma presentation, it should be fully considered as a symptom in our differential diagnosis. In this case, dysphagia was the patient's main complaint, and a parathyroid adenoma was the final medical diagnosis.

Keywords: dysphagia, hypercalcemia, parathyroid adenoma

CR129

Case report: Neuroimaging features of idiopathic intracranial hypertension in pediatric patient

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Introduction: Idiopathic intracranial hypertension (IIH), formerly known as benign intracranial hypertension or pseudotumor cerebri, is a neurological condition characterised by elevated intracranial pressure in the absence of an intracranial tumor or other pathologies like hydrocephalus or cerebral venous sinus thrombosis. In children, IIH is uncommon and more prevalent in those aged 12 to 17 than in those aged 2 to 12. The main clinical signs include headache, nausea, vomiting, pulsatile tinnitus, double vision, and progressive vision loss.

Case report: Historically, the diagnosis of IIH was one of exclusion, and imaging had a limited function in ruling out lesions that caused IIH, such as obstructive hydrocephalus, tumors, chronic meningitis, arteriovenous fistulas, internal jugular vein stenosis, and dural sinus thrombosis. Recently, neuroimaging has been used to both confirm the diagnosis and rule out other possibilities, such as intracranial mass lesion or hydrocephalus. We report the case of a 15-year-old female patient with idiopathic intracranial hypertension and accompanying neuroradiological findings. The perioptic subarachnoid space is distended, as shown by magnetic resonance imaging (MRI), which results in a larger optic nerve sheath, flattened posterior sclera, vertical tortuosity and elongated orbital optic nerves. A downward herniation of cerebrospinal fluid (CSF) via the diaphragm sella, results in an empty sella, which shows a persistent rise in intracranial pressure (ICP).

Conclusion: In conclusion, while diagnosing IIH, it's critical to analyze orbit, sellar, and venographic data. Certain neuroradiological abnormalities can point to the diagnosis of IIH in the absence of any obvious cause of elevated ICP.

Keywords: Idiopathic intracranial hypertension; neuroradiology; pediatrics

CR130

Stanford type A extensive aortic dissection: a case report

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Introduction: Stanford type A aortic dissection is a surgical emergency with a high mortality rate of over 90% in patients who do not undergo operative intervention, with the mortality rate after surgery and hospitalization of 10-30%.

Case report: Hereby we present a case of a 45-year-old male patient who reported to the emergency department at 7 a.m. with severe chest pain and accompanying paresthesias of his left arm and reduced sensitivity of his left leg. The patient previously had no serious chronic diseases except hypertension. Patient's blood pressure was 112/55 mmHg, electrocardiogram was without pathological findings, X-ray showed non-specific changes in the form of mediastinum enlargement, while laboratory findings showed reduced erythrocyte count (3.58 x 10*12/L), haemoglobin (109 g/L), hematocrit (0.316 L/L) and increased high sensitivity troponin I (150.4 ng/L). Emergency computed tomography angiography (CTA) showed signs of aortic dissection type Stanford A starting from the aortic valve and affecting the ascending aorta, aortic arch, descending thoracic aorta, abdominal aorta down to the common, external and internal right iliac artery. As a result of the dissection, most of the abdominal arteries originated from the false lumen, which caused hypoperfusion of the kidneys and digestive organs. The patient underwent emergency surgery during which his aorta was completely reconstructed and he was hospitalized, after which he was discharged with completely normal laboratory findings, electrocardiogram and normal CTA findings.

Conclusion: We can conclude that high-quality emergency radiological examination and emergency surgery are necessary for survival and the best possible quality of life post-operatively.

Keywords: aortic dissection; computed tomography angiography; electrocardiogram; emergency surgery

CR131

Treatment of craniopharyngioma

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Introduction: Craniopharyngioma is a rare type of benign brain tumor, located near the brain's pituitary gland. The pituitary gland secretes hormones that control many functions in the body. As a craniopharyngioma slowly grows, it can affect the function of the nearby structures in the brain.

Case report: At the start of 2020. the patient notices degeneration of the sight bilaterally with hallucinations and diplopia, combined with cognitive disabilities. The patient was hospitalized because of altered state of consciousness. The MRI (magnetic resonance imaging) was done and she was diagnosed with craniopharyngioma. She was examined by an endocrinologist and diagnosed with panhypopituitarism and diabetes insipidus after resection of craniofaringeoma. She was proscribed with Cortef and long term control of thyroide hormones. The first MRI post-op showed the residue of the tumor. The mass was pressing on the chiasma opticum. She was hospitalized in the December of 2020. because of progressive degeneration of her sight in the combined with the difficulty in maintaining balance. MSCT (multislice spiral computed tomography) of the brain was done and showed progression of tumor and secondary hydrocephalus. ETV (Endoscopic third ventriculostomy) was done as treatment for hydrocephalus. The second post-op MRI was done and showed same size residue. On 28.1.2022. the patient was examined by the opthalmologist, presented with bilateral white PNOs (papilla nervi optici) and bilateral atrophy in the macula lutea which led to blindness.

Conclusion: Endoscopic endonasal removal of the tumor is the best way to remove the residues and this method would decreased chance of recidivism.

Keywords: blindness, craniopharyngioma, MRI, neurosurgery, panhypopituitarism

CR132

Hirschsprung's disease – Case Report

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Introduction: Hirschsprung's disease is a congenital abnormality of the nervous system in the bowel characterized by the absence of ganglion cells from submucosal and myenteric nerve plexus. It is an important clinical differential diagnosis in infants and children presenting with severe obstipation.

Case report: We present a case of 13-year-old female patient presenting with chronic symptoms of alternating constipation and diarrhea. Upon arrival patient states that recently she had up to six stools a day without pathological admixtures. She denies presence of abdominal pain, nausea or emesis. Due to previous chronic obstipation, the patient underwent an MRI which showed a significantly distended rectal ampulla with a diameter of up to 11 cm filled with air and gas, whereas the normal diameter is approximately 4 cm. Inferior median laparotomy was indicated, during which five full-thickness biopsy specimens of the wall were excised for pathohistological analysis. Also, in the left lower hemiabdomen, a temporary bipolar stoma was performed at the beginning of the sigmoid colon. Pathohistological analysis revealed a chronic inflammatory infiltrate within the lamina propria wall, consisting of lymphocytes, plasma cells and a crypt abscess. Immunohistochemical staining for calretinin and Neuron-Specific Enolase was performed, which confirmed the diagnosis of Hirschsprung's disease.

Conclusion: This case report shows the importance of early diagnosis and its impact on improving the patient's quality of life.

Keywords: Agangliosis, Hirschsprung's disease, Megacolon

CR133

From suspected nephrolithiasis to hereditary thrombophilia

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Introduction: Inherited thrombophilia is a blood coagulation disorder that increases the risk for venous thromboembolism (VTE). Clinical manifestation of VTE occurs at any age and is under the influence of many risk factors.

Case report: In this case, we present a female patient, age of 41, who came to the emergency department because of constant pain under the right rib cage spreading to the back. The pain intensified in a lying position and during deep inspiration. Two weeks earlier, the patient was examined for the same symptoms; due to elevated inflammatory parameters, pathological findings in the urine and clinically suspected nephrolithiasis, antibiotic therapy was recommended. Now the pain has worsened, with even higher inflammatory parameters. After receiving the orderly X-ray findings of the heart and lungs, as the ultrasound of the abdomen, D-dimer test was taken. Due to positive D-dimer test, CT pulmonary angiography was performed and showed a saddle thrombus at the fork of the right pulmonary artery, as well as thrombotic content in the branches for the left lower lobe – bilateral pulmonary embolism (PE). After receiving LMWH therapy, the patient was discharged with continued application of anticoagulant therapy with dabigatran. According to the Wells score, the patient had low probability for PE, only with risk factors of taking OHK and smoking. Further evaluation in this patient revealed homozygous PAI-1 mutation.

Conclusion: Hereditary thrombophilia is a genetic condition with variable clinical presentation and should be evaluated in the population of younger patients with a thromboembolic incident.

Keywords: hereditary thrombophilia; pulmonary embolism; thrombophilia

CR134

Pulmonary embolism as the background of post-traumatic subarachnoid hemorrhage

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Introduction: Traumatic subarachnoid hemorrhage (SAH), a common finding following head trauma, is usually a benign condition with a favorable outcome, seldom requiring surgical intervention. Nevertheless, sometimes an internal event can be hidden in the etiology.

Case report: In this case, we present a female patient, age of 59, who was presented in the emergency deparment in a deep areflective coma (GCS 3). Upon arrival, the patient was found at home lying in the bathroom, unconscious, and during transport to the hospital she developed a grand mal seizure. In the clinical status, a deviation of the bulbs to the right was observed with extinguished photoreaction of the pupils. CT scan of the brain showed a minimal post-traumatic SAH, localized frontally bilaterally, which does not correspond to the patient's state of consciousness. Consequently, the diagnostic work-up was extended - CT angiography of the intracranial arteries showed no signs of AV malformation or aneurysm, but CT pulmonary angiography revealed thrombi segmentally in the lower left lobe and subsegmentally in the branches for the lower right lobe. During the observation, the patient was treated with insulin due to verified hyperglycemia, and ultimately completely recovered her state of consciousness with a normal neurological status (GCS 15). Further evaluation verified heterozygous mutation of factor V Leiden, and long-term anticoagulant therapy was indicated for this patient.

Conclusion: Pulmonary embolism can lead to syncope and result in traumatic SAH. Regarding thromboembolic incidents, genetic testing is necessary in patients with uncertain etiology to rule out or confirm hereditary thrombophilia.

Keywords: hereditary thrombophilia; pulmonary embolism; subarachnoid hemorrhage; traumatic subarachnoid hemorrhage

CR135

Extracorporeal blood purification in patient with HELLP syndrome

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Introduction: HELLP syndrome is a pregnancy complication characterised by haemolytic anaemia, elevated liver enzymes and thrombocytopenia.

Case report: A 30-year old woman was admitted at the 35th week of twin pregnancy due to pre-eclampsia. A caesarean section was performed. On the 5th post-partum day laboratory findings showed thrombocytopenia, signs of haemolysis and acute liver and kidney failure as well as elevated inflammatory markers of systemic inflammatory response syndrome (SIRS): C-reactive protein, fibrinogen and interleukin 6 (IL-6). Due to the deterioration of her clinical condition (hyperbilirubinemia and icterus), the development of oliguria and hypotension, the patient was transferred to the intensive care unit. Considering the patients physical status (haemodynamic instability, oliguria) and laboratory findings (hyperbilirubinemia, azotaemia and extremely high proinflammatory markers), the extracorporeal blood purification with haemodialysis procedure was indicated. After 12 hours of veno-venous hemodiafiltration with adsorbent membrane the patient was hemodynamically stable and diuresis was recovered. Laboratory results showed improvement of hepatic and kidney function markers, increase in number of thrombocytes and decrease of proinflammatory markers. In 24 hours of this procedure IL-6 serum concentration was reduced from 10150 ng/L to 178.3 ng/L. In a clinically recovered state, the patient was discharged home after 7 days.

Conclusion: The method of extracorporeal blood purification shows positive results in the treatment of diseases that are based on SIRS by removing proinflammatory mediators. Application of these techniques should be considered as a treatment option for critically ill patients with HELLP syndrome and multiorgan failure.

Keywords: HELLP syndrome, hemadsorption, pre-eclampsia

CR136

Right-sided lobar pneumonia complicated by pleural effusion n an eight-year-old boy – Case report

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Introduction: Pneumonia is leading cause of death in children in the developing world, causing substantial morbidity in children worldwide.

Case report: An eight-year-old boy was admitted to the pediatric clinic in Osijek for treatment of right-sided lobar pneumonia complicated by pleural effusion. He was initially treated in General County Hospital of Vinkovci (GCH Vinkovci). He was febrile, with poor general appearance and tachydyspnea. On the right lung was an extremely weakened breathing sound. He was treated with oxygen therapy, parenterally rehydrated with continuation of the previously started antimicrobial therapy with ceftriaxone. Vancomycin was introduced. After radiological examination, a thoracic drain was placed. The effusion was an exudate and microbiologically sterile, however Streptococcus pneumoniae, Streptococcus pyogenes and Respiratory syncytial virus were isolated in GCH Vinkovci. After the initial drainage of 500 millilitres of effusion, a partial decrease in inflammatory parameters was observed. A sparing thoracotomy with lung decortication was performed. In the further course, a gradual recovery follows, both clinically and laboratory, and with physical respiratory therapy there is a significant recovery of respiratory function. The child was in a clinically stable condition with meropenem and vancomycin in therapy and was transferred to the pulmonology department. There was a re-increase of inflammatory parameters with pancytopenia and fever going up to 40°C. Tazocin was introduced into therapy instead of meropenem. Two days later, the blood count recovers, and the inflammatory parameters decrease. One week after discharge, consolidation is no longer visible on ultrasound.

Conclusion: This case report once again underlines the importance and urgency of treating pneumonia in children and the possibility of complications that can arise.

Keywords: pediatrics, pleural effusion, pneumonia

CR137

Gravitational erythema – Rare entity or common misdiagnosis?

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Introduction: Gravitational erythema is a benign condition, in which skin rash occurs as a result of the abnormal vascular response, due to increased venous pressure. Though it was first described in 1988, its pathophysiology is still not fully understood, and it can present a real riddle in diagnostics. Specific therapy is currently unavailable, and the therapeutic approach includes compressive stockings and limb elevation.

Case report: A 13-year-old girl, with a previous history of asthma and allergic rhinitis as a reaction to pollen exposure, was examined at the vascular surgery department. She reported bilateral changes in the lower extremities, that were occurring after a few minutes of standing. Changes were described as livedo reticularis, and no specific therapy was prescribed. After a one-year period, she was examined once again, and this time livedo reticularis was accompanied by ankle joint pain, without edema or redness which excluded arthritis as a possible diagnosis. In the following period, capillaroscopy and immunological panel were done, and they both came back negative. In the meantime, her clinical presentation got worse as livedo reticularis vanished, but she presented with upper leg erythema, with heat and itching sensations. From everything written, the most suitable diagnosis is gravitational erythema, and the patient was discharged with recommendations about limb elevation and compressive stockings wearing.

Conclusion: Even though gravitational erythema is a benign condition, it's psychological consequences can be severe. During the diagnostics, it is important to differentiate this benign disease from vasculitis, vasculopathies, neurodermatitis, and neuropathies, in which immunological testing plays an important role.

Keywords: Gravitational erythema; Erythema; Livedo reticularis; Rash

CR138

The use of single-pass albumin dialysis (SPAD) to correct severe refractory hyperbilirubinemia in alcoholic cirrhosis

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Introduction: Liver failure, whether it occurs without preexisting liver disease or as an acute decompensation of a chronic liver disorder such as alcoholic cirrhosis, carries a high risk of mortality. Multiple toxins that are accumulated in liver failure are not water-soluble and are transported through the blood being bound to albumin. Among those, serum bilirubin and ammoniac level, surrogate markers for these toxins, have been linked to mortality in these patients. New methods, such as SPAD, have been demonstrated as an efficient method for reducing albumin bound toxins.

Case report: We present a case of a 65-year-old male with acute decompensation of a chronic liver disorder with an alcoholic etiology. Anamnesis revealed that the patient was first admitted in 2020 due to hematemesis, which revealed esophageal varices. In December of 2022, patient presents himself in emergency department with jaundice and abdominal swelling. Laboratory tests indicated severe mixed hyperbilirubinemia, hyperammoniemia and hepatorenal syndrome, which led to immediate hospitalization. Conservative management was unsuccessful in reducing bilirubin levels. Therefore, he was transferred to the intensive care unit (ICU), where SPAD was performed with continuous veno-venous hemodiafiltration because the patient also had hepatorenal syndrome. SPAD dialyzes blood against more dilute albumin-rich dialysate, which is discharged after a single pass through the dialyzer. Four days later, bilirubin levels were down to a third of the initial levels, and he was transferred back from the ICU.

Conclusion: Liver failure is an urgent clinical condition requiring immediate treatment. This report showed that SPAD is an efficient extracorporeal liver support system that doesn't require additional technology and could be easily used in hospitals that are not equipped with other devices for albumin dialysis.

Keywords: hyperbilirubinemia, liver failure, single-pass albumin dialysis

CR139

Foreign body aspiration in a teenager

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Introduction: Foreign body aspiration is a life threatening emergency and a leading cause of death among children, particularly in children under 3 years of age. Among the aspirated objects, various types of nuts are the most common. Young children have an increased risk of foreign body aspiration due to the different structure of the upper airways compared to adults as well as having an immature swallowing mechanism.

Case report: A 12-year-old male patient presented to our clinic with complaints of difficulty breathing while eating peanuts. The patient had a history of hospitalization due to acute bronchiolitis at the age of 2 months, and at the age of 3 he was hospitalized for febrile seizures. On admission, the patient exhibited dyspnea with an oxygen saturation of 97%, and appeared pale and frightened. On lung auscultation, weakened breathing with wheezing was noticed on the right lung. Despite normal X-ray results, and due to high clinical suspicion of a possible foreign body aspiration, , the patient underwent bronchoscopy under general anesthesia, where a foreign body was found in the right intermediate bronchus that obstructed the entire right bronchus, and extracted. The foreign body was a peanut with a diameter of 1 cm, and the patient was sent home the next day.

Conclusion: Bronchoscopy is the preferred diagnostic as well as therapeutic modality for patients with foreign body aspiration. Prevention and rapid diagnosis of aspiration are critical for ensuring the best outcomes for patients, as an untreated foreign body aspiration leads to fatal outcomes.

Keywords: Bronchoscopy; foreign body aspiration; pulmonary auscultation; wheezing

CR140

Acute necrotizing encephalitis following symptomatic SARS-CoV-2 infection

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Introduction: Acute necrotizing encephalitis is a disease that most often follows an acute febrile illness caused by various viral agents. Severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2) is an extremely rare and novel cause of encephalitis, and only a few cases have been reported worldwide in adult patients.

Case report: A one-year-old, PCR (polymerase chain reaction) SARS-CoV-2 positive girl was admitted to the Coronavirus disease (COVID) ward due to pyrexia, pharyngitis and emesis. 12 hours after admittance she remained highly febrile and had a sudden deterioration of neurological status (sopor) and developed generalized tonic-clonic seizures. Brain magnetic resonance imaging showed lesions of the mesencephalon and thalamus. Within the lesions in the thalamus and insula were visible zones of hemorrhagic content, which is a characteristic of acute necrotizing encephalitis. She was intubated and mechanically ventilated. Intravenous immunoglobulin therapy (IMG) was started. She was transferred to the Referent Center for Pediatric Infective Diseases where she spent 11 days mechanically ventilated. She was treated with remdesivir, IMG, methylprednisone, and levetiracetam. Physical therapy was carried out throughout the stay but severe neurological damage remained (spastic tetraparesis, feeding through a nasogastric tube, neurogenic bladder). The child was discharged home with recommendations to continue physical rehabilitation and multidisciplinary treatment.

Conclusion: Acute necrotizing encephalitis is a rare but possible complication of SARS-CoV-2 infection. Any change in the neurological status of SARS-CoV-2-positive patients should raise the suspicion of more serious complications in order to prevent long-term consequences with timely examinations and treatment.

Keywords: COVID-19, encephalitis, SARS-CoV-2

CR141

Supraventricular tachycardia as a cause of cardiac decompensation

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Introduction: Supraventricular paroxismal tachycardia (SVPT) is the most common arrhythmia diagnosed in infants. It's not a life threatening condition, but sometimes it can lead to cardiac decompensation.

Case report: A 15-day-old male newborn was admitted to the Pediatric Intensive Care Unit due to supraventricular tachycardia that lasted 24 hours before admittance. The patient was tachycardic, oliguric and tachypneic with hepatomegaly. An electrocardiogram showed tachycardia with narrow QRS complexes, without clearly visible P-waves and ventricular extrasystoles (VES). An ultrasound examination revealed cardiomegaly, insufficiency of the valves, and a foramen ovale with a left-to-right shunt. The patient was sedated, endotracheally intubated, and mechanically ventilated. After the failure of adenosine on 3 occasions to establish a normal rhythm, amiodarone was started at a dose of 10 mcg/kg/min, diuretics, and milrinone. The patient received a bolus of bicarbonate due to acidosis. After increasing the dose of amiodarone to 15 mcg/kg/min, which proved unsuccessful, electrical cardioversion was performed and sinus rhythm was obtained. Due to low blood pressure and poor diuresis, inotropic support with noradrenaline was started. Brain ultrasound showed increased periventricular echogenicity. Neuroprotection was started with phenobarbitone and erythropoietin. During the stay, the patient was cardiocirculatory stable and the ultrasound of the heart showed an enlarged left ventricle. In order to perform additional tests and continue treatment, the patient was transferred to the Zagreb Clinical Hospital Center, Department of Pediatric Cardiology.

