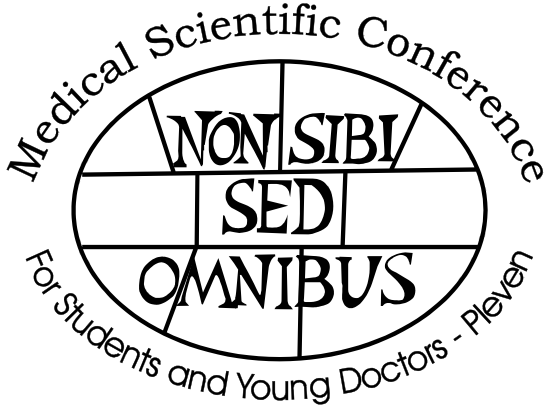
MEDICAL UNIVERSITY – PLEVEN, BULGARIA

XXII INTERNATIONAL MEDICAL SCIENTIFIC CONFERENCE FOR STUDENTS AND YOUNG DOCTORS
13 – 18 OCTOBER 2025

MEDICAL UNIVERSITY – PLEVEN, BULGARIA



ABSTRACT BOOK

Under the auspices of the Rector of Medical University – Pleven, Bulgaria

Prof. Dobromir Dimitrov, MD, PhD

WEBSITE:
www.mu-pleven.bg
www.mdsc.mu-pleven.bg

Publisher: Publishing Center Medical University – Pleven

Edited by: Assoc. Prof. Diana Pendicheva-Duhlenska, MD, PhD
Gergana Neykova

ISBN 978-954-756-368-1 (Book)
ISBN 978-954-756-369-8 (PDF E-book)

Dear students, young colleagues and friends,
Dear international guests,

It is a great pleasure and honour for me to welcome you at Medical University – Pleven as participants and invited speakers of the **XXII International Medical Scientific Conference for Students and Young Doctors under the motto: The Art of Medicine – The Sparkle of Life**. This scientific youth forum has been an emblem of Medical University – Pleven for 22 years as the most successful international student event in Bulgaria attracting participants from all over the world! I am extremely proud to be part of the history of the conference – 22 years ago as a medical student at our University; I was one of the first organizers of this significant international forum. Therefore, I am perfectly aware of the great energy and hard work the students and their professors put into the organisation of such an event entirely dedicated to their international colleagues and guests.

Dear guests and colleagues,

Nowadays we are aware that technology is advancing so rapidly that today we have tools that can alter DNA, simulate human conversation, and analyze the universe in ways that were science fiction a generation ago. In contrast to this technological breakthrough, our moral, emotional, and spiritual development - for example, how we deal with meaning, purpose, compassion, and wisdom - evolves much more slowly. Proving this growing gap between power and wisdom, I want to share a quote from Carl Jung: "We have the means to destroy the world, but not the wisdom to refrain from doing so."
That is why, we would like to draw the attention of medical students and young doctors to this year's motto of the forum - ***The Art of Medicine – The Sparkle of Life.*** It refers to the humanistic, intuitive, and empathetic side of practicing medicine, complementing the scientific and technical aspect. We should have in mind that while science provides the knowledge and tools to diagnose and treat disease, the art of medicine involves how those tools are applied with compassion, communication, and clinical judgment. This year the purpose of the youth forum is to teach and remind us of the key elements of the Art of Medicine: empathy and compassion, communication, clinical judgement, patient-centered care and intuition. We are looking forward to welcoming you at Medical University – Pleven for participation in the **XXII International Medical Scientific Conference for Students and Young Doctors**! We can master together the ***Art of Medicine***!

PROF. DOBROMIR DIMITROV, MD, PHD
RECTOR OF MEDICAL UNIVERSITY – PLEVEN, BULGARIA

Dear teachers,
Dear colleagues and friends,

Once again, it is our pleasure to welcome you to the **XXII International Medical Scientific Conference for Students and Young Doctors (MDSC)** with this year's motto "The Art of Medicine – The Sparkle of Life".
The twenty-first edition of this inspiring forum of young scientists will take place on **13th October – 18th October 2025 at the University Telecommunication Endoscopic Center (TELEC) of MU-Pleven.**

It has been 22 years since one exciting beginning who set the first steps to infinite science and shared experience. These years are full of hard work, challenges and successes. 22 years of memories, new friendships and strong relations that will live through time!

It has been 51 years since Medical University – Pleven started giving us knowledge and wisdom! It is a fortress of future light in education and research and a path to good realization and modern training that brightens our professional dreams! And that is why we continue working with the same motivation, passion and curiosity which guided the very first Organizing Committee in the year of beginning 2002!
Following our tradition, we will tirelessly focus on bringing you again to the best lectures and workshops that we strongly believe will broaden your competence in the basic fields of medicine and health sciences.
Like in any other remarkable event, your experience would not be completed without meeting new amazing people at our social programme, including a Welcome party and a trip to one of the many beautiful locations in Bulgaria. Therefore, stay tuned for more information.
We are filled with enthusiasm and are looking forward to meeting you all here in Pleven at the XXI International Medical Scientific Conference for Students and Young Doctors.
"The most beautiful things in the world cannot be seen or touched, they are felt with the heart." – Antoine de Saint-Exupéry, The Little Prince

Warmest regards,
OC
Medical University – Pleven
Pleven, Bulgaria

SCIENTIFIC BOARD

ORGANIZING COMMITTEE

SECTION	MEMBERS	CONTACTS
President	Teodora Bozhinova	teodora_bojinova@abv.bg
Vice President	Boryana Hristova	boryana.xristiowa@gmail.com
Academic Coordinator	Assoc. prof. Diana Pendicheva-Duhlenska, MD, PhD	pendicheva@gmail.com
Secretary Board	Simona Yakimova	simonka200213@gmail.com
Technical Commission	Milena Kirilova	mimk01k00@gmail.com
	Martin Yolov	martin.yolov2001@gmail.com
	Veselin Dinkov	vdinkov182@gmail.com
	Daniela Perrone	perronedaniela1@gmail.com
	Vladislava Dimitrova	dimit.vladis@mail.bg
	Alena Gospodinova	alenka5-3@abv.bg
Financial and PR Commission	Antonia Andreeva	tonyb@abv.bg
	Antoniya Stoycheva	antoniyastoycheva61@gmail.com
	Svetoslava Chingova	svetoslava.chingova@abv.bg
	Marija Bogoeva	bogoevamarija3@gmail.com
	Anastasija Petkovska	anastasijapetkovska1408@gmail.com
Scientific Commission	Ralitsa Sotirova	ralisotirovaa2000@gmail.com
	Dzhemile Isuf	djemile.salix@gmail.com
	Viktor Velkov	victor.velkov@protonmail.com
	Gegana Neykova	geri.en@abv.bg
	Adrijan Bojchovski	bojchovski05@gmail.com
	Marinella Vanini	maryvanini99@gmail.com
Social Commission	Simona Yakimova	simonka200213@gmail.com
	Ventsislava Koleva	vkoleva2002@abv.bg
	Iliyana Radova	iliyana12343@gmail.com
	Anna Dimitrova	ani1710200@abv.bg

Advisory Board		
	Aygulya Akisheva, MD	Rostislava Kushleva, MPharm
	Kristina Peeva, MD	Tsvetislav Petrov, MPharm
	Nina Emilova, MD	Mariana Kostova, MD
	Yoan Ivanov, MD	Maria Tsvyatkova, MD
	Iva Kostadinova, MD	Tsveta Kotseva, MD
	Vasil Neykov, MD	Robert Gjoshev, MD

WEB DESIGN: Alexey Todorov – a.todorov@mu-pleven.bg
SYSTEM SUPPORT: Vladislav Hristov
AUTHOR OF SPECIAL AWARDS: **Ivan Ivanov**, sculpturer, Pleven, Bulgaria

CONTENTS

SESSIONS OVERVIEW

TENTH AUTUMN SCHOOL OF INNOVATIONS IN MEDICINE AND PHARMACY 13 - 14 OCTOBER 2025		
FROM OVERMEDICATION TO OPTIMIZATION: MANAGING POLYPHARMACY IN OLDER ADULTS		Veronika Bencheva *Chair of Clinical Pharmacology, Faculty of Health, Witten/Herdecke University, Witten, Germany* *Center for Clinical Trials, Faculty of Health, Witten/Herdecke University, Witten, Germany*
NEXT - GENERATION IMMUNOTHERAPY: EMERGING PARADIGMS AND CLINICAL IMPLICATIONS		Prof. Jeliazko Arabadjiev, MD, PhD, MPH *Head of the Department of Medical Oncology at Acibadem City Clinic Tokuda Hospital - Sofia and Chairman of the Bulgarian Scientific Society of Immuno-Oncology*
TRANSPORTATION OF THE GREAT VESSELS		Prof. Tsvetomir Loukanov, MD, PhD *Consultant, Congenital Cardiac Surgeon of the Department Cardiac Surgery in Heidelberg, Germany*
ROLE OF ECHOCARDIOGRAPHY IN DIAGNOSING CARDIAC DISEASES		Dr. Shreya Ohri, MD *Consultant - St. Peter's and Ashford Hospital, Senior Clinical Fellow - Royal Brompton Hospital Imperial College, London*
FROM SHADOWS TO INSIGHTS: INSPIRING THE NEXT ERA OF FORENSIC IMAGING		Dr. Yanko Kolev, MD, PhD *Department of General Medicine, Forensic Medicine and Deontology, Medical University of Pleven, Pleven, Bulgaria* *Department of Forensic Medicine, District Hospital MBAL, Gabrovo, Bulgaria* *President, International Association of Forensic Sciences (IAFS)*
WHEN FORENSIC IMAGING HELPS FORENSIC PATHOLOGY: ABOUT THE TOULOUSE EXPERIENCE (FRANCE)		Fabrice Dedouit, MD, PhD, HDR *Radiologist and forensic pathologist, Medico-legal department, Toulouse University and Hospital, Toulouse, France*

INNOVATIONS IN ROBOTIC SURGICAL ONCOLOGY		Assoc. Prof. Martin Karamanliev *Specialist in „General Surgery" at the Clinic of Oncological Surgery „University Hospital G. Stranski"* *Permanent member of the Health and Sports Commission in the National Agency for Evaluation and Accreditation at the Council of Ministers*
MEDICATIONS AND SEXUALl FUNCTION - WAR AND PEACE		Prof. Georgi Momekov, MD, Corresponding Member of the Bulgarian Academy of Sciences *Dean of the Faculty of Pharmacy at Medical university of Sofia* *Chairman of the Board of the Bulgarian Scientific Pharmaceutical Society*
FROM DATA TO DECISIONS: HOW AI CAN TRANSFORM POPULATION HEALTH		Dr. Ayis Pyrros *Diagnostic and Neuroradiologist in Tinley Park, Illinois, as part of the Duly Health& Care network*
ACADEMIC LECTURE (AL)		
CHIMNEYS AND IN SITU FENESTRATION ASSISTED ENDOVASULAR TREATMENT OF AORTIC DISSECTION INVOLVING THE ARCH		Prof. Dr. Ivo Petrov *Corresponding Member of the Bulgarian Academy of Sciences* *Medical Director of Acibadem City Clinic Cardiovascular Center, Sofia, Bulgaria* *Head of the Department of Cardiology and Angiology of Acibadem City Clinic Cardiovascular Center, Sofia* *Professor of Cardiology in Sofia University „St. Kliment Ohridski"* *President of the Bulgarian Society of Endovascular Therapy*
KEYNOTE LECTURE (KL)		
FROM PLANT TO MEDICINE - THE ROLE OF PHARMACOGNOSY IN THE DEVELOPMENT OF MODERN PHARMACY		Ivan Stambolov *Department of Pharmacognosy, Faculty of Pharmacy, Medical university of Sofia*

ANTARCTIC SLEEP STUDY – WHERE SLEEP MEETS THE END OF THE WORLD		Neyko Neykov, MD, PhD, prof. Iv. Staikov, MD, PhD *Department of Neurology and Sleep Medicine, Acibadem City Clinic Tokuda Hospital, Sofia, Bulgaria*
GENOMIC LABORATORY: BEHIND THE SCENES OF PERSONALIZED MEDICINE		Slavena Nikolova, MD *Medical Genetics Department - Medical University - Pleven, Bulgaria*
GEDEON RICHTER SPONSOR'S LECTURE: TODAY'S GAMECHANGERS…		Boris Dinkov, MD *Endocrinology resident - UMHAT "Dr. Georgi Stranski" - Pleven, Bulgaria* *Asst.prof. Of Pharmacology and clinical pharmacology - Medical University - Pleven, Bulgaria*
INTERNATIONAL MOBILITY UNDER THE „ERASMUS+" PROGRAM: FOCUS ON THE ERASMUS+ PROGRAM 2021-2027 - NEW OPPORTUNITIES FOR MOBILITY AND COOPERATION IN HIGHER EDUCATION		Experts on the Erasmus+ program *Department of International and Project Activities, Medical University - Pleven, Bulgaria*
HISTORY AND DEVELOPMENT OF ANESTHESIOLOGY WORLDWIDE AND IN BULGARIA		Assoc. Prof. Petko Stefanovski , MD, PhD *Department of Anesthesiology and Intensive Care, Medical University – Pleven, Bulgaria; National Health Insurance Fund Governor, Bulgaria; Former Deputy Minister of Health, Republic of Bulgaria* Daniel Hristov, MD *UMHAT "Saint Marina" - Pleven, Bulgaria*
A BRIEF HISTORY OF MOUNTAIN MEDICINE		Assoc. Prof. Oleg Tcholakov *Head of the Department of Biliary- Hepatic and Pancreatic Surgery at University Hospital "Lozenets" in Sofia, Bulgaria*
ADVANCED TRAUMA LIFE SUPPORT IN SPECIFIC CONDITIONS		Dr. Albena Atanasova *Clinic of Pediatric Anesthesiology and Intensive Care in UMBALSM "N.I.Pirogov"*

ACCIDENTAL HYPOTHERMIA		Dr. Sevdalina Mihaylova *Clinic of Pediatric Anesthesiology and Intensive Care in UMBALSM "N.I.Pirogov"*
FEATURES OF ADAPTATION TO HIGH ALTITUDE. HYPOBARIC HYPOXIA		Doychin Boyanov *Assistant Prof. in the Department of Tourism, Mountaineering, and Orienteering at National Sports Academy (NSA) in Bulgaria* *Climbed multiple eight- thousanders including Everest, K2, Nanga Parbat, Broad Peak, Hidden Peak, Denali* *Participated in numerous Bulgarian Antarctic expeditions, first ascents of peaks on Livingston island*
MEDICAL EQUIPMENT IN THE MOUNTAINS – WHAT TO BRING WITH US?		Dr. Martin Yordanov *Clinic of Anesthesiology and Intensive Care at University Hospital "Lozenets" in Sofia*
PSYCHOLOGICAL PROFILING		Todor Todorov *Forensic Psychophysiologist, Manager of Assess Ltd., Worked at Criminal Psychology sector of the Institute of Psychology-Ministry of Internal Affairs, Member of the American Polygraphic Association (APA) and the Society of Psychologists in the Republic of Bulgaria*
PHYSIOPREVENTION WITH A FOCUS ON CARDIOVASCULAR DISEASES		Radostina Madzharova, MD *Clinic of Physical and Rehabilitation Medicine Medical University - Pleven*
WORKSHOPS (W)		
W1: SUTURING SKILLS WITH PRACTICE ON REAL TISSUES. BASIC SURGICAL SKILLS		**Moderator:** Dobromir Nguen, MD, PhD First Surgical Clinic, UMHAT „Dr. Georgi Stranski" Pleven, Bulgaria
W2: SUTURING SKILLS WITH PRACTICE ON REAL TISSUES - ADVANCED		**Moderator:** Moderator: Anislav Gabarski, MD, PhD UMHAT „Saint Marina" - Pleven, Bulgaria

W3: MINIMALLY INVASIVE SURGERY		**Moderator:** Martin Karamanliev, MD, PhD, Meri Shoshkova, MD Department of Surgical Oncology, University Hospital "Dr. G. Stranski", Pleven, Bulgaria
W4: HANDS-ON BRONCHOSCOPY WORKSHOP FOR MEDICAL STUDENTS		**Moderator:** Nikolay Kyuchukov, MD, PhD Department of Pulmonology and Phthisiatry, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria
W5: RADIOGRAPHIC IMAGING IN NEUROLOGICAL PATHOLOGY - MAKING IN THE FIRST STEPS		**Moderator:** Iliya Duhlenski, MD UMHAT "Dr. Georgi Stranski" – Pleven, Bulgaria
W6: GASTROINTESTINAL ENDOSCOPY		**Moderator:** Georgi Georgiev, MD Department of Gastroenterology, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria
W7: WORKSHOP ON FETAL MORPHOLOGY		**Moderators:** Elitsa Gyokova, MD, PhD UMHAT „Saint Marina" - Pleven, Bulgaria
W8: IN THE DEPTHS OF PHARMACOGNOSY		**Moderator:** Assist. Prof. Andrey Andreev Faculty of Pharmacy, Medical University - Pleven, Bulgaria
W9: CLINICAL ECHOCARDIOGRAPHY		**Moderator:** Assoc. Prof. Gospodinov, MD, PhD UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria
W10: INTENSIVE CARE WORKSHOR		**Moderator:** Daniel Hristov, MD UMHAT „Saint Marina" - Pleven, Bulgaria
W11: NEONATOLOGY WORKSHOP		**Moderator:** Gergana Stankova, MD, PhD Department of Obstetrics and Gynecology, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria
W12: MDSC TEENS		**Moderator:** Tanya Valcheva Vice president of Bulgarian Red Cross Youth Anna Koleva President of AMSB - Pleven

ORAL PRESENTATIONS (OP)	
SECTION I	**Obstetrics, Gynecology and Pediatrics** Chaired by: Assoc. Prof. Nikola Popovski, MD, PhD Nikoleta Stoyanova, MD
SECTION II	**Surgery, Orthopedics and Urology** Chaired by: Dimitar Tsankov, Ivaylo Nenov, MD, PhD Anisalv Gabarski, MD, PhD
SECTION III	**Varia** Chaired by: Prof. Galiya Gancheva, MD, PhD Prof. Mariela Kamburova, MD, PhD Assoc. Prof. Armine Grigoryan, MD, PhD
SECTION IV	**Internal Medicine** Chaired by: Assoc. prof. Vania Slavcheva, MD, PhD Kamen Genov, MD, PhD
SECTION V	**Neurology, Neurosurgery and Psychiatry** Chaired by: Assoc. Prof. Petranka Chumpalova, MD, Anatoli Todorov, MD
SECTION VI	**Pharmacy** Chaired by: Prof. Galiya Stavreva, MD, PhD Assoc. Prof. Aleksandar Pashev, PhD in Chemistry Assist. Prof. Svetoslav Stoev, PharmD, PhD
POSTER SESSIONS (P)	
POSTER SECTION	Chaired by: Prof. Snezhana Tisheva, DMSc, PhD Assoc. Prof. Diana Pendicheva, MD, PhD Assoc. Prof. Stefan Trifonov, MD, PhD

CONFERENCE TIMETABLE

13 OCTOBER, 2025 (MONDAY)

TENTH AUTUMN SCHOOL OF INNOVATIONS IN MEDICINE AND PHARMACY

10:00 - 14:00	**Registration - TELEC**
11:45 - 12:00	**Coffee break**
12:00 - 12:45	**KEY LECTURE : From Overmedication to Optimization: Managing Polypharmacy in Older Adults** **Dr. rer. medic. Veronica Bencheva** Research Associate at the Chair of Clinical Pharmacology and the Center for Clinical Trials at the University of Witten/Herdecke, Member of the German Deprescribing Network
13:00 - 13:30	**Lunch break**
13:30 - 14:15	**KEY LECTURE : Next - generation immunotherapy: Emerging paradigms and clinical implications** **Prof. Jeliazko Arabadjiev, MD, PhD, MPH** **Head of the Department of Medical Oncology at Acibadem City Clinic Tokuda Hospital - Sofia andChairman of the Bulgarian Scientific Society of Immuno-Oncology**
14:15 - 14:30	**Coffee break**
14:30 - 15:15	**KEY LECTURE : Transposition of the Great Vessels** **Prof. Tsvetomir Loukanov, MD, PhD** **Consultant, Congenital Cardiac Surgeon of the Department Cardiac Surgery in Heidelberg, Germany**
15:30 - 16:15	**KEY LECTURE: Role of Echocardiography in diagnosing Cardiac Diseases** **Dr. Shreya Ohri, MD** Consultant -St. Peter‘s and Ashford Hospital, Senior Clinical Fellow - Royal Brompton Hospital Imperial College, London

14 OCTOBER, 2025 (TUESDAY)

TENTH AUTUMN SCHOOL OF INNOVATIONS IN MEDICINE AND PHARMACY

08:30 - 12:00 **REGISTRATION - TELEC**

11:00 - 11:45 **KEY LECTURE :**

Dr. Yanko Kolev, MD, PhD

Head of the Department of Forensic Medicine at the District Hospital of Gabrovo, Bulgaria

National consultant of forensic medicine at the Bulgarian Ministry of Health

President of the International Association of Forensic Sciences (IAFS)

11:45 - 12:00 **Coffee break**

12:00 - 12:45 **KEY LECTURE : When forensic imaging helps forensic pathology: about the Toulouse experience**

(France)

Fabrice Dedouit, MD, PhD, HDR

Radiologist and Forensic Pathologist, Docent in the University Hospital of Toulouse, forensic department, France

12:45 - 13:15 **Lunch break**

13:15 - 14:00 **KEY LECTURE : Innovations in robotic surgical oncology**

Assoc. Prof. Martin Karamanliev

Specialist in "General Surgery" at the Clinic of Oncological Surgery "University Hospital G. Stranski"

Permanent member of the Health and Sports Commission in the National Agency for Evaluation and

Accreditation at the Council of Ministers

14:15 - 15:00 **KEY LECTURE: Medications and Sexual Function - War and Peace**

Prof. Dr. Georgi Momekov, Corresponding Member of the Bulgarian Academy of Sciences

Dean of the Faculty of Pharmacy at Medical university of Sofia

Chairman of the Board of the Bulgarian Scientific Pharmaceutical Society

15:00 - 15:15 **Coffee break**

15:15 - 16:00 **KEY LECTURE : From Data to Decisions: How AI Can Transform Population Health**

Dr. Ayis Pyrros

Diagnostic and Neuroradiologist in Tinley Park, Illinois, as part of the Duly Health& Care network

16:30 - 17:30 **OFFICIAL OPENING CEREMONY**
ACADEMIC LECTURE: Chimneys and In situ fenestration assisted endovascular treatment of aortic dissection involving the arch

Prof. Dr. Ivo Petrov, Corresponding Member of the Bulgarian Academy of Sciences

Medical Director of Acibadem City Clinic Cardiovascular Center, Sofia, Bulgaria

Head of the Department of Cardiology and Angiology of Acibadem City Clinic Cardiovascular Center, Sofia

Professor of Cardiology in Sofia University "St. Kliment Ohridski"

President of the Bulgarian Society of Endovascular Therapy

ADOCUMENTARY FILM:

„Who is Professor Chirkov?"