Conclusion: Neonates with SVPT may not have any symptoms. In order to prevent cardiac decompensation, it's important to recognize congestive heart failure symptoms.

Keywords: cardiomegaly, supraventricular tachycardia, ultrasound, ventricular extrasystoles

CR142

Bicuspid aortic valve: from latency to clinical reality (a case report)

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Introduction: As the most common congenital heart defect affecting nearly 2% of the population, the bicuspid aortic valve (BAV) can become symptomatic later on in life, causing a variety of cardiovascular complications as the paediatric population moves into adulthood.

Case report: A young athlete with no prior cardiac symptoms or significant patient medical history went in for a general medical examination in December 2021 where a heart murmur was verified. He was referred to do a heart ultrasound at the Department of Cardiology where the following was described: concentric left ventricular (LV) hypertrophy, BAV with fibrotic changes, mild aortic stenosis and moderate to severe aortic regurgitation. Coronarography was performed in February 2022 with no significant stenoses. Given the ultrasound findings, he was hospitalized in Clinical Hospital Centre (CHC) Zagreb and had undergone successful aortic valve replacement surgery. Postoperative pharmacotherapy was as follows: warfarin, bisoprolol, acetylsalicylic acid, pantoprazole. The patient was sent back to CHC Osijek in October 2022 after his general physician noticed an elevation of inflammatory parameters in laboratory tests: Klebsiella pneumoniae was isolated in urine cultures. He was treated with broad – spectrum antibiotic therapy (vancomycin, meropenem, rifampicin). A transthoracic (TTE) and echocardiogram (TEE) confirmed pericardial effusion, predominantly alongside the posterior wall of the heart with LV accretions without convincing signs of endocarditis. Control TEE and TTE performed two weeks later showed regression of pericardial fluid. Further post – procedural course was without complications.

Conclusion: With a normal life expectancy, BAV must be closely monitored and treated if and when symptoms initially occur.

Keywords: bicuspid aortic valve, transoesophageal echocardiogram, transthoracic echocardiogram

CR143

Hemoglobin-to-red-cell distribution width ratio as a novel predictor in different conditions

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Introduction: Hemoglobin and red cell distribution width are both widely available and routinely measured in blood tests. The hemoglobin-to-red cell distribution width ratio (HRR) has been introduced as a new potential marker for predicting the clinical course and outcome in patients with various types of cancer, cardiovascular and cerebrovascular disease.

Review: Data were taken from PubMed. Malignant diseases in which the prognostic value of HRR was investigated included: diffuse large B-cell lymphoma, pulmonary large-cell neuroendocrine carcinoma, esophageal squamous cell carcinoma, and nasopharyngeal cancer. Low HRR is associated with shorter overall survival, higher incidence of advanced stage, and overall poor prognosis with worse outcomes. Studies of cardiovascular disease revealed that low HRR is a significant prognostic tool for predicting heart failure mortality and cardiovascular hospitalizations. It was also concluded that low HRR is predictive of mortality after percutaneous coronary intervention (PCI) among patients with coronary atherosclerotic disease. Except for mortality, lower HRR on admission was an effective predictor for contrast-induced nephropathy in elderly patients with myocardial infarction undergoing emergency PCI. Ischemic stroke patients with atrial fibrillation with a reduced HRR are more likely to have a higher risk of all-cause mortality. A large retrospective study found low HRR being inversely associated with increased all-cause mortality in patients with sepsis-associated encephalopathy in intensive care units.

Conclusion: Further studies are required to standardize the HRR cutoff value and investigate whether HRR can be incorporated into risk assessment models for predicting adverse prognosis in this and some other conditions.

Keywords: Hemoglobin, Red Cell Index

CR144

Proteinuria and empty sella syndrome as one of the complications of morbid obesity

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Introduction: Obesity, as one of the significant public health problems is described as an unhealthy excessive accumulation of body fat, and it's associated to many comorbidities. The aim was to present a patient with a series of comorbidities caused by morbid obesity.

Case report: This case presents a 35-year-old patient, initially examined for general weakness and oliguria. The diagnosis of unspecified proteinuria was established by clinical examination, and the perihilar variant of focal segmental glomerulosclerosis (FSGS), secondary to obesity (body mass index-BMI at the time was 45) was established by biopsy. She was also diagnosed with hypertension and sleep apnea. An endocrinological examination was also carried out, which established prediabetes. Dapagliflozin was introduced into the therapy, after which she developed acute pancreatitis. In addition, she was also diagnosed with hypocorticism, which, along with subsequent anamnestic data on headache, nausea and vomiting, raised the suspicion of empty sella syndrome. The diagnosis was ultimately confirmed by magnetic resonance imaging. Also, she was examined several times by a psychiatrist due to a depressive disorder. Considering the severely impaired psychophysical condition as well as the fact that the BMI increased to 50, the patient was recommended bariatric surgery, to which she agreed.

Conclusion: Although obesity is one of the leading causes of mortality, many people still take it lightly. This case is interesting because it simultaneously describes the complications of frequent consequences of obesity, such as diabetes, emphasizes the breadth of possible complications, and at the same time reminds the existence of other clinically relevant complications such as FSGS and empty sella syndrome, which should also be considered, and shouldn't be overlooked.

Keywords: Empty sellae syndrome, FSGS, obesity

CR145

Congenital syphilis – not solely a blast from the past

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Introduction: Congenital syphilis is a fetal infectious disease caused by Treponema pallidum. It is acquired in the uterus during pregnancy from mother with active infection. This spirochete has earned its reputation as the "great imitator" due to various clinical presentations.

Case report: We present a case of 5-week-old male who was admitted to the hospital due to fever and reddish skin lesions, first on his face, then spread all over his body two days later. He was alert, but febrile, irritable and lethargic. His vital signs were normal. Physical examination revealed confluent copper red maculopapular areas with central desquamation. He had anaemia (E 2.8, Hb 86), thrombocytopenia (60), hyperbilirubinemia, elevated inflammatory parameters (CRP209.5, PCT 82.3) and hepatosplenomegaly. The infant was born at 36+1 gestational week via vaginal delivery from a 17-year-old mother who didn't make her first antenatal appointment until 30th week of gestation. An itchy rash appeared on her distal extremities during the 3rd trimester, treated with topical steroids. After childbirth, her overdue antenatal tests showed that she had reactive syphilis serology tests (anti-TP IgM and IgG positive, RPR positive, TPHA 1:1280). An infants' laboratory workup confirmed positive TPHA (320), antiTP (CLIA) (22.9) and RPR (16). The patient received a 10-days course of intravenous aqueous penicillin G and then intramuscular benzathine penicillin after which he was discharged with normal laboratory parameters and without any signs of disease.

Conclusion: The main purpose of this report is to emphasize the importance of routine antenatal screening in order to prevent this severe and possibly life-threatening infection.

Keywords: antenatal screening, congenital syphilis, prevention

CR146

Wunderlich syndrome – a case report

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Introduction: Angiomyolipomas (AMLs) are neoplasms which consist of tissue resembling blood vessels, smooth muscle and adipose tissue. Even though AMLs tend to be asymptomatic and generally do not require treatment, they may cause a condition known as Wunderlich syndrome, a non-traumatic spontaneous acute renal hemorrhage into the subcapsular and perirenal space.

Case report: A 47-year-old-woman presented to the emergency department with 2 hours of severe, dull pain in the right hemiabdomen with symptoms of nausea and vomiting. She denied changes in her appetite and bowel habits. Physical examination showed no gross abnormalities. Laboratory workup revealed normocytic anemia, thrombocytopenia and slightly elevated CRP. In patient's medical records it was found that she is under active surveillance for right renal angiomyolipoma. She was immediately referred to MSCT scan of the abdomen and pelvis. It detected a fat-containing heterogenous mass arising from the lateral aspect of the right kidney measuring approximately 8.5x7cm. Contrast extravasation into the surrounding tissue with huge perirenal hematoma extending into the pelvic cavity was indicative of significant active ongoing bleeding. No signs of right renal vein infiltration were found. Urgent transcatheter arterial embolization of AML by microcoils was performed. Additionally, the patient received a 10-days oral course of ciprofloxacin. During outpatient follow-up, there was a reduction in AML size with normal kidney function.

Conclusion: This case report is a reminder that it is important to think about rare conditions that can be life-threatening if left undiagnosed.

Keywords: angiomyolipoma, embolization, hemorrhage

CR147

Heart transplantation in female patient due to inherited arrhythmogenic right ventricular cardiomyopathy (ARVC)

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Introduction: Arrhythmogenic right ventricular cardiomyopathy/dysplasia (ARVC/D) is an inherited cardiomyopathy that causes gradual replacement of the myocardium with fatty tissue and can lead not only to unstable heart rhythms and sudden cardiac death but also heart failure. It is characterized by autosomal dominant inheritance and poorly understood reduced penetrance of mutations in desmosome-encoding genes.

Case report: We present a case of a 31-year-old female patient who underwent heart transplantation after years of treatment for ARVC. At the age of 13, patient presented at the family doctor's office with recurrent syncope when initial assessment showed electrocardiographic abnormalities. Final diagnosis was then set by following ultrasound examination and genetic analysis which revealed heterozygotic mutation of plakophilin-2 (PKP-2). (Two brothers and mother were also confirmed as carriers of the same gene mutation.) At the age of 16 patient had implantable cardioverter-defibrillator (ICD) placement. As cardiomyopathy progressed, left ventricular failure also developed resulting in reduced ejection fraction of left ventricle and elevated N-terminal pro B-type natriuretic peptide (NT-proBNP) levels which suggested the need for heart transplantation in this patient. Patient received heart transplantation at the age of 30 followed with immunosuppressive and antiaggregation therapy and is continuously monitored through regular controls with family physician and cardiologist.

Conclusion: ARVC is a rare but severe and progressive genetic disease. With this case we want to emphasize the importance of early recognition in patients with symptoms and genetic testing in close relatives (who can even be asymptomatic) where the family doctor can really contribute to carrying out a quality screening.

Keywords: arrhythmogenic right ventricular dysplasia, genetic predisposition, heart transplantation, family physician

CR148

Stereotypical behavior or organic changes?

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Introduction: As doctors, we often encounter elderly patients. The transition from living independently to losing the ability to care for themselves is a crucial phase of their life which can be challenging for some people. This causes resistance that can lead to conflicts of many kinds. We can mistake their psychiatric symptoms for dissatisfaction produced by life. The purpose of this case report is to illustrate a scenario in which we should be extremely vigilant for signs of potential psychosis.

Case report: Since 1982, our patient has been in psychiatric treatment. From that time on she has not been taking any pharmacotherapy nor has been properly diagnoses until recently, in the year 2017. At that time her family doctor sent her to a psychiatrist with a diagnosis of organic delusional disorder. Her condition peaked in 2023 when it became apparent that she was experiencing significant organic changes. If her symptoms had been identified when they first manifested, she might have received far better care and understanding from her environment. Symptoms of persecution in elderly are so common in daily life that we frequently pass them off as typical behaviour. This case demonstrates the need for psychiatrics, primary care physicians, and senior patients' families to exercise greater caution when dealing with this kind of behaviour.

Conclusion: When treating elderly patients, particularly those in retirement homes, we should be more cautious about any organic changes in their psyche and not attribute their problems to stereotypical behavior of older people and therefore overlook their symptoms.

Keywords: Confusion, Elder Mistreatment, Geriatric Psychiatry, Health Services for the Aged, Organic Mental Disorder

CR149

Restored sinus rhythm via Bachmann's bundle: a case report

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Introduction: Bachmann's bundle is an inter-atrial muscular bundle that is considered to be the main pathway of interatrial conduction.

Case report: We present the case of a 65-year-old male patient who was hospitalized three times due to electrophysiology studies (EPS) and ablation of atypical atrial flutter (aAFL). He was hospitalized again due to persistent aAFL recurrence. EPS was performed, during which a 3D mapping of both atriums was done and macro-re-entry tachycardia dependent of cavotricuspid isthmus with large right atrial scar was verified. An ablation line connecting tricuspid annulus and superior vena cava was done using radiofrequency ablation (RFA) and the tachycardia was terminated after which atrial and ventricular asystole was monitored, with a spontaneous junctional rhythm (40/min) occurring after 5 minutes. Junctional rhythm activated the right atrium, however did not impact the sinus node, which had its activity of 60/min, but did not activated the right atrium although being faster than junctional rhythm. The sinus node was definitely separated from the atrioventricular node by the ablation lines. Moreover, a sinus rhythm with first activation from the left atrium and prolonged PQ interval was noted afterwards. Intracardiac potentials detected that the sinus node was activating both atriums, whose impulses were transmitted via the Bachman bundle to the left atrium, and then to the AV node. A post-procedural stress test was performed, and chronotropic competence was proved with patient being asymptomatic.

Conclusion: This case highlights the potential role of the interatrial bundle in impulse conduction when it is not possible via conventional pathways.

Keywords: Ablation; Bachmann's bundle; sinus rhythm; tachycardia.

CR150

A rare cause of hypercalcemia: a case report

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Introduction: The most common causes of hypercalcemia are primary hyperparathyroidism and malignancy.

Case report: We present the case of a 40-year-old female patient with an intellectual disability who was admitted to the emergency department (ED) with severe symptomatic hypercalcaemia (total serum calcium level was 4.2 mmol/L) and acute renal failure (ARF). ARF was caused by a combination of dehydration and hypercalcaemia. Laboratory workup was done, and parathormone (PTH) values were within the normal range, which ruled out parathyroid pathology. Considering the condition, it was necessary to rule out paraneoplastic syndrome, i.e., lung, breast, colon and stomach tumours. Endocrinological findings did not support the milk-alkali syndrome either. Sarcoidosis (a granulomatous disease that can cause hypercalcaemia) was ruled out by an ophthalmologist's and pulmonologist's examination (angiotensin convertase enzyme (ACE) serum activity, bronchoscopy, lung computer tomography (CT)). Haematological examination excluded multiple myeloma. A more detailed anamnesis ruled out the possibility of intoxication with vitamin D and antifreeze. Regarding to intellectual disability and single episode of hypercalcaemia, genetic testing was performed to rule out hereditary syndromes (i.e. tubulopathies) that can cause hypercalcaemia, however the test results were normal. Repeated anamnesis revealed the patient's recurrent vomiting habits, most likely as part of bulimia. Considering that positron emission tomography CT (PET-CT) and PTH-related protein definitively ruled out a (para)neoplastic condition, and all other findings were normal, the only explanation is that hypercalcaemia and consequent ARF were caused by an excessive vomiting.

Conclusion: This case emphasizes the importance of taking a detailed and repeated anamnesis, which is sometimes the most useful diagnostic method in the ED.

Keywords: acute renal failure; bulimia; hypercalcaemia; vomiting.

CR151

Polymorphic ventricular tachycardia caused by an antibradycardia pacemaker with the exhausted battery due to R on T phenomenon

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Introduction: Pacemaker implantation has proved to improve survival and to reduce symptoms related to bradycardia. However, a series of complications related to its implantation have been reported, including a ventricular fibrillation, which is extremely rare.

Case report: We present a case of an 80-year-old man with a non-ischemic cardiomyopathy who presented with repeated syncope compliant with appropriate ICD activation. He was implanted with a right-sided single-chamber pacemaker due to the 2nd degree AV block in 2012. In 2022, he was implanted with a left-sided single-chamber ICD. During the ICD implantation, the pacemaker's battery was turned off - OVO mode. At the first scheduled follow-up, the patient reported five syncope. A total of 44 episodes of ventricular arrhythmias were registered, out of which 5 were terminated by shocks. More detailed analysis of arrhythmic episodes showed that our patient had iatrogenic ventricular arrhythmias caused by an inappropriate pacing of a turned-off pacemaker with an exhausted battery. The pacemaker's asynchronous activity triggered polymorphic ventricular tachycardia' (VT) episodes, most likely due to R on T phenomenon, which had caused shock deliveries by ICD. Taking into account the unpredictable end-of-life behaviour of the turned-off pacemaker, the battery was removed, after which the patient had no syncope and no ICD activation.

Conclusion: Although it is known that pacemaker can have proarrhythmic effect, to the authors' best knowledge this is the first report of the iatrogenic polymorphic VTs caused by an interaction of turned-off pacemaker and consequential ICD activation.

Keywords: pacemaker; R on T phenomenon; ventricular tachycardia.

CR152

Primary left atrial angiosarcoma presenting with multiple extracardiac manifestations: a case report

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Introduction: Primary cardiac tumors are extremely rare and mostly benign. Most of the primary malignant cardiac tumors are sarcomas. At the time of presentation, most of the cases are untreatable and have already metastasized.

Case report: We present a case of an otherwise healthy 43-year-old Caucasian female with multiple extracardiac embolization caused by left atrial angiosarcoma. She initially presented with acute thromboembolism of the left popliteal artery, followed by multiple infarctions of the spleen one week after, as well as acute cerebral embolization during hospitalization. A large heterogenous mass in the left atrium was seen on the transthoracic echocardiography and transesophageal echocardiography (TEE), first believed to be a thrombus. Further work-up (MSCT coronary angiography, cardiac CT, whole body PET CT) showed a large, poorly vascularized mass limited to the left atrium with characteristics of sarcoma, with no metastases found. Histology of the aspired embolus after the cerebral infarction confirmed a primary mesenchymal sarcoma, most likely an angiosarcoma. She was operated and the mass was removed in toto. Histology of the tumor reconfirmed an angiosarcoma. She started adjuvant chemotherapy with paclitaxel. During 6-month follow-up, no recurrence of the tumor or metastases has been noted.

Conclusion: In this case we emphasize the role of early comprehensive cardiac imaging since clinical presentation of cardiac tumors can vary significantly. A high level of suspicion is necessary for early diagnosis and management of primary cardiac tumors since delayed action fosters worse outcomes.

Keywords: Angiosarcoma; left atrium; primary cardiac tumor

CR153

Grade 2 chondrosarcoma of the distal femur with non-aggressive radiologic presentation

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Introduction: Chondrosarcoma is a malignant mesenchymal tumor that is the second most common primary bone sarcoma. Differentiating enchondromas and low-grade chondrosarcomas can be challenging based on radiologic findings alone.

Case report: A 38-year-old female with left knee pain on exertion was admitted to the Department of Orthopaedic Surgery due to worrisome magnetic resonance imaging (MRI) findings. MRI scan revealed an oval, expansive mass measuring 45x27x23 mm in the distal femur with sharply defined margins, without cortical erosion or periosteal reaction. Bone scan showed late phase uptake. A biopsy of the lesion revealed a chondroid neoplasm with areas of hypercellularity and nuclear atypia, which was suspicious for malignancy. However, further patho-radiologic correlation stated that the mass was more likely an enchondroma due to the absence of radiological patterns that would suggest aggressive behavior of the lesion. The pathological specimens and imaging data were sent to another institution in Graz, Austria, where grade-2 chondrosarcoma was suspected and complete resection of the lesion was suggested. An en bloc resection of the tumor was performed and sent to pathology. A shaped allograft from the bone bank was placed between the resected bone fragments and fixed with an LCP (locking compression plate) titanium plate and screws. Final histology revealed that it was indeed a grade-2 chondrosarcoma with negative margins. The patient is in follow-up.

Conclusion: Imaging findings are not reliable in distinguishing enchondromas from low-grade chondrosarcomas. Therefore, biopsy and histologic findings play a critical role in the diagnosis of chondroid lesions. A careful multidisciplinary approach is suggested even in benign cases.

Keywords: Biopsy; Chondrosarcoma; Orthopedic Procedures

CR154

Acute respiratory insufficiency in a one year-old boy due to foreign body – Case report

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Introduction: Obstruction of the airways by foreign bodies occurs more frequently in children than in adults, primarily due to the anatomical characteristics of the respiratory organs in infants and young children (they have a small diameter, the mucosa is better vascularised).

Case report: A one-year-old boy was admitted to the pediatric clinic in Osijek for treatment of obstruction of the middle and lower right bronchial lobes complicated by acute respiratory insufficiency. Before the bronchoscopy, an X-ray of the heart and lungs was performed, where the peribronchovascular pattern was emphasized on both sides, perihilar, without other pathological shadows. After that, a bronchoscopy was performed due to the suspicion of a foreign body in the respiratory system with the use of lidocaine. The right intermedius bronchus was completely obstructed by a foreign body, which was successfully dislocated in the trachea with a three-pronged grasper, but the extraction was unsuccessful. The patient was intubated and the foreign body was fragmented with biopsy forceps and extracted completely with a combination of forceps extraction and suction. Reevaluation shows post-obstructive secretion with thick gelatinous content - mucus/foreign body, which is extracted. During the procedure, the acutely aspirated foreign body mentioned by the mother was not found, but another one which, based on the findings and chronic changes and granulations, was previously present in the right bronchus intermedius, but the CT (Computed Tomography) scan and X-ray were normal.

Conclusion: This case shows us that an aspirated foreign body does not always have to be shown on primary screenings such as X-ray and CT-scan.

Keywords: foreign body, pediatrics, respiratory insufficiency

CR155

Double adjuvant therapy of stage III malignant melanoma – a case report

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Introduction: Pharmacological treatment of stage III malignant melanoma (MM) is carried out after a complete tumor resection. For patients with a positive BRAF mutation, recommended adjuvant treatment is with a BRAF or MEK inhibitor. However, if there is no BRAF mutation, then post adjuvant immunotherapy treatment is recommended. The aim of this case report is to present the benefits of double adjuvant therapy in the treatment of MM.

Case report: A 41-year-old man had an excision of a cutaneous tumor in the inguinal region in March 2020. Pathohistological diagnosis (PHD) was nodular melanoma; Breslow III (depth 2,7 mm), Clark level III. In April 2020 the patient had a reexcision of the scar tissue with a sentinel lymph node biopsy (SNLB) which was positive. Based on the 8th edition of American Joint Committee on Cancer (AJCC) classification, the tumor was classified MM, stage III. Due to a positive BRAF mutation, the patient started a year-long post adjuvant therapy with a BRAF/MEK inhibitor. In March 2022, the patient had a recurrent tumor arising from the scar tissue, as well as a satellite lesion (PHD: MM, again stage III). Based on the AJCC guidelines, due to a newly diagnosed stage III melanoma, the patient was indicated a second adjuvant therapy with pembrolizumab (immunotherapy), regardless of a positive BRAF mutation.

Conclusion: This case report highlights the value of the American Joint Committee on Cancer (AJCC) staging and treatment guidelines, as well as the importance of post adjuvant therapy in the treatment of stage III malignant melanoma. This patient has benefited from double adjuvant therapy due to aggressive melanoma recurrence.

Keywords: adjuvant chemotherapy, immunotherapy, malignant melanoma

CR156

Durvalumab after chemoradiotherapy in the treatment of stage III non-small cell lung cancer

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Introduction: Stage III non-small cell lung cancer (NSCLC) includes a heterogeneous presentation of nonmetastatic inoperable tumor. Treatment of choice for inoperable stage III NSCLC is concurrent platinum-based chemoradiation (CCRT). Recently, durvalumab immunotherapy has been widely used as maintenance therapy after CCRT, as the results of the PACIFIC trial showed that the estimated 5-year overall survival (OS) rate was 42.9% for durvalumab and 33.4% for the placebo group.

Case report: A 47-year-old man was diagnosed with inoperable stage III lung adenocarcinoma (NSCLC) of the right inferior lobe in March 2022. Pathohistological diagnosis (PHD) confirmed positive programmed death-ligand 1 (PD-L1) expression in 5% of the tumor cells, negative epidermal growth factor receptor (EGFR) mutation, negative anaplastic lymphoma kinase (ALK) mutation and negative ROS proto-oncogene 1 rearrangement. The patient first underwent radiation therapy (tolerance dose (TD) 60 Gy/ 30 fractions) and paclitaxel/carboplatin chemotherapy. After that, a Computed Tomography (CT) scan was preformed and it showed regression of the tumor. In August 2022, the patient started durvalumab immunotherapy and a follow-up Multislice Computed Tomography (MSCT) scan was preformed which showed a 14% decrease in the size of the tumor. The patient has had nine cycles of durvalumab immunotherapy so far and a treatment response evaluation is expected to be performed soon.

Conclusion: This case report shows recent advances in the treatment of inoperable stage III NSCLC. It highlights a new standard-of-care treatment: consolidation immunotherapy given after definitive chemoradiotherapy.

Keywords: immunotherapy, non-small-cell lung carcinoma, programmed cell death 1 ligand 1

CR157

Medulloblastoma presented as torticollis in paediatric patient

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Introduction: Medulloblastoma is the most common malignant tumour in the paediatric population. It is usually located in the centre of the cerebellum, and presents with vomiting, fatigue, ataxia, hydrocephalus, and walking difficulties. Additionally, one rare sign observed when the tumour is located more laterally is torticollis, a dystonic condition defined by an abnormal, asymmetrical head or neck position. The aim of this case report is to emphasize the importance of thorough examinations of any symptoms related to this life-threatening diagnosis.

Case report: We present a 3-year-old boy with a head tilt to the left side and limping on his left leg. Primary orthopaedic diagnosis was myogenic torticollis, a common condition in younger children. Wearing a collar, the first-line treatment, did not give the expected positive results. MRI examination showed an expansive polycystic tumour in the right cerebellar hemisphere, compressing the fourth ventricle and displacing the brainstem to the left. Considering that CNXI innervates the sternocleidomastoid muscle, compression of its right spinal root is the anatomical explanation for the left-sided head tilt. After neurosurgical operative tumour ablation and oncologic HIT 2000 BIS4 protocol treatment, the patient did not have any relapses for 11 years.

Conclusion: While torticollis is commonly caused by an injury, it can rarely be caused by tumour in the posterior cranial fossa. This case illustrates the need for a meticulous search of the underlying cause of torticollis in affected patients, as it can be an indicator of various serious conditions.

Keywords: medulloblastoma, nerve compression, torticollis

CR158

Pulmonary artery hypoplasia in 3-year-old child with acute lymphoblastic leukemia: case report

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Introduction: Acute lymphoblastic leukemia (ALL) is the most common malignant disease in children, accounting for 25% of all childhood malignancies. In Croatia, around 30 new cases of ALL are reported annually. Typical clinical features are fever, fatigue, pallor, bruising, hepatomegaly, splenomegaly, and lymphadenopathy. The treatment is divided into induction, consolidation, and maintenance therapy.

Case report: A 3-year-old girl initially presented with high fever, lassitude, pallor, cough, and vomiting. The initial complete blood count showed pancytopenia, so she was admitted to the local hospital where they suspected lymphoproliferative disease and transferred her to our Center. The 'common' ALL was diagnosed. The treatment according to the standard protocol started. Since the chest X-ray detected the enlargement of the cardiac silhouette, the heart echocardiography was performed. It raised suspicion of the coarctation of the aorta. Therefore, a computed tomography angiography scan was performed which revealed the left pulmonary artery hypoplasia. Heart catheterization was suggested after the end of induction treatment. Six months after the diagnosis our patient is in good condition, in the first complete remission in pediatric hematologist and cardiologist follow-up.

Conclusion: In our case, the initial diagnostic assessment of the newly diagnosed ALL showed suspicion of heart disease which was later confirmed. One should always bear in mind the possibility of another disease present alongside the primary disease. Unusual findings should never be ignored as they can lead to the failure of making a correct diagnosis thus having a significant impact on the outcome.

Keywords: ALL, chemotherapy, congenital heart disease

CR159

Atypical presentation of perforated peptic ulcer: a case report

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Introduction: Peptic ulcer disease (PUD) is a condition that affects approximately 4 million people annually. Patients with PUD are usually asymptomatic or have mild dyspepsia. However, PUD may complicate with perforation and gastrointestinal bleeding. Perforated peptic ulcer (PPU) is a medical emergency which manifests in the vast majority of cases with abdominal pain, tachycardia, and abdominal rigidity and is associated with the mortality rate of up to 30%.

Case report: A 79-year-old patient flying on a plane suddenly experienced shortness of breath, became cyanotic and somnolent. The patient was immediately examined by the doctor at the airport. Blood oxygen saturation was 72%, blood pressure was immeasurable and severe bradycardia was present. No other clinical remarks were noted. Oxygen flow rate was set at 15 L/min and the patient was quickly transported to the hospital. Initial blood panel revealed acidosis and severe hypoglycemia. Ultrasound and computed tomography were performed which showed massive free fluid in the abdominal cavity. PPU was highly suspected, and the patient was immediately taken to the operative room. Upper median laparotomy was performed which confirmed PPU. Diffuse peritonitis and cirrhotic liver were also noted. Finally, the patient has been admitted to the intensive care unit where he is recovering very well.

Conclusion: This case of a patient presenting with atypical PPU emphasizes the importance of diagnostic equipment availability, as well as the synergy between first responders, emergency room physicians and the operating room staff needed for the patient to have the optimal outcome.

Keywords: Emergency medicine, peptic ulcer, surgery

CR160

Peripheral vein catheterization and COVID-19 infection are risk factors for superficial thrombophlebitis

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Introduction: The spectrum of known clinical effects of COVID-19 disease is diverse and expanding. Respiratory tract is the most affected site, but multiple organs may be affected. SARS-CoV-2, among other complications, can be a cause of local hypercoagulable state at peripheral venous catheter insertion and can lead to superficial thrombophlebitis. Venous thromboembolism (VTE), such as deep vein thrombosis (DVT) and pulmonary thromboembolism (PE) are some serious complications. A significant incidence of thrombosis in hospitalized patients with COVID-19 was reported early during the pandemic.

Case report: We present a 37-year-old unvaccinated patient with prolonged symptoms of coronavirus disease 2019. Patient presented with respiratory and musculoskeletal symptoms and was febrile for total of 14 days. He was hospitalized due to bilateral interstitial pneumonia and low blood oxygen rate and received dexamethasone and thromboprophylaxis with low-molecular-weight heparin (LMWH). During that time thrombophlebitis with cellulitis occurred at venipuncture site in the cubital fossa along with elevated blood D-dimer level. Patient was successfully treated with heparin, cefazolin and local care.

Conclusion: Peripheral vein catheterization during COVID-19 treatment is a risk factor for thrombus formation. Securing the peripheral venous route is a standard procedure in treatment of hospitalized patients, but venous catheter shall be removed as soon as it is no longer required in order to avoid this complication.

Keywords: catheterization, COVID-19, thrombophlebitis

CR161

Hypoglossal canal cyst: a rare pathology

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Introduction: Lesions in the hypoglossal canal are quite uncommon and are usually benign. They include synovial cysts, schwannomas, meningiomas and juxtaarticular cysts. All lesions mostly present with symptoms of unilateral peripheral hypoglossal nerve palsy. Biopsy of these lesions is difficult, so imaging techniques are crucial in the final diagnosis. Treatment depends on multiple factors including aggressivity and growth of the lesion, patient age, comorbidities and severity of symptoms. It mostly consists of a conservative approach, as lesions of the hypoglossal canal often spontaneously regress.

Case report: We present a 78-year-old woman with an extradural cystic lesion in her right hypoglossal canal. The patient's symptoms were dysphagia and heartburn. During physical examination, tongue deviation toward the right was present as well as asymmetry of the tongue morphology. Contrast-enhanced MSCT (multislice computed tomography) of the head and neck showed right unilateral atrophy of the tongue. Contrast-enhanced MRI (Magnetic resonance imaging) showed an extradural lesion extending through the entire canal and causing bone resorption. Due to patient age and benignity of the lesion, observation with myofunctional therapy was the treatment of choice.

Conclusion: Hypoglossal nerve palsy is a rare pathology with many central and peripheral causes.

Diagnosis should be made through anamnesis, good physical examination and imaging. It should be noted that biopsy is usually not performed due to its challenging and high risk nature.When deciding treatment, all factors, including medical condition, patient and surgery factors and possible outcome, play a significant role.

Keywords: cyst, hypoglossal canal, palsy

CR162

From transient ischemic attack to glial tumour, maybe

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Introduction: Epileptic seizure can be the symptom of transient ischemic attack (TIA) or cerebral infarction. Furthermore, brain tumours are often presented with epileptic seizures. Computed tomography (CT) and magnetic resonance imaging (MRI) of the brain are usually used to distinguish these conditions, but what if the results are not clear enough?

Case report: A 62-year-old male presented with loss of vision on the right side of the visual field on the right eye, nausea and confusion. While waiting in the Emergency Department, the patient developed a generalized tonic-clonic seizure. CT scan of the brain did not show any pathomorphological substrate. After a few hours, the patient's neurological status was normal. He was admitted to the Clinic of Neurology with the suspected diagnosis of TIA. During his stay in the hospital, the patient was treated with antiplatelet therapy. He did not have any symptoms or seizures. Electroencephalography (EEG) showed focus of cerebral dysfunction left frontocentrotemporal, which indicates a pathologic substrate in that area, reduces the likelihood of TIA and indicates some other pathological condition. A brain MRI showed thickening of the cortex of the left temporooccipital lateral gyrus. The suspected diagnoses were cerebral infarction or focal cortical dysplasia. One month later, a follow-up MRI showed the differential diagnosis may also be glial tumour with vasogenic oedema.

Conclusion: Occurrence of an epileptic seizure in a healthy individual is a clear warning for the persons health. Therefore, thorough diagnostic is essential. This case is an example of a wide range of differential diagnoses, where the definite diagnosis can only be determined with pathohistological finding.

Keywords: cerebral infarct, epileptic seizure, glial tumour, transient ischemic attack

CR163

Innovative Whole Genome Joint Analysis for identification of rare non-coding causative variants - case report of a child with intellectual disorder

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Introduction: Pediatric onset diseases are highly related to genetic etiology. Whole genome sequencing (WGS) can detect various genome alterations, including non-coding variants. Because of its significant diagnostic yield, WGS is highly integrated into clinical practice.

Case report: We present a five-year-old girl with Intellectual developmental disorder, autosomal dominant 35 (MRD35), caused by a mutation in the PPP2R5D gene, encoding a Serine/threonine- protein phosphatase 2A which is involved in the negative control of growth and cell division. At one year, she presented with craniofacial dysmorphia, a broad and sunken nasal bridge, dark circles under the eyes, macrocephaly, a high palate, fine tremor, hypotonia, and neurodevelopmental delay. Later, she manifested delayed speech and language development and autistic behavior. A joint analysis of the child's and her family's entire genome was done under the "CroSeq-GenomeBank" project. As a result, a rare non-coding causative variant in the PPP2R5D gene in the heterozygous composition was identified, and she was diagnosed with MRD35. Current treatment is symptomatic, including multidisciplinary habilitation and developmental and speech therapy.

Conclusion: Rare pediatric diseases are difficult to recognize based on clinical features alone, which is why genetic testing is critical to help establish the diagnosis. Early diagnosis is possible using innovative techniques such as Joint-WGS. The infrastructure of the "CroSeq-GenomeBank" has brought this foundation of personalized and precise medicine to Croatia, keeping up with highly developed countries.

Keywords: "CroSeq-GenomeBank" project, Intellectual Diseases, Mutation, Whole Genome Sequencing

CR164

Anorexia nervosa: an uncommon cause of elevated liver enzymes

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Introduction: Protein-calorie malnutrition is a severe and complex condition associated with anorexia nervosa. Without proper treatment, it can damage various organs and be life-threatening.

Case report: A 21-year-old female patient was referred to the emergency department due to a severe form of anorexia nervosa with a body mass index (BMI) of 11.41 kg/m^2. She had polycystic ovaries in addition to an eating disorder and an anxiety-depressive disorder. Physical examination revealed psychomotor slowdown, sarcopenia, and diffuse abdominal tenderness. Laboratory workup showed marked hepatocellular damage with elevated liver enzymes: aspartate transaminase 2964, alanine transaminase 1755, creatine kinase 2496, lactate dehydrogenase 1481, alkaline phosphatase 906 U/L, low albumin 32 g/L and prothrombin time 44%, elevated bilirubin 28 µmol/L and low platelets 60 x 10^9 /L. Abdominal ultrasound showed hepatomegaly, without vascular damage or other abnormalities. Additional laboratory testing and history eliminated viral hepatitis and other causes of liver injury, including autoimmune, metabolic and toxic damage. The patient was hospitalized in the intensive care unit and treated by a combination of parenteral and oral nutrition, which achieved a satisfactory initial recovery of body mass with a weight gain of 12.4 kg (body weight 41.4 kg, BMI 17.1 kg/m^2) that was followed by a normalization of liver enzymes. The course of hospitalization was complicated by the development of central venous catheter sepsis caused by a coagulase-negative staphylococcus, which was successfully treated with intravenous vancomycin.

Conclusion: Anorexia nervosa is a rare cause of elevated liver enzymes. With proper treatment, the patient successfully recovered and liver enzymes normalized.

Keywords: Anorexia nervosa; elevated liver enzymes; malnutrition,

CR165

Foreign body in the esophagus - an accident in setting or something more? What is the definite treatment?

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Introduction: Eosinophilic esophagitis (EoE) is chronic, immune/antigen mediated esophageal disease characterized by symptoms related to esophageal dysfunction and eosinophil-predominant inflammation with prevalence increasing in both children and adults. In children, symptoms include abdominal pain, vomiting, gastroesophageal reflux symptoms, dysphagia, food bolus impactions, and failure to thrive, often making the diagnosis challenging. Proton pump inhibitors are considered one of several first-line treatment options, alongside topical steroids and elimination diets. The aim of long-term therapy is to avoid disease recurrence and complications.

Case report: We present a case of a 13-year-old boy who was referred to the pediatric clinic due to suffocation, shortness of breath, coughing and pain in the jugular projection, all caused by food bolus impaction in the esophagus. Urgent upper endoscopy was performed. During endoscopy, the bolus passed further through GI tract. Esophagus appeared inflamed with furrows and rings (trahealization), findings characteristic for EoE. Diagnosis was confirmed by histology (>25 eosinophils per HPF), and proton pump inhibitor (pantoprazole) was started as a first line treatment. In the meantime, allergology results showed antigen specific immunoglobulin E to egg white (0.57 kU_A/L) and cow's milk (0.80 kU_A/L) and elimination diet was introduced. The patient was followed endoscopically but the remission was reached only after topical corticosteroid (fluticasone) was added as the final line in therapy.

Conclusion: EoE can present with medical emergency due to food impaction. A multidisciplinary approach (gastroenterologist, allergologist, dietitian, pathologist) is recommended for managing patients affected by EoE, given the complexity of its treatment.

Keywords: allergy ; elimination diet ; eosinophilic esophagitis

CR166

Short stature in children - deficiency of growth hormone or is it something else?

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Introduction: Growth hormone (GH) deficiency results in short stature. However, malabsorption and malnutrition as in the case of inflammatory bowel diseases (IBD) can also cause growth deceleration in children. This case report stresses the importance of looking for other causes (including Crohn's disease (CD)) when a child with short stature does not achieve the expected growth in height despite adequate therapy with GH.

Case report: We present a case of a 13-year-old girl who was treated because of growth restriction (height 132 cm; z-score -5.86) due to GH insufficiency. Despite two years of GH substitution, she showed no significant progress. Also, she had reduced body weight (21,7 kg, z-score -3.84; BMI 12.5kg/m^2, z-score -4.22), she was anemic and had repeatedly elevated inflammatory markers (CRP > 23.3mg/L, ESR 32mm/h). Further work-up was performed including colonoscopy which confirmed Crohn's disease. To induce remission exclusive enteral nutrition was started with azathioprine as a maintenance therapy. After one month she developed mechanical ileus due to stenosis of hepatic flexure of colon. She underwent a surgical procedure (resection of terminal ileum and a right hemi-colectomy) after which she continued to take azathioprine and remained in remission. Her inflammatory parameters normalized and she started to thrive: in following 2 years she grew 15 cm and doubled her weight (BMI 18kg/m^2, z-score -0.82).

Conclusion: CD causes failure to thrive due to maldigestion and malabsorption. When slow growth persists despite GH replacement treatment, screening for other causes should be considered.

Keywords: Crohn's disease, growth hormone deficiency, short stature

CR167

The Emergence of Hoarseness as an Early Sign of Tuberculosis

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Introduction: Tuberculosis is a bacterial infection that primarily affects the lungs but can also spread to other parts of the body. It is caused by the bacterium Mycobacterium tuberculosis and is spread from person to person through the air when an infected person coughs, sneezes, etc.