20:00 **WELCOME PARTY**

15 OCTOBER, 2025 (WEDNESDAY)

08:30 - 14:00 **REGISTRATION - TELEC**

9:00 - 10:00 **ORAL PRESENTATIONS BY SECTIONS: SESSION Obstetrics, Gynecology and Pediatrics**

10:30 - 11:15 **KEY LECTURE : From Plant to Medicine - the Role of Pharmacognosy in the Development of Modern**

Pharmacy

Ivan Stambolov

Master of Pharmacy in Medical university- Sofia

Nutritionist (Stanford School of Medicine)

11:30 - 11:45 **Coffee break**

11:45 - 12:00 **KEY LECTURE: Antarctic Studies: Sleep Meets the End of the World**

Dr. Neyko Neykov

Neurologist at Acibadem City Clinic Tokuda Hospital in Sofia, Bulgaria

Part of the expedition of the Bulgarian Antarctic research efforts coordinated by the Bulgarian Antarctic

Institute, which operates the St. Kliment Ohridski Base on Livingston Island

12:00-12:15 **LECTURE: Genomic Laboratory: Behind the Scenes of Personalized Medicine**

12:15 - 13:15 **Lunch break**

13:15 - 13:45 **GEDEON RICHTER SPONSOR'S LECTURE: Today's Gamechangers…**

14:00 - 14:45 **INTERNATIONAL MOBILITY UNDER THE "ERASMUS+" PROGRAM: FOCUS ON THE ERASMUS+ PROGRAM 2021-2027 - NEW OPPORTUNITIES FOR MOBILITY AND COOPERATION IN HIGHER EDUCATION**
Moderators: Experts on the Erasmus+ program, Department of International and Project Activities, Medical University - Pleven, Bulgaria

15:00 - 18:00 **WORKSHOPS**

16 OCTOBER, 2025 (THURSDAY)

9:30 - 10:45 **ORAL PRESENTATIONS BY SECTIONS: SESSION Surgery, Orthopedics and Urology**

10:45 - 11:00 **Coffee break**

11:00 - 12:00 **POSTER SECTION PRESENTATION**

12:00 - 12:30 **Lunch break**

12:30 - 13:30 **ORAL PRESENTATIONS BY SECTIONS: SESSION Neurology, Neurosurgery and Psychiatry**

13:30 - 13:45 **Coffee break**

13:45 - 14:30 **KEY LECTURE:**

Assoc. Prof. Petko Stefanovski, MD, PhD

Department of Anesthesiology and Intensive Care, Medical University – Pleven, Bulgaria; General Manager,

National Health Insurance Fund (NHIF), Bulgaria; Former Deputy Minister of Health, Republic of Bulgaria

Daniel Hristov, MD

15:00 - 17:00 **KEY LECTURE: A brief history of mountain medicine**

Assoc. Prof. Oleg Tcholakov

Head of the Department of Biliary- Hepatic and Pancreatic Surgery at University Hospital "Lozenets" in Sofia, Bulgaria

KEY LECTURE: Advanced Trauma Life Support in specific conditions

Dr. Albena Atanasova

Clinic of Pediatric Anesthesiology and Intensive Care in UMBALSM "N.I.Pirogov"

KEY LECTURE: Accidental hypothermia

Dr. Sevdalina Mihaylova

Clinic of Pediatric Anesthesiology and Intensive Care in UMBALSM "N.I.Pirogov"

KEY LECTURE: Features of adaptation to high altitude. Hypobaric hypoxia

Doychin Boyanov

Assistant Prof. in the Department of Tourism, Mountaineering, and Orienteering at National Sports Academy

(NSA) in Bulgaria

Climbed multiple eight- thousanders including Everest, K2, Nanga Parbat, Broad Peak, Hidden Peak, Denali

Participated in numerous Bulgarian Antarctic expeditions, first ascents of peaks on Livingston island

KEY LECTURE: Medical equipment in the mountains – what to bring with us?

Dr. Martin Yordanov

Clinic of Anesthesiology and Intensive Care at University Hospital "Lozenets" in Sofia

20:00 **Official dinner "Hotel Rostov"**

17 OCTOBER, 2025 (FRIDAY)

10:00 - 10:45 **ORAL PRESENTATIONS BY SECTIONS: SESSION Pharmacy**

10:45 - 11:00 **Coffee break**

11:00 - 11:45 **KEY LECTURE: Psychological profiling**

Todor Todorov

Forensic Psychophysiologist, Manager of Assess Ltd., Worked at Criminal Psychology sector of the Institute of

Psychology-Ministry of Internal Affairs, Member of the American Polygraphic Association (APA) and the Society of Psychologists in the Republic of Bulgaria

12:00 - 13:00	**ORAL PRESENTATIONS BY SECTIONS: SESSION Internal Medicine**
13:00 - 13:15	**Coffee break**
13:15- 14:30	**ORAL PRESENTATIONS BY SECTIONS: SESSION Varia**
14:45 - 15:30	**KEY LECTURE: Physioprophylaxis of Cardiovascular Diseases - Essence and Advantages** **Dr. Madzharova** Department of Physical and Rehabilitation Medicine, Occupational Therapy and Sports, Faculty of Public Health, Medical University – Pleven
15:30	**Official closing ceremony**

SPONSORS AND MEDIA PARTNERS

XXII International Medical Scientific Conference for Students and Young Doctors is sponsored by:

МЕДИЦИНСКИ УНИВЕРСИТЕТ ПЛЕВЕН

Гедеон Рихтер

credoweb™ HEALTH EXPERTS

Doppelherz®

EC EDUCATIONAL CENTRE international bookshop

ФРАМАР framar.bg

Rotaract ROTARY INTERNATIONAL

WE KINDLY THANK ALL OUR SPONSORS AND PARTNERS FOR THEIR CONSISTENT SUPPORT AND CONSIDERATION

TENTH AUTUMN SCHOOL INNOVATIONS IN MEDICINE AND PHARMACY

13 - 14 October 2025

13th October 2025

FROM OVERMEDICATION TO OPTIMIZATION: MANAGING POLYPHARMACY IN OLDER ADULTS

Veronika Bencheva*,**
**** Chair of Clinical Pharmacology, Faculty of Health, Witten/Herdecke University, Witten, Germany***
*****Center for Clinical Trials, Faculty of Health, Witten/Herdecke University, Witten, Germany***

Polypharmacy is becoming an increasingly relevant challenge in the treatment of older and multimorbid patients. The use of several medications at the same time can lead to adverse drug events, drug–drug interactions, and problems with adherence, all of which may seriously affect patients' quality of life. To address these risks, structured medication reviews that take individual patient needs into account are essential.

In this presentation, we will discuss the clinical consequences of polypharmacy and summarize key principles of medication management in older adults. Established instruments such as PRISCUS, FORTA, the STOPP/START criteria, and the Beers list will be introduced as practical tools for identifying potentially inappropriate medications. An important approach in this context is deprescribing, meaning the careful and supervised reduction or discontinuation of drugs that are no longer indicated. Deprescribing will be presented as one possible strategy to deal with polypharmacy and to support treatment decisions. In addition, common barriers to implementation, key success factors, relevant guidelines for deprescribing, and findings from published studies will be discussed.

The aim is to encourage a critical and reflective approach to polypharmacy and to promote individualized, safe, and effective pharmacotherapy.

NEXT - GENERATION IMMUNOTHERAPY: EMERGING PARADIGMS AND CLINICAL IMPLICATIONS

Prof. Jeliazko Arabadjiev, MD, PhD, MPH*
Head of the Department of Medical Oncology at Acibadem City Clinic Tokuda Hospital - Sofia and Chairman of the Bulgarian Scientific Society of Immuno-Oncology
Correspondence: jeliazko.arabadjiev@acibademcityclinic.bg

AIMS
This study critically examines the emerging landscape of next-generation immunotherapeutic modalities and their evolving role in oncological practice. The objective is to evaluate the efficacy, safety, and translational relevance of novel approaches—such as bispecific antibodies, chimeric antigen receptor (CAR) and T-cell receptor (TCR)-engineered cellular therapies, personalized neoantigen-based vaccines, and next-generation immune checkpoint inhibitors—relative to established immunotherapy paradigms and conventional systemic treatments.
METHODS
A systematic review of recent peer-reviewed literature, phase I–III clinical trials, and translational studies was undertaken. Comparative analyses were conducted to assess therapeutic response rates, survival outcomes, toxicity profiles, and mechanisms of resistance. The review further explores combinatorial strategies integrating advanced immunotherapies with existing treatment modalities and evaluates the role of predictive biomarkers in optimizing patient selection.
RESULTS
Next-generation immunotherapies demonstrate considerable clinical promise, exhibiting superior response durability, improved target specificity, and enhanced modulation of the tumor microenvironment compared to first-generation agents. Engineered immune effector cell platforms and bispecific constructs have shown substantial efficacy in refractory and metastatic settings. Early-phase studies on personalized neoantigen vaccines and novel checkpoint blockade strategies indicate synergistic benefits when combined with standard regimens, contributing to reductions in immune evasion and therapeutic resistance.
CONCLUSION
Advancements in next-generation immunotherapy herald a paradigm shift in oncological therapeutics, enabling precision-driven, durable, and less toxic interventions. Successful clinical translation will depend on refining biomarker-guided patient stratification, developing rational combination strategies, and overcoming intrinsic and acquired resistance mechanisms. Future research should prioritize broadening the applicability of these modalities across diverse tumor types and optimizing their integration into multimodal treatment frameworks.
KEY WORDS: next-generation immunotherapy, CAR-T cells, bispecific antibodies, neoantigen vaccines, immune checkpoint blockade, tumor microenvironment, precision oncology

TRANSPORTATION OF THE GREAT VESSELS

Prof. Tsvetomir Loukanov, MD, PhD*
Consultant, Congenital Cardiac Surgeon of the Department Cardiac Surgery in Heidelberg, Germany

Transposition of the great arteries (in this case, dextro-transposition) occurs when the aorta arises directly from the right ventricle and the pulmonary artery arises from the left ventricle, resulting in independent, parallel pulmonary and systemic circulations; oxygenated blood cannot reach the body except through openings connecting the right and left sides of the heart (eg, patent foramen ovale, ventricular septal defect [VSD]). Symptoms are primarily severe neonatal cyanosis and occasionally heart failure, if there is an associated VSD. Heart sounds and murmurs depend on the presence of associated congenital anomalies. Diagnosis is by echocardiography. Definitive treatment is surgical repair.

ROLE OF ECHOCARDIOGRAPHY IN DIAGNOSING CARDIAC DISEASES

Dr. Shreya Ohri, MD*
Consultant - St. Peter's and Ashford Hospital, Senior Clinical Fellow - Royal Brompton Hospital Imperial College, London

Echocardiography is a readily available, non-invasive, diagnostic testing modality that uses ultrasound to assess cardiac structure and function. It provides vital information for disease diagnosis, risk stratification, management, and surveillance of various cardiac conditions. Its' excellent temporal and spatial resolution allow for detailed evaluation of cardiac systolic and diastolic function, valvular pathology, and hemodynamic.

This is applicable in a variety of environments ranging from the emergency department to critical care, operating theatres, Cath labs and for monitoring chronic cardiovascular diseases. Complex echocardiography includes transoesophageal, stress, bubble/ contrast, and use of advanced techniques like myocardial strain and 3D echocardiography which further enhances its' sensitivity and specificity.

It can be done in a variety of clinical settings, such as for establishing an initial diagnosis in a patient with cardiac symptoms such as chest pain, palpitations and dyspnoea. Where assessment of systolic and diastolic function and valvular assessment is crucial.

Complex echocardiography is essential to guide surgical and peri-procedural decision making. In the emergency room, it is often used to assess for regional wall motion thickening abnormalities, presence of cardiac tamponade and aortic dissections. Echocardiography is the first-line for assessment and further classification of heart failure, valvular abnormalities and various cardiomyopathies; which then guides treatment and helps with the patients' prognostic evaluation.

14th October 2025

FROM SHADOWS TO INSIGHTS: INSPIRING THE NEXT ERA OF FORENSIC IMAGING

Dr. Yanko Kolev, MD, PhD*,**,**

Department of General Medicine, Forensic Medicine and Deontology, Medical University of Pleven, Pleven, Bulgaria
****Department of Forensic Medicine, District Hospital MBAL, Gabrovo, Bulgaria***
*****President, International Association of Forensic Sciences (IAFS)***

Advances in imaging are transforming how justice sees the body, the injury and the scene. High−resolution post−mortem CT, MRI and angiography now underpin the *virtual autopsy*, producing permanent, non−invasive 3−D archives that often match - and increasingly guide - traditional dissection. These cross−sectional datasets feed artificial−intelligence models that automatically segment organs and flag subtle patterns, converting hours of interpretation into minutes while harmonising reports across borders.

Yet the story no longer ends in the mortuary. At the crime scene, photogrammetry, LiDAR and drone−borne laser scanning capture millimetre−accurate geometry; multispectral (ALS) and thermal cameras reveal biological traces, fibres and recent disturbances invisible to the naked eye. Such images merge with autopsy data to create immersive *digital twins* that investigators can revisit, re−measure and present in court long after the physical evidence has gone.

Clinical forensic imaging completes the continuum. Low−dose CT, contrast−enhanced ultrasound, X-rays and fast MRI document occult fractures, strangulation injuries and child abuse with an objectivity that protects both patient and practitioner, supplying courts with reproducible metrics rather than subjective sketches. Emerging photon−counting CT, spectral MRI and handheld 3−D scanners promise even finer detail and true field portability, while 3−D printing of bones, objects or whole scenes revolutionises teaching, peer review and jury comprehension.

These technological leaps bring new duties. International societies have begun converging on modality−specific guidelines, reporting standards and radiation−safety thresholds - crucial guard−rails in an era of rapid innovation. Multidisciplinary training is essential to prevent blind faith in algorithms and to translate pixel−level findings into legally robust conclusions. At the same time, ethical frameworks must protect data privacy, respect cultural sensitivities and ensure equitable global access.

This keynote traces the arc from the first forensic X−ray to today's AI−enabled digital ecosystem, showing how five converging pillars - virtual autopsy, AI−powered

analysis, 3−D reconstruction, clinical forensic imaging and imaging−guided crime−scene investigation - are coalescing into a single iterative workflow. By embracing that workflow, the forensic community can move from shadows to insights that are faster, fairer and scientifically unassailable.

KEY WORDS: forensic imaging, crime scene investigation, 3D reconstruction, gender based violence, forensic medicine, technology, alternate light sources (ALS)

WHEN FORENSIC IMAGING HELPS FORENSIC PATHOLOGY: ABOUT THE TOULOUSE EXPERIENCE (FRANCE)

Fabrice Dedouit, MD, PhD, HDR*
Radiologist and forensic pathologist, Medico-legal department, Toulouse University and Hospital, Toulouse, France

This presentation will explore the various applications of forensic imaging, with a particular focus on post-mortem computed tomography (PMCT) and PMCT angiography. Illustrative examples will be presented in various forensic contexts, such as autopsy and forensic anthropology. This presentation will also focus on forensic identification covering different anthropological aims: identification of lesions and surgery, and comparative and reconstructive identification.

The presentation will focus on the forensic imaging experience in Toulouse, France. On 26 February 2024, the forensic department of Toulouse Hospital moved from Rangueil Hospital (west of Toulouse) to Purpan Hospital (east of Toulouse). Relocating the Institute of Forensic Medicine to newly renovated buildings (the former Emergency Building) with new autopsy rooms also enabled the acquisition of a CT scanner. We will present the acquired equipment (CT scanner, post-processing equipment, etc.) and explain the factors that influenced our choice of CT scanner. We will present our organisation for linking forensic imaging and autopsies, as well as the involvement of radiographers and the medico-legal institute‘s forensic technicians in performing PMCT.

We will present the statistics of forensic imaging activity and the contexts in which post-mortem computed tomography (PMCT) is performed. Considering one year of PMCT activity, 620 PMCTs were performed alongside 1,184 autopsies. The percentages of cases studied through PMCT by manner of death were as follows: natural deaths 40%, accidental deaths 26%, suicides 26%, homicides 3.3%, and unknown 4.7%. The causes of death studied with PMCT are shown as a percentage: natural deaths (40%), motor vehicle accidents (25%), hanging/strangulation (11%), falls (7%), gunshot wounds (6%), burns/fire (4%), cutting objects (3%), drowning (2%), blunt trauma (1.3%), and toxic deaths (0.7%).

The identification of surgical materials and the detection of metallic foreign bodies are also essential and are key to radiological comparative identification. Many radiological modalities (radioscopy, plain X-rays and computed tomography) can be compared with post-mortem computed tomography (PMCT) scans. Many elements can be compared between ante- and post-mortem radiological documentation. The odontological radiological comparative identification process must involve a forensic odontologist to ensure quality. Many illustrative examples will be presented to the audience.

Finally, we will present the advantages and limitations of this organisation in terms of forensics, teaching, research and collaborations. The presentation will also emphasise the importance of multidisciplinary work, involving forensic pathologists, forensic odontologists, forensic anthropologists, radiologists, radiographers, archaeologists, and many other specialists.

INNOVATIONS IN ROBOTIC SURGICAL ONCOLOGY

Assoc. Prof. Martin Karamanliev*,**
****Specialist in „General Surgery" at the Clinic of Oncological Surgery „University Hospital G. Stranski"***
*****Permanent member of the Health and Sports Commission in the National Agency for Evaluation and Accreditation at the Council of Ministers***

Robotic surgery has rapidly transformed the landscape of surgical oncology by enhancing precision, visualization, and minimally invasive capabilities. Recent advances in robotic platforms allow surgeons to perform complex oncologic procedures with greater dexterity and control, while reducing patient morbidity and accelerating recovery. This lecture will provide an overview of the latest innovations in robotic surgical oncology, including developments in imaging integration, fluorescence-guided surgery, artificial intelligence–assisted decision-making, and novel applications in breast and colorectal cancers. Emphasis will be placed on how these technologies improve oncologic outcomes, optimize perioperative safety, and expand the role of minimally invasive surgery in complex cancer care. By bridging surgical expertise with cutting-edge technology, robotic surgical oncology is reshaping the standards of cancer treatment and surgical education.

FROM DATA TO DECISIONS: HOW AI CAN TRANSFORM POPULATION HEALTH

Dr. Ayis Pyrros*
****Diagnostic and Neuroradiologist in Tinley Park, Illinois, as part of the Duly Health& Care network***

Dr. Ayis T. Pyrros, MD, is a distinguished American radiologist and neuroradiologist:
• He serves as Section Chief of Neuroradiology and a full partner at Duly Health and Care, Tinley Park, Illinois, with over 17 years of clinical experience seeing patients of all ages.
• Dr. Pyrros is an Adjunct Teaching Faculty at the University of Illinois Chicago and has actively contributed to multiple research projects, particularly in AI, imaging informatics, and predictive diagnostics.
• He holds board certifications in Diagnostic Radiology, Neuroradiology, and Clinical Informatics, and has completed extensive training at institutions including Sidney Kimmel Medical College at Thomas Jefferson University, Northwestern University, and Christiana Care Health Services.

Expertise & Research Areas

Dr. Pyrros' work spans clinical practice, research, and technological innovation, including:
Diagnostic Radiology and Neuroradiology, with expertise in head and neck imaging, DTI, perfusion imaging, and MRS
Medical Imaging Informatics, AI-driven imaging models, and population health imaging platforms
Research and mentorship in bioinformatics, deep learning applications in radiology, and imaging biomarker development
Clinical patient care emphasizing clear communication and empowerment through understandable imaging results

LECTURES

ACADEMIC LECTURE

CHIMNEYS AND IN SITU FENESTRATION ASSISTED ENDOVASULAR TREATMENT OF AORTIC DISSECTION INVOLVING THE ARCH

Prof. Dr. Ivo Petrov*,**,,****,*****

****Corresponding Member of the Bulgarian Academy of Sciences***
*****Medical Director of Acibadem City Clinic Cardiovascular Center, Sofia, Bulgaria***
******Head of the Department of Cardiology and Angiology of Acibadem City Clinic Cardiovascular Center, Sofia***
*******Professor of Cardiology in Sofia University „St. Kliment Ohridski“***
********President of the Bulgarian Society of Endovascular Therapy***

BACKGROUND
Aortic arch dissections remain a formidable challenge in cardiovascular medicine due to their complex anatomy and life-threatening complications. While open surgical repair is the gold standard, it carries considerable morbidity and mortality. Recent advances in endovascular techniques have enabled less invasive alternatives for selected patients with complex type A dissections.
METHODS
We retrospectively analyzed a cohort of 14 patients with Stanford type A aortic dissection treated with totally endovascular approaches. In 11 cases, prior ascending aortic surgery had been performed, persistent true lumen compression with malperfusion or progressive false lumen enlargement prompted subsequent endovascular intervention. Three fully endovascular techniques were employed:
Percutaneous stent-assisted reperfusion of side branches, followed by large bare-metal aortic stent implantation across the supra-aortic vessels.
Chimney-assisted thoracic endovascular aortic repair (TEVAR) preserving supra-aortic branches.
Arch TEVAR with in-situ fenestration and implantation of bridging stent grafts.
RESULTS
All patients underwent successful endovascular treatment with restoration of true lumen flow and resolution of malperfusion. Endovascular reintervention provided stabilization in patients with persistent or progressive disease following primary surgery. No peri-procedural mortality occurred in this series. Early outcomes suggest feasibility and effectiveness of these techniques in the setting of complex arch dissections.

CONCLUSION

Totally endovascular approaches offer promising alternatives for patients with complex aortic arch dissections, particularly in emergent scenarios or post-surgical recurrence. While procedural challenges and long-term durability remain areas of ongoing investigation, advancements in technology, increasing operator experience, and careful patient selection are expanding the role of endovascular therapy in this high-risk population. Multidisciplinary collaboration remains pivotal in optimizing outcomes.

KEYNOTE LECTURES

FROM PLANT TO MEDICINE - THE ROLE OF PHARMACOGNOSY IN THE DEVELOPMENT OF MODERN PHARMACY

Ivan Stambolov*
Department of Pharmacognosy, Faculty of Pharmacy, Medical university of Sofia

Pharmacognosy, the study of medicinal substances derived from natural sources, has been a cornerstone of healthcare for centuries. Rooted in ancient traditions, early civilizations relied heavily on plants, minerals, and animal products for treating ailments — practices that laid the foundation for modern medicine. From the herbal scrolls of Egypt and the materia medica of ancient Greece and China, to the apothecaries of the Middle Ages, Pharmacognosy evolved alongside humanity‘s growing understanding of nature‘s therapeutic potential.

The scientific advancement of the 19th and 20th centuries transformed Pharmacognosy into a more systematic discipline, integrating botany, chemistry, and pharmacology. Landmark discoveries such as quinine, morphine, and penicillin showcased the power of natural compounds in combating disease and shaped the development of pharmaceutical sciences.

Today, Pharmacognosy remains essential in the discovery and development of new drugs, particularly in the search for novel antibiotics, anticancer agents, and treatments for chronic diseases. Advances in analytical techniques, biotechnology, and ethnopharmacology have expanded the scope of natural product research, allowing scientists to isolate, characterize, and synthesize bioactive compounds with greater precision than ever before. Moreover, the integration of traditional knowledge with modern scientific methods offers promising pathways for innovation.

As pharmaceutical sciences continue to evolve, pharmacognosy bridges the gap between ancient wisdom and contemporary medicine - underscoring the enduring value of nature as both a source of healing and scientific inspiration.

ANTARCTIC SLEEP STUDY – WHERE SLEEP MEETS THE END OF THE WORLD

Neyko Neykov, MD, PhD, prof. Iv. Staikov, MD, PhD*
Department of Neurology and Sleep Medicine, Acibadem City Clinic Tokuda Hospital, Sofia, Bulgaria

Sleep is a fundamental human process—but how does it respond when exposed to one of the most extreme environments on Earth? This presentation explores the first Bulgarian polysomnographic sleep recordings conducted on the Antarctic continent, during the 30th Bulgarian Antarctic Expedition on Livingston Island.

We investigated how the human brain and sleep architecture adapt to environmental isolation, continuous daylight, and the psychological impact of remoteness. Results revealed a significant increase in deep (N3) sleep, shortened REM latency, and emotionally intense dreams, often involving deceased loved ones. These findings suggest a robust compensatory and restorative response of the brain, triggered by extreme physical and psychological stress.

The study combines scientific insight with personal expeditionary experience, highlighting the role of sleep as both a physiological necessity and a mirror of inner human resilience. Drawing parallels between Antarctica and future space missions, the research offers valuable implications for sleep medicine, adaptation in isolated environments, and the neurobiology of survival.
Keywords: sleep, Antarctica, polysomnography, isolation, adaptation, deep sleep, REM, expedition, resilience, polar

GENOMIC LABORATORY: BEHIND THE SCENES OF PERSONALIZED MEDICINE

Slavena Nikolova, MD*
****Medical Genetics Department - Medical University - Pleven, Bulgaria***

Personalized medicine represents an innovative strategy in diagnosis, prevention, and treatment based on the individual genetic, molecular, and clinical characteristics of each patient. Major tool of this approach are the modern genomic technologies. Since 2018, the Genomic Laboratory of Center of Competence has analyzed more than 1,000 individuals using Next Generation Sequencing (NGS) – complex multistep technique that allows for the simultaneous analysis of multiple genes in multiple patients.