Case report: A 40-year-old man presents to his family doctor with hoarseness, dry cough and fatigue. The physician diagnoses him with acute pharyngitis. As the symptoms persist, he visits an otolaryngologist who sets the diagnosis to chronic laryngitis and he is referred for a neck ultrasound. The ultrasound detects lymphadenopathy and a lymph node biopsy is performed. Cytological examination showed a purulent inflammation with elements of granulomatous reaction. A microscopic examination of the sputum with a culture was also performed and pulmonary tuberculosis was confirmed which was also confirmed by a chest X-ray. The pulmonologist referred the patient for hospital treatment that lasted for 4 months and numerous diagnostic procedures were performed. The patient's therapy consisted of antituberculosis drugs isoniazid, rifampin and a vitamin B complex. Further controls with the pulmonologist were recommended.

Conclusion: Due to the rarity of tuberculosis diagnosis in modern times, general symptoms such as coughing and hoarseness can easily be mistaken for diagnoses of mild respiratory illnesses. However, with a more detailed analysis, a tuberculosis diagnosis is established, followed by a long-term hospital treatment which does not result in a fatal outcome as was the case in history.

Keywords: hoarseness, lymphadenopathy, tuberculosis

CR168

Intraventricular hemorrhage as a result of untreated arterial hypertension: a case report

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Introduction: Intracerebral hemorrhage is a sudden bleeding into the tissues of the brain, into its ventricles, or into both. The biggest risk factors for spontaneous bleeding are high blood pressure and amyloidosis. The main goal of this case report is to present an atypical localization of hypertensive intracerebral hemorrhage.

Case report: A patient in his late 40s was brought to the emergency department due to difficulty waking up, slurred speech and drifting while walking. The patient suffers from untreated arterial hypertension. The patient's blood pressure on admission was 230/110. A neurological examination revealed weakness on the right side of the body, symmetrically weakened tendon reflexes. A computed tomography scan was performed, which showed blood in the lateral, third and fourth ventricles, and a shift of the central structures to the right by 7 mm. Computed tomography angiography did not provide convincing signs of arteriovenous malformations and aneurysmal dilatations. The patient was treated with anticonvulsants and antihypertensives. Before the patient's discharge, a control computed tomography scan was performed, which showed regression of the hemorrhagic content. The patient was discharged home with a clinical presentation of mild right-sided hemiparesis.

Conclusion: Untreated arterial hypertension is the cause of hemorrhage in this patient. This case shows an atypical location of the hemorrhagic process which in case of hypertensive intracerebral hemorrhage is usually localized in the three most common locations, namely: basal ganglia, pons and cerebellum.

Keywords: Cerebral Intraventricular Hemorrhage, Hypertension, Intracranial Hemorrhage, Hypertensive

CR169

Hemophagocytic lymphohistiocytosis induced by influenza A virus

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Introduction: Hemophagocytic lymphohistiocytosis (HLH) is an aggressive and life-threatening syndrome of excessive immune activation. This case report aims to show the importance of early recognition and treatment of hemophagocytic lymphohistiocytosis.

Case report: We present a case of secondary hemophagocytic lymphohistiocytosis in a 4-year-old girl. In December 2022, she was admitted to the hospital in Požega due to acute gastroenteritis presented with high fever, vomiting and foul-smelling, watery stool, and consequently, dehydration. The patient's medical history included febrile respiratory and gastrointestinal disease with highly elevated liver enzymes that happened twice earlier that year. Laboratory results showed elevated liver enzymes and LDH, decreased liver function, and high D-dimers. Due to the severity of the disease, the patient was transported to the intensive care unit at Children's Hospital Zagreb. As a result of extremely high ferritin levels, macrophage activation syndrome was suspected and the patient was started on corticosteroid therapy with prednisone. RT-PCR test was positive for influenza type A virus, which was the main trigger for macrophage activation syndrome. Therapy with oseltamivir was introduced. Multiple episodes of highly elevated liver enzymes led to the conclusory diagnosis of hemophagocytic lymphohistiocytosis. The question arises as to whether there will be further relapses. Therefore, the patient will need regular check-ups.

Conclusion: When faced with reoccurring infections and elevated liver enzymes, we should always consider hemophagocytic lymphohistiocytosis in our differential diagnosis because, although rare, it can be fatal without treatment.

Keywords: Hemophagocytic lymphohistiocytosis, Immune activation, Influenza A virus, Macrophage activation syndrome

CR170

Case report: Neuroimaging importance in the diagnosis of acute disseminated encephalomyelitis

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Introduction: Acute disseminated encephalomyelitis (ADEM) is diffuse demyelinating inflammatory disease of central nervous system (CNS), usually occurring recently after immunization or infection with the peak incidence during childhood between 5-8 years of age. While formerly ADEM was considered to be monophasic disease, recent studies shows its´ recurrent and multiphasic forms. Clinically it presents with fever, headache, altered consciousness, ataxia, bladder or rectum dysfunction, optic neuritis etc.

Case report: We report a case of a 10-year-old male patient which presents to pediatric emergency department with acute intermittent urinary retention, after upper respiratory tract infection and worsening of neurologic symptoms in form of malaise, emotional irritability, headache, positive meningeal symptoms, muscle pain with brisk deep tendon reflexes and unsteady gait. Urgent neuroaxis magnetic resonance imaging (MRI) scan shows multifocal disseminated T2-weighted and Fluid attenuated Inversion recovery (FLAIR) hyperintensities, bilaterally and asymmetrically involving insular cortical-subcortical white matter and also affecting basal ganglia (globus pallidus) and both thalamus. In the region of cervical, thoracic spinal cord and conus medullaris, longitudinally transverse myelitis (LETM) was observed, with discreet imbibition of spinal cord lesions on post-contrast scan. Laboratory findings shows the presence of anti-myelin oligodendrocyte glycoprotein antibody (MOG-ab). The patient was treated with high dose steroids and his condition quickly improved. All previously verified demyelinating lesions disappeared on the follow-up MRI.

Conclusion: Neuroimaging helps to exclude other conditions that may mimic the clinical presentation of ADEM, so MRI is currently the modality of choice to confirm the diagnosis.

Keywords: Acute disseminated encephalomyelitis, neuroradiology, pediatrics

CR171

Hypotonia, global developmental delay and psychiatric disorders as sign of 3p26.1 microduplication syndrome

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Introduction: 3p26.1 microduplication syndrome (OMIM # 618922) is a rare and not yet fully understood. A microduplication is involving part of the GRM7 gene (Glutamate Metabolic Receptor 7), the major excitatory neurotransmitter in the central nervous system, and it activates both ionotropic and metabotropic glutamate receptors. The most common features of mutation GRM7 gene are neurodevelopmental disorder with seizures and hypotonia.

Case report: We present a 18-year-old female patient born from the third pregnancy of healthy nonconsanguineous parents, with intrauterine growth retardation (IUGR), like term hypotrophic infant without other anomalies. The neurological examination revealed global developmental and language delay with mild intellectual disabilities. Dysmorphic features present are maxillary prognathism, abnormally-shaped teeth, gothic palate, microretrognathia, badly shaped ears, progressive dextroscoliosis. Between the ages of 17 and 18, she developed psychosis with schizophrenia. Array Comparative Genomic Hybridization revealed a 417.03□kb duplication in the 3p26.1 region. Duplication is involving pathogenic variant of the GRM7 gene.

Conclusion: In the literature there is only one case of microdeletion of this locus and characterised as syndrom of unknown clinical significance. Homozygous or compound heterozygous mutation in the GRM7 gene is an autosomal recessive neurodevelopmental disorder characterized by global developmental delay, seizures and hypotonia, like our case without seizures. Partial duplication of GRM7 gene has been implicated to play a role in psychiatric disorders such as schizophrenia, ADHD, depression and autism spectrum disorder. Our patient showed shizophrenia and depressive episodes. Parents are not available for genetic testing.

Keywords: 3p26.1 microduplication syndrome, global developmental delay, schizophrenia

CR172

Hemorrhagic shock caused by rupture of a liver metastasis, a case report

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Introduction: Metastatic hepatic lesions are a common type of hepatic neoplasm. Spontaneous rupture of a metastatic hepatic lesion, on the other hand, is an extremely rare occurrence. Clinical findings of such a rupture vary from subtle abdominal pain to hemorrhagic shock. Hemorrhagic shock management is based on rapid definitive source control of bleeding and replenishment of blood by transfusion. We present a case of hemorrhagic shock due to a rupture of a hepatic metastasis.

Case report: A 81-year-old male presented to the emergency department following a syncopal episode with nausea and vomiting. He complained of constant diffuse abdominal pain in the past few months accompanied by weight loss. On examination he had signs of acute abdomen with hemorrhagic shock. Emergent explorative laparotomy was done, in which a cirrhotic liver with a ruptured hepatic metastasis was found. Following adequate hemostasis and blood product transfusion, he was transferred to the intensive care unit (ICU). He received the standard of care with analgosedation, antibiotic therapy and supportive measures. On the sixth postoperative day, the patient became hypotensive and dyspneic, pulmonary embolism was confirmed so he received anticoagulation therapy. His state gradually worsened with frequent episodes of hypotension and signs of renal and hepatic failure and the patient arrested on the ninth postoperative day, followed by an unsuccessful attempt at cardiopulmonary resuscitation.

Conclusion: Hemorrhagic liver metastases are so uncommon that the diagnosis is rarely made preoperatively. Regardless of treatment, due to a non-specific and severe clinical presentation, hepatic metastatic rupture has a very poor prognosis.

Keywords: Acute Abdomen; Hemorrhagic Shock; Liver Neoplasms; Pulmonary Embolism; Rupture

CR173

Cystic fibrosis transmembrane conductance regulator (CFTR) modulators therapy for cystic fibrosis in a lung transplant candidate: a case report

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Introduction: Cystic fibrosis (CF) is an autosomal recessive disorder caused by different mutations in the CFTR gene resulting in viscid secretions in the respiratory, gastrointestinal, and urogenital tract. The aim of this case report was to show how can treatment with CFTR modulators change the course of the disease.

Case report: We present a 14-year-old girl with CF, a Phe508del/Ser466* heterozygote. Prenatally, she presented with meconium ileus and therefore underwent surgery. The patient was regularly monitored and treated with inhalations of dornase alfa and hypertonic saline, respiratory physical therapy, pancreatic enzymes, fat-soluble vitamins, and enteral nutritional supplements. Gradually, she experienced more frequent pulmonary exacerbations and developed bronchiectases, CF-related diabetes, liver disease, and osteopenia. Percutaneous endoscopic gastrostomy (PEG) tube was inserted at the age of 11 due to feeding and weight gaining problems. Despite the intensive therapy and high energy intake (>5000 kcal/day), chronic respiratory insufficiency (forced expiratory volume in the 1st second, FEV1=0,29 L; arterial pCO_2=7,5 kPa) and failure to thrive (body mass index measured by z-score, BMI-z=-3,16) were observed, hence leading to a lung transplant proposal. During the pretransplant evaluation in a foreign CF center, the combination of ivacaftor and triple CFTR-modulator therapy (ivacaftor, tezacaftor, elexacaftor) was initiated. Significant improvement in lung function (FEV1=1,08 L), increase in six-minute walking distance (+230m), BMI-z (BMI-z=-1,23), and decline in sweat chloride and serum IgG levels were observed during the following hospitalizations, thus leading to lung transplant not being considered anymore.

Conclusion: Although there's no causal therapy for CF, this case shows significant benefits of CFTR-modulator therapy, even in severe cases where a lung transplant was being opted for.

Keywords: CFTR-protein, human; Chloride Channel Agonists; Cystic Fibrosis

CR174

Herpes-zoster infection in children

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Introduction: Primary varicella-zoster virus infection causes chickenpox, commonly affecting children and young adults, and shingles in adults but rarely in children. When the virus reactivates, it spreads to the skin and sometimes to the central nervous system. The clinical reactivation process is manifested by an eruption of vesiculous rash in the dermatome area, neuralgic pain, and sometimes neurological outbursts. Of the total number of patients with shingles, only 5% are under the age of 15.

Case report: A 12-year-old boy with a history of frequent respiratory infections has allergic rhinitis and atopic dermatitis with no need for continuous therapy but only as needed. Testing confirmed allergy to cat hair, dust, and mites. Spirometry was normal and FeNO was 40 ppb. He has been coughing for the past 10 days after getting over a viral infection and has developed herpetiform changes in the left shoulder and arm area which is C6 dermatome. There was no associated neuralgic pain or central nervous system involvement during the reactivation period. After consultation with a dermatologist, it was confirmed that it was a rash caused by herpes zoster infection.The mother confirmed that the boy had recovered from chickenpox in kindergarten. A family doctor prescribed acyclovir at a dose of 4x800mg 5 days per day although there are no specific data on the suppression of herpes simplex infections or the treatment of herpes zoster infections in immunocompetent children.

Conclusion: Herpes zoster, although rare in children, remains a possible diagnosis and should be kept in mind when skin changes occur especially after an infection. Clear guidelines are needed for treatment of herpes zoster in immunocompetent children.

Keywords: Allergy, Herpes-zoster, Respiratory infections, Shingles

CR175

Severe fungal infection in rheumatoid arthritis patient treated with TNF antagonist

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Introduction: The use of tumor necrosis factor (TNF) antagonists for the treatment of rheumatoid arthritis has been associated with an increased incidence of opportunistic infections, such as mycotic infections, which can lead to rapid deterioration of health correlated with high risk of mortality.

Case report: We present a case of 76-year-old female patient with a previously known history of seropositive rheumatoid arthritis, successfully treated with TNF antagonist (adalimumab) for eight years. Several months upon hospitalization, the patient suffered from frequent throbbing headaches, therefore brain magnetic resonance imaging was performed, describing a pathological process on the sphenoid bone corresponding to a complex mycotic infection infiltrating the sphenoid sinus on the left side with osteolytic inflammatory changes. In the laboratory findings, elevated inflammatory parameters were verified and due to the developed mycotic infection, biological therapy with adalimumab and subcutaneous methotrexate was excluded. Multi-slice computer tomography (MSCT) of the paranasal cavities was performed, which showed a fungal granuloma that expanded and eroded the sphenoid sinus, clivus and sella turcica accompanied with destruction of the clivus. MSCT findings raised suspicion of primary tumor process of the nasopharynx, therefore an otorhinolaryngologists was consulted, affirming the diagnose of mycosis infection of the sphenoid. The patient was treated with parenteral fluconazole for 2 weeks, during which the headaches were less pronounced, and her clinical state improved.

Conclusion: Although the rate for developing a severe fungal infection during adalimumab treatment is low according to clinical studies, an increased observation of the patients treated with TNF antagonists is recommended, due to severe and rapid onset of fungal infection, leading to higher risk of mortality among immunocompromised patients.

Keywords: Fungal infection, rheumatoid arthritis, TNF inhibitors

CR176

Type 2 myocardial infarction with ST segment elevation caused by anemia: a case report

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Introduction: ST segment elevation myocardial infarction (STEMI) is one of three types of acute coronary syndrome based on electrocardiographic (ECG) presentation. Based on etiology, myocardial infarction (MI) is divided into five subtypes: type 1 (acute coronary atherothrombosis), type 2 (oxygen supply-demand imbalance), type 3 (sudden cardiac death), type 4 and 5 (related to coronary revascularization procedures). In the vast majority of cases, STEMI is type infarction 1. We present a rare case of STEMI, whose underlying cause is a demand-supply mismatch.

Case report: A 78-year-old male with a history of hypertension, heart failure and complex coronary artery disease presented to the emergency department with anginal chest pain, dyspnea and abdominal pain. A 12 lead ECG showed inferoposterolateral ST segment elevation with Q waves. Laboratory workup revealed anemia and elevated troponin confirming the diagnosis of STEMI. After urgent correction of anaemia coronary angiography was performed which showed no progression of coronary disease nor culprit lesion. Endoscopic workup excluded active gastrointestinal bleeding, but concomitant abdominal pain suggested diverticular bleeding as a possible cause. Further correction od anaemia and antiischemic medication led to complete resolution of symptoms and ST segment elevation.

Conclusion: This case report highlights the importance of distinguishing between type 1 and 2 MI even in patients with STEMI in order to provide the most appropriate and effective treatment that will improve outcomes.

Keywords: anemia, coronarography, STEMI.

CR177

Relapse of acute lymphoblastic leukemia in a 4-year-old patient: a case report

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Introduction: Relapsed acute lymphoblastic leukemia (ALL) is defined as the return of ALL in patients who have already undergone treatment and achieved complete remission. ALL is the most common childhood malignancy and there is up to 30-35 new cases in Croatia each year. Between 10 and 15 % of patients experience a relapse which is why follow-up of patients is required. According to time of occurence after diagnosis, a relapse is divided into three groups: very early (<18 months), early (18-36 months) and late (>36 months)

Case report: A 4-year-old girl presented with pallor, fatigue and leg pain. Clinical examination revealed pale skin, few leg bruises, cervical, axillary and inguinal lymphadenopathy and hepatosplenomegaly. Laboratory findings showed leukocytosis, thrombocytopenia and anemia. A bone marrow aspiration (BMA) was performed and the diagnosis of common ALL was established. The treatment started according to protocol ALL IC-BFM 2009 resulting in complete remission on day 33. She continued with treatment but during maintenance therapy routine blood tests and BMA, 14 months after diagnosis, showed very early relapse. Chemotherapy was started again after which allogeneic hematopoetic stem cell transplant from matched unrelated donor was performed. Engraftment occurred on day 34 and at the same time erythematous macules appeared on the chest and back which was considered and treated as acute graft-versus-host disease.

Conclusion: Although remission occurs in more than 95% of patients, between 10 and 15% of them will have a disease relapse. Because of that, long-term follow-up care is mandatory.

Keywords: acute lymphoblastic leukemia, bone marrow aspiration, relapse

CR178

Pathophysiological Complexity of Amiodarone-Induced Hypothyroidism (AIH) in patient With Congenital Heart Disease-Ebstein Anomaly: a case report

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Introduction: Thyroid dysfunction is a potentially serious complication of amiodarone therapy, especially in older patients with acquired heart disease. Because there is no published systematic study on amiodarone-associated hypothirodism (AIH) in patients with congenital heart disease (CHD), we report a possible pathophysiological link of developed AIH in patient with rare CHD, that has not been reported in significant number in the literature so far.

Case report: A female, 55-year-old patient with history of Ebstein anomaly (non-operated), presented to family medicine doctor with symptoms of progressive dyspnoea, weakness and dysfagia for several months. Electrocardiography, echocardiography and chest X-ray confirmed presence of Ebstain anomaly. Lab results (thyroid-stimulating hormone (TSH), free triiodthyronine, thyroxine, thyroglobulin-antibodies, anti-thyroid-peroxidase antibodies (anti-TPO)) and thyroid ultrasound confirmed presence of hypothyroidism. She had been treated with amiodarone for the last 10 years to manage paroxysmal sinus tachycardia. Thyroxine and TSH levels were measured at six-month intervals for first two years of therapy. After that, she was absent for several years. She had no personal or family history of thyroid disease.

Conclusion: According to available data, there is no published systematic study on AIH in patients with CHD (large cohort studies). Pathophysiological complexity however, could be due to the agent triggering autoimmune thyroid disease, so it is possible that amiodarone precipitated the onset of preexisting autoimmune disease. The value of regular thyroid function testing and measurement of anti-TPO should be considered in patients during amiodarone administration, especially in older patients with rare CHD.

Keywords: Amiodarone, Congenital Heart Defect, Ebstein Anomaly, Hypothyroidism

CR179

Intestinal malrotation with midgut semivolvulus in an adult patient: a Case Report

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Introduction: Intestinal malrotation (IM) is a rare congenital disease caused by abnormal intestinal rotation and fixation of the intestinal tract in the early embryonic state. Most presentations occur in the first year of life, but some can remain asymptomatic and present later. The aim of this case is showing the importance of suspecting an IM in adult patients with sequence of non-specific gastrointestinal symptoms because it can culminate in either adhesive bowel obstruction or midgut volvulus.

Case report: We present a case of 25-year-old male with a long history of recurrent episodes of abdominal pain and vomiting. In 2022 the patient was admitted to the ER with general pain in the abdomen and vomiting for 5 days. Emergency X-ray scan showed air-fluid levels without obstruction. The ultrasound of the abdomen was normal. He was feeling better after the analgesic therapy and was referred to further examinations. After 2 days he was feeling worse, the gastroscopy was preformed and the nasogastric output was 700mL. The abdominal computerized tomography (CT) showed semivolvulus of the jejunum and of the following superior mesenteric artery. Magnetic resonance enterography (MR enterography) confirmed the diagnosis. The patient was planned for surgery and the Ladd's laparoscopic procedure was performed. First, the Ladd's bands lying over the duodenum and gallbladder were divided, after which the appendectomy and counterclockwise untwisting of the midgut volvulus was completed. Patient was sent home after 9 days.

Conclusion: This case shows the importance of an early diagnosis of IM in adults because of the possible devastating complications such as intestinal ischemia and gangrene.

Keywords: Malrotation, Volvulus

CR180

Lumbar spondylodiscitis: A Case Report

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Introduction: Spondylodiscitis is a rare primary infection of the intervertebral disc by a pathogen with secondary infection of adjacent vertebral bodies. Although it is the third most common form of osteomyelitis at >50 years of age, there is limited body of research available on this disease. Therefore, the aim of this report is to put emphasis on the need for further research on this condition.

Case report: An 80-year-old female with advanced osteoporosis was admitted to the Clinic of Neurology with a 3-month history of progressive low back pain unresponsive to analgesic therapy and irradiating to the legs, difficulties walking and recurrent urinary infections. Laboratory examination revealed elevated levels of C-reactive protein and granulocytes which indicates inflammation. Blood and urine culture were sterile. Lumbar magnetic resonance imaging (LMRI) scan revealed high signal intensity of the subchondral bone at the level of L5-S1 in the contrast study indicating spondylodiscitis. Also, inflammatory changes were detected paravertebrally in the epidural space at the level of L4-L5, L5-S1 with surrounding soft-tissue structures paravertebrally. Collection of liquid content was suspected paravertebrally left along L5-S1. The patient was treated with antibiotics for 6 weeks (flucloxacillin and ceftriaxone, meropenem and vancomycin, co-amoxiclav and levofloxacin). In LMRI scan, done after 4 weeks of treatment, signs of spondylodiscitis were persisting. On 3rd LMRI scan done 10 weeks after the beginning of treatment the collection of liquid was gone, the patient was feeling subjectively better and could walk with crutches.

Conclusion: The early diagnosis and treatment of spondylodiscitis are essential for the best outcome, but this is often delayed because it often presents with nonspecific symptoms. Long-term antibiotic therapy is crucial in treating this disease.

Keywords: inflammation, intervertebral disc, spondylodiscitis

CR181

Unusual systemic clinical manifestation in an adolescent patient

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Introduction: Mast cell activating syndrome (MCAS) is a condition in which the mast cells are over releasing mediators caused by various triggers. The mediator release causes skin, gastrointestinal, lung, and heart-related symptoms and can lead to anaphylaxis. The etiology is still unclear, and many triggers are recognized (infections, stress, exercise, food, medications, and others). It is difficult to make a diagnosis of MCAS. This is because the differential diagnosis is extensive, and the diagnostic criteria are not entirely defined.

Case report: A 14-year-old girl presented an unusual systemic clinical appearance, from mild to severe presentation (laryngeal cough, stridor, hives, angioedema, nausea, vomiting, hypotension, sweating, syncope, anaphylaxis). The signs and symptoms can be triggered by cold and hot air, sun exposure, exertion, and inhalation of irritative substances. Their occurrence is sudden, with rapid onset of tachycardia, hypotension, shortness of breath, macular and urticarial rash, vomiting and angioedema. The clinical presentation, laboratory analysis (elevated levels of tryptase and eosinophilic cationic proteins, increased percent of CD63+ basophils on the basophil activation test), and therapy response were fulfilled for the diagnosis of MCAS. The iv. corticosteroids, antihistamine, and racemic epinephrine were given, and regression of the acute symptoms was registered. The maintenance therapy consists of montelukast, corticosteroids, omalizumab, antihistamines, and cromolyn.

Conclusion: MCAS might be the underlying cause of unexplained symptoms when several organ systems are involved. There is a much higher risk of a severe allergic reaction, which can be fatal. Avoiding the triggers, regular symptomatic therapy and biological therapy can be sufficient in controlling the disease.

Keywords: Anaphylaxis ; Histamine Antagonists ; Mast Cell Activation Syndrome

CR182

In which cases of recurrent respiratory infections to suspect primary immunodeficiency?

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Introduction:: Recurrent respiratory infections in children, especially if complicated with recurrent pneumonia, should arouse suspicion for immunodeficiency. DiGeorge syndrome is a genetic disorder characterized by immunodeficiency, heart defects, and distinctive phenotype. A microdeletion of band 22q11.2 causes it. The age at diagnosis varies due to phenotype expression. Heart defects or hypocalcemia are mainly present in the neonatal period, but that is not always the case. The prognosis also varies, primarily with the severity of immune impairment and frequency of infections.

Case report: A 5-year-old boy presented with frequent laryngitis and bronchitis from early childhood, initially associated with gastroesophageal reflux disease. Until age 3, he had three cases of pneumonia and was highly suspicious of primary immunodeficiency. In laboratory analysis, he had repeated leukopenia and decreased IgM and IgG antibodies. The immunophenotyping of peripheral blood lymphocytes showed reduced helper T cells and plasmablasts levels and elevated levels of NK cells and transitional B cells. The tracheobronchial fiberendoscopy showed extramural compression of the right bronchus, and mediastinum magnetic resonance imaging (MRI) revealed a left-skewed heart with an aortic arch situated on the right and Kommerell diverticulum. Also, the thymus was not apparent on the MRI. Due to low levels of IgG and IgM, he received immunoglobulin therapy, and other supportive treatment was regularly applied.

Conclusion: Although primary immunodeficiencies are classified as rare genetic disorders in patients with recurrent infections, it is necessary to perform additional diagnostic procedures to exclude them. There is currently no cure for DiGeorge syndrome, and it should be closely monitored and receive substitutional therapy.

Keywords: DiGeorge Syndrome ; Immunologic Deficiency Syndromes ; Respiratory Tract Infections

CR183

Ten-year-old girl with retinoblastoma

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Introduction: Retinoblastoma is a rare intraocular malignant tumour most commonly found in children under the age of five. Leukocoria and strabismus are two most common symptoms.

Case report: A ten-year-old girl was brought to primary doctor by the parents. She claimed that she lost her vision on the left eye and that few weeks ago the ball hit her eye while playing basketball. She had no ocular pain or redness, and there was no significant family history of carcinoma or neurologic illness. She was fully vaccinated and her medical history was unremarkable . The primary physician referred her to the ophtalmologist for further examination and management. On examination, her vision was 6/6 on the right eye and only light perception of the left eye. The left eye cornea was clear, lens was normal, fundus examination revealed an extensive exudative retinal detachment. The MRI scan of the orbit showed an intraocular mass of the left eye with a hyperdense lesion suggesting calcification. EUA revealed a mass with extensive exudative retinal detachment. Ophthalmologist suggested enucleation of the left eye and parents agreed to the procedure. The left eye enucleation was performed. Histopathological analysis confirmed a diagnosis of intraocular retinoblastoma. Post enucleation, she is doing well with a prosthetic eye with no recurrence.

Conclusion: Even though retinoblastoma is more commonly seen in younger children, it can still occur in older children. Any unexplained visual loss in children primary doctor should reffer to ophthalmology for proper eye examination.

Keywords: children , retinoblastoma, ophthalmology

CR184

Premature birth as a risk factor for later intellectual difficulties with the development of a prepsychotic clinical picture

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Introduction: According to recent studies, children born very preterm (≤32 weeks gestational age) show poorer cognitive and language development. Some studies show that premature infants are at higher risk of behavioral problems, motor and sensory abnormalities, developmental delay, and poorer academic performance. This case report aims to show how different parental and environmental factors contribute to the neurodevelopment of premature newborns.

Case report: We present the case of a 13-year-old girl who was born preterm. Additionally, relations with her family are not appropriate for a child to develop normally. Her mother shows passive minimal care and her father is unavailable. Her father, as an alcoholic, abused her mother, which caused them to start a divorce process. At the age of 13, the girl was admitted to the children's psychiatry due to strong anxiety and nonexplainable fear of any kind of sweeping or erasing. She showed signs of compulsive rituals such as taking a deep breath before passing the threshold, having unreasonable fears of developing diseases such as cancer and death when going to sleep. She was diagnosed with obsessive compulsive disorder, and because her fears were so intense, she showed prepsychotic decompensation. Her therapy consists of Fevarin (fluvoxamine maleate) and Folocin (vitamin B9).

Conclusion: This case suggests that preterm born infants are at higher risk of developing different mental health problems compared to full term infants. In addition, parental, environmental and socioeconomic factors may also contribute to the final health outcomes of these children.

Keywords: environmental factors, neurodevelopment, preterm infants

CR185

Delayed surgical treatment of bilateral choanal atresia in CHARGE syndrome: A case report

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Introduction: CHARGE syndrome is an autosomal dominant genetic disorder caused by a mutation of the CHD7 gene (chromodomain helicase DNA binding protein 7), which is located on chromosome 8. The name CHARGE is an acronym for a group of rare congenital malformations that are visible immediately after birth: C-coloboma of the eye, H-heart defects, A-choanal atresia, R-retardation, G-genital and urinary malformations, E-ear anomalies, including deafness and vestibular difficulties.

Case report: We report a case of a male premature infant who was treated diagnostically for phenotypic dysmorphia which involves low-lying ears, choanal atresia, retrognathia, and hypoplastic scrotum which indicated CHARGE syndrome. Immediate endotracheal intubation due to respiratory insufficiency was needed. Bilateral choanal atresia was diagnosed by otorhinolaryngological examination and computerized tomography. On the fifth day after birth, the infant was subjected to an operation in which bilateral bony atresia were perforated with a diode laser, also catheters were placed in both nasal cavities. During the postoperative follow-up, secretions were aspirated daily. On the eighth postoperative day, the premature infant was extubated, the catheter was removed from the right nasal cavity to prevent epithelization, and the child started breathing independently through the nose, with optimal peripheral oxygenation. The patient was diagnosed with hearing loss in the right ear and deafness in the left ear.

Conclusion: To conclude, bilateral choanal atresia perforation can be delayed by securing the airway with endotracheal intubation. Diode laser is one of the therapeutic options that effectively removes the mechanical barrier to the physiological way of breathing.

Keywords: CHARGE Syndrome; choanal atresia; diode laser

CR186

From Flu to Tetraplegia: A case report

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Introduction: Guillain-Barré syndrome (GBS) is a form of acute polyneuropathy that causes sudden worsening of muscle weakness, which sometimes leads to paralysis. The presumed cause is an autoimmune reaction—the body's immune system attacks the myelin sheath. In about 80% of people, symptoms begin five days to three weeks after a mild infection, surgery, or vaccination.

Case report: A 53-year-old man, after recovering from a mild infection with the Influenza virus, began to feel severe pain with redness in both knees, and then tingling in the feet and hands, spreading all the way to the hips and shoulders. Over time, he developed generalized weakness and became immobile two days before admission. After being admitted to the Clinic for Neurology, an emergency magnetic resonance imaging (MRI) of the cervical spine was performed, which indicated an inflammatory process of the spinal cord. An emergency cerebrospinal fluid puncture showed albuminocytological dissociation, and the electromioneurography (EMNG) findings confirmed acute polyradiculoneuritis. He developed respiratory failure and was tracheotomized and mechanically ventilated. He was treated with plasmapheresis on six occasions, intravenous immunoglobulins, analgesics, antiepileptics, antihypertensives and anticoagulant therapy with potassium replacement. The patient recovered partially, but flaccid tetraplegia persisted. After stabilization of the disease, physical therapy was performed with gradual weak improvements in muscle function.

Conclusion: GBS should be suspected in patients with signs of neurological deficits after infection or vaccination, regardless of the severity of the symptoms. GBS is a very serious disease that requires immediate hospitalization and treatment, because the earlier the treatment is, the milder the consequences are and neurological functions return faster.

Keywords: Guillain-Barré syndrome, Influenza, Tetraplegia

CR187

From swollen leg to Tuberculosis: A case report

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Introduction: Tuberculosis is an infectious disease caused by Mycobacterium tuberculosis bacteria. Tuberculosis generally affects the lungs, but it can also affect other parts of the body. Nephrotic syndrome is caused by the urinary loss of protein which exceeds the body's compensatory capacity.

Case report: A 34-year-old man noticed, during a two-week period, oedema of his both legs, more present in the morning hours, which spread from the foot to the knee. He denied other subjective complaints such as body pains, elevated body temperature or changes in urination. He was a long-term smoker. During the physical examination, the only pathological signs were weakened breathing sound apically and an inaudible breathing sound over the lower two thirds of the right lobe. In the blood and urine laboratory findings distinct proteinuria, increased C-reactive protein (CRP) and sedimentation of erythrocytes were found. A diagnosis of nephrotic syndrome was made, but with normal kidney function. He was treated with dietary measures and symptomatic therapy. Along with the treatment, the gradual disappearance of the oedema was monitored. The inflammatory parameters did not subside, and an X-ray of the lungs was performed, which showed a homogeneous shadowing with a latero-ascending border in terms of a pleural effusion in the right lung. MSCT showed significant bronchial deformation and bronchiectasis. Quantiferon test and sputum showed acute tuberculosis. Tuberculosis was treated with four antituberculosis drugs. The changes in the lungs led to the development of chronic obstructive pulmonary disease (COPD).

Conclusion: Nephrotic syndrome should be approached very thoroughly to find the proper cause. When, in addition to the classic clinical symptoms, there are also signs of pulmonary insufficiency, one should think of Mycobacterium tuberculosis, especially in immunocompromised patients.

Keywords: Nephrotic syndrome, Quantiferon test, Tuberculosis

CR188

Forensic age estimation in asylum seekers

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Introduction: Forensic age estimation is a discipline that provides judicial authorities with valuable information for refugees, asylum seekers or human trafficking victims who lack any identification documents. Age is estimated by several methods based on biological and psychological development, and skeletal and dental maturation.

Case report: At the request of the Ministry of the Interior of the Republic of Croatia, the procedure for determining the age of an asylum seeker was carried out. The multidisciplinary team included a pediatrician, a radiologist, a forensic dentist and a forensic medicine specialist. The subject claimed he was 16 years old. The physical exam determined that facial, axillary, pubic, chest and stomach hair have a distribution characteristic of an adult male person. The color of the voice corresponded to that of adult males. An X-ray of both hands showed closed epiphyseal plates of the metacarpal bones, proximal phalanges and distal nodes of the radius and the ulna. An orthopan showed that the dentition is fully developed and the tooth roots are closed, which both confirmed an age over 20 years old.After the medical examination of the subject and the reconciliation of the team members, it was concluded that the person was undoubtedly of legal age.

Conclusion: Information given by an expert stating that an individual is classified as an adult or a minor can have a significant impact on the individual depending on the legal framework in which the decision is made.

Keywords: adolescent development, forensic medicine, radiography

CR189

Orbital abscess as a complication of acute sinusitis in an 8-year-old patient

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Introduction: The spread of inflammatory substrate from the paranasal sinuses into the orbit leads to orbital complications in acute paranasal sinus infections. Further spread of inflammatory contents through the orbital tissues leads to orbital abscess, which may result in loss of an eye or development of thrombosis of the cavernous sinus.

Case report: In this case, an 8-year-old patient was referred to the ENT clinic from the pediatric clinic because of difficulty breathing through the nose and pain in the right side of the face for 2 days. Clinical status showed cellulitis of both right eyelids with spread of hyperemia toward the cheek, marked proptosis, and purulent secretion in the middle nasal passage on the right side. After obtaining the CT image, acute sinusitis was confirmed in the right frontal sinus, right sphenoid sinus, and right maxillary sinus, as well as an abscess in the orbit. The patient then underwent surgery, which included antrostomy of the right maxillary sinus and removal of ethmoid bulla. Postoperatively, intravenous antibiotic therapy was administered with daily anemization of the mucous membrane of the nasal cavity. The patient was discharged on postoperative day 4 with good general condition and good local findings.

Conclusion: A severe form of orbital abscess, an extremely rare complication of acute sinusitis in children and adolescents, was successfully treated with a sophisticated therapeutic approach and the development of further complications was prevented.

Keywords: antrostomy; bullectomy; complications of acute sinusitis; orbital abscess

CR190

Cardiogenic shock secondary to supraventricular tachycardia in the neonate

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Introduction: Supraventricular tachycardia (SVT) is the most common sustained arrhythmia in neonates requiring emergency cardiac care. SVT may initially be asymptomatic, but prolonged SVT can result in congestive cardiac failure and shock.

Case report: A 15-days-old male neonate was admitted to the Department of Pediatric Intensive Care Unit due to supraventricular tachycardia and cardiogenic shock. Day before hospitalization, he refused to eat, vomited and became adynamic. The physical exam showed gray-yellow skin with livedo reticularis, prolonged capillary reperfusion and hypotension. The electrocardiogram recorded tachycardia with narrow QRS complex, without clearly visible P-waves and with occasional ventricular extrasystoles. The heart rate was 250 beats per minute. The echocardiography showed dilated heart. Laboratory test revealed acidosis, elevated troponin, NT pro-BNP and C-reactive protein. Adenosine treatment was unsuccessful. Synchronized cardioversion led to short-term improvement. Due to severity of patient's condition, he was sedated and mechanically ventilated for four days. After removal of sedation, hemiconvulsions appeared. Treatment with milrinone, noradrenaline, phenobarbital, amiodarone and diuretics was started as well as other supportive therapy. Finally, amiodarone led to the conversion to sinus rhythm. There were several relapses that were resolved by increasing dose of antiarrhythmic drugs. After hemodynamic stabilization, he was transferred to Clinical Hospital Centre Zagreb. After full recovery, there was no recurrence of SVT.

Conclusion: Cardiogenic shock due to SVT is rare and potentially fatal condition in infants. The early recognition with appropriate treatment is the key points in curing these patients.

Keywords: cardiogenic shock, neonate, supraventricular tachycardia

CR191

Time of death estimation for inheritance purposes

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Introduction: Time of death estimation is important in forensic medicine due to various cases of deaths in suspicious circumstances. Supravital reactions and postmortem changes such as algor mortis, rigor mortis and postmortem hypostasis enable establishing the time of death in narrow time spans. As the postmortem interval increases, the body undergoes additional changes. Putrefaction starts after approximately 1 week in air, 2 weeks in water and 8 weeks in the grave. Adipocere is seen in moist environments 1 or 2 months after death. Mummification lasts from 6 to 12 months after death and occurs in environments with warm and dry air. Skeletalization starts about 3 years after death. Development of postmortem changes depends on numerous factors such as weather conditions, cause of death, characteristics of the microlocation.

Case report: An old married couple was found dead in their apartment. Because both of them had children from previous marriages, there was a legal need to distinguish who died first due to the distribution of the inheritance. At the time of discovery of the bodies, significant postmortem changes were visible on both bodies. The analysis of postmortem changes, together with the position of both bodies and also the prior medical history of both deceased people provided evidence on determining who died first.

Conclusion: The development of postmortem changes enables establishing the time of death. This information can be used for law purposes such as murder investigations and solving the inheritance problems like this one.

Keywords: cause of death, forensic medicine, postmortem changes

CR192

Systemic lupus erythematosus presenting as a cardiac emergency: a case report

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Introduction: Systemic lupus erythematosus (SLE) is a chronic, multisystemic autoimmune disease that can affect almost every organ and presents with different clinical manifestations. It's characterized by flairs and remission periods. SLE is more common in women of reproductive age, and it's usually diagnosed at younger age.

Case report: We report case of a 20-year-old woman, with no known previous diseases, a smoker, presenting to the Emergency Department (ED) with chest pain and dyspnoea. An electrocardiogram (ECG) and a computerized tomography (CT) are done to exclude an acute coronary syndrome (ACS) and pulmonary thromboembolism (PTE). ECG showed no signs of pathology, but thoracic CT showed lymphadenopathy. Laboratory findings showed a slightly elevated C-reactive protein (CRP), so the patient was referred to a pulmonologist. Pulmonology exam excluded pulmological conditions, but the pulmonologist requested tumor markers and immunology tests. In a month, the patient returns to the ED for the same symptoms, but in addition to previous symptoms, she reports arthralgias and morning stiffness of hand joints. Therefore, she was referred to the rheumatologist/clinical immunologist who prescribed non-steroid anti-rheumatic drugs (NSAR) as symptomatic therapy upon the results of immunology tests arrived. Immunology tests revealed positive antinuclear factors (ANF) and specific antibodies for SLE which confirmed SLE diagnose. Patient was treated with pulse glucocorticoid therapy and hydroxychloroquine was prescribed as immunomodulatory therapy.