We present two clinical cases demonstrating the impact of NGS in identifying pathogenic variants: a patient with congenital Epidermolysis Bullosa and a family affected by Lynch syndrome.

Our findings confirm that the personalized approach enables more accurate diagnosis assignment and more efficient prevention strategies. Personalized medicine is no longer a concept of the future—it is becoming a practical reality in modern clinical care.

GEDEON RICHTER SPONSOR'S LECTURE: Today's Gamechangers…

Boris Dinkov, MD*,*
Endocrinology resident - UMHAT "Dr. Georgi Stranski" - Pleven, Bulgaria
****Asst.prof. Of Pharmacology and clinical pharmacology - Medical University - Pleven, Bulgaria***

Dr. Dinkov graduated in Medicine at the Medical University of Pleven in 2021 as Valedictorian, with full honors (GPA 6.00) and the prestigious "Golden Hippocrates" award. During his studies, he actively participated in national and international conferences and developed an early interest in the field of endocrinology.

He currently specializes in Endocrinology and Metabolic Diseases at University Hospital "Dr. Georgi Stranski" in Pleven, while actively teaching practical courses in Pharmacology and Clinical Pharmacology to students.
Dr. Dinkov is an active member of the Bulgarian Society of Endocrinology and the Bulgarian Scientific Society of Pharmacology, Clinical Pharmacology, and Therapy.

His scientific and clinical interests include:
- Adverse drug reactions and pharmacovigilance;
- Individualization and optimization of endocrine therapy in multimorbid patients;
- Pathophysiology of diabetes, obesity, and metabolic syndrome;
- Nutritional and sports medicine

INTERNATIONAL MOBILITY UNDER THE „ERASMUS+“ PROGRAM 2021-2027 – NEW MOBILITY OPPORTUNITIES FOR MU-PLEVEN IN 2025-2026

Angelova N., Ivanova I., Pendicheva-Duhlenska D.
Department “Erasmus+”, MU-Pleven, Bulgaria
Presenting author: Angelova N.
Correspondence: iro@mu-pleven.bg

We present the new opportunities for student mobility in higher education in the frame of Erasmus+ program, for the academic 2025/2026 year. Medical University – Pleven is awarded with Erasmus Charter for Higher Education 2021-2027 by the European Commission, which provides the general quality framework for European and international cooperation activities.

We discuss the latest bilateral agreements of Medical University – Pleven with program and partner universities, the basic steps of online student application for study and traineeship and the process of selection for the exchange.. The new rules regarding the use of EWP will be elucidated.

The Head of the Erasmus+ sector will present the key Erasmus+ actions and will discuss with the future applicants the steps of conditions, recognition, financial support, required documents and Inter-Institutional bilateral agreements.

Keywords: *“Erasmus+” program, student exchange, Medical University – Pleven.*

HISTORY AND DEVELOPMENT OF ANESTHESIOLOGY WORLDWIDE AND IN BULGARIA

Assoc. Prof. Petko Stefanovski , MD, PhD,*,**,, Daniel Hristov, MD*******
****Department of Anesthesiology and Intensive Care, Medical University – Pleven, Bulgaria***
*****National Health Insurance Fund Governor, Bulgaria***
******Former Deputy Minister of Health, Republic of Bulgaria***
*******UMHAT "Saint Marina" - Pleven, Bulgaria***

This presentation explores the origins and evolution of anesthesiology as a cornerstone of modern medicine. It begins with the early quest for painless surgical procedures, highlighting the groundbreaking discovery and clinical application of anesthetic gases, as well as the contributions of the pioneering figures who laid the foundation of this science.
The second part focuses on the emergence of anesthesiology in Bulgaria, tracing its first steps, progress, and eventual establishment as an essential medical specialty. Special attention is given to its role in comprehensive, patient-centered care and its impact on advancing personalized treatment approaches.

A BRIEF HISTORY OF MOUNTAIN MEDICINE

Assoc. Prof. Oleg Tcholakov*
****Head of the Department of Biliary- Hepatic and Pancreatic Surgery at University Hospital "Lozenets" in Sofia, Bulgaria***

ADVANCED TRAUMA LIFE SUPPORT IN SPECIFIC CONDITIONS

Dr. Albena Atanasova*
****Clinic of Pediatric Anesthesiology and Intensive Care in UMBALSM "N.I.Pirogov"***

ACCIDENTAL HYPOTHERMIA

Dr. Sevdalina Mihaylova*
****Clinic of Pediatric Anesthesiology and Intensive Care in UMBALSM "N.I.Pirogov"***

FEATURES OF ADAPTATION TO HIGH ALTITUDE. HYPOBARIC HYPOXIA

Doychin Boyanov*
****Assistant Prof. in the Department of Tourism, Mountaineering, and Orienteering at National Sports Academy (NSA) in Bulgaria***
Climbed multiple eight- thousanders including Everest, K2, Nanga Parbat, Broad Peak, Hidden Peak, Denali
Participated in numerous Bulgarian Antarctic expeditions, first ascents of peaks on Livingston island

MEDICAL EQUIPMENT IN THE MOUNTAINS – WHAT TO BRING WITH US?

Dr. Martin Yordanov*
****Clinic of Anesthesiology and Intensive Care at University Hospital "Lozenets" in Sofia***

Mountain medicine is a specialized field focused on diagnosing, treating, and preventing health issues in high-altitude and remote environments. These doctors are trained to work in extreme conditions – cold, altitude, rough terrain, and limited resources. They care for climbers, hikers, and rescuers where nature pushes the human body to its limits.

PSYCHOLOGICAL PROFILING

Todor Todorov*

Forensic Psychophysiologist, Manager of Assess Ltd., Worked at Criminal Psychology sector of the Institute of Psychology-Ministry of Internal Affairs, Member of the American Polygraphic Association (APA) and the Society of Psychologists in the Republic of Bulgaria

Todor Todorov is a forensic psychophysiologist. Between 1999 and 2012, he worked in the "Criminal Psychology" department at the Institute of Psychology – Ministry of Interior (MVR), and from 2009 to 2012, he served as head of the department.

Todor Todorov has extensive practical experience in the field of psychological profiling of unknown perpetrators of serious criminal offenses, negotiations in hostage situations, crisis intervention, handling critical situations involving individuals with suicidal intentions, as well as analysis of written, audio, and video materials, behavioral analysis, and the preparation and defense of forensic psychological evaluations.

As a criminal psychologist and expert psychophysiologist, Todor Todorov has conducted polygraph examinations with over 4,000 individuals in cases involving loyalty assessments, theft investigations, confidential information misuse, robbery, arson, and other serious crimes. Additionally, he has supervised over 10,000 polygraph examinations.

His professional background includes completing a Full Polygraph Training Course and Post-Conviction Sex Offender Testing (PCSOT and Advanced PCSOT) at the Backster School of Lie Detection, San Diego, USA.

Todor Todorov is a certified polygraph instructor by the Backster School of Lie Detection. He is a member of the American Polygraph Association (APA) and the Union of Psychologists in the Republic of Bulgaria.

He is also the author of publications in specialized journals of the Institute of Psychology – (MVR) on topics related to criminal psychology and has participated in roundtables, international seminars, and projects related to crime detection and prevention.

PHYSIOPREVENTION WITH A FOCUS ON CARDIOVASCULAR DISEASES

Dr. Radostina Madzharova*,**
****Clinic of Physical and Rehabilitation Medicine***
*****Medical University - Pleven***

We will discuss what physioprevention is and what its principles are. The focus will be on the natural factors of the environment that we use to prevent cardiovascular diseases. How each of them works and how we dose them. Which of the risk factors for these diseases are easily influenced by natural physical agents.
The most commonly used physical factors are air baths, sunbaths, water treatments, ultraviolet irradiations, sea treatment, and movement therapy. These are the best studied and have proven their effect on risk factors for cardiovascular diseases.
In Bulgaria, a large part of the balneocenters uses climatotherapy and thalassotherapy for the prevention of cardiovascular diseases. Kinesitherapy is the most widely used and convenient option for preventing cardiovascular disorders in the workplace.

KEY WORDS: physioprevention, cardiovascular diseases

WORKSHOPS

WORKSHOP 1: SUTURING SKILLS WITH PRACTICE ON REAL TISSUES. BASIC SURGICAL SKILLS

Moderator: Dobromir Nguen, MD, PhD
First Surgical Clinic, UMHAT „Dr. Georgi Stranski“ Pleven, Bulgaria

Surgical suturing and knot-tying represent fundamental skills that every physician, regardless of specialty, should master with confidence. This interactive workshop is designed to provide participants not only with the theoretical background, but also with extensive hands-on practice on real tissues. During the session, attendees will learn and apply different suturing techniques, explore the principles of tissue handling, and improve their dexterity in tying secure surgical knots. Special attention will be given to the choice of sutures, ergonomics, and tips for avoiding common mistakes in everyday clinical practice. By the end of the workshop, participants will have strengthened their confidence and precision in performing one of the most essential procedures in surgery.

WORKSHOP 2: SUTURING SKILLS WITH PRACTICE ON REAL TISSUES - ADVANCED

Moderator: Anislav Gabarski, MD, PhD
UMHAT „Sveta Marina“ - Pleven, Bulgaria

This hands-on workshop is designed for medical students seeking to develop and refine essential surgical skills. Participants will receive guided practice in suturing, knot tying, and select advanced techniques, with direct supervision to ensure proper technique and confidence-building. Ideal for students preparing for clinical rotations or surgical placements, this focused session emphasizes practical skill development in a supportive learning environment.

WORKSHOP 3: MINIMALLY INVASIVE SURGERY

Moderator: Martin Karamanliev, MD, PhD, Meri Shoshkova, MD
Department of Surgical Oncology,
University Hospital “Dr. G. Stranski”, Pleven, Bulgaria

Minimally invasive surgery is the new surgical trend. Nowadays more and more laparoscopic and robotic surgeries are being performed for less traumatic outcomes for the patients. If you want to learn the intricate methods of laparoscopic surgery and how it differs from traditional open surgery, this workshop is for you! Participants will acquire the basic knowledge of minimally invasive surgery and will have the opportunities to practice it.

WORKSHOP 4: HANDS-ON BRONCHOSCOPY WORKSHOP FOR MEDICAL STUDENTS

Moderator: Nikolay Kyuchukov, MD, PhD
Department of Pulmonology and Phthisiatry,
UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria
Discover the basics of airway anatomy and endoscopic navigation in this interactive session designed for medical students. Guided by an experienced clinician, you'll practice bronchoscopy techniques on simulators and gain valuable insights into one of the most important tools in respiratory medicine. A unique chance to combine learning with hands-on experience!

WORKSHOP 5: RADIOGRAPHIC IMAGING IN NEUROLOGICAL PATHOLOGY - MAKING IN THE FIRST STEPS

Moderator: Iliya Duhlenski, MD
UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria
The brain is a beautiful and mysterious maze that we are still discovering new secrets about. Being able to see beneath the surface is a privilege that we nowadays have - through the ever developing CT and MRI. With the information of this workshop you will be able to start your journey in their world and recognize the most common pathologies, and some of the not so common ones. We will discuss the normal anatomy and different tips to make your learning easier.

WORKSHOP 6: GASTROINTESTINAL ENDOSCOPY

Moderator: Georgi Georgiev, MD
Department of Gastroenterology, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria
A glimpse into the world of Interventional Gastroenterology - this workshop will teach you the basics of endoscopy, its indications and uses for GIT bleeding, cancer screening and so much more.

WORKSHOP 7: WORKSHOP ON FETAL MORPHOLOGY

Moderator: Elitsa Gyokova, MD, PhD
UMHAT „Sveta Marina" - Pleven, Bulgaria
What is Fetal Morphology?
Fetal morphology refers to the detailed ultrasound examination conducted between 19 and 23 weeks of pregnancy. This scan assesses the development and structure of

the fetus, including the brain, heart, spine, kidneys, limbs, and facial features. It is crucial for detecting congenital anomalies and ensuring optimal fetal development.
About Dr. Elitsa Gyokova
Dr. Elitsa Gyokova is an obstetrician-gynecologist specializing in fetal medicine. She graduated from the Medical University of Pleven in 2016 and currently serves as a Senior Lecturer and Medical Doctor at the same institution. Dr. Gyokova is a consultant at Saint Marina Hospital in Pleven and is affiliated with the Fetal Medicine Foundation. Her research interests encompass prenatal screening, preeclampsia prevention, and the impact of maternal health on fetal outcomes. She has authored over 40 peer-reviewed publications and actively participates in national and international conferences on prenatal diagnostics

WORKSHOP 8: IN THE DEPTHS OFf PHARMACOGNOSY

Moderator: Asst. Prof. Andrey Andreev
Faculty of Pharmacy,
Medical University - Pleven, Bulgaria
This workshop will take you in a different world of herbs and medicinal plants. The microscopic point of view shows unique and interesting parts of them. You are getting the opportunity to uncover a new part of Pharmacognosy.

WORKSHOP 9: CLINICAL ECHOCARDIOGRAPHY

Moderator: Assoc. Prof. Konstantin Gospodinov, MD, PhD
UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria
The lecturer and leader of the training will be Assoc. Prof. Gospodinov, an expert with extensive practical and academic experience in the field of imaging diagnostics and invasive methods. The workshop will present basic techniques for ultrasound examination, discuss interesting clinical cases and provide an opportunity for practical work with the equipment.

WORKSHOP 10: INTENSIVE CARE WORKSHOR

Moderator: Daniel Hristov, MD
UMHAT „Saint Marina" - Pleven, Bulgaria

This workshop offers hands-on training in intensive care, focusing on cardiopulmonary resuscitation (CPR) and endotracheal intubation techniques, essential for emergency and critical care settings.

WORKSHOP 11: NEONATOLOGY WORKSHOP

Moderator: Gergana Stankova, MD, PhD
Department of Obstetrics and Gynecology, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria

- Basic principles of NICU care - theory
- A glance inside - cases that we have treated
- Resuscitation - the guide to better me
- Intubation (if you manage to provide a suitable mannequin)
- quiz

WORKSHOP 12: MDSC TEENS

Moderator: Tanya Valcheva*, Anna Koleva**
****Vice president of Bulgarian Red Cross Youth***
*****President of AMSB - Pleven***

Prospective university students from specialized classes of leading high schools also take part in the scientific conference, the initiative is carried out with the support of the Bulgarian Red Cross Youth.

VARIA SECTION

CHAIRMEN:

Prof. Galiya Gancheva, MD, PhD

Prof. Mariela Kamburova, MD, PhD

Assoc. Prof. Armine Grigoryan, MD, PhD

SECRETARY:

Martin Yolov, OC

Wherever the art of medicine is loved, there is also a love of humanity

Hippocrates

DEAFNESS IN INFANCY AND EARLY CHILDHOOD. MEDICAL AND SOCIAL ASPECTS

Tsakov V. A.*, Mirchev S. I.**, Osman N.A.*, Nikolov G.N.**
****Student, Medical university - Pleven, Bulgaria***
*****Department of Otorhinolaryngology, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria***
Presenting author: Tsakov V. A.
Correspondence: vasiltsakov1@gmail.com

OBJECTIVE
To present the most common causes of deafness, the stages through which a normally hearing child/hearing-impaired child passes, diagnostic methods, and treatment approaches according to the location of damage to the auditory analyzer.
The frequency of deafness in newborns according to the WHO is 1.4 per 1,000 newborns. This data is also applicable for Bulgaria. The causes of deafness are diverse. Deafness is divided into congenital (genetic causes) and acquired (infectious diseases, e.g., rubella, cytomegalovirus, meningitis, and others).
METHODS Using a protocol for early detection of congenital and acquired neonatal deafness includes:Screening qualitative test - measurement of otoacoustic emissions (OAE) of outer hair cells, performed after birth in the maternity ward.
Quantitative measurement of hearing loss with objective tests: auditory brainstem response (ABR), brainstem evoked response audiometry (BERA).
Imaging studies: CT and/or MRI for visualization of the cochlea and central nervous system – they are important for preoperative preparations for cochlear implantations.
Results: Screening identified hearing loss in 1.4 per 1,000 newborns, consistent with WHO data. Early diagnosis and intervention significantly improved auditory-speech development, cognitive outcomes, and social integration, especially when initiated before 6 months of age.
CONCLUSION
The auditory and speech development of children, born with normal hearing, has temporal characteristics that help children form auditory perceptions and speech.
Delayed diagnosis, that determines whether the child has impaired hearing, delays auditory-speech and neuropsychological development. This leads to social isolation and a reduced quality of life.

KEY WORDS: Infant/child deafness, Hearing screening

SURROGACY: THE LEGAL SITUATION IN BULGARIA

Peudova C.S.*, Peudova A.S.**, Tsanova-Rangelova S.V.***
****Fifth year medical student at Medical University - Pleven***
*****Fifth year law student at Faculty of Law and History, SWU "Neofit Rilski" Blagoevgrad***
****** PhD in Civil Law, chief assistant at Faculty of Law and History, SWU "Neofit Rilski" Blagoevgrad***
Presenting author: Peudova C.S.
Correspondence: carolina.s.peudova@gmail.com

AIM
To conduct a brief analysis regarding the necessity of legal regulation of surrogacy, taking into account its advantages and disadvantages, as well as its implications for the parties involved.
METHODS
The research is based on the current legislation of the Republic of Bulgaria. It involves an analysis of the relevant provisions of the Constitution, the Family Code, the Health Act, the Law on Protection against Domestic violence, Child Protection law, as well as judicial practice concerning surrogacy.
RESULTS
The legislation of the Republic of Bulgaria does not provide a legal framework regulating surrogacy. Based on the conducted analysis, the first major issue that emerges concerns the legal determination of the child's origin. Under Bulgarian law, the mother is legally recognized as the woman who gives birth to the child, which creates substantial difficulties in establishing the child's parentage and subsequently in the process of acknowledgement of the child by the intended parents. Furthermore, the lack of legal regulation may result in the absence of adequate protection for the rights of the parties involved. The unregulated nature of surrogacy carries the risk of the process being reduced to a form of child trafficking and exploitation of women and children. Surrogacy, in turn, offers an opportunity for women with reproductive challenges to have children using their own genetic material. This reproductive option contributes to addressing the demographic crisis by potentially increasing the birth rate and supporting population growth.
CONCLUSION
The absence of a clear legal framework renders surrogacy a risky and legally uncertain process. The establishment of comprehensive legislation is of paramount importance in order to ensure the protection of the "best interest of the child".

KEY WORDS: surrogacy, legislation

INSOMNIA AMONG THE STUDENTS AT MU PLEVEN

Yakimova S. R.*, Tsankova V. S**
****Medical student 5th year at MU-Pleven***
*****General Psychiatry Department, First Psychiatric Clinic, UMHAT "D-r Georgi Stranski" - Pleven; Department of Psychiatry and Medical Psychology, MU-Pleven***
Presenting author: Yakimova S. R.
Correspondence:simonka200213@gmail.com

AIMS/OBJECTIVES
To present an analysis of results of our research on insomnia among students of different years and specialities in Medical University Pleven.
METHODS
The research includes 160 anonymous participants who took part in it through an online survey. The questionnaire consisted of a few demographic questions and Insomnia Severity Index. With 7 items it aims to measure insomnia in four categories : no clinically significant insomnia, subthreshold, clinical insomnia – moderate severity and severe clinical insomnia. Each item is rated on a 5-point scale ranging from 0 to 4 and the score reveals a Total score that can vary between 0 to 28.
RESULTS
The research includes 122 women and 38 men in 7 different specialities and all 6 years of education in MU-Pleven. Their age ranges from 18 to 43 years old with an average of 21.35. In regard to the ISI, we received results in a wide variety anywhere between 0 and 23 points, the average score of them all being 8,54 , which is in the Subthreshold category regarding measuring insomnia. Yet 83 people (51.86%) score in that same category or in the higher ones, which points to 38% subthreshold insomnia and 14% significant sleep disorder among the student body of MU-Pleven.
CONCLUSION
Sleep problems were measured in more than half of the participating students in our research – 14% report significant insomnia levels and 38% are classified in "Subtreshold" which is alarming, considering all the negative effects it can have in regards to their academic performance, mental and physical health, social relations and many other spheres in their lives.

KEY WORDS: Insomnia, Insomnia severity scale, Students

WHAT COULD BE BEHIND HIGH BLOOD PRESSURE THAT DOES NOT RESPOND TO MEDICAL TREATMENT

Hristov M.*, Tomova V.**
****Medical University Pleven, Bulgaria***
*****Department of Cardiology, UMHAT „Saint Marina" Pleven***
Presenting author: Hristov M.
Correspondence: miroslav_hristov78@abv.bg

INTRODUCTION

Pheochromocytoma is a tumor that originates from the chromaffin cells in the medulla of the adrenal glands. It is more often benign. The disease is rare, affecting less than 1% of people with arterial hypertension. The pathogenesis of pheochromocytoma is associated with increased production of catecholamines. The ratio between adrenaline and noradrenaline varies, depending on the nature and localization of the tumor. Its clinical picture is very diverse, there is an aphorism „The characteristic of typical cases of pheochromocytoma is their atypical course".

CASE PRESENTATION

The presented clinical case is about a 50-year-old woman with complaints of frequent hypertensive crises with maximum blood pressure values up to 235/125 mmHg with not good control, accompanied by a feeling of sudden fear, headache, tremor and sweating. The following therapy for hypertension is prescribed - Lodoz 5 mg/6.25 mg (Bisoprolol/Hydrochlorothiazide) - 1 tab. 8 am, Tritace 10 mg (Ramipril) - 1 tab. 8am and Magnerot 500 mg - 1 tab. 8 pm. The secondary examination concluded that there was a paradoxical increase in blood pressure from the β-blocker in one of the medications, which raised suspicions that the hypertension was due to an endocrine disease. Laboratory and instrumental tests were prescribed. Metanephrins levels were twice above normal. A CT scan of the abdomen and pelvis showed a tumor formation in the area of the left adrenal gland measuring 45/38 mm. After the patient's blood pressure was stabilized, a successful adrenalectomy was performed.

CONCLUSION

The low frequency of pheochromocytoma is the reason for its placement in the last places of differential diagnostic plan at patients with high blood pressure. The fact that in the initial stage of the disease, hypertensive attacks are single and are often provoked by emotional states, makes many clinicians suspect panic attacks in the hectic everyday life of the 21st century. That is why it is necessary to always keep this disease in mind, especially in young people with high blood pressure and insulin resistance.

KEY WORDS: pheochromocytoma, arterial hypertension, catecholamines, surgical treatment

PREVALENCE OF EGFR MUTATIONS IN NON-SMALL CELL LUNG CANCER

Santoro M.**, Klein B.*, Nankov V.,******, Petrova Z.****,******, Kamburova Z.*****,******, Popovska S.,*********

****Second-year medical student, Medical University of Sofia, Sofia, Bulgaria***

*****Second-year medical student, Medical University of Pleven, Pleven, Bulgaria***

******Department of Anatomy, Cytology, Histology and Biology, Medical University of Pleven, Pleven, Bulgaria***

*******Department of Pathoanatomy, Medical University of Pleven, Pleven, Bulgaria***

********Department of Medical Genetics, Medical University of Pleven, Pleven, Bulgaria***

*********Centre of Competence in Personalized Medicine, 3D and Telemedicine, Robotic Assisted and Minimally Invasive Surgery—Leonardo da Vinci, Pleven, Bulgaria***

Presenting author: Santoro M.

Correspondence: Vladislav.Nankov@mu-pleven.bg

INTRODUCTION

Lung cancer is a leading cause of cancer-related death globally, with non-small cell lung cancer (NSCLC) representing 80% to 85% of cases. Tyrosine kinase inhibitors (TKIs) have proven highly effective in the treatment of NSCLC tumours harbouring EGFR mutations. These treatments yield favourable clinical responses and improved overall outcomes compared to traditional chemotherapy. Accurate determination of EGFR mutation status is therefore essential to guide targeted therapy selection in patients with NSCLC.

AIM

The aim of the current study is to determine the prevalence and spectrum of EGFR mutations in Bulgarian patients with NSCLC.

MATERIALS AND METHODS

Genetic material (DNA)was obtained from 145 patients with metastatic lung adenocarcinoma and EGFR mutation status was determined using next generation sequencing (NGS).