Conclusion: SLE can be presented with variety of clinical manifestations including arthralgias, chest discomfort, dyspnoea, skin rash typically affecting younger females. Hence, in a patient presenting with symptoms of an ACS and PTE, especially a young female, with negative findings for those conditions, a diagnosis of SLE should be also considered.

Keywords: acute coronary syndrome, pulmonary embolism, systemic lupus erythematosus

CR193

Catatonic schizophrenia – forgotten, but still present (case report of an adolescent girl)

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Introduction: Catatonic schizophrenia is rare severe mental disorder characterized by striking motor behaviour, typically involving either significant reductions in voluntary movement or hyperactivity and agitation. This disorder is less common in children and adolescents. Based on International Classification of Diseases 11 there are no subtypes of schizophrenia.

Case report: We report a case of 18-year-old adolescent girl diagnosed with catatonic schizophrenia at the age of 16. She was hospitalised for the first time at the age of 13 with diagnosis of unspecified psychotic disorder. From the age of 13-16 she was hospitalised multiple times and treated with multiple antipsychotics (risperidone 2mg, aripiprazole 10mg, haloperidol 10mg, quetiapine 200mg) and anxiolytics. Exacerbation of the disorder happened when she was 16 due to subdosage and treatment noncompliance. Syndrome of catatonia that occured included symptoms like flexibilitas cerea, muscle rigidity, poor motor skills, no control over urination and defecation. At that time her condition was resistant to all the available antypsychotics. That is when she became a candidate for clozapine treatment and she went under the process of antipsychotic titration for right dose of the medication to be determined. After the dose of 375mg was determined, we have seen an improvement in her condition and she has been in remision for 10 months.

Conclusion: Treatment resistant schizophrenia with syndrome of catatonia in pediatric and adolescent patients might be an indication for clozapine treatment. Antipsychotic titration might be needed for the right dose of clozapine to be determined.

Keywords: antipsychotic titration, catatonic schyzophrenia, clozapine treatment, pediatric patient

CR194

Myasthenia gravis in pregnancy

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Introduction: Myasthenia gravis is a chronic autoimmune neuromuscular disease which is most often caused by antibodies to the acethylcholine receptor. It affects women of chlidbearnig age. Early pregnancy and especially post-partum are periods at risk for myasthenia worsening. The aim of this case report is to highlight the importance of managing myasthenia gravis in pregnancy in order to prevent myasthenic crisis and neonatal form of this disease.

Case report: We present a 23-year-old female patient who was diagnosed with seropositive (NAChR+) myasthenia gravis two years ago. She presented with ptosis, diplopia, generalized muscle weakness with occasional bulbar symptoms. She was treated with acetylcholinesterase inhibitors and prednisone and while stabile she underwent thymectomy. Patient got pregnant and since then her symptoms reappeared. She started having problems while walking and climbing stairs, had difficulties with chewing and ocular symptoms. She was started on prednisone again and was treated with intravenous immunoglobulins with good response and complete symptoms resolution. All given medication are considered safe in pregnancy, whereas magnesium sulfate is contraindicated. Patient is now 11 weeks pregnant. We will closely monitor her during the rest of her pregnancy and postpartal period to manage and prevent further potential worsening and refer her to a tertiary Center for delivery especially due to neonatal care.

Conclusion: Myasthenia gravis can worsen in pregnancy and can lead to neonatal myasthenia gravis due to transplacentar antibody crossing. Planning pregnancy and closely monitoring our patients is important in order to minimize possible life threating complications for mother and child.

Keywords: myasthenia gravis, pregnancy, neonatal myasthenia gravis

CR195

Ophthalmological manifestation of Charcot-Marie-Tooth disease in a patient in the emergency department

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Introduction: Charcot-Marie-Tooth (CMT) disease, also known as hereditary motor and sensory neuropathy, comprises a spectrum of genetically heterogeneous disorders.While CMT can be caused by multiple genetic variants, the usual clinical presentation is distinctive, with reduced mass and strength of distal limb muscles, bone deformities, loss of deep tendon reflexes, and occasionally visual disturbances.

Case report: A 46-year-old patient comes to the emergency neurology clinic because of the appearance of diplopia 2 days ago. He was examined by an ophthalmologist and diagnosed with ophthalmoplegia of the right eye. He states that the symptoms worsen when looking to the left or the right. He had no head trauma, headache, dizziness, or speech and swallowing disorders. He was diagnosed with CMT at the age of 10 years (his father also has the same condition). During the examination, the inability of adduction of the right bulbus when looking to the left was found, when the vertical diplopia, which is otherwise continuously present, worsened. CT and CT angiography was performed to rule out other neurological events such as aneurysms, tumors, hemorrhages, or ischemia. According to the instructions of the doctor in the emergency department, the patient comes for further treatment at the neurologist after 2 weeks and states that the diplopia has completely disappeared.

Conclusion: Ophthalmological manifestations of CMT are rare, and include optic neuropathy, impaired oculomotility, pupil abnormalities, retinitis pigmentosa, premature presbyopia, and color vision abnormalities in the red-green axis. This patient's ocular motility disorder was intermittent and remittent in nature, progressing very slowly over time.

Keywords: Charcot-Marie-Tooth disease, diplopia, neuropathy

CR196

Unrecognized celiac disease in a girl with iron deficiency anemia

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Introduction: Celiac disease or gluten enteropathy is an immune-mediated enteropathy in genetically predisposed individuals triggered by gluten, a protein found in wheat, barley, and rye. Intake of gluten causes inflammation in the small intestine which over time damages its mucosa, and thus prevents the absorption of necessary nutrients. The prevalence of celiac disease in most countries is around 1%. The symptoms can vary widely and may include intestinal (diarrhea, abdominal pain, weight loss) and extra-intestinal symptoms (anemia, fatigue, and others).

Case report: A 13-year-old girl presented to our clinic with iron deficiency anemia refractory to treatment. She was diagnosed with the disease 10 years prior and was treated by a primary care doctor, but until now has not done a more extensive evaluation. The patient presented with fatigue, dizziness, nausea, cold hands and feet, dry skin, and chapped lips. Laboratory results showed low levels of hemoglobin, iron, and folic acid and high anti-tTg levels.Considering the elevated anti-tTg, the patient underwent an upper endoscopy which revealed visible atrophy of the intestinal mucosa. Histological findings confirmed the diagnosis of celiac disease (Marsh-Oberhuber type 3c). The patient was advised and educated on a gluten-free diet. Soon after her blood count and nutrient levels improved and the anemia resolved.

Conclusion: Iron deficiency anemia is the most common hematological disease in children. Most often it can easily be treated symptomatically. In some cases, it masks the underlying condition, like in this case a celiac disease, which remains hidden and keeps causing serious health problems.

Keywords: celiac disease, iron deficiency anemia, pediatrics

CR197

Rhabdomyolysis caused by a viral infection in a 6-year-old girl

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Introduction: Rhabdomyolysis is a condition which occurs when damaged muscle tissue releases its proteins and electrolytes into the bloodstream, potentially damaging the heart and kidneys. Common causes include muscle injuries, reduced blood flow, medications, toxins, and infections and extreme body temperatures. Symptoms may include muscle pain, weakness, and dark urine. The diagnosis is made through blood tests for creatine kinase (CK) and urine tests.

Case report: A 6-year-old patient presents to the emergency department with fever (up to 38.5 degrees Celsius), muscle pain, general weakness and difficulty standing. Other vital functions were normal. Assessment of glomerular filtration, urea, creatinine, and electrolytes was normal. Extremities were without edema. Laboratory tests revealed an elevated level of CK (45054 U/L), CK-MB (creatine kinase-myoglobin binding) (269.4 U/L), proteins in the urine 2+ and hemoglobin 3+. Serology for infectious agents was performed and positive IgM (immunoglobulin M) and IgA (immunoglobulin A) for Coxsackie virus and Influenza virus type A were obtained.

Conclusion: We present this case to demonstrate the importance of an early diagnosis of rhabdomyolysis. It should be considered in patients which present with flue like symptoms and pain in the extremities. Early diagnosis means an earlier start of treatment and a greater chance of recovery without permanent health effects.

Keywords: blood, kidney, muscle, rhabdomyolysis

CR198

Mechanical Thrombectomy in a patient with deep vein thrombosis

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Introduction: Deep vein thrombosis (DVT) is a thromboembolic event characterized by the formation of a blood clot within the deep veins of the extremities or pelvis. It is caused by poor venous circulation, endothelial dysfunction, or hypercoagulability. Symptoms may include pain and swelling in the affected limb. Diagnosis is typically made using color Doppler-ultrasonography (CD-USG), D-dimers, and other tests as needed. Treatment includes anticoagulants and/or thrombectomy.

Case report: A 59-year-old patient presented to the emergency department due to swelling and redness in his right leg, which appeared 2 days earlier during a bicycle ride. Additional symptoms included heaviness in the same leg and a tightening of the leg while walking. There was no prior leg trauma. Chest pain, dyspnea, and crises of consciousness were not present. D-dimers were >4.40 mg/L FEU. He was treated with low molecular weight heparin 10,000 units s.c. (subcutaneously) and a color Doppler ultrasound of the veins of the right leg was performed. It revealed a DVT of femoral vein with propagation of the thrombus to iliac vein. The patient underwent an endovascular procedure called percutaneus mechanical thrombectomy. During the procedure, significant thrombotic masses were extracted. The postoperative course went smoothly, and the patient was discharged home on postoperative day 6 with anticoagulation therapy.

Conclusion: This case report illustrates the importance of prompt diagnosis and management of DVT to prevent complications and ensure a successful outcome. It also highligths that percutaneus mechanical thrombectomy in combination with thrombolytic therapy had become the method of choice for iliofemoral DVT.

Keywords: extremities, femoral vein, thrombectomy, thrombosis

CR199

Esketamine: The new hero for fighting treatment-resistant depression

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Introduction: Patients with recurrent depressive disorder sometimes do not respond satisfactorily to adequate treatment – this is referred to as the treatment-resistant depression. Prognosis and treatment of these patients significantly changed when esketamine, a drug derived from ketamine, was introduced.

Case report: A patient is a 40-year-old woman diagnosed with recurrent depressive disorder. She began her treatment before ten years as postpartum depression and during this period treated with a different drugs including antidepressants (sertraline, escitalopram, duloxetine, maprotiline), antipsychotics (olanzapine, quetiapine, brexpiprazole) and mood stabilizers (lithium and lamotrigine). TMS was also tried but showed no results. Based on her score on assessment scales (MADRS=35 and CGI-S=6), she has met the criterion to begin treatment with esketamine – 56 mg two times a week for the next four weeks. After four weeks and 8 doses, the patient had a significant improvement of her symptoms (MADRS=15 and CGI-S=3) and no side-effects. She continued treatment for the next four weeks and after that showed even more significant improvement (MADRS=10 and CGI-S=2). She continued with esketamine for another round of treatment, for the next 16 weeks. Symptomatic and functional remission was achieved in the patient.

Conclusion: Esketamine, which was first introduced in Croatia in 2022, is a new drug for treating treatment-resistant depression. Although it can cause "a pool" of side effects, with close monitoring of patients and understanding of its mechanism of action, it is a promising option and gives perspective to these patients.

Keywords: Depressive Disorder, Treatment-Resistant Depression; Antidepressants, Esketamine

OSCON

CM

CLINICAL MEDICINE

CM01

The comparison of thrombocytopenia causes in children under observation and children with introduced therapy

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Introduction: Thrombocytopenia refers to the count of platelets lower than 150 × 109/L. The categorization of thrombocytopenia causes is based on the pathological mechanisms leading to thrombocytopenia. The etiology of thrombocytopenia is divided into thrombocytopenias caused by increased destruction and caused by decreased platelet formation. Asymptomatic or minimally symptomatic thrombocytopenia does not require treatment, while severe and symptomatic thrombocytopenia may be treated with IVIG, corticosteroids, platelet concentrate and/or splenectomy.

Materials and methods: The research is established as a retrospective study on all children hospitalised at the Department of Hematology and Oncology, 110 children in total, Peadiatric Clinic, Clinical Hospital Centre Osijek from 2017 to 2021 for the purposes of medical treatment of thrombocytopenia.

Results: Out of total of 110 patients treated over the period of five years, 83 children were under observation, while 27 received a certain kind of therapy. Simultaneously, a number of children had the same cause of thrombocytopenia (e.g. acute lymphoblastic leukemia with respiratory and/or gastroenterological infection). 22 out of 27 children with introduced therapy, which is more than 80 %, had immune thrombocytopenia.

Conclusion: Comparing the causes of thrombocytopenia in children under observation and children with introduced therapy no statistical difference was found, except in children diagnosed with immune thrombocytopenia.

CM02

The Frequency of Thrombocytopenia at the Pediatric Clinic of the Clinical Hospital Centre Osijek over a Period of Five Years

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Introduction: Thrombocytopenia refers to the count of platelets lower than 150 × 109/L. The incidence is estimated at 3 – 4 per 10 000 inhabitants yearly, with mildly increased incidence in women and peaking in children and patients over 60 years old. Immune thrombocytopenia (ITP) is the most frequent immune mediated thrombocytopenia in children, with yearly incidence of symptomatic cases estimated between 3 – 8 cases per 100 000 children.

Materials and methods: The research is established as a retrospective study on all children hospitalised at the Department of Hematology and Oncology, 110 children in total, Peadiatric Clinic, Clinical Hospital Centre Osijek from 2017 to 2021 for the purposes of medical treatment of thrombocytopenia.

Results: Within the period from 2017 to 2021 a total of 110 children was hospitalised due to thrombocytopenia, and their proportion in the total number of hospitalised children at the Pediatric Clinic ranged from 1.26 % in 2017 to 0.75 % in 2021. The highest number of hospitalized children was in 2017, the number of hospitalized children was 35.

Conclusion: In the observed five-year period, analysing all children hospitalized at the Pediatric Clinic, the percentage of children hospitalized under the leading diagnosis of thrombocytopenia at the Department of Hematology and Oncology was around 1 % of the total hospitalized, which is significant when is known that around 50 % of hospitalizations in pediatrics are caused by respiratory and gastrointestinal viruses.

Keywords: gastrointestinal infection, respiratory tract infections, thrombocytopenia

CM03

Examination of the correlation of vitamin D and C-reactive protein in patients with newly discovered arterial hypertension

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Introduction: Arterial hypertension is one of the most common multifactorial diseases that affect today's population. Elevated blood pressure values can occur in states of physical and mental activity when taking medicaments, coffee, and tobacco. Low values are observed during sleep. Blood pressure is affected by race, gender, age etc. The goal of research is to investigate the existence of a relationship between the levels of vitamin D and C-reactive protein in patients with newly diagnosed arterial hypertension.

Material and methods: According to the criteria for inclusion in the study, data from 50 patients of both sexes with newly diagnosed arterial hypertension were isolated. The control group consisted of 45 clinically and biochemically healthy examinees, who according to gender and age structure corresponded to the examined groups of patients. Data on the levels of systolic and diastolic blood pressure, highly sensitive C-reactive protein (hsCRP) and vitamin D (25 (OH) D) were taken from the medical records of all subjects included in the study.

Results: When comparing CRP in patients suffering from arterial hypertension and CRP from healthy subjects, we get a significant difference: CRP is significantly higher in hypertensive examinees. The concentration of vitamin D is statistically significantly lower in patients with newly diagnosed hypertension compared to the control group of subjects. Vitamin D and CRP were found to have a negative correlation ($r = -0.605$; $p<0.01$).

Conclusion: When CRP increases, vitamin D levels will be lower and vice versa. In hypertensive patients, a significant increase in CRP was observed, and a significantly lower concentration of vitamin D. No statistically significant difference in gender and age was observed in the control group of subjects.

Keywords: arterial hypertension, C-reactive protein, vitamin D

CM04

Viral gastroenteritis in children during the SARS-CoV-2 pandemic

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Introduction: Viruses can cause severe gastroenteritis in infants and young children. The main symptoms are vomiting and diarrhoea. More serious complications include dehydration and disturbance of acid-base balance. The most common viruses that cause gastroenteritis are rotavirus, adenovirus, and norovirus. They are easily transmitted via faecal-oral route. The disease has a winter and spring seasonal pattern. The mentioned viruses are most often diagnosed in hospitalized children with a severe clinical picture. The aim of the research was to examine the frequency of viral gastroenteritis in children in the first two years of life during the severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) pandemic.

Materials and methods: In the regular routine work of the laboratory of the Department of Clinical Microbiology and Hospital Infections, University Hospital Centre Osijek, immunochromatographic tests are used to detect antigens of aforementioned viruses in stool samples. The results were collected in the period from 18.5.2020 to 31.1.2023.

Results: In our research, 335 samples were tested for rotavirus and adenovirus, of which 20 samples were positive for adenovirus and 144 for rotavirus. 78 samples were tested for norovirus, of which 10 were positive. The greatest number of tested, but least of positive samples was reported in 2020. The most of positive samples were reported in the winter of 2021/22.

Conclusion: The results indicate that the seasonal pattern of gastrointestinal viral infections changed during the SARS-CoV-2 pandemic. Due to reduced social contact and strict epidemiological measures in 2020, the incidence of viral gastroenteritis in children was lower compared to the winter of the following year.

Keywords: adenovirus, norovirus, rotavirus, SARS-CoV-2

CM05

Treatment of hepatitis C during the COVID-19 pandemic

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Introduction: Chronic hepatitis C continues to be a major public health challenge as it can result in the asymptomatic progression of cirrhosis and hepatocellular carcinoma. Croatia is among the nations with the lowest incidence of this disease. Since 2014, direct-acting antiviral agents (DAAs) have dramatically transformed the management of HCV. The COVID-19 pandemic has had a profound impact on the provision of healthcare services, leading to a decrease in the number of patients diagnosed and treated for hepatitis C.

Materials and methods: Retrospective analysis of hepatitis C patients treated at the Clinic for Infectious Diseases KBC Osijek during the COVID-19 pandemic.

Results: The Clinic for Infectious Diseases KBC Osijek treated 36% fewer patients with hepatitis C compared to pre-pandemic times. The majority of the patients were former intravenous drug users; 78% were male and 22% were female, and their average age was 40.5 years. The most prevalent genotype among the patients was genotype 3a (55%), followed by genotype 1a (3.5%). A majority of the patients (82%) had fibrosis stage 2. The mean viremia level was 13 x 105 IU/mL HCV RNA, and the mean ALT level was 110 U/L. The patients were primarily treated with glecaprevir/pibrentasvir, followed by sofosbuvir/velpatasvir and elbasvir/grazoprevir, and all patients were successfully cured.

Conclusion: The pandemic of COVID-19 presents an obstacle to prompt diagnosis and treatment of hepatitis C. It is essential to develop a strategy for monitoring these patients while these DAA therapies offer a remarkable opportunity to significantly reduce HCV infection and associated complications.

Keywords: Hepatitis C, COVID-19, SARS-CoV-2

CM06

Association between intracranial hemorrhage and neurodevelopmental outcome in very low birth weight infants in Clinical Hospital Centre Osijek

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Introduction: Very low birthweight (VLBW) infants are defined as infants with birth weight less than 1500 g and <37 weeks gestation. The maturation period between the 34th and 40th week of pregnancy is crucial for the full development of the nervous system, which is why premature children face numerous difficulties due to a less developed neurological system. They are at a higher risk for developing neurologic impairments (motor and speech deficits, cognitive delay, deafness and blindness, and cerebral palsy) when compared to term children. This study aims to determine intracranial hemorrhage (IH) as a possible predictor of neurodevelopment outcomes in VLBW children.

Materials and methods: This study was a retrospective cross-sectional study of 120 VLBW babies born in Clinical Hospital Centre Osijek between January 2018 and December 2019. We monitored the neurodevelopmental outcome of the mentioned children at the age of three.

Results: In this study, 76 out of 120 (63%) babies were diagnosed with some stage of intracranial hemorrhage. Nine of them had stage I of IH, 33 stages II, 22 stages III, and 3 stages IV IH. The mortality rate was 23%. Due to the lack of insight into the findings outside of our hospital, we could follow only 32 patients. Of these 32, 21% are classified as high-neuro risk children, 43% with a motor deficit, 38% with cognitive, and 53% with a speech deficit.

Conclusion: Intracranial hemorrhage represents a high risk for developing neurological and cognitive deficits in VLBW children. Our results are also consistent with other studies.

Keywords: intracranial hemorrhage, very low birth weight, infant

CM07

Pregnancy myth: eating for two and reporting half?