RESULTS

EGFR mutations were detected in 25 patients (17%) with metastatic lung adenocarcinoma. Notably, EGFR alterations were more frequently observed in female patients, and were significantly more prevalent in non-smokers. The most common activating mutations involving the kinase domain of the EGFR were EGFR exon 19 deletion (48%), followed by the single nucleotide substitution L858R in exon 21 (36%). Two patients (8%) had EGFR mutations that are associated with

resistance to first- and second-generation TKIs. One patient (4%) harbored an EGFR exon 20 insertion mutation and another individual (4%) had EGFR exon 20 T790M. Two patients (8%) presented with “compound mutations”, i.e. they had more than one mutation in the EGFR gene.

CONCLUSION

EGFR mutations are commonly found in NSCLC patients with no previous smoking history. Accurate and timely detection of EGFR alterations is therefore required to guide therapeutic selection and support personalised cancer care.

KEYWORDS: non-small cell lung cancer, epidermal growth factor receptor, next generation sequencing, targeted therapy, tyrosine kinase inhibitors

ADVANCEMENT FLAP FOR RECONSTRUCTION OF CUTANEOUS DEFECT AFTER LEIOMYOSARCOMA IN THE TEMPORAL REGION

Vasilev P.*, Karaivanov M.**, Ramadan S., Karamanliev M.****, Dimitrov D.****, Edward A.********

****Department of Dermatology, Venereology and Allergology, Faculty of Medicine, Medical University- Pleven, Bulgaria.***

*****Department of General and Clinical Pathoanatomy, Faculty of Medicine, Medical University- Pleven, Bulgaria.***

******Department of Propaedeutics of Internal Diseases, Faculty of Medicine, Medical University- Pleven, Bulgaria.***

*******Department of Propaedeutics of Surgical Diseases, Faculty of Medicine, Medical University- Pleven, Bulgaria.***

********Medical student - Medical University - Pleven***

Presenting Author: Edward A.

Correspondence: cynella01@gmail.com

INTRODUCTION

Cutaneous leiomyosarcoma is a rare malignant smooth muscle tumor that arises from the erector muscles of the hair follicles. It accounts for less than 3% of all soft tissue skin neoplasms.

THE CASE PRESENTATION

A case of a 91-year-old male patient, with complaints of a slow growing dark-red nodule on the skin of the left side of the face from about 9 months. Over 6 months, the nodule grew rapidly, becoming dense, painful, and bled when touched. Surgical treatment with radical removal of the formation was performed, followed by plastic reconstruction of the left temporal region with advancing flap from the entire buccal region. Histological and immunohistochemical examinations supported the final diagnosis.

CONCLUSION

A rare case of facial cutaneous leiomyosarcoma in a 91-year-old patient. The large defect created after tumor excision was successfully repaired using an advancement flap. This shows that the advancement flap is a good option for reconstruction of temporal defects with an incredibly good cosmetic outcome.

KEY WORDS: cutaneous leiomyosarcoma, advancement flap

THE IMPACT OF BARIATRIC SURGERY ON LONG-TERM RISK OF BREAST CANCER: A SYSTEMATIC REVIEW, META-ANALYSIS, AND META-REGRESSION

I Gede Aswin Parisya Sasmana*, I Made Suputra Dwipayana*, Christo Timothy Mamangdean*
****Faculty of Medicine, Udayana University, Bali, Indonesia***
Presenting author: I Gede Aswin Parisya Sasmana
Correspondence: aswin.parisya@gmail.com

INTRODUCTION
Breast cancer is a leading cause of morbidity and mortality in women worldwide. Obesity is known to be an important risk factor for breast cancer, and bariatric surgery has been shown to be effective in long-term weight loss. However, the impact of bariatric surgery on long-term breast cancer risk remains unclear, and other factors that influence its role have not been evaluated.

AIM
This review aims to systematically and quantitatively evaluate the effect of bariatric surgery on breast cancer risk and identify potential moderating factors through meta-regression analysis.

METHODS
A systematic review and meta-analysis of clinical studies reporting breast cancer incidence in patients with and without bariatric surgery was conducted. Data were analyzed using a random-effects model. Relative risks (RRs) with 95% confidence intervals (CIs) were calculated. Publication bias was tested using funnel plots and Egger‘s exact test. Meta-regression analysis was evaluated using mean age and year of publication as moderators using R Studio software.

RESULTS
A total of 17 studies with over 3,076,897 participants were analyzed. Bariatric surgery significantly reduced the risk of breast cancer with a protective RR of 0.64 (95% CI: 0.47–0.86; p0.001), although heterogeneity between studies was high (I^2=97%). Egger‘s test showed no significant publication bias (p=0.115). Meta-regression analysis showed that mean age (coefficient=0.07; p=0.20) and year of publication (coefficient=0.03; p=0.46) did not significantly influence the effect size.

CONCLUSION
Bariatric surgery has been shown to be associated with a reduced long-term risk of breast cancer.

KEYWORDS: bariatric surgery, breast cancer, obesity, meta-analysis, meta-regression

A COMPARATIVE STUDY OF ORTHOREXIA LEVELS IN BULGARIAN AND FOREIGN STUDENTS: WHEN HEALTHY EATING CROSSES THE LINE

Angelova L. D.*, Vitkova Ts. G. **, Birdanova. V. A. **
**** Student in specialty Medicine, MU-Pleven***
*****Department of Hygiene, medical ecology , occupational diseases and disaster medicine, MU-Pleven, Bulgaria***
Presenting author: Angelova L. D.
Correspondence: bubi.l.angelova@gmail.com

AIMS
The aim of the study is to determine the levels of orthorexic eating patterns among Bulgarian and foreign students from various specialties at the Medical University - Pleven and other higher education institutions in and outside Bulgaria, and to identify the most at-risk groups.
METHODS
A cross-sectional study was conducted, in which 342 students (201 Bulgarian and 141 foreign) from universities in and outside the country participated in. An author‘s questionnaire module was developed, including a demographic section, questions adapted from ORTO-15 and 2 author‘s questions, which highlight self-detecting an obsession with healthy eating. Statistical data processing was performed using Microsoft Excel software with the Analysis ToolPak add-in.
RESULTS
Among international students, 26% of all respondents show a tendency towards orthorexia nervosa, with the most affected being those in health/medical sciences (44%). Women are significantly more affected (62%) than men (38%). 53% of the students would seek help. Among the surveyed Bulgarian students, 10% show a tendency towards the condition, with the most affected groups as a percentage being students in health/medical sciences (76%). The female gender is more susceptible (66%) compared to males (34%). 38% of those surveyed would seek help.
CONCLUSION
A higher tendency towards orthorexia is reported among international students compared to Bulgarians, with females predominating in both groups. Students in medical specialties are most affected, which shows that the focus on health reinforces obsessive behavior towards nutrition. Willingness to seek help is more pronounced among international students than among Bulgarians, demonstrating differences in cultural attitudes regarding seeking support.

KEY WORDS: orthorexia nervosa, cross-sectional study, risk groups

COMPARATIVE ANALYSIS OF HYBRID CAPTURE AND AMPLICON SEQUENCING FOR THE DETECTION OF FGFR2 FUSIONS IN CHOLANGIOCARCINOMA

Klein B.*, Santoro M.**, Nankov V.,******, Petrova Z.****,******, Kamburova Z.*****,******, Popovska S.4,********

****Second-year medical student, Medical University of Sofia, Sofia, Bulgaria***

*****Second-year medical student, Medical University of Pleven, Pleven, Bulgaria***

******Department of Anatomy, Cytology, Histology and Biology, Medical University of Pleven, Pleven, Bulgaria***

*******Department of Pathoanatomy, Medical University of Pleven, Pleven, Bulgaria***

********Department of Medical Genetics, Medical University of Pleven, Pleven, Bulgaria***

*********Centre of Competence in Personalized Medicine, 3D and Telemedicine, Robotic Assisted and Minimally Invasive Surgery - Leonardo da Vinci, Pleven, Bulgaria***

Presenting author: Klein B.

Correspondence: Vladislav.Nankov@mu-pleven.bg

INTRODUCTION

Hybrid capture and amplicon sequencing are both next generation sequencing (NGS) methods used for the detection of gene fusions. Hybrid capture-based target enrichment works by capturing certain genomic regions of interest by hybridisation to target-specific DNA or RNA probes, while amplicon sequencing utilises multiplex PCR with specific primers to amplify known fusion partners. Few studies exist that compare the utility and the effectiveness of each sequencing approach for the detection of FGFR2 fusions in cholangiocarcinoma.

AIM

The aim of the current study is to evaluate the use of hybrid capture and amplicon sequencing for the detection of FGFR2 fusions in cholangiocarcinoma.

MATERIALS AND METHODS

Genetic material (DNA and RNA) was obtained from 30 patients with cholangiocarcinoma and FGFR2 mutation status was determined using amplicon sequencing and comprehensive genomic profiling.

RESULTS

Amplicon sequencing of RNA samples revealed no FGFR2 alterations. However, when genetic material (DNA and RNA) obtained from three patients was analysed using both amplicon-based and hybrid capture sequencing and the results were compared, the FGFR2-AHCYL1 rearrangement was detected in one sample using hybrid capture analysis only. Hybrid capture sequencing of cholangiocarcinoma samples enabled in-house comprehensive genomic profiling (CGP) of each tumour,

allowing for the identification of other molecular changes beyond FGFR2 alterations that can guide targeted therapy, including single nucleotide variants, copy number variants, indels, tumour mutational burden, microsatellite instability.

CONCLUSION

Hybrid capture NGS enables the detection of a broader range of FGFR2 fusions and other molecular biomarkers than amplicon sequencing. This supports the identification of known and
novel biomarkers that can guide personalised cancer treatment in cholangiocarcinoma.

KEYWORDS: cholangiocarcinoma, FGFR2, NGS, hybrid capture sequencing, amplicon sequencing

CASE REPORT FOR VANISHING TWIN SYNDROME

Ivanova Ts. *, Stoyanova N.**, Popovski N.**
****Faculty of Medicine, Medical University- Pleven, Bulgaria***
***** Department of Obstetrics and Gynaecology, Medical University Pleven***
Presenting author: Ivanova Ts.
Correspondence: cvetiivanova1206@abv.bg

INTRODUCTION

Vanishing twin syndrome is a relatively common phenomenon in multiple pregnancies, characterised by intrauterine death and resorption of one embryo, most often during first trimester. The risk for the mother and the surviving foetus depend on the timing of the loss. Early and consistent ultrasound monitoring is crucial for timely diagnosis, enabling optimal pregnancy management to minimise complications and improve perinatal outcomes. We present a clinical case of a dichorionic-diamniotic twin pregnancy complicated by vanishing twin syndrome detected in second trimester.

CASE PRESENTATION

A 34- year-old woman (G4P2A1) was referred for fetal morphology at 23 weeks of gestation. The pregnancy was spontaneously conceived with dichorionic- diamniotic twins diagnosed in the first trimester scan. Her medical history included two full-term vaginal deliveries and one elective abortion, without comorbidities or medications use.

CONCLUSION

VTS is a specific complication of multiple pregnancy carrying risks for both mother and the surviving foetus. Reported complications include preterm birth, fetal growth restriction, congenital anomalies and rarely, maternal coagulopathy. Early and detailed ultrasound is essential for the proper diagnosis, monitoring, and optimisation of perinatal outcomes.

KEY WORDS: vanishing twin syndrome, multiple pregnancy, complications

MODULATING THE GUT-LIVER AXIS WITH INCRETIN-BASED DRUGS: A NEW FRONTIER IN TYPE 2 DIABETES AND MASLD

Dinkov B.V.* ,**, Pagano L., Mattei M.***, Dinkov V.V.***, Adinolfi G.***, Millia V.***, Stavreva G*., Pendicheva-Duhlenska D.****
****Department of Pharmacology and Toxicology, Medical University – Pleven, Bulgaria***
***** Clinic of Endocrinology and metabolic diseases y UMHAT D-r Georgi Stranski, Pleven, Bulgaria***
******Faculty of Medicine, Medical University – Pleven, Bulgaria***
Presenting author: Dinkov. B.V.
Correspondence: boris.dinkov.md@gmail.com

BACKGROUND
The gut microbiome plays a critical role in the pathogenesis and progression of type 2 diabetes(T2D) and metabolic dysfunction-associated steatotic liver disease (MASLD). More than 60% of patients with T2D develop MASLD.
AIMS
This study aims to review data on novel incretin-based drugs and their effects on the gut microbiome and liver fat deposition in type 2 diabetes.
METHODS
A literature review was conducted using clinical trial databases to summarize current data on the effects of novel incretin analogs on the gut microbiome and their significance in the progression of MASLD with focus on metabolomics.
RESULTS
The human gut microbiome hosts trillions bacteria. Rodents are considered a representative model for gut microbiome studies. In a study in mice model of diabetes, the dual GLP-1/GIP receptor agonist tirzepatide significantly reduced hepatic steatosis by modulating the gut microbiota and bile acid metabolism. Tirzepatide intervention increased the abundance of Akkermansia. In a study in MASLD mice model, tirzepatide significantly reduced the liver aminotransferases and hepatic triglycerides. Metabolomic analysis revealed that tirzepatide reduced fatty acid liver uptake and enhanced the cholesterol efflux. Recent data in mice model of diabetes showed that semaglutide improved the integrity of gut barrier and altered gut microbiota, especially Alloprevotella, Alistpes, Ligilactobacillus and Lactobacillus and ameliorated MASLD.
CONCLUSION
T2D and MASLD require an integrated approach. Investigating the effects of incretin analogs on gut microbiome may reveal potential strategies for delaying and reducing MASLD and associated inflammation.
KEY WORDS: type 2 diabetes, MASLD, gut microbiome, incretin analogues.

SURGERY, UROLOGY & ORTHOPEDICS SECTION

CHAIRMEN:

Anislav Gabarski, MD, PhD

Ivaylo Nenov, MD, PhD

Dimitar Tsankov, MD

SECRETARY:

Teodora Bozhinova, OC

In nothing do men more nearly approach the gods than in giving health to men.

Cicero

INFLAMMATORY BREAST CANCER (IBC): SURGICAL APPROACHES AND BREAST-CONSERVING SURGERY

Marda M. A.*, Triantafyllou G. I.*
****Student in Medical University - Pleven***
Presenting author: Marda M. A.
Correspondence: marilenamarda06@gmail.com

INTRODUCTION
Inflammatory Breast Cancer (IBC) is an extremely aggressive, rapidly spreading and highly recurring type of breast cancer. Its intricate metastatic behavior and high locoregional recurrence rate, specifically skin invasion commonly in IBC, impedes surgical resection. Therapeutic management includes trimodal approaches including systemic chemotherapy (neoadjuvant chemotherapy) followed by surgical resection (radial mastectomy) and locoregional radiation therapy. Over the last years, these multidisciplinary approaches have been noted to have an increasing rate in pathologic complete response (pCR) in the surgically removed areas. This opens the horizon for different surgical approaches that could preserve certain structures in the affected tissue such as conservation of the lymph nodes and avoidance of axillary dissection. Mastectomy could be replaced by breast conserving surgery. This could also allow for an earlier reconstruction or even immediate reconstruction of the breast in patients with IBC.

OBJECTIVE
The aim of this present study is the evaluation of different surgical approaches regarding resection of IBC and the potential replacement of radial mastectomy by breast-conserving surgery.

METHODS
A review of literature was performed through the PubMed database and Cochrane library aiming to identify articles regarding surgical approaches of IBC.

RESULTS
A strong correlation was associated between pCR rates and surgical approaches. Moreover, increasing rates of pCR and BCS were analysed. Finally, a significant correlation was found in the post-operation survival rate when BCS was used.

CONCLUSION
The aforementioned results demonstrated by this study pave the way for new surgical approaches for IBC. Further research is needed to promote BCS as an alternative type of targeted therapy against IBC.

KEYWORDS: inflammatory breast cancer (IBC), mastectomy, surgery, breast-conserving surgery (BCS)

WHEN TWO PATHS COLLIDE: BILIARY ILEUS AND DIVERTICULAR PERFORATION AS A SURGICAL EMERGENCY IN THE ELDERLY

Ivanova Viktoria I.*, Atanasova N.*
****Department of Surgery, UMHAT "Dr. Georgi Stranski - Pleven, Bulgaria***
Presenting author: Ivanova V. I.
Correspondence: viki.style16gmail.com

INTRODUCTION

Biliodigestive fistulas are rare complications of cholelithiasis that may lead to the so-called biliary ileus. Their presentation in patients with polymorbidity can mask the diagnosis and delay treatment.

CASE REPORT

An 83-year-old female was admitted for the first time to the Department of Abdominal Surgery at UMHAT "Dr. Georgi Stranski" with complaints of vomiting and abdominal pain for several days. Multiple comorbidities were present – COPD, ischemic heart disease, chronic kidney disease, congestive heart failure, bronchial asthma, and T-cell non-Hodgkin lymphoma. Laboratory tests revealed elevated CRP (157.27), bilirubin, urea, and creatinine. Imaging studies (ultrasound, abdominal X-ray with contrast passage, and CT) showed dilated bowel loops, the presence of a single gallstone, and signs of a biliodigestive fistula.

During laparotomy, a cholecystoduodenal fistula, a gallstone obstructing the small intestine, and sigmoid diverticulitis with abscess formation and perforation were discovered. Enterotomy with stone extraction and fistulectomy was performed.

CONCLUSION

The combination of biliary ileus and perforated diverticulum represents a severe clinical condition requiring timely decision-making and multidisciplinary approaches. In elderly patients with comorbidities, an aggressive diagnostic approach and prompt surgical intervention are essential.

KEYWORDS: biliodigestive fistula, cholelithiasis, biliary ileus, diverticulitis, perforation

SUSPECTED SPLENIC RUPTURE IN A NON-TRAUMATIC CENTER: A CASE REPORT

Rashid S.*, Vladova P.**
****Student in Medical University - Pleven***
*****Department of propedeutic of surgical diseases, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria***
Presenting author: Rashid S.
Correspondence: rashidsara1318@gmail.com

AIMS/OBJECTIVES

To present a clinical case of a suspected spleen rupture following a blunt abdominal trauma, explore the diagnostic and management challenges in non-trauma centers.

MATERIALS AND METHODS

A 51-year-old male with obesity and a previous history of bariatric surgery 6 months ago was admitted on 1st July 2025 due to a motorcycle accident. CT scans show fractures of the spinous process of Th8 and body of Th10, 3rd- 8th rib on the right and 2nd- 9th rib on the left. Stable hemodynamics, alo- and auto-oriented. New CT scan: Rupture in the upper pole of the spleen, directly under the rupture, a 28/25 mm hematoma is present. Minimal amount of fluid collection around the lower pole of the spleen.

RESULTS

An exploratory laparotomy was performed. Intraoperative findings: No intraperitoneal bleeding. Spleen was intact, with a 3 cm long and 4–5 mm deep anatomical groove/ sulcus misinterpreted on CT as a rupture. No evidence of subcapsular hematoma or parenchymal injury.

CONCLUSION

According to current trauma guidelines, such cases in hemodynamically stable patients are highly suitable for non-operative management (NOM). Grade I–II injuries have a high success rate when managed non-operatively. In this case, the absence of key trauma infrastructure (radiology expertise, interventional options, intraoperative ultrasound) resulted in an unnecessary laparotomy ("white laparotomy"). This highlights the need to strengthen trauma readiness in general hospitals, improve imaging interpretation, and raise awareness of anatomical variants to avoid avoidable surgeries and reduce risks in high-anesthetic-risk patients.

KEYWORDS: splenic trauma, non-operative management, non-trauma center

MODERN APPROACH TO FIBROADENOMA MANAGEMENT USING VACUUM-ASSISTED BIOPSY: A CASE REPORT

Petrova S. Y.*, Dimitrov D.*, Karamanliev M.*
Presenting author: Petrova S.
****Department of Surgery, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria***
Correspondence: stefka_petrova@mail.bg

BACKGROUND
Fibroadenomas are the most frequent benign breast tumors in young women. In recent years, vacuum-assisted biopsy (VAB) has gained popularity as a minimally invasive option that allows for both diagnosis and therapeutic removal of benign lesions with minimal morbidity.
CASE PRESENTATION
We present a case of a 32-year-old female patient with a 20 mm well-defined lesion in the lower outer quadrant of the right breast. Ultrasound imaging exposed typical features of a benign solid mass. A vacuum-assisted biopsy was performed under local anesthesia using an 8G needle.. Approximately 80% of the lesion volume was successfully excised. Histological examination revealed a biphasic benign lesion with characteristics of fibroadenoma and focal features consistent with a benign phyllodes tumor. Given the predominantly fibroadenomatous structure and the benign histology, no further surgical intervention was deemed necessary. At 6-month follow-up, ultrasound showed no evidence of regrowth or residual mass, and the patient remained asymptomatic.
CONCLUSION
This case highlights the effectiveness and safety of vacuum-assisted biopsy for selected benign breast lesions, particularly when histological complexity exists. VAE offers a tissue-preserving and cosmetically favorable option that can avoid open surgery in carefully chosen patients.

KEYWORDS: fibroadenoma, phyllodes tumor, vacuum-assisted biopsy, minimally invasive breast surgery, benign breast lesion

INTUSSUSCEPTION - YOU SHOULD NEVER RULE IT OUT

Georgiev G. Y.*, Markov A. A.*, Stefanova N. I.*, Vlahova M. D.**
**** Resident doctor in Department of Gastroenterology, UMHAT Dr. Georgi Stranski – Pleven, Bulgaria***
*****Head of Department of Gastroenterology, UMHAT Dr. Georgi Stranski – Pleven, Bulgaria***
Presenting author: Georgiev G. Y.
Correspondence: georgegeorgiev98@gmail.com

AIMS/OBJECTIVES
Intussusception accounts for the leading cause of abdominal surgical emergencies in children under the age of 5 years old but it is a rarity among older children and adults. We are presenting a few specific cases in patients between 8 and 25 years of age.
METHODS
The obtained cases are product of the multidisciplinary approach and close collaboration between the Emergency department, Gastroenterology, Radiology and Surgery within our hospital. Our small cohort of patients consisted of 2 male and 1 female person ranging between 8 and 25 years of age, who all visited the ER due to acute localized or diffuse abdominal pain. The traditional diagnostic approach to intussusception includes blood tests and ultrasound due to its high specificity and sensitivity.
RESULTS
The suspected intussusception during the ultrasound examination due to the characteristic “target-sign”, was confirmed and surgically managed successfully in all 3 patients, proving the high accuracy of ultrasonography in such cases.
CONCLUSION
Intussusception is still unusual in teenagers and young adults, but it is clinically important and should not be ruled out on an age-basis in the case of abdominal pain. Ultrasound is a fast, reliable and safe diagnostic procedure in suspected intussusception.

KEYWORDS: intussusception, ultrasound, emergency, abdominal pain, young adults

FROM CUTANEOUS MALIGNANT MELANOMA TO LATE GASTROINTESTINAL AND PERITONEAL METASTASES: A MULTIORGAN RESECTION CASE

Cavallaro R.*, Bozkurt M. A.**, Kose H., Vladova P.*******
**** Rosa Cavallaro, IV year student, Medical University Pleven***
***** Case scientific advisor Prof. Dr. Bozkurt M.A Department of General Surgery-İstinye Üniversite Hastanesi Liv Hospital Bahçeşehir***
******Dr. Kose H., resident, İstinye Üniversite Hastanesi Liv Hospital Bahçeşehir***
*******Mentor-scientific advisor Prof. Dr. Paulina Trifonova Vladova- Department of coloproctology, propedeutics of General Surgery UMHAT "Dr. Georgi Stranski"-Pleven, Bulgaria***
Presenting author: Cavallaro R.
Correspondence: rosacavallaro0@gmail.com

AIMS
To report the clinical course, diagnostic and surgical management about a rare case of small bowel and peritoneal metastases from malignant melanoma with multiorgan involvement.
METHODS
A 55-year-old woman with a history of stage 2C malignant melanoma of the right arm (BRAF V600 and PDL-1 positive) was under regular follow-up from 2021. In July 2025 on a routine surveillance, abdominal CT demonstrated a large mesenteric mass involving the ileum, with suspected invasion of the bladder and sigmoid colon, mesenteric lymphadenopathy, and possible omental implants. Multidisciplinary review led to exploratory laparotomy, small bowel resection, partial cystectomy, cholecystectomy, and retroperitoneal mass excision.
RESULTS
Intraoperatively, a 5 × 5 cm ileal tumor was found 100 cm from the ileocecal valve, invading the bladder and sigmoid colon. Histology revealed a 6.5 cm serosa-invasive malignant tumor of pleomorphic epithelioid cells, positive for S100, Melan-A, HMB45, and Sox-10, with a Ki-67 index of 15–20%. Lymphovascular invasion and metastases were detected in one peritumoral lymph node and three falciform ligament nodes, with extracapsular spread. All surgical margins were negative. Gallbladder pathology showed chronic cholecystitis with cholelithiasis. The findings were consistent with metastatic malignant melanoma. Postoperative planning included PET-CT, brain MRI, and consideration of nivolumab plus ipilimumab therapy.
CONCUSION
This case illustrates the course for late, aggressive gastrointestinal spread in melanoma. Imaging, multidisciplinary planning, and complete resection can be achieved even in multiorgan involvement, with pathology on oncologic care.
KEYWORDS: malignant melanoma, small bowel, metastasis, surgery, immunohistochemistry

INFLAMMATORY MYOFIBROBLASTIC TUMOR OF MECKEL'S DIVERTICULUM COMPLICATED BY PERFORATION: AN EXCEPTIONALLY RARE CAUSE OF ACUTE ABDOMEN IN ADULTS

Yanakieva M. R.*; Yankov A. Y.**; Nguen D. D.**; Dimitrov V.M.**; Lazarova A. G.*; Iieva Ts. A.***
**** Student, Medical University of Pleven***
*****1st Surgical clinic, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria***
******Surgical clinic, MHAT "Heart and Brain" – Pleven, Bulgaria***
Presenting author: Yanakieva M. R.
Correspondence: maria_yanakieva@abv.bg

INTRODUCTION

Meckel's diverticulum (MD) is the most common congenital anomaly of the gastrointestinal tract, with a prevalence of approximately 2% in the general population. Although typically asymptomatic, lifetime risk of complications is estimated at 4 - 6%. In adults, the most frequent complications include intestinal obstruction (14 - 53%) and diverticulitis or perforation (~20%). Neoplastic transformation in MD is exceedingly rare, with reported incidence of 0.5 - 3.2%, encompassing both benign and malignant tumors. Inflammatory myofibroblastic tumor (IMT) is itself an uncommon mesenchymal lesion, accounting for 1% of all soft tissue tumors, and is considered of intermediate malignant potential due to its tendency for local recurrence and rare metastasis. The co-existence of IMT and MD perforation in an adult patient represents a clinical rarity.

THE CASE PRESENTATION

A 54-year-old male was presented to the emergency department with acute onset diffuse abdominal pain. Clinical examination revealed muscular guarding, positive Blumberg's sign, markedly diminished peristalsis and rigidity that precluded assessment of succussion splash. Emergency laparotomy was performed and the exploration of the abdominal cavity revealed feculent peritonitis secondary to perforation of a MD. Macroscopic evaluation demonstrated an inflamed, indurated and rigid diverticular wall. Histopathological examination confirmed the presence of an IMT, which had led to perforation of the diverticulum and subsequent peritoneal irritation with clinical manifestation of acute abdomen.

CONCLUSION

We describe a highly unusual case of perforated Meckel's diverticulum caused by an IMT in a 54-year-old patient. Individually, both perforation of MD and IMT are rare entities. Their co-existence represents an exceptional and, to our knowledge, previously undescribed complication. This case contributes novel data to the literature on MD complications and highlights the necessity of maintaining broad differential considerations in adult patients presenting with acute abdomen.

KEYWORDS: Meckel's diverticulum, inflammatory myofibroblastic tumor, acute abdomen, perforation

SIMULATION TRAINING AND THE SHORTENING OF THE LEARNING CURVE IN ROBOTIC SURGERY

Dinkov V.*, Marinova P.**, Dimitrov D.D.**, Karamanliev M. P.**
****Medical University - Pleven***
*****Department of Surgery, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria***
Presenting author: Dinkov V.
Correspondence: vdinkov182@gmail.com

INTRODUCTION

Robotic surgery is rapidly transforming modern operative practice, offering unparalleled precision and improved patient outcomes. However, it also requires surgeons to master a unique set of psychomotor and cognitive skills that differ significantly from those used in open or laparoscopic procedures. Traditional training pathways are insufficient to meet these demands, resulting in a steep learning curve for new trainees.

AIM

This study evaluates the impact of simulation-based training programs on skill acquisition, error reduction, and the overall shortening of the learning curve in robotic surgery education

MATERIALS AND METHODS

A review of published literature, institutional reports, and structured simulation curricula was performed. Performance indicators such as task completion time, motion efficiency, error frequency, depth perception, and trainee confidence were analyzed. Specific attention was given to how early exposure to robotic simulators influences progression to live surgery.

RESULTS

Simulation-based training significantly reduces the number of repetitions required to master essential robotic tasks, improves three-dimensional perception, and enhances fine instrument control. Students and junior surgeons trained with high-fidelity simulators demonstrate superior dexterity, more efficient workflow, and a safer, smoother transition to operating room practice. Furthermore, integrating simulation into medical education increases trainee engagement and allows skills to be assessed objectively before performing procedures on patients.

CONCLUSION

Incorporating simulation programs into early surgical education represents a strategic solution to optimize training time, reduce technical errors, and ensure competency prior to live operative exposure. This approach accelerates proficiency and improves both surgeon readiness and patient safety.

KEYWORDS: learning curve, simulators, robotic surgery

SPLENIC ARTERY ANEURYSM IN A HAELTHY 56-YEAR-OLD MALE MANAGED WITHOUT SPLENECTOMY

Ahmad L. A.* , Ahmad R. A.*, Tsiripidis O.**
****Medical student, MU-Pleven, Bulgaria***
*****Surgery Department of Bodosakeio General Hospital, Ptolemaida, Greece***
Presenting author: Ahmad L. A.
Correspondence: linaalachmant@gmail.com

INTRODUCTION

Rupture of a splenic artery aneurysm (SAA) is a rare but life-threatening event, most often seen in women with underlying risk factors such as liver disease, portal hypertension, or pregnancy. Preservation of splenic function during emergency management remains a considerable surgical challenge. (SAAs) are significantly less common in men, with only around 15 reported surviving male cases worldwide in the medical literature, which highlights the exceptional rarity of this presentation.

CASE PRESENTATION

A 56-year-old man with no prior comorbidities presented to the emergency department with sudden, severe abdominal pain accompanied by diaphoresis and pallor. On arrival he was tachycardic, hypotensive, and had a reduced hematocrit. A CT scan revealed internal bleeding, and he was taken immediately to surgery. The splenic artery aneurysm was repaired without performing a splenectomy, successfully preserving the spleen.

CONCLUSION

This case highlights the importance of early recognition and urgent surgical intervention in ruptured splenic artery aneurysm. Although splenectomy is often required, spleen-preserving surgery is feasible in selected cases, offering favorable outcomes and maintaining immune function. The rarity of this condition in men further emphasizes the need for heightened clinical awareness.

KEYWORDS: splenic artery aneurysm, rapture, general surgery, rare, spleen preservation

THE EFFECT OF SLEEVE GASTRECTOMY VERSUS ROUX-EN-Y GASTRIC BYPASS ON PANCREATIC CANCER RISK REDUCTION: A SYSTEMATIC REVIEW AND BAYESIAN NETWORK META-ANALYSIS

I Gede Aswin Parisya Sasmana*, Christo Timothy Mamangdean*, Ngakan Putu Krishna Mahayana*
****Faculty of Medicine, Udayana University, Bali, Indonesia***
Presenting author: I Gede Aswin Parisya Sasmana
Correspondence: aswin.parisya@gmail.com

INTRODUCTION
Pancreatic cancer is a disease with a poor prognosis, and obesity is a significant risk factor. Bariatric surgery (including Sleeve Gastrectomy (SG) and Roux-en-Y Gastric Bypass (RYGB) can reduce the risk of obesity-related diseases, but their comparative effectiveness in reducing pancreatic cancer risk is unclear. This review aims to assess and compare the effects of SG and RYGB on pancreatic cancer risk.
METHODS
A systematic review was conducted using a search of articles using the PRISMA guidelines. Data, including study characteristics, type of bariatric surgery used, and a comparison of pancreatic cancer incidence in the overall sample, were evaluated. The collected data were analyzed using a Bayesian Network Meta-Analysis model in R software version 4.3.1.
RESULTS
A total of five studies, including 1,813,704 patients, were included in the analysis, comparing SG, RYGB, and patients without surgery. Both SG and RYGB were associated with a reduced incidence of pancreatic cancer compared to non-surgical treatment. The crude aggregated relative risk of SG versus no surgery was 0.3 (95% CI: 0.12–0.70) and RYGB versus no surgery was 5.2 (95% CI: 0.26–1.05). A direct comparison of the aggregated SG versus RYGB showed an RR of 0.73 (95% CI 0.51–1.04), indicating a tendency for SG to be more protective. SUCRA supported that SG had the highest probability of being the most effective intervention (0.927) compared to RYGB (0.541).
CONCLUSION
SG has the greatest potential in reducing the risk of pancreatic cancer.

KEY WORDS: bariatric surgery, sleeve gastrectomy, roux-en-Y gastric bypass, pancreatic cancer

NEUROLOGY, NEUROSURGERY & PSYCHIATRY SECTION

CHAIRMEN:

Assoc. Prof. Petranka Chumpalova, MD, PhD

Anatoli Todorov, MD

SECRETARY:

Simona Yakimova, OC

Let the young know they will never find a more interesting, more instructive book than the patient himself.

Giorgio Baglivi

MENTAL HEALTH AND QUALITY OF LIFE IN PATIENTS WITH UNTREATED UNRUPTURED INTRACRANIAL ANEURYSMS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF 417, 152 PATIENTS WITH TRIAL SEQUENTIAL ANALYSIS

Penchev P.*, Ivanov K.*, Milanova-Ilieva D.**, Gaydarski L., Kostov K.*, Dimitrova V.****, Korentova I.*****, Petrov P.******, Tablov B.**********
****Faculty of Medicine, Medical University of Plovdiv, Plovdiv, Bulgaria***
*****Department of Pediatrics, St. George's University Hospital, Plovdiv, Bulgaria***
******Department of Anatomy, Histology and Embryology, Medical University of Sofia, Sofia, Bulgaria***
*******Faculty of Medicine, Medical University of Pleven, Pleven, Bulgaria***
********Faculty of Medicine, Trakia University, Stara Zagora, Bulgaria***
*********Department of Anatomy, Histology and Embryology, Medical University of Plovdiv, Plovdiv, Bulgaria***
********** Department of Anesthesiology and Intensive Care, Multiprofile Hospital for Active Treatment „Life Hospital", Burgas, Bulgaria***
Presenting author: Penchev. P.
Correspondence: sonaonetrick@abv.bg

OBJECTIVES
We aimed to conduct a systematic review and meta-analysis to evaluate mental health and quality of life (QoL) outcomes in patients with untreated unruptured intracranial aneurysms (UIAs).
METHODS
A systematic search was conducted up to 30 November 2024 using PubMed, Scopus, and Cochrane Central for studies comparing patients with untreated UIAs to the control group (healthy/treated or with ruptured aneurysm patients). The outcomes of interest included anxiety, depression, and QoL. Statistical analysis was performed using RevMan 5.1.7 and R 4.3.1. Heterogeneity was assessed using I2 statistics and the Cochrane Q test. Risk ratios (RR) and standardized mean differences (SMD) were computed using a frequentist random-effects model.
RESULTS
We included five studies with 417,152 patients, of whom 85,668 (20.53%) had untreated UIAs. In the pooled analysis, patients with untreated UIAs had significantly higher anxiety levels (SMD 0.66; 95% CI [0.16; 1.17]; p = 0.01; I2 = 76%) and lower QoL (SMD −0.82; 95% CI [−1.12; −0.53]; p = 0.01; I2 = 56%) compared to the control group. However, no statistically significant differences were found in depression (RR 0.94; 95% CI [0.52; 1.72]; p = 0.84; I2 = 88%) between groups.

CONCLUSION

This meta-analysis indicates a potential association between untreated UIAs and increased anxiety levels and reduced QoL. Regarding depression, no significant differences were observed between groups.

KEY WORDS: intracranial aneurysm, anxiety, depression, quality of life, mental health

BREAKTHROUGHS IN ALZHEIMER'S DISEASE THERAPY: DISEASE MODIFYING DRUGS

Raja A. B.*
***Medical student 6th year at MU-Pleven**
***Presenting author: Raja A. B.**
Correspondence: abdulbasitraja12@gmail.com

AIMS
An estimated 10 million new cases of dementia are recorded every year, with Alzheimer's disease (AD) consisting of 60-70% of all cases as the most common form of dementia. AD results in cognitive decline, memory loss, and difficulty carrying out familiar tasks. This presentation aims to analyse and discuss new therapeutic advancements for AD, particularly focusing on anti-amyloid monoclonal antibody therapies, and their effectiveness in slowing the progression of cognitive decline.
METHODS
A review of recent literature was carried out to assess the efficacy of anti-amyloid therapies in having a beneficial clinical outcome in patients with AD. Randomised control trials were included, in addition to phase 2 and 3 trials. Clinical outcomes were compared to see the efficacy of the new therapies.
RESULTS
The research includes 147 women and 54 men in 10 different specialities and all 6 years of education in MU-Pleven. Their age ranges from 18 to 46 years old with an average of 23.52. In regard to the PQ, we received results in a wide variety anywhere between 50 and 98 points, the average score of them all being 68.95, which is in the above average category regarding measuring procrastination. Yet 126 people (62.68%) score in that same category or in the high one, which points to significant procrastination levels among the student body of MU-Pleven.
CONCLUSION
The breakthrough with disease modifying therapies signal a new era for AD treatment, though the limited clinical benefit and need for early diagnosis show that there is still much to be done in order to improve the efficacy of these therapies.

KEW WORDS: Alzheimer's disease, lecanemab, amyloid-beta, monoclonal antibodies, disease-modifying therapies

LEKSELL GAMMA KNIFE STEREOTACTIC RADIOSURGERY AS NON-INVASIVE METHOD FOR TREATMENT OF VESTIBULAR SCHWANNOMA

Petrov I. S.*, Petrov I. P.**, Bildirev N. N.*
**** Radiotherapy and Radiosurgery, Heart and Brain Center of Excellence, Pleven***
***** Medical Physics, Heart and Brain Center of Excellence, Pleven***
Presenting author: Petrov I. S.
Correspondence:dr.stan92@gmail.com

AIMS
Vestibular Schwannomas (VS) are benign tumors arising from the vestibulocochlear nerve, most common intracranial tumors within the ponto-cerebellar angle, associated with tinnitus, hearing loss and other symptoms. For decades, conservative management and surgery have been the only treatment options. There are different surgical approaches with different advantages (e.g. better hearing preservation), and disadvanteges (risk of facial nerve lesioning, seizures induction, ipsilateral hearing loss). Leksell Gamma Knife (LGK) Stereotactic Radiosurgery (SRS) is a non-invasive contemporary treatment option for VS associated with high effectiveness and safety, standard first-line treatment in many countries. We present our first in Bulgaria experience with LGK SRS for VS and the observed post-treatment outcomes.
METHODS
33 patients have been treated for VS with LGK SRS since 2020 at our center. Follow-up, including with MRI, was performed for 16 (7-32 months, median 19 months).
RESULTS
In 4 patients 25-50% tumor volume reduction was achieved with improvement of tinnitus while preserving the hearing, some – with pseudo-progression initially. In 2 patients (follow-up year) – only increased tumor volume with altered structural appearance, characteristic of pseudo-progression, was observed so far. For the remaining 10 patients stable disease was achieved with minimal/no volume reduction, but with suppressed tumor growth and alleviation of the symptoms.
CONCLUSION
LGK SRS is an excellent treatment option for VS with best chances for hearing preservation. It is pain-free and avoids the disadvantages of the surgical treatment: sedation, blood loss, prolonged hospital stay and recovery, risk of wound infection and risk of lesioning of the surrounding brain structures.

KEY WORDS: vestibular schwannoma, acoustic neuroma, radiosurgery, gamma knife

SCHIZOAFFETICE DISORDER – A CASE WITH A PECULIAR DYNAMIC

Tsankova V.S. *, Todorov A. T. **
****Resident doctor at Department of Acute Psychotic Disorders in First Psychiatric Clinic, UMHAT "D-r Georgi Stranski" – Pleven; Department of Psychiatry and Medical Psychology of Medical University – Pleven***
*****attending doctor, PhD at Department of Acute Psychotic Disorders in First Psychiatric Clinic, UMHAT "D-r Georgi Stranski" - Pleven; Department of Psychiatry and Medical Psychology of Medical University – Pleven***
Presenting author: Tsankova, V. S.
Correspondence: v.tzankova@live.com

INTRODUCTION

A case of a 18 year old man that challenged us in both diagnostic and therapeutic approach in
regards to its symptoms, some of which very rare, and unusual dynamic.

THE CASE PRESENTATION

Our patient's behavior gradually changed over the course of 2 months as he became isolated, shared that he felt guilty about numerous things in his life and the world, his behaviour was bizzare and included self harm. He is a subject of aggression from his mother, who suffers from an undiagnosed psychiatric condition, that lead to him jumping from the window on the second floor of his house. He was admitted to the clinic after treatment of his serious injuries with initial diagnosis of Acute polymorphic disorder with schizophrenia symptoms. During interviews he shared depressive delusions, had severe anxiety and regardless of treatment, his mood declined further and he developed suicidal thoughts and a severe risk of deadly self harm due to his Ahasver's delusions. This lead us in the direction of a severe psychotic depressive episode. After introducing an antidepressant, his mood started quickly alternating with episodes of dysphoria, vital fear and euphoria in correlation to the intensification of his delusions. This dynamic of the case pointed us in the direction of a Schizoaffective disorder. After changing our therapeutic approach we saw gradual betterment that lead to the patient's discharge after 2 months.

CONCLUSION

Cases like this are important to clinical practice as they teach us a lot about the diagnostic and
treatment of psychiatric disorders.

KEY WORDS: Ahasver's delusions, Schizoaffective disorder, dynamic

ACRYLIC CRANIOPLASTY POST CLINOID MENINGIOMA RESECTION

Mujahed N. *, Patama S. **
**** 3rd year medical student, MU-Pleven- Bulgaria***
***** Department of Neurosurgery, UNIAIR -Surabaya,Indonesia***
Presenting Author: Mujahed N.
Correspondence: nurettom@gmail.com

INTRODUCTION

Skull defects and cerebrospinal fluid (CSF) leakage are well-known complications after neurosurgical tumor resections. Cranioplasty not only restores cranial integrity and cosmesis but also prevents neurological deterioration and infection. Recent advances in 3D printing have enabled the development of custom acrylic implants, offering precise reconstruction in complex cases.

THE CASE PRESENTATION

We report the case of a patient with a left frontotemporoparietal skull defect and CSF leakage following clinoid meningioma resection. The patient had a medical history of hypertension and type 2 diabetes mellitus. Postoperatively, he developed skull defect, CSF leak, and an epidural abscess. Computed tomography with 3D reconstruction confirmed the extent and location of the cranial defect. Surgical treatment involved debridement of infected tissue, evacuation of the epidural abscess, dural repair, and cranioplasty using a custom-made 3D acrylic implant. The postoperative course was uneventful, with stable vital parameters, preserved neurological function, and satisfactory cosmetic outcome.

CONCLUSION

This case demonstrates that custom 3D acrylic cranioplasty is a safe and effective solution for managing postoperative cranial defects complicated by CSF leakage. Early surgical intervention combined with meticulous perioperative management provides excellent clinical and cosmetic results, highlighting the value of 3D-printed implants in modern cranial reconstruction.

KEY WORDS: 3D cranioplasty; acrylic implant; meningioma

OBSTETRICS AND GYNECOLOGY & PEDIATRICS SECTION

CHAIRMEN:

Assoc. Prof. Nikola Popovski, MD, PhD

Nikoleta Stoyanova, MD

SECRETARY:

Anastasija Petkovska, OC

The aim of medicine is to prevent disease and prolong life; the ideal of medicine is to eliminate the need of a physician.

William J. Mayo

FROM PLACENTAL ABRUPTION TO VISION LOSS: A CLINICAL CASE OF SEVERE PREECLAMPSIA

Ivanova Ts.*, Stoyanova N.**, Popovski N.**
**** Faculty of Medicine, MU – Pleven, Bulgaria***
*****Department of Obstetrics and Gynaecology, MU - Pleven, Bulgaria***
Presenting author: Ivanova Ts.
Correspondence: cvetiivanova1206@abv.bg

BACKGROUND
Preeclampsia is a pregnancy-specific hypertensive disorder caused by generalized vasospasm, leading to reduced organ perfusion and endothelial activation. It typically develops after 20 weeks of gestation and may involve multiple organ systems. Risk factors include advanced maternal age, nulliparity, multiple gestation, high BMI, and comorbidities such as diabetes and autoimmune diseases.
CASE PRESENTATION
We report a 29-year-old woman, G4P1A2, admitted at 35 weeks of gestation with severe preeclampsia (BP 170/110 mmHg, severe headache, visual disturbances). Uterine hypertonus was present without vaginal bleeding. Ultrasound revealed intrauterine fetal demise and retroplacental hematoma consistent with placental abruption.
MANAGEMENT AND OUTCOME
An emergency cesarean section was performed due to low Bishop score and imminent eclampsia. Postoperatively, despite dual antihypertensive therapy, hypertension persisted. Two hours postpartum, the patient developed sudden bilateral vision loss. Ophthalmologic evaluation confirmed bilateral retinal detachment.
CONCLUSION
This case highlights the severe maternal and fetal complications of undiagnosed or untreated preeclampsia. Our aim is to emphasize the consequences of severe preeclampsia, leading to multiple organ damage. Early diagnosis of preeclampsia is crucial to enable timely intervention and reduce the risk of severe complications

KEY WORDS: preeclampsia, visions loss, clinical case

INCIDENTAL DIAGNOSIS OF ACUTE LYMPHOBLASTIC LEUKEMIA IN A CHILD PRESENTING WITH SEPSIS: A CASE REPORT

Elkina S.* , Gali C.K.*
****Department of Pediatrics, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria***
Presenting author: Gali C.K.
Correspondence: chalcedonyg@gmail.com

INTRODUCTION

Acute febrile syndrome in pediatrics is often attributed to common infections, and when cytopenias are also present, the diagnosis broadens to viral suppression or sepsis-related bone marrow stress. In cases of persistent clinical decline and unexpected laboratory abnormalities, reevaluation of the initial diagnosis is needed.

THE CASE PRESENTATION

This case report describes an 8-year-old boy who presented with fever and facial swelling following a dental extraction and was initially treated for sepsis with intravenous antibiotics and supportive therapy. The child's condition remained unimproved despite initial treatment, and blood testing revealed pancytopenia, macrocytic anemia, and a significantly elevated lactate dehydrogenase (LDH) level. These findings raised concern for a possible hematologic disorder. A peripheral blood smear showed lymphoblasts, and although flow cytometry was initiated, results were pending at the time of discharge. The patient was referred to a specialized pediatric hematology and oncology center, where bone marrow evaluation confirmed a diagnosis of Acute Lymphoblastic Leukemia (ALL).

CONCLUSION

This case highlights the need for clinicians to maintain diagnostic flexibility when faced with abnormal or unresolving illness in children. It also reinforces the diagnostic value of a peripheral blood smear as a simple yet powerful tool for identifying malignant hematologic conditions during evaluation of presumed infection.