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Introduction: Inadequate GWG was associated with a higher risk of adverse pregnancy outcome. Our earlier reports, consistent to other studies, have shown that almost 50% of pregnant women exhibit excessive GWG. This study aimed to compare the reported energy intake obtained from food frequency questionnaire (FFQ) and energy requirements during pregnancy in order to determine awareness of excessive energy intake.

Materials and methods: The study included sixty-five healthy pregnant women between 37 and 40 weeks of gestation. A 4-terminal portable impedance analyzer (Maltron Bioscan 920-II, Maltron International Ltd., U.K.) was used for to calculate resting metabolic rate (RMR kcal). EPIC-Norfolk FFQ was used to calculate reported energy intake during pregnancy. Individual ratio between reported energy intake (Elrep) and RMR (Elrep/RMR) was calculated. Goldberg cut-offs were used to evaluate reported energy intake by FFQ. Participants were categorized as low energy reporters (LERs) and non-LERs.

Results: Reported energy intake (Elrep) was significantly below the recommended values for the third trimester of pregnancy (Elrep 1941 ± 638 vs. recommended RMR 2130 ± 93, $p < 0.001$). 42.2% of participants were classified as low energy reporters (LERs).

Conclusions: Taking into consideration a total of 49% of pregnant women exhibiting excessive GWG and 42.2% of LERs, we can conclude that there is a high proportion of pregnant women unaware of energy intake what can partially be attributed to self-deception. Once more we emphasize a need for more comprehensive and detailed nutrition counseling for all women during pregnancy.

Keywords: energy intake, gestational weight gain, pregnancy

CM08

Morphological characteristics of clear cell renal tumor - five-year experience of one institution

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Introduction: Kidney tumors can be benign and malignant, while malignant are much more clinically significant. Clear cell carcinoma of the kidney (clear cell RCC) represents 2% to 3% of all malignacies, occurring in the 6th or 7th decade.

Material and methods: Retrospectively, patient's medical records pathohistologically diagnosed with this tumor were analized for the time period 2017- 2023 at the Center for Pathology and Histology of the University Clinical Center of Vojvodina in Novi Sad.

Results: Totally 240 samples of clear cell RCC was verified, male population was more affected (142 patients, i.e. 59.1%). The average female's age was 61.2, and for the male population 62.1. The most common method for obtaining material was radical nephrectomy. Looking the laterallity of affected kidney, primary tumors occurred more often in the right kidney. The largest diameter of the tumor was 22 cm, and the smallest 1.3 cm.

Conclusion: Primary kidney tumors are more common in men. Clear cell carcinoma of the kidney has a greater tendency to involve the right kidney. The most common localization of primary kidney tumors is the upper pole of the kidney. The average size of primary kidney neoplasia is 5.9 cm. Using the TNM classification, kidney tumors are most often detected and surgically treated in the pT1 stage of the disease, which indicates a positive association with the five-year survival of patients.

Keywords: morphological characteristics, clear cell renal carcinoma, TNM classification

CM09

Health care transition from pediatric nephrologist to nephrologist for adults from pediatricians' perspective

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Introduction: Transition from pediatric nephrologist to nephrologist for adults is challenging process that includes organized cooperation of patient, patient's family and healthcare professionals. We examine which factors affect the organization and course of the transition.

Materials and methods: Fourteen Croatian pediatric nephrologists (5 men; median age 47 years, 31 - 69) responded to anonymous survey authored by the investigators and conducted via Google. Twelve respondents work in hospitals, while two of them in primary health care.

Results: Twelve of 14 pediatric nephrologists control patients with chronic kidney disease up to 18 years of age and 2 of them even after that age. Median number of pediatric patients per a pediatrician who go through the transition process annually was 5 (1 - 15). Thirteen of 14 pediatricians personally arrange the patients' transfer, 4 of 14 encounter resistance from nephrologists for adults, while 11 of 14 believe that patients' parents feel insecure during the transition. All but one prepare patients for the transition. There is no organized psychological help for patients during the transition. As main problem in the transition process they chose stress about the entire process (6 of 14), disorganized psychological support (4 of 14) and inadequate support from other healthcare professionals (4 of 14).

Conclusion: The trend of accomplishing the transition from pediatric to adult nephrology care in Croatia is being implemented with certain difficulties. The process requires more structured course, with less stress and more psychological and other healthcare support.

Keywords: adult, child, health care transition, nephrology

CM10

Initial deviations in laboratory parameters of very low birth weight infants as indicators for the development retinopathy of prematurity

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Introduction: Retinopathy of prematurity (ROP) is a proliferative vascular disease of the immature retina. This study investigated the possible correlation of hematological and biochemical laboratory findings in the development of ROP by analyzing laboratory parameters done in the first 72 hours of the preterm infant's life.

Materials and methods: The group of respondents consists of all preterm infants with very low birth weights born at the Osijek Clinical Hospital from 2015 to 2020. Data were collected from medical records and the hospital information system and processed by computer program R.

Results: The overall prevalence of ROP was 50,9 %. Laboratory parameters, which proved to be statistically significant, were differences in glucose values, sodium, erythrocytes, and hemoglobin. Patients who had ROP had slightly higher glucose values and lower values of sodium, erythrocytes, and hemoglobin.

Conclusions: Preterm infants in whom ROP will appear have deviations in initial laboratory parameters that can be useful for early detecting significant comorbidities and thus prevent the development of ROP.

Keywords: preterm; retinopathy of prematurity; very low birth weight

CM11

The epidemiology of bacterial acute otitis media in early childhood

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Introduction: Acute otitis media (AOM) is an inflammation of the middle ear including the auditory ossicles and the Eustachian tube. Infants and toddlers are prone to acquiring ear infections due to the horizontal placement of the Eustachian tube. Depending on the age of the child and the severity of symptoms, they should be either observed closely or treated with antibiotics. The aim of this research was to determine the prevalence of AOM and most common pathogens causing it in children aged from 0 to 3 years old.

Materials and methods: The total of 82 ear swabs have been taken from various pediatric patients at the Hospital center in Osijek over a period from 18th May 2020 to 31st January 2023. The isolates were isolated via conventional microbiological cultivation methods on both solid and liquid media: the aforementioned were identified using the MALDI-TOF spectrometry. Antibiotic resistance was tested using the disk diffusion method on Mueller Hinton agar alongside of "The European committee on antimicrobial susceptibility testing" (EUCAST) guidelines for interpretation.

Results: Among the middle ear infections (82), the most common diagnosis is suppurative and unspecified otitis media (49). Peak age prevalence is 1 year old. Out of 82 cultivated isolates, 48 were confirmed as positive for a specific pathogen. Among those, the most common pathogen causing AOM was *Streptococcus pyogenes,* followed by *Streptococcus pneumoniae* and *Haemophilus influenzae*. Antimicrobial susceptibility testing hasn't shown any significant resistances.

Conclusion: AOM is one of the main childhood pathologies, with its peak age prevalence of 1 year old in our study group. Success in decreasing its prevalence lies in adequate clinical and therapeutic approach.

Keywords: epidemiology, otitis media, *Streptococcus pyogenes*

CM12

Duration of total parenteral nutrition as a risk factor in the development of necrotizing enterocolitis

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Introduction: Necrotizing enterocolitis (NEC) is inflammation and necrosis of the intestinal wall in infants that can result in intestinal perforation. Laboratory findings that accompany NEC in the clinical picture are most often anemia, immature granulocytes, neutropenia, thrombocytopenia, metabolic acidosis, and hyponatremia

Materials and methods: All very low birth weight infants (<1500 grams) that were born on the in the Clinical Hospital Center Osijek between January 2015 - December2019, who lived longer than 72h. Gropu was divided in two subgroups: with and wihtou NEC. Data was collected from the medical documentation and statistically analyzed in a R-4.1.2.

Results: We found statistically significant differences in the median duration of parenteral nutrition. Children with NEC had median of 4 with interquartile range (IQR) 1-6 days] while infants wihotu NEC had median of totalparenteral nutrition of 2 days with interquartile range (IQR) 1-3days].

Conclusion: Preterm infants in whom NEC will develop on average, spend longer on total parenteral nutrition. Many studies have concluded that there is insufficient evidence to show that early trophic feeding compared to enteral fasting prevents NEC, but some countries, such as Japan, have the lowest incidence of NEC in all categories, and attribute it to early and "aggressive enteral feeding. Late start of enteral feeding in our study was shown to be a negative predictive factor, but further prospective studies are needed to confirm the real association.

Keywords: enterocolitis; infant; necrotizing

CM13

Introducing an enzyme-based amperometric glucose-sensor to preclinical research

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Introduction: Brain glucose metabolism, especially in the prefrontal cortical area (PFC), could play a crucial role in the development of posttraumatic stress disorder (PTSD). For measuring metabolic processes in vivo we need adequate temporal resolution. Despite glucose sensors are available commercially , these are not built for measuring inside the brain. In a collaboration we are developing an enzyme-based biosensor with the aim of measuring glucose-levels at the prefrontal cortex of rats.

Materials and methods: In an enzyme reaction glucose-oxydase generates hydrogen-peroxide, the concentration of which can be measured by periodically interrupted amperometry. The challenge was to generate a reliably measuring miniature electrode.

Results: Our sensor can exclude other potentially interfering electroactive species such as ascorbic acid, but measures glucose in an adequate concentration-range. Its lifespan has been extended to two weeks with a new design for enzyme immobilization. The modified measuring method improves the sensitivity and lowers the limit of detection. In pilot experiments we proved that the peripheral modulation of glucose levels by glucose or insulin administration has a measurable effect centrally, in the PFC.

Conclusion: In this collaboration we established a replicable protocol for electrode design. Our further research using this biosensor can contribute to the understanding of the metabolic aspects of PTSD, therefore, to improve the efficacy of its therapy. The knowledge gained during development of the biosensor has opened a new window for applying this electrochemical method to other projects and animal models.

Keywords: biosensor, brain, electrochemistry, glucose

CM14

Evaluation of TSH receptor antibody levels and effectiveness of I-131 treatment for Graves-Basedow's disease

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Introduction: Graves-Basedow disease is an organ-specific autoimmune disease, characterized by the production of thyroid stimulating hormone receptor antibodies (TRAb). The options for treatment of hyperthyroidism include antithyroid drugs, radioactive iodine ablation, and thyroidectomy. The aim of radioactive iodine therapy is to treat hyperthyroidism by destroying sufficient thyroid tissue to render the patient either euthyroid or hypothyroid. The aim of the study is to evaluate the level of TRAb in patients with autoimmune hyperthyroidism (Graves' disease) with the outcome of radioiodine therapy.

Materials and methods: Our retrospective study included 35 participants, divided into two groups. The first group consisted of 18 patients that showed a response to radioiodine therapy, either in form of euthyroidism or hypothyroidism. The second group was comprised of 17 patients with no response after therapy. The concentration of thyroid stimulating hormone (TSH), free triiodothyronine (FT3), free thyroxine (FT4), TRAb, anti-thyroid autoantibodies (TPOAb) and the thyroid size were determined for all patients and patient data was evaluated.

Results: Statistically significant lower values of TRAb and a shorter duration of treatment with antithyroid drugs were found in the group of patients that showed a response to radioiodine treatment. Correlation shows that a shorter duration of pretreatment and lower number of TSH receptor antibodies, predict a better response to radioiodine therapy.

Conclusion: Monitoring the level of TRAb could be helpful to assess prognosis and guide treatment after I-131 therapy in Graves' disease. Therapy failure was correlated with higher levels of TRAb and long-term treatment with antithyroid drugs.

Keywords: Antithyroid drugs; Graves-Basedow disease; Hyperthyroidism; Radioiodine Therapy; TSH receptor antibody

CM15

Initial laboratory findings of patients diagnosed with diffuse large B cell lymphoma – Single institution experience

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Introduction: Diffuse large B cell lymphoma (DLBCL) is the most common type of non-Hodgkin lymphomas (NHLs) and it accounts up to 30 % of all NHLs. The patients diagnosed with DLBCL are presented with rapidly enlarged mass or enlarged lymph nodes and 30 % of them have B-symptoms (fever, night sweating and loss of body mass). All of the patients with DLBCL have abnormal laboratory findings and our aim in this study is to evaluate the initial changes of the blood work in patients diagnosed with DLBCL in University Hospital Centre Osijek.

Matherials and methods: In this retrospective study we analysed laboratory findings of 153 patients of both sexes diagnosed with DLBCL in University Hospital Centre Osijek. Laboratory findings include number of erythrocytes, leukocytes, thrombocytes, neutrophyls, lymphocytes and monocytes in the peripheral blood of the patients as well as values of hemoglobine, lactat dehydrogenase (LDH), albumines, C-reactive protein (CRP) and indexes calculated from the data.

Results: The mean age of diagnosis was 62 years and 88 (57,5 %) were patients. Most of the patients (52,3 %) had low or lowe-intermediate International Prognostic Index. LDH was elevated in 50,3 % of the patients. The mean values of blood cells were: erythrocytes $4,37*10^{12}/l$, hemoglobine 125,0 g/l, leukocytes 7, $1*10^{9}/l$, thrombocytes $47*10^{9}/l$, absolute lymphocyte count $1,48*10^{9}/l$, albumine 40,0 g/l. Median value of CRP was 32,7 mg/l, CRP/albumine ratio 0,95, mean corpuscular volume of 86,4 fl.

Conclusion: All of the patients had abnormal laboratory findings and the most common were anemia, leukocytosis and elevated CRP. It is important to recognize B-symptoms and in combination with similar laboratory findings should alarming to start further hematological diagnostics.

Keywords: Clinical laboratory, Diffuse large B cell lymphma, Leukocytosis

OSCON

R

REVIEW

RO1

Efficacy of a probiotic-containing formula on feeding intolerance in otherwise healthy infants

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Introduction: Feeding intolerance, manifested by colic, constipation and crying, is a frequent problem in otherwise healthy formula-fed infants (FFI). It has been proven that the digestion of breastfed infants (BFI) is significantly better than that of FFI, leading to a lower incidence of the previously mentioned symptoms. Recent studies indicate that the development of gut microbiota, which is lacking in FFI compared to BFI, can be restored after multi-strain probiotic supplementation. The aim of this review was to investigate whether there is a difference in gastrointestinal (GI) intolerance between FFI with (FFI-P) and FFI without (FFI-X) probiotic supplementation.

Review: We analyzed various studies on PubMed and BMC pediatrics using the keywords "feeding intolerance", "infant formula" and "probiotics".The majority of studies have shown that FFI-P had milder GI symptoms and softer stools than FFI-X. GI symptoms were equally frequent in BFI and FFI-P, indicating the latter can be a satisfactory substitute for breast milk in this regard. Studies also showed that a significant number of pediatricians confirmed that colic episodes were less frequent in FFI-P compared to BFI or FFI-X.

Conclusion: The presented results show that the formula without probiotics is inferior to the formula with probiotics and breast milk in terms of gastrointestinal intolerance and therefore should be replaced by these variants. FFI receiving probiotics had an equal incidence of GI symptoms and even fewer infantile colic episodes than BFI. However, it is important to emphasize that breast milk has many other advantages compared to formula with probiotics.

Keywords: feeding intolerance, infant formula, probiotics

RO2

Traumatic brain injury in children and young adolescents

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Introduction: Head trauma is the leading cause of brain injury in children. Traumatic brain injury (TBI) can occur due to a variety of distinct mechanisms such as penetrating wounds, blast wounds, contact wounds or acceleration-deceleration injuries to the brain. TBI can cause a focal or diffuse brain damage, or both. Symptoms can vary depending on site of lesion, extent of damage to the brain, and the child's age or stage of development. Computed tomography (CT) scan remains the gold standard in imaging evaluations of traumatic brain injury.

Review: Retrospective trial revealed the group of school children as the most prominent in treatment of TBI. The groups of young adolescents and preschool children were less frequently presented. The most common injuries in our group were mild TBI, evaluated as Glasgow Coma Scale (GCS) of 13-15. Only two children underwent surgical treatment.

Conclusion: Multidisciplinary approach in each phase of management remains the optimal care of children suffering of brain injuries. The initial evaluation and prompt diagnosis along multimodal monitoring and an adequate treatment of intracranial hypertension are mandatory to minimize pathophysiological damage to the developing brain. Management of paediatric TBI is still widely challenging.

Keywords: Child, Craniocerebral trauma, Glasgow Coma Scale

R03

Age-related macular degeneration

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Introduction: Age-related macular degeneration (AMD) is a leading cause of vision loss in the elderly, causing approximately 8% of all cases of blindness worldwide, and its occurrence has dramatically increased in recent years. This paper aims to discuss current methods of diagnosis and treatment.

Review: Data was extracted from PubMed. AMD is subdivided into early, intermediate, and late stages. The early stage of AMD is often asymptomatic, while those in later stages may experience distorted vision or loss of central vision. Late AMD is divided into dry (atrophic) and neovascular (wet, exudative) forms. The proper diagnostic evaluation must include an ophthalmological examination with measurement of best corrected visual acuity, funduscopic evaluation with dilated pupils, macular layer imaging with optical coherence tomography (OCT), and fluorescein angiography. No evidence-based treatment for atrophic late AMD is yet available, but several treatment approaches focused on understanding the pathogenesis of progression, are being studied in clinical trials. Current therapy for dry AMD focuses on slowing its progression by modifying risk factors (smoking) and supplementation with vitamins C, E, and beta-carotene. Intravitreal injections of antivascular endothelial factor (VEGF) are the primary treatment for exudative AMD's choroidal neovascularization. Clinical trials are underway for dual anti-VEGF and anti-PDGF (platelet-derived growth factor) medications and adeno-associated virus-based gene therapies for both forms of AMD.

Conclusion: Current treatment options for AMD are limited and can be associated with significant side effects and burdens on the patient. With the aging population, the demand for effective treatment options will only continue to increase, making the development of new therapies crucial to improve outcomes.

Keywords: age-related macular degeneration, antiangiogenic agent, wet macular degeneration

R04

REVIEW: Target options for deep brain stimulation in the treatment of essential tremor

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Introduction: Deep brain stimulation (DBS) is a rapidly evolving field in movement disorders treatment and it's a well-established option for essential tremor (ET). The ventral intermediate nucleus of the thalamus (VIM) is a conventional target but others are being explored. One of them is caudal zona incerta (cZI)/posterior subthalamic area (PSA). We want to compare them to conclude which one is superior.

Review: PubMed was searched for relevant studies. The main disadvantage of VIM targeting is that tremor suppression decreases over time in 40-70% of patients. With cZI/PSA stimulation, the reduction of tremor is estimated at 79% with studies showing tremor control up to 7 years postoperatively. In a 17-patient study, the benefits of both target stimulation were evaluated with a single electrode insertion through both areas and results indicate improved control of tremor with cZI/PSA. In another smaller study, no superiority of VIM or cZI/PSA was found but they concluded that aiming for both targets in one trajectory could bring benefits from either target stimulation. Unfortunately, another 4-patient study showed that even though cZI/PSA improved tremor, VIM provided better long-term outcomes.

Conclusion: The main disadvantage of VIM targeting is the progressive worsening of tremor and cZI/PSA is suggested as a superior target regarding that. Since in some limited studies, evidence is contradictory, randomized controlled trials comparing targets should be conducted. Until definite proof and better patient selection for either target, placing an electrode in contact with both targets could be more beneficial and it's, neurosurgically, relatively easy.

Keywords: deep brain stimulation, essential tremor, functional neurosurgery

RO5

Ketogenic diet and its potential effects on DMT2 neuropathy and various pathophysiological processes underlying neurodegenerative diseases

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Introduction: The ketogenic diet (KD) is a very low carbohydrate, high fat diet. It involves a drastic reduction in carbohydrate intake and its replacement with fat intake. This reduction in carbohydrates puts the body into ketosis, a metabolic state in which ketone bodies predominate as an energy source. In patients with type 2 diabetes mellitus (DMT2), KD has been shown to be effective in weight loss, reducing hyperinsulinemia, and improving insulin sensitivity. There are also interesting findings of beneficial effects on DMT2 neuropathy and various neurodegenerative diseases. Although the mechanism is not fully understood, KD has been used to treat seizures since the days of early empirical medicine. The question is how this diet and its metabolites affect the CNS. The answer may represent a new approach to the treatment of certain diseases. In this review, we try to explain what the cause of the beneficial effect could be and suggest further research that could explain the relationship between diet and CNS.