KEYWORDS: sepsis, acute lymphoblastic leukemia, pediatric malignancy, peripheral blood smear, incidental diagnosis

THE BLIND SPOT OF PREECLAMPSIA: PRES IN THE POSTPARTUM PERIOD

Chelo A. *, Lerario S. *, Popovski N. **, Stoyanova N. **
****Medical University Pleven***
*****Department of Obstetrics and Gynaecology, Medical university Pleven, Bulgaria***
Presenting author: Lerario S.
Correspondence: simonalerr@gmail.com

AIMS/OBJECTIVES
Posterior Reversible Encephalopathy Syndrome (PRES) is a rare, potentially life-threatening disorder characterised by neurological manifestation due to subcortical white matter edema. It is often linked to an uncontrolled hypertensive state, such as preeclampsia or eclampsia. Although generally reversible with prompt diagnosis and intervention, delayed recognition may lead to severe maternal morbidity. This work seeks to present a case of PRES in the immediate post-partum period following a caesarean delivery of twins, and emphasise the importance of early recognition, appropriate management, multidisciplinary care in ensuring a favourable outcome.
METHODS
We present a clinical case of a 26-year-old woman, G3P1, admitted at 36 weeks of gestation for elective caesarean section of monochorionic diamniotic twins. The pregnancy was uneventful and delivery uncomplicated. Six hours post-operatively, the patient developed sudden bilateral vision loss and confusion. Neurological and ophthalmological examinations
revealed disorientation, absence of light perception, light-reactive pupils, normal macula. Brain MRI showed occipital cortical hyperintensities consistent with PRES. The patient was transferred to intensive care, where antihypertensive and supportive therapy were initiated.
RESULTS
Within 10 hours of treatment, patient's vision improved. Adjustments in antihypertensive treatment were required in the following days. Patient was discharged in stable condition 7 days later. No abnormalities appeared in follow-up clinical examination and MRI and therapy was subsequently discontinued.
CONCLUSION
Prompt initiation of antihypertensive and supportive measures were effective in controlling blood pressure, alleviating symptoms, facilitating full visual recovery. Careful monitoring and timely adjustment of therapy were essential to prevent complications and ensure favourable outcomes.

KEYWORDS: PRES, visual disturbances, multidisciplinary management, postpartum complications

MATERNAL AND NEONATAL OUTCOMES IN PREGNANCIES COMPLICATED BY AUTOIMMUNE DISEASE: TWO CASE REPORTS OF SLE AND RA

Gentile C.*, Stoyanova N.**, Popovski N.**, Caiulo R.**, Moattar N.**
****Medical University – Pleven, Bulgaria***
*****Department of Obstetrics and Gynecology, University Hospital "Dr. Georgi Stranski", Pleven, Bulgaria***
Presenting author: Gentile C.
Correspondence: claudiagentile2013@gmail.com

INTRODUCTION

Pregnancy in women with autoimmune diseases presents significant clinical challenges, requiring maternal immune tolerance of the semi-allogeneic fetus while maintaining protection against infections and malignancy. Disease activity varies: rheumatoid arthritis (RA) often improves, whereas systemic lupus erythematosus (SLE) remains unpredictable and is associated with fetal loss, preterm birth, and neonatal lupus due to transplacental autoantibody transfer. Active disease markedly increases maternal and fetal risks, necessitating meticulous management.

METHODS

We report two cases:

1. A 38-year-old G4P2 woman with SLE and prior adverse pregnancy outcomes conceived spontaneously during active disease. Her pregnancy was complicated by severe preeclampsia, fetal growth restriction, and impending eclampsia, requiring emergency cesarean at 30 weeks. The neonate required prolonged NICU support. Postpartum, disease activity declined, permitting initiation of targeted biologic therapy and clinical stabilization.
2. A 34-year-old G2P1 woman with RA and secondary Sjögren's syndrome demonstrated high immunological activity but remained clinically asymptomatic. Monthly Immunovenin therapy, initiated preconception and continued through the first trimester, did not significantly alter anti-Ro52 or anti-Ro60 antibody levels, confirmed by microblot analysis. Cesarean delivery at 38 weeks was successful.

RESULTS

These cases underscore the importance of preconception counseling, close immunological monitoring, and multidisciplinary care. Postpartum surveillance for RA flares is essential to prevent rapid disease progression and optimize maternal and neonatal outcomes.

CONCLUSION

Early detection, individualized management, and advanced therapeutic strategies can substantially improve both maternal and neonatal outcomes in pregnancies complicated by autoimmune disorders.

KEY WORDS: autoimmune disease, SLE, RA, pregnancy, maternal-fetal outcomes

THE IMPORTANCE OF ANTENATAL ROUTINE MENTAL-HEALTH SCREENING TO LOWER PSYCHOSOCIAL RISK AMONG PREGNANT WOMEN IN BULGARIA

Coletta M.*, Gyokova E.**, Hristova-Atanasova E., Iskrov G.******
****Medical Student, 4th year - Medical University Pleven***
*****Department of Obstetrics and Gynaecology, Faculty of Medicine, Medical University-Pleven, Pleven, Bulgaria; University Hospital "Saint Marina"-Pleven, Pleven, Bulgaria***
******Department of Social Medicine and Public Health, Faculty of Public Health, Medical University of Plovdiv, Plovdiv, Bulgaria***
Presenting author: Coletta M.
Correspondence: mariasole.med@gmail.com

AIMS/OBJECTIVES
This study aims to enrich the global and regional evidence on perinatal mental health (PMH) by examining the prevalence and determinants of antenatal psychosocial risk among pregnant women in Bulgaria—a country lacking national guidelines, structured PMH services and routine screening polices. Previous national assessments and research highlight that PMH continues to receive limited attention within Bulgarian clinical practice and academic discussions.
METHODS
A cross-sectional survey was conducted between June and October 2024 among 216 third-trimester pregnant women recruited from the University Hospital "Saint Marina"-Pleven. Data on sociodemographic, behavioural, reproductive, and psychosocial factors were collected using the validated Antenatal Risk Questionnaire–Revised (ANRQ-R). Multivariate logistic regression was applied to identify predictors of elevated psychosocial risk.
RESULTS
Overall, 65.7% of participants met criteria for elevated psychosocial risk. Significant risk factors included passive smoking exposure during pregnancy (OR = 5.03, p 0.001), physical activity before pregnancy (OR = 1.81, p = 0.004), and family history of hereditary disease (OR = 42.67, p 0.001). Protective factors included better self-rated health (OR = 0.37, p = 0.004), chronic illness (OR = 0.42, p = 0.049), previous childbirth experience (OR = 0.11, p = 0.032), and residence in Northwestern Bulgaria (OR = 0.31, p = 0.028). Despite the high prevalence, only 9.5% of women accessed professional support either consulting general practitioners, psychologists or psychiatrists.
CONCLUSION
The study highlights the high prevalence of antenatal psychosocial risk in Bulgaria

and the existing service gaps. Before implementing nationwide screening, further steps such as pilot programs, cultural validation of instruments, provider training, culturally tailored interventions, public-health education and system readiness assessments are necessary to address barriers and ensure equitable support for women.

KEY WORDS: antenatal psychosocial risk, mental health in pregnancy, Bulgaria, antenatal screening

INTERNAL MEDICINE SECTION

CHAIRMEN:

Assoc. Prof. Vania Slavcheva, MD, PhD

Kamen Genov, MD, PhD

SECRETARY:

Ralitsa Sotirova, OC

Science has everything to say about what is possible. Science has nothing to say about what is permissible.

Charles Krauthammer

STABBED BY THE CURE: A PACEMAKER-INDUCED CARDIAC CRISIS – A CASE STUDY

Raju J . M.* , Jimmy C.* , Tomy. N* , Josy S. T. *, Gospodinov K . D.** ,
****Student of Medical University – Pleven , Bulgaria***
*****Cardiology Department, UMHAT" Dr Georgi Stranski" – Pleven, Bulgaria***
Presenting author: Raju J . M.
Correspondence: jincemaria03@gmail.com

INTRODUCTION

Cardiac tamponade is a rare but life-threatening complication of temporary pacemaker placement, particularly in elderly patients with multiple comorbidities. Early recognition and prompt intervention are critical to survival.

CASE PRESENTATION

We present the case of a 90-year-old male with a history of ischemic heart disease (status post-stenting), chronic kidney disease (Stage III), hypertension, type 2 diabetes mellitus, and prior left nephrectomy for renal cell carcinoma. He initially presented with symptomatic bradycardia due to complete AV block and received a temporary pacemaker at an external facility. Following complications post-implantation, the patient was transferred to Dr. Georgi Stranski University Hospital. Clinical evaluation, ECG, and Transthoracic Echocardiography confirmed cardiac tamponade secondary to right ventricular perforation by the pacemaker lead. Emergency pericardiocentesis was performed, draining 180 mL of haemorrhagic fluid, resulting in immediate hemodynamic stabilization. A permanent VVI pacemaker was successfully implanted. Post-intervention, the patient was closely monitored with daily echocardiography and serial laboratory tests. These revealed stabilization of the pericardial effusion with no evidence of recurrent tamponade. The patient responded well to antiarrhythmic and anticoagulant therapy.

CONCLUSION

This case underscores the importance of early recognition and multidisciplinary intervention in the management of life-threatening cardiac tamponade caused by pacemaker lead perforation. It also highlights the need for precision in cardiac pacing, particularly in elderly patients with complex medical backgrounds

KEY WORDS: Cardiac tamponade, Pacemaker, AV block, Pericardiocentesis

DECODING DYSPNEA: A CASE REPORT OF A MALE NON-SMOKER WITH COMPLICATED COPD

Ismailova F. B.*, Ivankovska S. T.**, Borisova E. D.**, Pavlov P.S. **, Glogovska P. T.***
****Student, Medical University – Pleven, Bulgaria***
*****Department of Pulmonology and Phthisiatry, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria***
****** Department of Internal Medicine, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria***
Presenting author: Ismailova F. B.
Correspondece:figyanbirsenova@gmail.com

INTRODUCTION

Chronic Obstructive Pulmonary Disease is a heterogeneous lung condition, characterized by chronic symptoms such as shortness of breath, cough, sputum production. These symptoms are caused by airway and/or alveolar abnormalities, resulting in progressive airflow obstruction. Diagnosis involves assessment of the obstruction with spirometry, together with evaluation of the patient's complaints. According to WHO, COPD is a leading cause of death, ranking fourth with three million deaths annually. Risk factors for COPD include smoking, occupational and household air pollution.

THE CASE PRESENTATION

We present the case of a 46-year-old male patient, non-smoker, who was diagnosed with COPD at a significantly earlier age than usual. The disease progression was notably more rapid than the average, characterized by frequent exacerbations, progressive weight loss leading to emaciation, colonization of the bronchial tree by highly antimicrobial-resistant Gram-negative bacteria. Additionally, the patient experienced daily manifestations of respiratory failure and was dependent on supplemental oxygen. He also tested negative for cystic fibrosis, but the diagnostic imaging revealed fibrotic and cystic changes, unusually advanced and disseminated for his age.

CONCLUSION

In conclusion, this is a rare case of early-onset COPD in a non-smoker patient, with quick progression, clinical and therapeutic challenges. In recent times, the knowledge about COPD has been expanding rapidly, especially regarding risk factors and clinical classifications. The prevalence and burden of COPD are both expected to rise in the coming years.

KEY WORDS: COPD, Pulmonology, Respiratory

TRANSFUSION THERAPY IN CLINICAL CASE STUDY OF ACUTE MYELOID LEUKEMIA

Lalova M.*, Vasileva V.**, Slavcheva V.***
****Third year student, Faculty of Medicine, Medical University-Pleven – Pleven, Bulgaria***
*****Department of Blood Transfusion, RCTH-Pleven – Pleven, Bulgaria***
******Department of Hematology, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria***
Presenting author: Lalova M.
Correspondence: martalalov@outlook.com

BACKGROUND
Acute myeloid leukemia (AML) is a malignant hematologic disease characterized by proliferation of abnormal cells in the bone marrow and subsequent suppression of erythropoiesis and megakaryopoiesis, as well as an aggressive clinical course. Transfusion therapy is essential in the treatment of AML, primarily involving red blood cell (RBC) and platelet (PLT) transfusions to help manage anemia and thrombocytopenia.
AIM
The objective of the case study is to follow the patient's complex treatment plan, highlighting the key role of transfusion therapy and supportive care in the outcome of the disease.
METHODS
To achieve the objective, empirical research methods were used, including details of the number of RBC and PLT units transfused.
RESULTS
The results of the study prove how crucial proper supportive care management is, transfusion therapy in particular.
CONCLUSION
In conclusion, transfusion therapy is based on the patient's response to chemotherapy. Adequate and timely supportive care is of definitive importance for successful long-term treatment of patients with AML.

KEYWORDS: acute myeloid leukemia, supportive care, survival, transfusion intensity, transfusion
therapy

ACUTE PERICARDITIS IN THE COURSE OF CHLAMYDIA INFECTION ASSOCIATED WITH REITER'S SYNDROME AND RAYNAUD'S PHENOMENON: A CASE REPORT

Janjooa F. R.*, Kamenov V. K.**, Tisheva S. T.**
****Medical University – Pleven, Bulgaria***
*****Emergency Cardiology Department, UMHAT "Dr. Georgi Stranski" – Pleven, Bulgaria***
Presenting author: Janjooa F. R.
Correspondence: FAARIA1001@GMAIL.COM

INTRODUCTION

Acute pericarditis is an inflammatory disorder of the pericardium, most often linked to viral or idiopathic aetiology. Bacterial and autoimmune associations are less common. Acute pericarditis precipitated by the systemic inflammatory response towards a Chlamydia

CASE PRESENTATION

A 32-year-old woman was admitted with acute chest pain, palpitations, and exertional dyspnoea. Alongside these cardiac symptoms, she exhibited classic features of Reiter's syndrome: polyarthritis, conjunctivitis, and urethritis, accompanied by a history of Raynaud's phenomenon. Her past medical history included polycystic ovary syndrome and thyroid surgery, but no known history of systemic autoimmune disorders. Notably, her spouse had recently been treated for urethritis. On examination, she was tachycardic at 134/min with blood pressure of 110/70 mmHg. Echocardiography demonstrated a moderate pericardial effusion without tamponade, preserved left ventricular systolic function, and mild tricuspid regurgitation. Laboratory investigations revealed elevated C-reactive protein, anaemia, metabolic syndrome, and positive Chlamydia trachomatis serology. The patient was managed with non-steroidal anti-inflammatory drugs, colchicine, and azithromycin—administered for 7 days in hospital and continued for 7 days at home. She showed steady clinical improvement with resolution of chest pain, reduction of effusion, and stabilisation of haemodynamic status.

CONCLUSION

This case highlights a rare overlap of infectious and autoimmune mechanisms contributing to pericarditis. Identification of C. trachomatis as an etiological factor enabled tailored antimicrobial therapy alongside standard anti-inflammatory treatment. Multidisciplinary collaboration between cardiology, rheumatology, and infectious disease specialists was pivotal for timely diagnosis and a favourable outcome.

KEY WORDS: pericarditis, chlamydia trachomatis, reiter's syndrome, raynaud's phenomenon

DERMATOLOGIC ADVERSE EVENT OF PAZOPANIB AND NIVOLUMAB: ACUTE ASTEATOTIC DERMATITIS IN RENAL CELL CARCINOMA

Naseem H.*, Vasilev P. **
****Medical University of Pleven***
*****Department of Dermatology, Venereology and Allergology, Faculty of Medicine, Medical University Pleven, Bulgaria***
Presenting author: Naseem H.
Correspondence: haiqansm@gmail.com

INTRODUCTION

The growing use of targeted therapies and immunotherapies in oncology has led to new patterns of cutaneous adverse events (AEs). These dermatologic complications, although not life-threatening, can significantly impair quality of life, influence treatment adherence, and necessitate dose modification or discontinuation.

THE CASE PRESENTATION

We present a 54-year-old male with metastatic clear cell renal cell carcinoma treated initially with pazopanib (800 mg/day). Two weeks after initiation, he developed mild xerotic and pruritic rash, managed with topical corticosteroids and emollients. Following disease progression, therapy was switched to nivolumab (480 mg i.v. every 21 days). Ten days post-infusion, he developed severe generalized xerosis with desquamation, erosions, and an extensive presternal plaque complicated by Staphylococcus aureus infection. Histopathology showed irregular acanthosis, parakeratosis, spongiosis, and perivascular inflammatory infiltrates. He was treated with systemic antibiotics, corticosteroids, antihistamines, topical corticosteroids, and emollients, leading to significant improvement. Oncology therapy was modified to everolimus. The patient remains stable with mild xerosis under topical maintenance therapy.

CONCLUSION

Xerosis is among the most common dermatologic AEs of tyrosine kinase inhibitors and immunotherapy; however, acute asteatotic dermatitis is rare. With the increasing use of these agents, collaboration between oncologists and dermatologists is crucial for early recognition and effective management of cutaneous toxicities.

KEY WORDS: clear cell renal cell carcinoma, pazopanib, nivolumab, adverse events, asteatotic dermatitis

MANAGING COMORBIDITIES TO IMPROVE CPAP ADHERENCE: A CASE OF MODERATE OBSTRUCTIVE SLEEP APNEA

Jimmy C.*, Tomy N.*, Josy S. T.*, Raju J. M.*, Ivanova Zl. I.**, Kyuchukov N. H.**, Ivanov Y. J.**
****Student of Medical University – Pleven, Bulgaria***
*****Clinic of Pulmonology, UMHAT "Dr Georgi Stranski" – Pleven, Bulgaria***
Presenting author: Jimmy C.
Correspondence: christeenajimmy2002@gmail.com

INTRODUCTION

Obstructive Sleep Apnea (OSA) is a condition characterized by repeated upper airway collapse during sleep, resulting in daytime sleepiness and reduced quality of life. CPAP therapy is the most effective treatment for OSA, but adherence to the therapy can be hindered due to comorbidities.

THE CASE PRESENTATION

A 57-year-old woman presented with pronounced daytime sleepiness and deficits in attention and memory, which severely affected her quality of life, along with weight gain and exertion during everyday physical activities. During her visit with the somnologist, she was classified as Mallampati class 1 with a high Epworth Sleepiness Scale score of 15. A sleep polygraphy test was performed in a hospital setting, which revealed moderate OSA with an apnea-hypopnea index (AHI) of 24.3/hour and intensive snoring. CPAP therapy using a nasal interface was initiated, but poor therapy adherence was registered. During her hospital stay, the patient developed orthopnea due to congestive heart failure on the background of low blood pressure. A well-balanced therapy with diuretics and cardiotonics was prescribed. Radiographs of the sinuses revealed a deviated nasal septum, which was corrected surgically. Two months after recovering from septoplasty, a control polygraphy test was performed, showing improvement in AHI (9/h) and reduced OSA severity, but persistent symptomatology. During follow-up visits, the patient showed good CPAP therapy adherence and improvement in symptoms.

CONCLUSION

Comorbidities are notable contributors to CPAP intolerance. This case signifies the benefits of good management of comorbidities in improving CPAP tolerance.

KEY WORDS: Obstructive sleep apnea, CPAP therapy, adherence

ORAL ANTICOAGULANTS INDIRECTLY BETTER THAN SUBCUTANEOUS ANTICOAGULANTS FOR THROMBOPROPHYLAXIS-A QUALITY IMPROVEMENT PROJECT

Shankar Y.*
Department of Emergency Medicine, CUH-Croydon, United Kingdom
Presenting author: Shankar Y.
Correspondence: yashas.shankar@nhs.net

AIMS/OBJECTIVES
The aim of the project was to compare patient compliances and incidences of venous thromboembolic events to different form of anticoagulants in thromboprophylaxis for long term immobilisation of lower limb and then interpret a relation between them.
METHODS
The data for this prospective analytical study was collected from 100 patients that suffered a traumatic injury to their lower limbs which in turn required immobilisation post-surgery/cast. The data was collected for a span of full three months where all these patients were then followed up continuously every two weeks at the fracture clinic until the end of their thromboprophylaxis duration or the start of their mobilisation. Two different forms of anticoagulants with one belonging to subcutaneous injectables (Enoxaparin) and the other one belonging to direct oral anticoagulants (Rivaroxaban) were offered as a choice to these patients. These patients were actively given all the necessary information regarding both forms of the anticoagulants in the form of a leaflet prior to making their choice/the start of their therapy. Comparison was then made between both forms of anticoagulants with regards to compliance and also the incidence of venous thrombotic events in the affected limb.
RESULTS
Patient compliance was found to be better with Rivaroxaban when compared to that of Enoxaparin. The incidence of venous thrombotic events in the affected limb was noted to be higher in patients that chose/used Enoxaparin over Rivaroxaban.
CONCLUSION
Compliance to the medication plays a crucial role when it comes to the incidence of a thrombotic event in prolonged lower limb immobilisation and can thus be an attributable factor.

KEY WORDS: Enoxaparin, Rivaroxaban, compliance, incidence, thrombotic.

PULMONARY EMBOLISM IN DISGUISE: A CASE OF ATYPICAL PRESENTATION IN AN ELDERLY PATIENT

Josy S.T.*, Tomy N.*, Jimmy C.*, Raju J.M.*, Stancheva N.**
****Student of Medical University- Pleven, Bulgaria***
*****Department of Cardiology, University Hospital "Dr Georgi Stranski" - Pleven, Bulgaria***
Presenting Author: Josy S.T.
Correspondence: josysneha2003@gmail.com

INTRODUCTION:
Pulmonary Embolism (PE) can be present atypically in elderly patients along with overlapping cardiac conditions, thereby complicating timely diagnosis and management.
CASE PRESENTATION:
An 80-year-old male with a history of hypertension, chronic heart failure, prior myocardial infarction and left bundle branch block was presented with sudden onset of dyspnea, right sided chest pain and hypotension. Laboratory tests revealed elevated inflammatory markers, high D-dimer and mildly raised troponin. ECG showed LBBB with a transient episode of ventricular tachycardia. Echocardiography showed right ventricular dysfunction and McConnell's sign. CT pulmonary angiography confirmed PE with thrombotic occlusion in the right pulmonary artery and a basal right sided pulmonary infarction. The patient was treated and managed with anticoagulants, beta-blockers and supportive care until hemodynamically stable. He was discharged asymptomatic with proper follow-up planned.
CONCLUSION:
This case specifies the diagnostic complexity of PE in elderly patients with existing cardiac diseases. It highlights the need for clinical vigilance, the utility of echocardiography and CT in diagnosis and the importance of rapid intervention in improving outcomes.

KEY WORDS: Pulmonary embolism, elderly, McConnell's sign, heart failure, ventricular tachycardia.

FAMILIAL ADENOMATOUS POLYPOSIS (FAP) WITH EXTRAINTESTINAL NEOPLASMS: CASE REPORT

Markov A. A.*, Stefanova N. I.*, Georgiev G. Y.*, Vlahova M. D.*
****Department of Gastroenterology , Gastroenterology Diagnostic Ward, UMHAT "Dr. Georgi Stranski"- Pleven, Bulgaria***
Presentiong author: Stafanova N.
Correspondence: stefanova_96@abv.bg

INTRODUCTION

The main objective of this case report is to present to society the rare condition FAP and to follow it's evolution. Familial adenomatous polyposis is a rare autosomal dominant inherited condition, caused by a mutation in the tumor suppressor gene APC (Adenomatous polyposis coli).

METHODS

The diagnostic process includes a combination of medical tests and family history. We present a case of a 34-years old patient with genetically proven APC gene mutation. She was operated in 2016 due to papillary thyroid cancer and in 2025 due to ovarian cancer which was immunohistochemically proven to be a metastasis from mucinous adenocarcinoma.

RESULTS

Long-term results show that one hundred percent of the patients with FAP develop colorectal carcinoma, if they don't undergo prophylactic surgery resection. The extraintestinal complications include polyps in the upper gastrointestinal tract as well as neoplasms in other organs such as carcinoma of the thyroid gland.

CONCLUSION

This case report means to showcase the importance of early screening, of keeping up with family predisposition and to highlight the extraintestinal complications.

KEY WORDS: polyposis, gene, inherited, carcinoma.

BIOLOGIC TREATMENT IN A PATIENT WITH SEVERE EOSINOPHILIC ASTHMA AND ALLERGIC RHINITIS: A CASE REPORT

Perrone D.**, Iacopi R.**, Kyuchukov N.*, Ivanova Zl. I.*, Ivanov Y.*
****Clinic of Pulmonology and Phthisiatry, UMHAT "Dr. Georgi Stranski," Pleven, Bulgaria***
*****Medical University - Pleven – 4th year students***
Presenting author: Iacopi R.
Correspondence: iacopi.rachele02@gmail.com

INTRODUCTION

Nowadays control of severe asthma is still a difficult task for the pulmonologist. These patients are usually on triple inhaled therapy combined with a short acting beta-2-agonist as needed but still have poor asthma control. This report presents the clinical follow-up of a patient with severe eosinophilic asthma and associated allergic rhinitis.