Review: KD appears to be beneficial in almost all aspects of glycemic control. When used in real patients, some patients were able to stop taking diabetes medications. KD has been shown to affect mechanisms of neuroinflammation, such as enhancing mitochondrial respiration, reducing reactive oxygen species and intracellular signaling mediators, increasing autophagy, and modulating gut microbiota.

Conclusion: Further research is needed to evaluate KD as a potential non-pharmacological treatment for DMT2 and various neurodegenerative diseases.

Keywords: DMT2, ketogenic diet, ketosis, neuroinflammation

RO6

ICL – brief review and comparison with other methods of refractive surgery

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Introduction: The Implantable Collamer Lens (ICL) is a posterior chamber intraocular lens (IOL) developed and patented by STAAR Surgical, Nidau, Switzerland. It is an implantable lens made of a biocompatible material called Collamer. There are two forms of ICL, phakic and toric. ICL has been used for the correction of moderate to high ametropia, myopia and, since the emergence of the toric lens, also astigmatism. Unlike other refractive surgery options, this procedure is reversible. Today the most popular option for refractive correction is the laser in situ keratomileusis (LASIK), which causes regression in the long term and decreases visual performance in patients, especially in patients with high myopia. This review shines a light on ICL implantation, compares it to other alternatives and encourages some further research on this topic.

Review: ICL implantation is a good procedure from the standpoints of safety, efficacy, predictability, and stability. In studies comparing ICL versus LASIK, patients with ICL reported better vision–related quality of life including fewer activity limitations and fewer symptoms such as eye dryness or discomfort. The advantages of ICL implantation also include quicker recovery and reversibility. Possible side effects include anterior opacities of the crystalline lens (1.1–5.9%), endothelial cell density loss (6.2±8.6%), and intraocular pressure increase.

Conclusion: ICL has been shown to be superior to LASIK. It will continue to be developed and used in wider scenarios. For further research, it is important to include a longer follow-up group and subdivide different types of lenses.

Keywords: ICL, LASIK, refractive surgery

R07

Should I V/Q Scan or Should I Angiogram – Diagnostic Imaging of Choice for Pulmonary Embolism in Pregnancy

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Introduction: Pulmonary embolism (PE) is the most common cause of sudden death in pregnancy. While diagnostic protocols for PE in the general population are well established, clinicians often have doubts about how to approach the diagnosis of PE during pregnancy. It is essential to decide which diagnostic method is the safest, most accurate and fastest.

Review: We searched PubMed literature with the terms "pulmonary embolism", "pregnancy" and "diagnostic imaging". Clinical trials, meta-analyses, RCT, and systematic reviews were included. We found 15 results and only 7 of them were relevant to this poster. Because of the data lack, the Cochrane systematic review couldn't estimate specificity and PPV. Also, between these two imaging methods, they didn't find significate differences in sensitivity and negative predictive value. Tromeur et al. also couldn't compare the accuracy of these two methods directly. They found both to be adequate for ruling out PE. Computed tomography pulmonary angiography (CTPA) and V/Q scanning are both under the risk threshold for fetal dose, but there was increased irradiation of maternal breasts with old CTPA protocols. An ongoing OPTICA study will compare breast irradiation doses using new CTPA protocols with old CTPA protocols and V/Q scans. V/Q scanning is less costly than CTPA, but the latter is faster and more accessible.

Conclusion: Current guidelines prefer V/Q scanning for normal chest X – rays and CTPA for abnormal ones. Both of these diagnostic procedures are equivalent until we get more studies, and it depends on the clinical picture of a patient which diagnostic approach to choose. The authors of this poster give an advantage to CTPA because of availability, speed, simplicity and possibly less radiation dose.

Keywords: Computed Tomography Angiography; Diagnostic Imaging; Pregnancy; Pulmonary Embolism; Ventilation-Perfusion Scan

R08

Should you worry child? – Children and mRNA vaccine

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Introduction: There is general scientific consensus that mRNA vaccines are safe and have more benefit than detriment for adults, but is this true for children, too? Do children benefit from mRNA vaccination or are they only used to protect older ones in our society.

Review: We searched PubMed literature with MeSH terms "children" and "mRNA vaccine". Including only clinical trials, meta-analyses and RCT, we found 16 results and only 6 of them were relevant for this poster. All of them say that the benefit from vaccination outweighs the harm of it. We found a discrepancy between different data sets. For the age group 12-18 years, one data says that severe side effects were in 1,2% of those vaccinated, while the other one says there were none of it. One meta-analysis found increased side effects in groups of older children and adolescents, while another clinical trial found increased side effects in the 6-23 month old group compared to 2-5 years old. When compared, mRNA vaccines have more adverse effects then inactivated ones. Inactivated vaccines had lower humoral immune response for the 3-5 years age group, but with higher doses, better response was acquired without increased adverse effect. Multisystem inflammatory syndrome in children can be induced by vaccination, but it is more likely to be caused by SARS-CoV-2 infection. In November 2022. children and adolescents were only 8,44% of the total number COVID-19 cases in Croatian population and none of them died.

Conclusion: Now, when the danger of COVID-19 in children has ceased for a while, we need to reassure what vaccination practices should we suggest in different future scenarios.

Keywords: Adolescent; Child; COVID-19; Vaccination

R09

Long term health consequences of COVID-19 infection in the pediatric population

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Introduction: The studies of long-term health consequences of COVID-19 are still very limited, especially for the pediatric population. The goal of this paper is to describe the long-term health consequences of pediatric patients with COVID-19.

Review: Data was extracted from PubMed. Usually, a variety of different symptoms are present, including cardiological (tachycardia, heart palpitations, chest pain), respiratory (dyspnea, chronic cough), gastrointestinal (nausea, diarrhea, loss of appetite, frequent abdominal pain), neuropsychiatric (headache, brain fog, difficulties concentrating, sleeping problems, deranged smell and taste, numbness), musculoskeletal (joint and muscle pains), dermatological (rashes) and immunological (remitting fever). Symptoms may vary and can be triggered by other infections or stress. The few studies that have documented long-term physical symptoms in children show that the most common outcomes consist of fatigue, difficulty in concentrating, dyspnea, sleep disturbances and sensory problems. Some of the studies showed children with predominantly gastrointestinal issues are those improving faster (usually within 6 months), while some of the children experiencing cardiorespiratory symptoms, fatigue and severe headache have still not recovered after 12 months. Furthermore, these health problems, accompanied by changes in lifestyle brought by the safety measures during the pandemic, had an impact on the mental health of pediatric patients.

Conclusion: The long-term health effects of COVID-19 in the pediatric population appear in wide variety of symptoms. In the future, more research should be devoted to this topic in order to help children who have long-term consequences of COVID-19 to have a healthy and happy childhood.

Keywords: children; COVID-19; long COVID

R10

Can laboratory biomarkers GFAP and UCH-L1 replace CT in exclusion of suspected mild traumatic brain injury?

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Introduction: Up to 90% traumatic brain injuries (TBIs) are classified as mild (mTBI), which mostly affect the frontal and temporal lobes. In this condition, there is an increased leakage of molecules across the blood-brain barrier. These molecules can be classified as biomarkers for mTBI.

Review: Data was extracted from PubMed. Glial fibrillary acidic protein (GFAP) and ubiquitin carboxyl-terminal hydrolase L1 (UCH-L1) are newly researched biomarkers that combined have the potential for rapid exclusion of mTBI. GFAP is a specific marker of astrocytes injury. UCH-L1 is highly expressed in the neuronal cytoplasm. Serum UCH-L1 level was shown to peak immediately after injury until 8 hours post injury, while GFAP peaks later (20-24 hours after injury) and stays elevated for a longer time. The first rapid handheld mTBI blood test for measuring the concentrations of GFAP and UCH-L1 is the i-STAT Plasma test where test results are available within 15 minutes. This may be the substitute for often unnecessary head CTs for exclusion of mTBI.

Conclusion: The current gold standard of mTBI diagnosis is CT, but only a small proportion of mTBI patients have CT-positive abnormalities. The use of CT is associated with the potentially unnecessary risk of ionizing radiation exposure. Furthermore, CT procedure is costly and time-consuming. Many studies indicate the potential usefulness of simultaneous determination of GFAP and UCH-L1 and we believe that this is the future in the exclusion of mTBI in emergency rooms.

Keywords: Glial Fibrillary Acid Protein, TBI (Traumatic Brain Injury), Ubiquitin Carboxyl-Terminal Hydrolase Isozyme L1

R11

"Teletubbies": specifics of congenital and infantile cataract surgery and diagnostics (a review)

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Introduction: Congenital cataract (CC) is the leading cause of preventable childhood blindness. CC is categorized as congenital, infantile and traumatic. Early diagnosis and treatment are of crucial importance to prevent the development of irreversible amblyopia.

Review: Treating childhood cataract involves early diagnosis. All newborns should have red reflex screening after birth and once again after a 6 – 8 week period, since that is a critical period for vision development relatively resistant to amblyopia, strabismus and nystagmus. If present, a detailed description of the cataract's morphology (total, membranous, anterior polar etc.) and location (unilateral or bilateral) is important for the trajectory of further treatment (conservative or surgical). Any cataract that is visually significant (blocking the red reflex) is an indication for cataract surgery. The aim of CC surgery is to provide and maintain a clear visual axis and a focused retinal image. Lens aspiration and/or anterior vitrectomy have become the standard of care in its surgical management. When the opacified lens is extracted, it is vital to correct the refractive error with an intraocular lens (IOL), contact lens or eyeglasses. Primary IOL implantation (during surgery) is recommended for children older than 1 year. Postsurgical goal refraction is dependent of the child's age and the symmetry of CC. Such may be: hypermetropia or emmetropia, which will result in greater myopic correction in adulthood due to the child's growing eye and everchanging optical parameters. Possible related postoperative complications period are as follows: posterior capsule opacification, secondary glaucoma, retinal detachment etc.

Conclusion: The management of CC is a challenge for most surgeons because of visual development and ocular growth. It is best to perform surgery at the earliest convenience due to the development of visual acuity.

Keywords: congenital cataract, intraocular lens, newborn screening

R12

Bisphenol A (BPA) in obese children

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Introduction: Bisphenol A (BPA) is a xenoestrogenic monomer, which is one of the most common industrial chemicals used in the production of polycarbonate plastics and polyepoxy. The aim of this study is to identify a possible connection between BPA levels in urine and exposure risks in obese children.

Review: This review included 3 articles from PubMed. Exposure to BPA primarily refers to the consumption of plastic-packaged food, canned food, use of plastic water containers, plastic toys... Consequently, it can lead to insulin resistance, diabetes mellitus, premature puberty, and behavioral problems. A significant influence of BPA is also present in obesity. Obesity is a complex multifactorial disease and one of the burning problems of today which causes increasing concern. Considering the unhealthy lifestyle of obese people who excessively consume a large amount of foods containing BPA, a significant number of studies on humans has shown that elevated concentration of BPA in urine is associated with younger age and obesity. Namely, in vitro studies have shown that BPA acts as a selective moderator of estrogen receptors, which can easily stimulate hypertrophy and hyperplasia of adipocytes. BPA has been found to stimulate glucocorticoid receptors that promote adipogenesis leading to obesity. In the long term, this chronic condition can lead to various health problems, so timely education is necessary.

Conclusion: There is limited information on the potential health risk of BPA exposure in children. Although many studies have shown an association between obesity and elevated urinary BPA concentrations, more research should be done in this area.

Keywords: bisphenol A; children; obesity

R13

Artificial intelligence and oculomics in the diagnosis of systemic diseases.

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Introduction: Artificial intelligence (AI) is a branch of computer science that has optimized and revolutionized diagnosis-treatment of many diseases in modern-day medicine, including ophthalmology. Deep learning (DL) as a subset of machine learning is used. These methods based on artificial neural networks have been applied in the diagnosis of ophthalmological diseases such as diabetic retinopathy, age-related macular degeneration, macular edema, and glaucoma. This review discusses the new implication of ophthalmic AI models in predicting non-ocular diseases and parameters based on millions of morphological datasets from digital images.

Review: Data was extracted from PubMed. The retina is the only tissue in human body allowing noninvasive visualization of the microvascular circulation and central nervous system. Therefore, noninvasive and readily available high-resolution imaging modalities such as retinal fundus photographs, optical coherence tomography, and external ophthalmic images have been used to identify, localize, and quantify ophthalmological biomarkers associated with systemic diseases (i.e., the oculome). Oculomics uses DL capacity in identifying biomarkers, and automatical learning of critical features in retina scans for the characterization of systemic diseases such as cardiovascular (hypertension and carotid artery atherosclerosis), neurodegenerative (Alzheimer's disease and multiple sclerosis), metabolic (diabetes and diabetic peripheral neuropathy), renal and hematological diseases. The current limitations of AI systems based on ophthalmic images are insufficient sensitivity and specificity, lack of standardization, cost-effectiveness, lack of external validation, use of only retrospective datasets, and insurance of high-quality ophthalmic images.

Conclusion: Retinal imaging-based oculomics are a novel promising field of research for predicting systemic diseases and parameters. However, further large-scale prospective studies are needed to define this method's efficiency, reliability, and cost-effectiveness.

Keywords: artificial intelligence, deep learning, oculomics, systemic disease

R14

Bariatric surgery in pediatric population.

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Introduction: Childhood obesity has increased in pandemic proportion over the last decades, emerging as one of the most important public health problems due to the associated development of multiple obesity-related comorbidities. Obesity treatment requires a multidisciplinary approach that structures individual lifestyle modifications such as dietary changes and exercise programs with pharmacological therapy. Due to the limited long-term success of the previously mentioned conservative interventions, bariatric surgery (BS) is increasingly being utilized as an effective method to achieve weight loss.

Review: We searched the PubMed database for all articles regarding BS in pediatric population. BS is the most effective strategy for sustained, significant weight loss, which results in the reduction of obesity-related comorbid conditions. The most commonly performed BS are Roux-en-Y gastric bypass, sleeve gastrectomy, and adjustable gastric band. Indications for BS are BMI≥35 kg/m2 with or without severe comorbidity, physical maturity, and a history of lifestyle efforts to lose weight through diet and physical activity changes. In addition to weight reduction, postoperative results indicate significant resolution of comorbidities such as type 2 diabetes, dyslipidemia, hypertension, obstructive sleep apnea, and other diseases. Depending on the procedure, different postoperative complications occur. These are anastomotic leaks, stricture, wound infection, band erosion, dumping syndrome, and nutritional deficiencies.

Conclusion: BS is becoming a pivotal part of the multidisciplinary approach to severe obesity management in children and adolescents. However, additional long-term studies are needed to evaluate and define its efficiency and safety.

Keywords: bariatric surgery, obesity, Roux-en Y gastric bypass, gastrectomy

OSCON

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OTHER

O01

Analgesic and OTC medicines in student home pharmacies: insight into use, storage and disposal

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Introduction: Research of medicines in student home pharmacies provides insight into habits related to medicines, their storage, use and disposal. Self-medication is a common practice among students, especially among students of medicine and health sciences. The aim of this study was to assess the prevalence of OTC medicines in student dormitories, knowledge, attitudes and practice of using OTC medicines, as well as ways of storing and disposing them.

Materials and methods: The research was conducted from 1st of November to 20th of December 2018 and included 70 student dormitories in Novi Sad. Data were collected through a standardized questionnaire and direct inspection of the inventory of OTC medicines and analgesics. The types of drugs, the method of obtaining the drug, the indications and the duration of use were recorded.

Results: During the investigation of student home pharmacies, a total of 337 drug packages were found. The most frequently found drugs were anti-inflammatory, anti-rheumatic and analgesics, among which Ibuprofen, Paracetamol and Diclofenac accounted for 30.86% of the total number of drugs found. Over 70% of drugs were purchased for self-medication, significantly more than observed in general population. About 10% of students kept expired medicines, 75% of medicines were properly stored, while a negligible number of them were properly disposed of.

Conclusion: Self-medication is widespread among student population. Analgesics along with anti-inflammatory drugs are most often found in student home pharmacies. The majority of medicines from student households are adequately kept but are not appropriately disposed of.

Keywords: home pharmacies, self-medication, students

O02

How effective are functional movement chain exercises among athletes and non-athletes?

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Introduction: Flexibility through the myofascial chains contributes to the proper functioning of the locomotor system. The goal of our research was to test the effectiveness of functional movement chain exercises compared to isolated movements among athletes, recreational athletes, and non-athletes.

Materials and methods: The type of our research was a randomized controlled trial with a questionnaire. The survey took place in 7 cities between March and November 2021. After completing the questionnaire, the sample (n = 74) underwent the first FMS (Functional Movement Screening), and then they were personally taught 6-12 functional / isolated exercises to correct their assessed deficiencies. On average, one exercise program lasted 152 ± 36 days, and then FMS values were measured back.

Results: Mobility and stability are best developed through functional movements (p = 0.001). Individuals who performed functional movements for an average of ≥2 hours per day until age 15 achieved better FMS results on the first measurement (p = 0.008). Those who were performing martial arts in childhood were better in their 1. FMS results (p=0.045). My hypothesis that individuals with higher FMS scores suffered fewer major injuries during their lifetime was not significantly demonstrated (p = 0.485).

Conclusion: Based on our results, it can be concluded that mobility and stability can be improved even after 25 years. The best tool for development is achieved with childhood onset functional movements, performing them for at least two hours a day.

Keywords: functional training, isolated training, mobility, stability

O03

Differences in cognitive reserve index between examinees of different gender and age

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Introduction: Cognitive reserve is result of individual life experience, which is based on brain plasticity, respectively on increased dendritization and synaptogenesis, as the consequence of learning process. Higher values of cognitive reserve potentially indicated a greater neuroprotective protective influence.Estimate the validity of cognitive reserve index in the population of middle and old age examines and determine possible differences among male and female respondents, also between different age groups.

Material and methods: Our study included 124 participants aged 40-80 years. The validity of cognitive reserve index were assessed by the CRIq Nucci 2012. CRIq is a method for the quantitative measurement and comprehensive evaluation of the CR, that individuals have accumulated throughout their lifetimes.The questionnaire include 24 questions classified into 3 sections: CRI-Education, CRI-Working Actitivity, CRI-Leisure time.

Results: In examined population the average values of cognitive reserve index have been determined (109.9±18.1). Men had higher average values of the index, but the difference was not proved to be statistically significant ($p>0.05$). Statistically significant difference between the years of the work experience, use of motor vehicles, hobbies, housekeeping and gardening was observed between men and women ($p<0.05$). Statistically significant existence of age differences was established in some indicators ($p>0.001$). The group from 60-71 had the higgest CRIq index score (115.6±16).

Conclusion: 1.Whole study determined the moderate average of congnitive reserve index. 2.There are differences of cognitive reserve index in relation of gender which is higher in mens, but not statistic important. 3.There are significant statistic differences between genders for some indicator. 4.The differences of cognitive reserve index in relation of gender were found.

Keywords: cognitive reserve; age; gender

O04

Assertiveness, aggression, and difficulties in emotional regulation in BJJ participants

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Introduction: The therapeutic properties of Brazilian Jiu-Jitsu (BJJ) on post-traumatic stress disorder (PTSD) have been already documented. Sports are generally a helpful tool during therapeutic processes. The aim of this study was to compare the values of a group practicing BJJ to those of a group practicing other sports and a group not practicing sports at all, in order to determine whether BJJ would show significant results. Our study focused on assertiveness, emotion regulation difficulties, and aggression, all of which have serious implications for the prevention, healing, and reintegration of PTSD patients.

Materials and methods: All the used self-report tests had high psychometric and internal reliability. For statistical data analysis, we used Jamovi and one-way ANOVA variance analysis to compare the groups. After calculating Cronbach's Alpha, homogeneity, and normality test, we used Fisher's test (assumed equal variances). To check significance Tukey post hoc test was used.

Results: Our measurement was based on two years of sports participation in an organized club setting, which was utilized to compare the results (N=135). No significant differences in difficulties in emotion regulation, aggression, and assertiveness scores were found between the non-athlete, athlete, and BJJ groups. It is also important to note that we do not know to what extent the level of aggression changed in the representatives of which sport, this factor could only be controlled by a separate input measure.

Conclusion: Although the measurements look promising, based on the current sample, no significant differences in our measurement were found, and more research into the psychological factors around BJJ is suggested.

Keywords: Aggression, Assertiveness, Brazilian Jiu-Jitsu, DERS, PTSD

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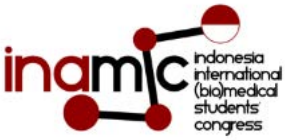
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