THE CASE PRESENTATION

A female patient with severe eosinophilic asthma and allergic rhinitis was on regular inhalation therapy (ICS/LABA and LAMA) and nevertheless had frequent exacerbations. Severe
breathlessness frequently made her visit the Emergency Department and get admitted for hospital treatment. During one of her severe exacerbations, she presented with breathlessness, reduced breath sounds, wheezing, bilateral rales. Spirometry showed FEV1 54% with FEV1/FVC 74%. Blood tests showed elevated eosinophil count of 1.09 G/L (normal value: 0.03-0.44 G/L), IgE 163. After treatment, spirometry showed improvement with FEV1 62% and FEV1/FVC 88%. At the end of therapy, FEV1 reached 85% and FEV1/FVC 95%.

After clinical discussion biologic treatment started with subcutaneous Benralizumab 30 mg. The schedule included two doses every 28 days, followed by administration every 56 days, for a total of 168 days. Inhaled maintenance therapy was continued. Blood eosinophils progressively decreased, reaching 0 G/L after six months. Lung function stabilized and no exacerbations, hospital admissions, or systemic corticosteroid use were reported. No adverse events occurred during follow-up.

CONCLUSION

Treatment with Benralizumab resulted in significant clinical improvement. It is an effective, well-tolerated add-on treatment for severe eosinophilic asthma, with concomitant allergic rhinitis.

KEY WORDS: Severe asthma, Benralizumab, Eosinophilia, Allergic rhinitis, Biologic therapy

EMERGENCY PCI TO PLANNED LAD REVASCULARISATION: MULTIVESSEL CAD – A CASE STUDY

Tomy N.*, Jimmy C.*, Josy S.T*, Raju J.M*, Stancheva N.**
****Medical University–Pleven, Bulgaria***
*****Cardiology Department - UMHAT "Dr. Gerogi Strasnki" - Pleven, Bulgaria***
Presenting author: Tomy N.
Correspondence: namithatomy07@gmail.com

INTRODUCTION

Multivessel coronary artery disease (CAD) is often managed by a staged approach in patients with ST-elevation myocardial infarction and chronic total occlusion of non-culprit artery.

CASE PRESENTATION

A 41-year-old male with a family history of premature CAD and hepatitis C presented with inferior STEMI from total right coronary artery occlusion. Laboratory workup revealed elevated LDL and cardiac biomarkers, including troponin I, confirming myocardial injury. Emergency PCI was performed with two drug-eluting stents in RCA. Chronic Subtotal ostial occlusion of the LAD and an ejection fraction of 51% led to a staged PCI. Re-angiography was performed after one month. Holter monitoring revealed short episodes of supraventricular tachycardia. In addition, echocardiography showed segmental wall motion abnormalities and moderate mitral regurgitation. Patient was managed with dual antiplatelets, statin, ACE inhibitor, and PPI. Beta-blockers were avoided due to a normal resting heart rate. He was discharged in stable condition.

CONCLUSION

This case highlights the importance of staged PCI in managing multivessel CAD and the importance of recognizing risk factors such as young age and family history.

KEY WORDS: staged PCI, LAD occlusion, STEMI

CARDIOVASCULAR OUTCOMES ASSOCIATED WITH SEMAGLUTIDE USE IN TYPE 2 DIABETES: A SYSTEMATIC REVIEW AND META-ANALYSIS

Adinolfi G.*, Millia V.*, Dinkov B.**,, Stavreva G.******
****Faculty of Medicine, Medical University – Pleven, Bulgaria***
*****Clinic of Endocrinology and Metabolic Diseases UMHAT "Dr Georgi Stranski", Pleven, Bulgaria***
******Department of Pharmacology and Toxicology, Medical University – Pleven, Bulgaria***
Presenting author: Adinolfi G.
Correspondence: gianmarcoadinolfi@libero.it

BACKGROUND
Cardiovascular complications are the leading cause of death in individuals with type 2 diabetes (T2D). The GLP-1 receptor agonist semaglutide has demonstrated notable cardiometabolic benefits.
OBJECTIVE
To systematically assess the effect of semaglutide, in both oral and subcutaneous formulations, on major adverse cardiovascular events (MACE) in T2D patients.
METHODS
This review followed PRISMA guidelines, with a comprehensive search in PubMed, MEDLINE, and Google Scholar up to June 2025. High-quality randomized controlled trials (RCTs), including the SOUL trial (2025), were included. The primary endpoint was MACE, defined as cardiovascular death, nonfatal myocardial infarction, and nonfatal stroke. Hazard ratios (HRs) and 95% confidence intervals (CIs) were pooled using a random-effects model.
RESULTS
Of 126 articles screened, 3 met inclusion criteria. The SOUL trial (n = 9,650) reported a significant reduction in MACE with oral semaglutide versus placebo (HR 0.86; 95% CI: 0.77–0.96; p = 0.006), with no significant impact on renal outcomes. The pooled HR for MACE across SOUL, SUSTAIN-6, and PIONEER-6 was 0.78 (95% CI: 0.69–0.88; $I^2 \approx 25\%$), indicating low-to-moderate heterogeneity. Adverse event profiles were comparable between semaglutide and placebo groups.
CONCLUSION
Semaglutide use is associated with a significant reduction in major cardiovascular events in T2D, supporting its role as a valuable agent for combined glycemic control and cardiovascular risk reduction.

KEYWORDS: semaglutide, GLP-1 receptor agonists, MACE, type 2 diabetes, meta-analysis, systematic review

PHARMACY SECTION

CHAIRMEN:

Prof. Galiya Stavreva, MD, PhD

Assoc. Prof. Aleksandar Pashev, PhD in Chemistry

Assist. Prof. Svetoslav Stoev, PharmD, PhD

SECRETARY:

Vladislava Dimitrova, OC

It is easy to get a thousand prescriptions, but hard to get one single remedy.

Chinese proverb

PREPARATION AND CHARACTERISATION OF PHYTOSOMES WITH RUTIN

Kushleva R.*, Petrov V.*., Mihaylov V.*., Sheitanova G.*, Titeva S.*
****Department of "Pharmaceutical sciences and social pharmacy", Faculty of pharmacy, Medical university – Pleven, Bulgaria***
Presenting author: Kushleva R.
Correspondence: rostislava.kush009@gmail.com

INTRODUCTION

Phytosomes are a new class of lipid nanocarriers developed to improve the bioavailability and therapeutic efficacy of plant compounds with low absorption rates. This innovative nanosystem involves the formation of a complex between standardized plant extracts/polyphenols and phospholipids, usually phosphatidylcholine, resulting in a molecular association that enhances the solubility, stability, and absorption of the biological active compounds.

AIM

The aim of the present study was to conduct research to select a suitable method for preparing phytosomes with rutin and determine the main technological and biopharmaceutical indicators of the obtained phytosomes.

METHODS

In the presented work were prepared phytosomes with 3 different ratio of rutin:lecithin (1:0,5; 1:1; 1:2). Tests were being conducted and the optimal ratio between rutin and lecithin in the preparation of phytosomes was derived. Two hydrophilic gels one with rutin and one with rutin phytosomes and Carbomer were prepared. The preparations were evaluated in vitro using modified Apparatus 2 Eur.Ph., into phosphate buffer with pH 6,8 at 37±0,5°C and determined using UV-VIS spectrophotometer at 360 nm. To analyze the mechanism of the drug release rate kinetics of the dosage form, the obtained data was fitted into zero-order, first order, Higuchi and Korsmeyer-Peppas release models.

RESULTS

The entrapment efficiency (EE%) of the formulations containing rutin and lecithin F1 to F3 were found to be in the range of 77% to 86% . It was observed that formulation containing rutin and lecithin in 1:1 ratio (F2) produced highest entrapment efficiency as compared to other formulations. The percentage drug release for the formulation containing rutin phytosomes and carbopol was found to be 27,72 in 4 hours.

CONCLUSIONS

The results indicate that phytosomes with rutin increase bioavailability and absorption of rutin.

KEYWORDS: rutin , phytosomes , entrapment efficiency, transdermal gel, in-vitro drug release, in-vitro drug release kinetics study

ALOPECIA TREATMENT – THE AUDOCITY OF SCIENCE

Silvio Garattini*, Aleksandrov R.A.**, Andreev N.S.**, Georgieva G. B.***
****Mario Negri Institute for Pharmacological Research, Milano, Italy***
*****Medical student - Medical University - Pleven, Bulgaria***
******Department of Chemistry and Biochemistry, Medical University – Pleven, Bulgaria***
Presenting author: Aleksandrov R.A.
Correspondence: 119913@mu-pleven.bg

BACKGROUND

Hair loss, especially conditions like androgenetic alopecia (AGA) and female pattern hair loss (FPHL), is far more than just a medical issue – it's something that touches the lives of millions of men and women. By the age of 50, about half of men and almost 40% of women will experience some form of hair loss. While much of the focus is on the biological side, the reality is that hair loss affects people personally – how they see themselves, how they feel, and even their finances. Even though it's often dismissed as just a cosmetic issue, hair loss can deeply affect a person's quality of life and increase anxiety.

PURPOSE

To synthesize current evidence on the pharmacological management of hair loss, highlight its psycho-emotional and socio-economic dimensions, and briefly illustrate these aspects with findings from a multicenter exploratory trial.

METHODS

Facts and data were compiled from peer-reviewed literature, international guidelines, and real-world analyses. For illustrative purposes, a randomized, controlled, adaptive-design trial is referenced to underline efficacy and safety trends. Patient-reported outcomes and health-economic tools were integrated.

RESULTS

Research consistently shows that several treatments – like minoxidil, finasteride, dutasteride and spironolactone – can really make a difference for people with hair loss. For men, dutasteride and finasteride tend to work best, while oral minoxidil helps both men and women and is generally safe. Spironolactone is a good choice especially for women. What is perhaps most encouraging is that, regardless of the treatment, people frequently reported feeling less depressed, and most said their quality of life has improved. On the economic side, while the yearly cost of treatment can be €350–600, needing less mental health support can save over €1,000 each year, making these therapies a smart investment for both individuals and society.

CONCLUSION

Hair loss is a condition of multifaceted impact: biological, psychological and economic. Pharmacological therapy, while primarily intended to restore follicular

activity, exerts broader benefits by alleviating mental distress, improving social functioning, and mental status. These findings support the conceptual shift of alopecia from a purely cosmetic concern to a condition of genuine clinical and public health significance. Future work should prioritize long-term safety and psycho-social benefits.

KEY WORDS: alopecia, minoxidil, finasteride, dutasteride, psychosocial burden

GOLD NANOPARTICLES: BIOLOGICAL SYNTHESIS AND USE IN MODERN RADIOTHERAPY STRATEGIES

Georgieva V. M.*, Marinov Ph. P.*, **, Petrov I. P.**, Lazhovski Ts.**, Stoilov K. D.**, Temnishki P.*, Marinovska P. G.*, Simeonova S., Georgiev P.***, Petrova S.***, Balashev K. T.******
****Medical University Pleven, 1 Sv. Kliment Ohridski Str., 5800 Pleven, Bulgaria***
*****Heart and Brain Center of Clinical Excellence, 2 Pierre Curie Str, 5800 Pleven, Bulgaria***
******Sofia University, Faculty of Chemistry and Pharmacy, Dept. Physical Chemistry, 1 James Bourchier Blvd., 1164 Sofia, Bulgaria***
Presenting author: Georgieva V. M.
Correspondence: victoriageorgieva181@gmail.com

AIMS/OBJECTIVES
Gold nanoparticles (AuNPs) have emerged as highly promising agents in radiotherapy enhancement due to their biocompatibility, ability to amplify local radiation effects within tumor tissues, and favorable pharmacokinetics, including low systemic clearance and a pronounced enhanced permeability and retention (EPR) effect that promotes selective accumulation in tumors. Their structural versatility and surface functionalization potential with targeting ligands further enhance their utility as vectors for the precise delivery of high atomic number gold atoms. Moreover, the intrinsic optical properties of AuNPs enable tracking in biological systems, pharmacokinetic profiling and optimization of therapeutic dosing.
METHODS
The development of efficient and sustainable synthesis strategies for gold nanoparticles and understanding of the mechanisms by which ionizing radiation influences their structure and behavior, represents a key objective in contemporary nanomedicine. This presentation highlights biosynthetic (microbiological) approaches to AuNP fabrication, emphasizing their relevance to pharmaceutical and biomedical applications.
RESULTS
Furthermore, we propose an experimental framework to examine the impact of ionizing radiation-specifically, high-energy photons generated by a medical linear accelerator (LINAC)-on the morphology and physicochemical characteristics of gold nanoparticles synthesized via the classical Türkiewicz chemical method.
CONCLUSIONS
The structural and optical modifications of AuNPs before and after irradiation will be assessed using UV-Vis spectroscopy and atomic force microscopy (AFM). The results reveal distinct, dose-dependent alterations in both spectral profiles and surface morphology, offering new insights into the radiation-responsiveness of nanoparticle systems and their optimization as radiosensitizers.
KEYWORDS: gold nanoparticles, ionizing radiation, atomic force microscopy (AFM), radiosensitization, microbial synthesis

PLANTS WITH BIOPESTICIDAL POTENTIAL AGAINST TABACCO AND DRUGSTORE BEETLES

Marinova F. B.*, Atanasova P. A.*, Petrova K. P.*, Karadzhov A. M.*, Yunal Z. Z.*, Gavrilov G. V.**, Gavrilova A. B.**
****Faculty of Pharmacy, Medical University – Pleven, Bulgaria***
*****Department of Pharmaceutical Chemistry and Pharmacognosy, Faculty of Pharmacy, Medical University – Pleven, Bulgaria***
Presenting author: Marinova F. B.
Correspondence: fani_ma2003@abv.bg

AIMS/OBJECTIVES
One of the main problems of storing plant substances is damage by pests, which are very often insects. The fumigation method, which is a standard for large food and herb warehouses, is not applicable to pharmacies and drugstores due to health and safety considerations. The aim of the presented study is to highlight promising plants that may have potential for biological control of key storage insect pests such as Lasioderma serricorne (Fabricius, 1792) and Stegobium paniceum (Linnaeus, 1758).
METHODS
During a routine inventory of the Teaching Herbarium at the Faculty of Pharmacy of the Medical University – Pleven in 2024, all herbarium specimens were examined and assessed for damage from the drugstore beetle (S. paniceum) and the Tabacco beetle (L. serricorne). These two insect species are the main infestors of the herbarium collection. The enlisted plants were divided into two groups – damaged and undamaged plants. As a next step, the remaining uninfested plants were analyzed for potential biopesticidal properties, based on reference scientific studies.
RESULTS
As a result of the current study, species of higher plant families such as Cupressaceae, Taxaceae, Araliaceae, Lythraceae, Santalaceae, Verbenaceae, Viscaceae, Cyperaceae, etc. were found to be unattractive to the above mentioned beetles. According to the reference, at least some of the affiliates of these families have proven biopesticidal properties.
CONCLUSIONS
The identified species and their related families are a good basis for future more in-depth research in the field of biopesticides.

KEYWORDS: biopesticides, herbarium specimens, insect pests

PRECLINICAL EVALUATION OF THE OXYNTOMODULIN ANALOG MAZDUTIDE ON GLYCEMIC CONTROL, METABOLIC-ASSOCIATED STEATOTIC LIVER DISEASE AND GUT MICROBIOME IN EXPERIMENTAL TYPE 2 DIABETES

Dinkov B.V.*,**, Koleva N.*, Tsolova E.*, Panayotova P.*, Baychev I., Dinkov V.****, Pendicheva-Duhlenska D.****

****Department of Pharmacology and Toxicology, Medical university – Pleven, Bulgaria***

*****Clinic of Endocrinology and metabolic diseases UMHAT Dr. Georgi Stranski, Pleven, Bulgaria***

******Departament of Pathologoanatomy, Medical university – Pleven, Bulgaria***

*******Faculty of Medicine, Medical University – Pleven, Bulgaria***

Presenting author: Dinkov. B.V.

Correspondence: boris.dinkov.md@gmail.com

BACKGROUND

Metabolic-dysfunction associated steatotic liver disease (MASLD), the hepatic manifestation of metabolic syndrome in type 2 diabetes (T2D), is associated with insulin resistance, oxidative stress, and gut microbiome dysbiosis. Novel incretin-based drugs improve glycemic control and metabolic parameters. However, their effects on liver pathology and gut microbiome remain incompletely understood.

OBJECTIVE

The study aims to investigate the effects of the oxyntomodulin analog mazdutide on liver steatosis, glycemic regulation, lipid metabolism, oxidative stress, and gut microbiome composition in a preclinical T2D model.

METHODS

Male Wistar rats will be subjected to a high-fat diet and intraperitoneal streptozotocin injection (35 mg/kg) to induce T2D. Animals (n=8 per group) will be allocated to four experimental groups: untreated diabetic, mazdutide-treated (30 nmol/kg), semaglutide-treated (30 nmol/kg), and healthy controls. Evaluations include fasting glucose and insulin, HOMA-IR and HOMA-β, insulin tolerance tests, weekly biometric monitoring, serum lipid profile, liver enzymes, and oxidative stress markers (MDA, catalase, superoxide dismutase). Histological analyses of liver, pancreas, kidney, and intestine will assess steatosis, inflammation, fibrosis, and intestinal barrier integrity. Gut microbiome composition will be determined from fecal samples using real-time PCR with specific primers and fluorescent probes.

EXPECTED OUTCOMES

Mazdutide is expected to reduce oxidative stress, improve glycemic and lipid profiles, beneficially modulate gut microbiota, and mitigate MASLD progression

and associated inflammation. These preliminary findings may provide mechanistic insights into the therapeutic potential of oxyntomodulin analogs and guide future translational studies addressing metabolic liver disease in T2D.

KEYWORDS: oxyntomodulin analog, type 2 diabetes, MASLD, gut microbiome, preclinical study

PRELIMITARY PHARMACOGNOSTIC STUDY OF ZIZIPHUS JUJUBA MILL LEAF EXTRACT

Dimitrova M. S.*, Butanska P. A. *, Andreev A. T.*, Trifonova D. S. *, Yotova M. C.*
****Department of Pharmaceutical Chemistry and Pharmacognosy, Faculty of Pharmacy, MU-Pleven, Bulgaria***
Presenting author: Dimitrova M. S.
Correspondence: mimistoianova@mail.bg

AIMS/OBJECTIVES
This preliminary study aimed to perform a pharmacognostic evaluation of Ziziphus jujuba leaves, focusing on macroscopic and microscopic characterization, phytochemical screening of the methanolic extract, and assessment of its antioxidant activity.
METHODS
Leaves of Z. jujuba cultivated in Bulgaria were air-dried at room temperature. Macroscopic and microscopic features were identified using standard pharmacopeial techniques. Triplicate extractions were performed with 70% methanol, followed by concentration under reduced pressure. Phytochemical tests were conducted to detect phenolic compounds, flavonoids, and triterpene saponins. Total polyphenol content was quantified using the Folin–Ciocalteu method and expressed as gallic acid equivalents. Antioxidant activity was evaluated using DPPH and ABTS radical scavenging assays. This research was funded by the European Union-NextGenerationEU, through the National Recovery and Resilience Plan of the Republic of Bulgaria, project № BG-RRP-2.004-0003.
RESULTS
Dried leaves were pale green, oval-lanceolate with finely serrated margins and three distinctive basal veins with non-fused ends. Microscopic analysis revealed epidermal tissue with stomata, covering trichomes, and calcium oxalate druses. Phytochemical screening confirmed the presence of phenolic compounds, flavonoids, and triterpene saponins in the methanolic extract. Total phenolic content was determined, and antioxidant assays showed dose-dependent radical inhibition, with extract concentrations ranging from 14.51-90.73 μg/mL (DPPH) and 90-907.3 μg/mL (ABTS).
CONCLUSION
This study contributes valuable pharmacognostic and phytochemical data for the identification and standardization of Ziziphus jujuba leaves.

KEY WORDS: pharmacognostic study, ziziphus jujuba, phytochemistry, antioxidant activity

REVIEWING THE EFFICACY OF NANOPARTICLE-BASED DRUG DELIVERY FOR CANCER THERAPY

Sadique M.*
Presenting author: Sadique M.
****Medical University Pleven, Pleven, Bulgaria***
Correspondence: minhaa.sadiquee@gmail.com

AIMS/OBJECTIVES
Cancer remains a leading cause of death worldwide, and conventional chemotherapy is limited by systemic toxicity and poor selectivity. This study aimed to evaluate the safety and efficacy of nanoparticle-based drug delivery systems in improving therapeutic outcomes in cancer therapy.
METHODS
Different classes of nanoparticles, including polymeric nanoparticles, liposomes, and inorganic nanocarriers, were synthesized and characterized for drug encapsulation. Physicochemical parameters such as particle size, surface charge, and drug loading capacity were analyzed. In vitro experiments using cancer cell lines assessed drug uptake and cytotoxicity, while in vivo murine xenograft models were employed to evaluate tumor suppression and systemic safety.
RESULTS
Nanoparticle formulations significantly enhanced drug solubility, stability, and targeted delivery compared to free drug forms. In vitro assays demonstrated higher uptake of nanoparticle-encapsulated drugs and increased cytotoxic effects on cancer cells. In vivo studies showed marked inhibition of tumor growth with reduced off-target toxicity. Safety assessments through hematological and histopathological analysis confirmed a favorable safety profile of the nanoparticle formulations.
CONCLUSION
Nanoparticle-based drug delivery systems improve the therapeutic index of anticancer agents by enhancing targeted delivery and minimizing systemic toxicity. These findings support their potential for clinical translation as an effective strategy in cancer therapy.

KEY WORDS: nanoparticles, cancer therapy, drug delivery, chemotherapy, targeted therapy

POSTER SECTION

CHAIRMEN:

Prof. Snezhana Tisheva, DMSc, PhD

Assoc. Prof. Diana Pendicheva, MD, PhD

Assoc. Prof. Stefan Trifonov, MD, PhD

SECRETARY:

Gergana Neykova, OC

Medicine heals doubts as well as diseases.

Karl Marx

P.1 RELATIONSHIP BETWEEN GUT MICROBIOTA AND METABOLIC SYNDROME

Ivanova Veselina I.*, Tsvetanov I.**, Grigoryan A.**
****Medical student, Medical University - Pleven, Bulgaria***
*****Department of Pathological Physiology MU– Pleven, Bulgaria***
Presenting author: Ivanova V.
Correspondence: veselina_i_4@abv.bg

INTRODUCTION

Metabolic syndrome (MetS) is a multifactorial condition characterized by insulin resistance, hyperglycemia, dyslipidemia, and abdominal obesity. The gut microbiota (GM), composed of trillions of microorganisms, has a major influence on the maintenance of metabolic homeostasis. The gut–liver axis plays a prominent role in the pathogenesis and therapy of metabolic diseases such as diabetes. Dysbiosis is considered an important pathogenic factor in the development of MetS and type 2 diabetes (T2D).

OBJECTIVE

To present a summary of current scientific data regarding the involvement of gut microbiota in the etiology and pathogenesis of metabolic syndrome, with an emphasis on mechanisms of inflammation, energy regulation, and metabolic dysfunction.

MATERIALS AND METHODS

A systematic review of the literature was performed using the following bases: PubMed, Scopus, and Web of Science. Preclinical and clinical studies were included, as well as meta-analyses, examining the microbiome in MetS and T2D. There have been several discoveries involving the gut microbiota and gut–liver axis in diabetes.

RESULTS

Patients with MetS exhibit reduced microbial diversity and a deficiency of butyrate-producing bacteria such as Faecalibacterium prausnitzii and Roseburia spp. The role of intestinal ecology in the metabolic syndrome was postulated when gut microbiota was directly connected with inflammation, hyperinsulinemia, and diabetes. Also, there are several trials ongoing on the therapeutic efficacy of probiotic administration in diabetes and its complications. Gut microbiota is now discussed as a novel prognostic biomarker with a potential therapeutic role in diabetes.

KEY WORDS: gut microbiota, inflammation, diabetes type 2, metabolic syndrome

P.2 COMPUTED TOMOGRAPHY SIGNS, HISTOPATHOLOGICAL CHARACTERISTICS AND DIFFERENTIAL DIAGNOSIS OF SOLITARY FIBROUS TUMOR OF THE PLEURA. A CASE REPORT

Trifonov R.G.*, Betova T.M.**, Kraevska E.P.**, Vasileva M.V.*, Peykov G.R., Fakirova A.D.****, Nikolova Z.M.********
****Clinic of Imaging Diagnostics, UMHAT „Saint Marina“ – Pleven, Bulgaria.***
*****Clinical Pathology Laboratory, UMHAT „Saint Marina“ – Pleven, Bulgaria***
******Surgery Clinic, Department of Thoracic Surgery, UMHAT „Saint Marina“ – Pleven, Bulgaria.***
*******Clinic of General and Clinical Pathology, Military Medical Academy – Sofia, Bulgaria.***
********VI year Medical student, Medical University – Pleven, Bulgaria***
Presenting author: Trifonov R.G.
Correspondence: radoslav_tr@abv.bg

INTRODUCTION

Solitary fibrous tumor of the pleura (SFTP) is a rare mesenchymal tumor, first described as a separate clinical entity by Klemperer and Rabin in 1931. It accounts for less than 5% of all pleural neoplasms. SFTP is typically found accidentally, on a routine chest X-ray examination, since most patients are asymptomatic.

THE CASE PRESENTATION

A 74-year-old woman was admitted to the Surgery Clinic with complaints of cough, chest heaviness and pain in the right hemithorax. The routine chest X-ray study revealed a well defined homogenous opacity in the right upper lung field – suspicious for a proliferative process. Subsequent contrast-enhanced chest CT was performed, which revealed an enhancing solitary well defined heterodense formation, sized 7.5 x 5.5 cm, which could be traced to the pleura. The preoperative differential diagnostic plan included localized mesothelioma, fibroma, neurinoma, lipoma, hamartoma, pleural metastasis, peripheral lung cancer, as well as hematoma. Following the operation, routine histological and immunohistochemical examinations of the resected material were performed, which confirmed the diagnosis of benign SFTP. A sensitive immunohistochemical marker (STAT6) was also applied, confirming a specific genetic anomaly (NAB-STAT6 gene fusion) for this tumor.

CONCLUSION

On preoperative chest CT, a solitary solid pleural lesion should not only be suspected for SFTP, but also differentiated from other primary and secondary pleural neoplasms, as well as pseudotumors. The morphology and immunohistochemistry, in addition to the specific molecular-genetic profile, support the diagnosis of SFTP.

KEY WORDS: solitary fibrous tumor, pleura, CT, immunohistochemistry, STAT6

P.3 ADVANCED GASTRIC AND GASTROESOPHAGEAL JUNCTION CARCINOMA – ANALYSIS OF CLINICOPATHOLOGICAL CHARACTERISTICS AND HER2 STATUS FOR THE PERIOD 2020-2025

Gorcheva Z.V.*, Ovcharova V.M.**, Betova T.M., Ivanov I.N.****, Georgiev G.A.**, Kraevska E.P.***, Danailova I.V.*, Rachev Z.R.********
****Clinic of Internal Medicine, University Hospital "St. Marina" – Pleven, Bulgaria***
*****Department of Medical Oncology, University Hospital "St. Marina" – Pleven, Bulgaria***
****** Laboratory of Clinical Pathology, University Hospital "St. Marina" – Pleven, Bulgaria***
******* Department of General and Clinical Pathology, University Hospital "Dr. G. Stranski" – Pleven, Bulgaria***
******** Medical student, 4th year, Medical University – Pleven, Bulgaria***
Presenting author: Ovcharova V.M.
Correspondence: venislava_ovcharova@abv.bg

INTRODUCTION

Gastric carcinoma is an increasingly common oncological disease and is usually diagnosed at an advanced stage. In Bulgaria, it ranks sixth in incidence among men and eighth among women.

OBJECTIVE

To quantitatively analyze and determine correlations between clinical data, morphological characteristics, and HER2 status in gastric and gastroesophageal junction carcinoma, considered relevant for guiding therapy.

MATERIALS AND METHODS

A retrospective and prospective study was conducted on 50 patients with histologically confirmed carcinoma of the stomach and gastroesophageal junction, hospitalized at University Hospital "St. Marina" – Pleven during the period 2020–2025. Data were collected from patient records. Standard histological and immunohistochemical methods were applied to determine HER2 status.

RESULTS

The male-to-female ratio was 32:18 (1.7:1). The mean age was 68.4 years. The most common tumor location was the gastric antrum – 17 cases (34%). The most frequent macroscopic type according to Borrmann was ulceroinfiltrative – 18 cases (36%), followed by diffusely infiltrative – 13 cases (26%). Histologically, the predominant type was tubular adenocarcinoma – 25 cases (50%), with 68% being poorly differentiated. According to Lauren's classification, the intestinal type was predominant – 34 cases (68%). In terms of T stage, 46% of tumors were in T3 stage, followed by T4 – 28%. The HER2 status was: Positive (3+) in 4% of cases in both

genders; Equivocal (2+) in 6%, only in males; Negative in 90% of cases Adjuvant chemotherapy was administered to patients who underwent radical surgery, while those with locally advanced or metastatic disease received systemic drug treatment and immunotherapy. HER2-positive patients received targeted therapy with the monoclonal antibody Trastuzumab. Recurrence was observed in 5 patients (10%).

CONCLUSION

The relationship between epidemiological data and certain histological characteristics has both prognostic and predictive value for patients with this disease.

KEY WORDS: gastric cancer, TNM, lauren classification, HER2, trastuzumab

P.4 SPASTIC PARAPARESIS AS A CONSEQUENCE OF COMPRESSIVE SYNDROME CAUSED BY A CHORDOMA IN THE SACRAL REGION

Mirnić M.*, Dominović-Kovačević A.**
****University of Banja Luka, Medical Faculty, Bosnia and Herzegovina***
*****Department of Neurology, University Clinical Center of the Republic of Srpska, Banja Luka, Bosnia and Herzegovina***
Presenting author: Mirnić M.
Correspondence: marko.mirnicc@gmail.com

INTRODUCTION

A 37-year-old female patient was admitted to the Neurology Department due to spastic paraparesis and pain in the lumbosacral region having persisted for a year, with slow progression. Neurological examination showed normal findings on cranial nerves and upper limbs, while spastic paraparesis was present bilaterally in the lower limbs, with a positive
Babinski sign and urinary incontinence.

CASE HISTORY

From her personal history, there is notable surgery of a grade II astrocytoma at the age of three, followed by AV shunt placement at the age of five. She denies any significant hereditary conditions. Vegetative functions, as well as mental and somatic status, were preserved.

INVESTIGATIONS

MRI of the thoracic spine revealed compressive myelopathy from T10 to T12 caused by a cystic dural lesion communicating with the CSF space. MRI of the lumbosacral spine showed a heterogeneous expansive solid lesion at the S1-S2 level. CSF cytobiochemical analysis showed elevated protein levels: 47.25 g/L.

TREATMENT/OUTCOME

Laminectomy, intradural tumor removal, and cyst evacuation were performed. Histopathological analysis confirmed the diagnosis of chordoma. Postoperatively, the patient underwent radiotherapy, chemotherapy, and rehabilitation.

DISCUSSION

Spastic paraparesis develops due to upper motor neuron damage. In this case, it resulted from a chordoma at S1-S2, which compressed the dural sac and caused retrograde CSF flow. Chordoma is a rare, slow-growing malignant bone tumor originating from remnants of the notochord. In 50% of cases, it appears in the sacral region. It is rarely seen in individuals under 40, typically locally aggressive, while metastases are usually a late event.

KEYWORDS: spastic paraparesis, retrograde CSF flow, chordoma, xanthochromia

P.5 TRIAL-LEVEL META-ANALYSIS OF SGLT2 INHIBITORS IN HEART FAILURE: TRANSLATIN

*Antova N.D.**
***Department of Medicine and Surgery, University of Bologna, Italy**
Presenting author: Antova N.D.
Correspondence: nora.antova@gmail.com

AIMS/OBJECTIVES
Heart failure (HF) is a leading cause of morbidity across the EU, with Bulgaria reporting the highest hospitalisation rate. Implementation of guideline-directed "four-pillar" therapy offers an opportunity to narrow this outcome gap. This study aimed to synthesise trial-level evidence on sodium–glucose cotransporter-2 inhibitors (SGLT2 inhibitors) in HF and estimate their potential clinical impact in Bulgaria.
METHODS
A trial-level meta-analysis of four RCTs was performed, pooling hazard ratios for cardiovascular death or first HF hospitalisation. Heterogeneity was assessed with I^2. Bulgarian HF prevalence was applied to the national population, with 80% assumed eligible for SGLT2 inhibitors. Uptake scenarios of 10–50% among eligible patients were modelled, and the pooled relative risk reduction was applied to national hospitalisation rates to estimate admissions avoided.
RESULTS
The pooled hazard ratio was 0.78 (95% CI 0.73–0.83), corresponding to a 22% relative risk reduction, with $I^2 = 0\%$. Applied to Bulgarian epidemiology (85,932 HF admissions/year), the model projects from 1891 to 9451 admissions avoided annually depending on uptake (10–50%). At 30% uptake, 5,672 admissions/year would be prevented.
CONCLUSION
SGLT2 inhibitors provide a consistent 22% reduction in the composite of cardiovascular death or first HF hospitalisation. In a high-burden country like Bulgaria, this could translate into thousands of avoided admissions annually. This study highlights the clinical importance and policy urgency of ensuring broad and equitable access to SGLT2 inhibitors for HF patients in Bulgaria.

KEY WORDS: SGLT2 inhibitors, heart failure, Bulgaria

P.6 BEYOND THE COMMON FIBROID: A VASCULAR VARIANT DISCOVERED

Lebădă N.I.*, Scripcaru D.**, Danciu M., Socolov D.G**** Gîscă T.C.*******
****Grigore T. Popa" University of Medicine and Pharmacy-Iași, Romania***
*****Department of Pathological Anatomy, Cuza Voda Clinical Obstetrics and Gynecology Hospital Iasi, Romania***
******Department of Pathological Anatomy, Regional Institute of Oncology (IRO)-Iași, Romania***
******Department of Gynecology and Obstetrics, Cuza-Voda Clinical Obstetrics and Gynecology Hospital, Iasi, Romania***
Presenting author: Lebădă N.I.
Correspondence: lebada.narcisa@gmail.com

INTRODUCTION

Uterine angioleiomyoma is a rare benign variant of leiomyoma characterized by proliferating smooth muscle around thick-walled vessels, posing risks of severe hemorrhage or rupture, especially during pregnancy. Furthermore, common uterine fibroids affect up to 80% of women by age 50, often leading to heavy bleeding, pelvic pain, pressure symptoms, anemia, infertility, and obstetric complications. This case report underscores the importance of nuanced diagnostics in managing oncological patients within the gynecological field.

THE CASE PRESENTATION

A 48-years-old woman admitted to the hospital with a diagnosis of a uterine fibroid and Hepatitis B. The patient, nulligravida and nulliparous, underwent a series of diagnostic evaluations to assess her condition and pelvic ultrasound. The primary surgical intervention consisted of a total hysterectomy with bilateral salpingo-oophorectomy and at the same time adhesiolysis was performed. On macroscopic examination, a well-defined subserosal nodule measuring 11 cm in diameter was observed. Sectioning revealed a cystic appearance with an 8 cm diameter, a smooth surface, and serosanguinous content. The final anatomo-pathological diagnosis revealed cystic uterine angioleiomyoma.

CONCLUSION

This case highlights the diagnostic challenges posed by rare leiomyoma variants like uterine angioleiomyoma, which often mimic conventional fibroids yet carry significant vascular risk. Diagnosis is challenging since imaging mimics common leiomyomas, making definitive identification typically possible only postoperatively through histopathology and immunohistochemistry.

KEYWORDS: angioleiomyoma, uterine fibroid, hysterectomy

P.7 IMBALANCE BETWEEN MATRIX METALLOPROTEINSASES AND THEIR INHIBITORS AS A KEY FACTOR IN ATHEROSCLEROTHIC PLAQUE INSTABILITY

Borisova A.*, Lalova A.**, Ruseva E.**, Mateeva A.**, Grigoryan A.*
****Department of Pathological Physiology MU – Pleven, Bulgaria***
***** Second-year medical studen, MU - Pleven, Bulgaria***
Presenting author: Lalova A.
Correspondence: annalalova1@gmail.com

AIMS/OBJECTIVES

Matrix metalloproteinases (MMPs) are a family of zinc- and calcium-dependent endopeptidases that play a central role in the remodeling of the extracellular matrix. The aim of this study is to investigate the role of matrix metalloproteinases and their endogenous inhibitors (TIMPs) in the development and progression of atherosclerosis. Special focus is placed on their involvement in the destabilization of atherosclerotic plaques — a key process underlying clinical manifestations of cardiovascular diseases such as myocardial infarction and stroke.

METHODS

A comprehensive literature review was conducted, including molecular biology, experimental, and clinical studies analyzing the expression, regulation, and functions of MMP-1, -2, -3, -7, -8, -9, -12, -13, and -14, as well as their tissue inhibitors TIMP-1 through TIMP-4. Histological and immunohistochemical data from studies of atherosclerotic plaques were also considered.

RESULTS

MMPs are involved in several key pathophysiological processes such as degradation of the extracellular matrix, vascular wall remodeling, apoptosis of vascular smooth muscle cells, and infiltration of inflammatory cells. MMP-2.-7, -8, -9, and -14 exhibit particularly strong associations with plaque instability. TIMPs regulate MMP activity through inhibitory binding. An imbalance between MMPs and TIMPs has been shown to result in structural vulnerability of the plaques, predisposing them to rupture and thrombosis.

CONCLUSION

Matrix metalloproteinases play a central role in the pathogenesis of atherosclerosis. The balance between their proteolytic activity and the counteraction by TIMPs is critical for plaque stability. Understanding these mechanisms opens new possibilities for early diagnosis and targeted therapeutic strategies in cardiovascular disease prevention.

KEY WORDS: MMPs, TIMP, atherosclerosis, plaque instability, inflammation

P.8 AUDIT OF FRACTURE NECK OF FEMUR MANAGEMENT IN EMERGENCY DEPARTMENT

Shankar Y.*
Department of Emergency Medicine, CUH-Croydon, United Kingdom
Presenting author: Shankar Y.
Correspondence: yashas.shankar@nhs.net

AIMS/OBJECTIVES
To benchmark the performance of Local Emergency Department against the standards set by the Royal College of Emergency Medicine. The objective was also to identify areas in need of improvement in the management of fracture neck of femur.
METHODS
Data from Local Emergency Department was collected from April 2024 to July 2024. The sample size was 35 patients where all of them were 18 years and above. The data was collected in a timely manner regarding pain score on arrival, prompt analgesia administration and revaluation, imaging including x-rays, fascia iliaca block and admission. The data collected was then compared with the standard guidelines/ recommendations set by the Royal college of Emergency Medicine and also with the previous audit cycle of Local Emergency department.
RESULTS
The obtained results proved to be better than the previous ED audit cycle meaning there have been improvements in providing care but no fundamental standards set by the Royal college of Emergency Medicine were met. 67% prompt imaging/x-rays on time within 2hrs was achieved which was the closest to Royal college of Emergency Medicine recommendation of 75%.
CONCLUSION
Better documentation needed, pain score evaluation should be made mandatory, more training for Fascia iliaca block and prompt analgesia administration would be beneficial. Better time management in terms of faster imaging and prompt admission would be beneficial.

KEY WORDS: pain score, analgesia, imaging admission

P.9 OLD ROADS, NEW PATHS: MIGS VERSUS TRADITION IN THE LONG BATTLE AGAINST GLAUCOMA

Trandafir C.*
Grigore T. Popa" University of Medicine and Pharmacy Iasi, Romania
Presenting author: Trandafir C.
Correspondence: cristianat07@yahoo.com

INTRODUCTION

Glaucoma, a leading cause of irreversible blindness, is primarily managed by lowering intraocular pressure (IOP). Traditional surgeries like trabeculectomy and tube shunts are effective but pose significant risks. Minimally invasive glaucoma surgeries (MIGS) offer safer alternatives, reducing IOP and medication burden, though long-term outcomes compared with conventional procedures remain uncertain. This review aims to evaluate and compare long- term outcomes of MIGS versus traditional surgeries.

MATERIALS AND METHODS

This review is based on 11 articles from PubMed and Clinical Key, published between 2015- 2023, totalling 1,200 patients. Assessed interventions included MIGS, compared with traditional filtering procedures. Outcomes evaluated were IOP reduction, decrease in glaucoma medication use, reoperation rates, and postoperative complications. Inclusion criteria consisted of adult patients diagnosed with POAG with at least 5 years of follow-up. Exclusion criteria involved patients with secondary glaucomas, angle-closure glaucoma, prior use of withdrawn MIGS devices, case reports, or studies with less than 5 years follow-up.

RESULTS

Trabecular MIGS combined with cataract extraction maintained significant IOP and medication reduction for 5 years, with fewer reoperations than cataract surgery alone. Subconjunctival devices achieved meaningful IOP lowering, generally higher than trabeculectomy. Traditional filtering surgeries reached the lowest IOP targets, crucial in advanced glaucoma, but at the expense of more hypotony, bleb-related complications, and reinterventions. MIGS showed superior safety profiles and faster recovery.

CONCLUSION

MIGS provide durable, safe outcomes in mild-to-moderate POAG, particularly when combined with cataract surgery, while traditional surgeries remain necessary for advanced disease requiring very low target IOP. Long-term patient selection should balance efficacy and safety with glaucoma stage and risk profile.

KEY WORDS: MIGS, trabeculectomy , POAG, glaucoma

P.10 GUT MICROBIOTA AND LIVER HEALTH

Nikolova I.R. * , Nikolov A.G. ** , Dimitrova A.D. ** , Krasteva G.Ts. *
*** Department of Propaedeutics of Internal Diseases, Medical University – Pleven, Bulgaria***
**** Medical student, Medical University – Pleven, Bulgaria***
***** Department of Pharmacology and Toxicology, Medical University – Pleven, Bulgaria***
Presenting author: Nikolova I.R.
Correspondence: ioana.r.nikolova@abv.bg

OBJECTIVES
The concept of the "gut-liver axis" emerged over 100 years ago, is now seen as a bidirectional system involving barrier, metabolic, and immune functions, where the gut microbiota plays a significant role. Dysbiosis is a key factor in the pathogenesis of metabolically associated steatotic liver disease (MASLD) – the most prevalent liver disorder, potentially leading to steatohepatitis and cirrhosis. We examine how disturbances in the gut microbiota influence liver health.

METHODS
Literature review.

RESULTS
The gut microbiota interacts permanently with the intestinal epithelium, maintaining its integrity and barrier functions. Dysbiosis increases intestinal permeability, allowing microorganisms, toxins and proinflammatory metabolites to reach the liver via the portal vein. This process fuels inflammation, steatosis, and fibrosis. Common in MASLD are changes in the composition of intestinal microorganisms – increased Bacteroidetes/Firmicutes ratio, overgrowth of endotoxin-releasing bacteria and ethanol-producing bacteria. In dysbiosis, the level of short-chain fatty acids (SCFAs) in the gut decreases. These are products of the fermentative activity of beneficial microorganisms (Lactobacilli, Bifidobacteria, Streptococcus) with favorable effects on lipid metabolism, insulin sensitivity, and energy homeostasis of liver cells. The normal microbiota induces the conversion of bile acids and activation of their receptors (FXR, TGR5), which is associated with reduced lipid deposition in the liver. Agonists and antagonists of these receptors have been tested for controlling MASLD.

CONCLUSION
Growing understanding of the gut microbiome, driven by advancements in multi-omics technologies, paves the way for developing microbiome-based diagnostic and therapeutic methods for the prevention, early diagnosis, and personalized therapy of MASLD and related diseases.

KEYWORDS: gut microbiota, dysbiosis, metabolically associated liver diseases (MASLD)

P.11 IMMUNOREGULATORY AND PROTECTIVE EFFECTS OF INTERFERON-γ IN MULTIPLE SCLEROSIS

Miteva A. T.*, Mihaylova M. P.*, Ivanova V. A.*, Temnishki P. T.*, Petkov H. I.**
**** Department of Chemistry and Biochemistry, MU-Pleven, Bulgaria***
*****Student of Medicine, MU-Pleven, Bulgaria***
Presenting author: Petkov H. I.
Correspondence: alexa_88@abv.bg

AIMS/OBJECTIVES
Multiple sclerosis (MS) is a chronic autoimmune disease of the central nervous system (CNS) characterized by demyelination, inflammation, and neurodegeneration. Different subpopulations of T cells (Th1, Th17), B cells, microglia, and macrophages are involved in the pathogenesis.
METHODS
Main methods are based on systematical search in PubMed/PMC for clinical and preclinical researches (1980 - 2024). Articles, mechanistic studies, clinical trials and reviews are also included.
RESULTS
Interferon-γ (IFN-γ), has traditionally been associated with pro-inflammatory effects, but increasing evidence from clinical and experimental models also suggests immunoregulatory and protective functions, modulating microglia and peripheral macrophages towards a tolerogenic phenotype, which reduces the production of reactive oxygen and nitrogen species and demyelination. In early clinical trials, direct administration of IFN-γ to patients with relapsing- remitting MS resulted in exacerbations, highlighting that protective effects are "context- and stage-dependent." However, therapeutic modulation of IFN-γ pathways by IFN-β or other immunomodulators has shown partial immunoregulation and improved clinical progression. New studies demonstrate that temporally or cellularly targeted activation of IFN-γ signaling can enhance Treg and tolerogenic myeloid cells without provoking active inflammatory phases.
CONCLUSION
IFN-γ has a dual role in MS: while in the acute phase of the disease it can provoke inflammation, in the chronic and convalescent phase it has important immunoregulatory and protective effects. A better understanding of these mechanisms is critical for the development of "targeted therapies" that can induce the regulatory functions of IFN-γ without provoking active lesions.

KEY WORDS: IFN-γ, multiple sclerosis, immunoregulation, protection, EAE

P.12 GIANT GASTROINTESTINAL STROMAL TUMOR OF THE STOMACH - RADIOLOGICAL AND CLINICO-PATHOLOGICAL CHARACTERISTICS. A CASE REPORT

Trifonov R.G.*, Betova T.M.**, Nedyalkov K.L., Vasileva M.V.*, Nikolova Z.M.*******
****Clinic of Imaging Diagnostics, UMHAT „Saint Marina“ – Pleven, Bulgaria.***
*****Clinical Pathology Laboratory, UMHAT „Saint Marina“ – Pleven, Bulgaria.***
******Surgery Clinic, Department of General Surgery, UMHAT „Saint Marina“ – Pleven, Bulgaria.***
*******VI year Medical student, Medical University – Pleven, Bulgaria***
Presenting author: Nikolova Z.M.
Correspondence: radoslav_tr@abv.bg

INTRODUCTION

Gastrointestinal stromal tumor (GIST) is the most common mesenchymal tumor of the gastrointestinal tract, and in 75% of cases, is associated with active mutation in KIT-protooncogene. Of all gastrointestinal neoplasms, GIST accounts for 0.1 - 3%, and in 85.7% of these cases, it originates in the stomach. The average size of the tumor formation is 5.46 cm. Tumors larger than 15 cm are rare and have been described in the literature as „giant GIST“.

THE CASE PRESENTATION

A 70-year-old woman was admitted to the Surgery Clinic with complaint of a dull pain in the left abdominal half, radiating towards the left chest region. Contrast-enhanced abdominal CT was performed, which revealed a formation suspicious for GIST, infiltrating the surrounding structures. Complete tumor resection was performed, with total gastrectomy and en bloc resection of the pancreas and spleen. Macroscopically, the stomach was deformed due to the tumor formation in its wall, sized 9x14x22 cm. The cut surface presented cystic degeneration, haemorrhages, and necroses. Histopathological examination revealed features typical of GIST, including increased cellularity, increased mitotic activity and spindle shaped cells. Immunohistochemical verification was obtained by positive immunoreactivity for C-KIT and CD34.

CONCLUSION

GISTs are solid tumors, which rarely grow giant. Initial diagnosis is usually assumed during imaging examination. In cases of stomach localization with infiltration of surrounding structures, the gold standard of treatment is the en bloc surgical resection. The use of immunohistochemical markers is required, in order to differentiate GIST from other mesenchymal neoplasms.

KEY WORDS: giant GIST, abdominal CT, immunohistochemistry

INDEX