Abstracts of the 9th Edition of the International Medical Students' Congress of Bucharest (IMSCB)

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Introduction

The International Medical Students' Congress of Bucharest (IMSCB) stands as one of the most significant academic events hosted annually within the Carol Davila University of Medicine and Pharmacy, Bucharest, Romania. With a tradition deeply rooted in the history of the medical student community, the congress reflects decades of academic continuity, growth, and commitment to medical excellence. Over time, IMSCB has evolved alongside the changing scientific landscape, embracing diversity, innovation, and international collaboration.

As we approached the 9th edition of IMSCB, held in 2025, our vision was to shape the congress into a space where science meets inspiration, and where students are encouraged to become active contributors and future changemakers in healthcare. Driven by curiosity, ambition, and the belief that progress begins with young minds, IMSCB continues to expand its range of activities, offering an increasingly diverse selection of scientific and non-scientific events adapted to the needs of students in a constantly evolving world.

We strongly believe that young talents should be supported and encouraged to engage in research, innovation, and original perspectives within the medical field. By creating an accessible and stimulating academic environment, IMSCB aims to encourage student involvement in scientific activity and foster a culture in which research becomes an integral part of medical education.

The present volume includes 97 accepted abstracts from the 9th edition of IMSCB, highlighting the academic effort, creativity, and quality of the participating students and reflecting the collaborative spirit that defines the congress.

Abstracts of the 9th Edition International Medical Students' Congress of Bucharest (IMSCB)

Fundamental Poster Presentations
Original Study

01. **CHALLENGES IN MEDICAL SCHOOL EDUCATION: ORGANIZATION, PLANNING, AND TIME MANAGEMENT**

Filip Kapor [1], Aleksandra Oluski [1], Tamara Stevanovic [1], Prof. Marija Jevtic, MD, PhD [1, 2]

[1] Faculty of Medicine, University of Novi Sad,

[2] Institute of Public Health of Vojvodina, Center for Hygiene and Human Ecology

INTRODUCTION: The education of Medical Faculty students equips them with the professional, social, and emotional skills needed to work in challenging environments. Mental challenges are directly related to an overload of material, unrealistic expectations, and significant responsibilities that require perfect time management. Unfortunately, many students experience burnout - emotional exhaustion resulting from chronic stress. This phenomenon is not only present among students but also in the professional healthcare environment, making the study of educational strategies and methods related to time management crucial. **MATERIALS AND METHODS**: A descriptive cross-sectional design was applied, using a quantitative approach through an anonymous online questionnaire distributed to 408 randomly selected senior medical students (third year and above). The instrument included sections on demographics, sources and management of stress, time management, burnout, and adaptation. Data were analyzed using descriptive statistics (percentages, means, and standard deviations) and thematic evaluation of qualitative responses. Statistical analysis was performed using Microsoft Excel and IBM SPSS, with significance set at $p < 0.05$. **RESULTS**: The sample consisted predominantly of female students (81.1%). More than half (52.3%) reported study-related difficulties, with moderate levels of stress ($M = 3.75$, $SD = 0.91$), anxiety ($M = 3.13$, $SD = 1.19$), and depression ($M = 2.84$, $SD = 1.27$). Students with a gymnasium background exhibited higher anxiety, depression, and burnout prevalence compared to those from medical high schools. Major stressors included study workload (59.3%), fear of failure (56%), and perfectionism (51.7%), while social support (69.2%), time organization (45.9%), and physical exercise (39.5%) were the most common coping strategies. Significant correlations were found between stress and anxiety ($r = 0.516$, $p < 0.001$), and regression analysis identified stress, anxiety, and poor time management as key predictors of psychological distress ($p < 0.05$). **CONCLUSION**: This study confirms a high level of stress, anxiety, and burnout among medical students, with inadequate time management identified as a key risk factor. Effective planning strategies may reduce stress and improve academic performance. It is recommended to integrate time management and mental health training programs into university curricula and to strengthen psychological support services for students.

Keywords: time management, organization, psychological distress, burnout, concentration

Fundamental Slideshow Presentations
Original Study

02. **NEW CYANOACRYLATE-POLYLACTIC ACID HEMOSTATIC PATCH: IN VIVO PROOF OF CONCEPT STUDY**

Lorena-Maria Hanțig [1], Alexandru Ilie-Ene [2], Prof. George Călin Dindelegan, MD, PhD [2]

[1] "Iuliu Haţieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania,

[2] Department of Surgery, "Iuliu Haţieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

INTRODUCTION: Severe abdominal trauma is present in approximately 20% of polytrauma cases, with massive hemorrhage being the primary cause of mortality. Achieving rapid and complete hemostasis is crucial, especially during resections of parenchymatous organs, where techniques such as direct compression, sutures, electrocauterization, and hemostatic dressings are commonly employed. This experimental study aimed to develop a novel hemostatic dressing by combining the adhesive properties of cyanoacrylate (CA) with the biocompatibility of polylactic acid (PLA). The CA-PLA patch was assessed in terms of bleeding time, total blood loss, and inflammatory response, compared to electrocautery and the TachoSil® (Takeda GmbH, Linz, Austria) hemostatic patch. **MATERIALS AND METHODS**: A hemostatic patch was developed by electrospinning PLA membranes and loading them with CA under sterile, inert conditions to ensure controlled polymerization and adhesive application. The experimental protocol involved a liver laceration model, using 36 male Wistar rats randomized into three groups: control, study, and TachoSil®. A standardized liver resection was performed, followed by hemostasis achieved using one of three methods. The animal part of the experiment was approved by the Romanian ANSVSA - Sanitary Veterinary and Food Safety Department of Cluj through the project authorization No. 377/25.08.2023. **RESULTS**: The CA-PLA patch achieved a median hemostasis time of 94 s, significantly shorter than electrocautery and TachoSil®. Blood loss and postoperative hemoglobin decline were minimal in the study group compared with controls. Unlike TachoSil®, which showed a significant postoperative rise in IL-6 and TNF-a, the CA-PLA group demonstrated no significant cytokine surge, indicating a lower acute inflammatory response. At long-term follow-up, the CA-PLA group exhibited persistent moderate inflammation with FBGC formation in 64% of cases and extensive fibrosis in 79%, along with occasional abscess formation (29%). TachoSil® showed progressive reduction in inflammation and lymphocyte infiltration over time and more mature neovascularization, suggesting superior remodeling compared to CA-PLA. **CONCLUSION**: The CA-PLA patch offers rapid, safe, and biocompatible hemostasis and reduces early systemic inflammation compared with standard techniques. However, long-term it may induce foreign-body reaction, fibrosis, and sporadic abscesses, raising concerns about biocompatibility.Further optimization and extended testing are essential before clinical application.

Keywords: hemostatic dressing, cyanoacrylate, polylactic acid, experimental liver resection model.

03. **BEYOND THE BUZZ: ADHD PREDICTS RISKY ENERGY DRINK USE IN MEDICAL STUDENTS**

Helena Żórawska [1], Paweł Niczyporuk [1], Magdalena Tomczyk [3], Assoc. Prof. Marzena Wojewódzka-Żelezniakiewicz, MD, PhD [2]

[1] Students Research Group by Department of Emergency Department, Medical University of Bialystok, Poland,

[2] Department of Emergency Medicine, Faculty of Health Science, Medical University of Bialystok, Poland,

[3] The Academy of Applied Medical and Social Sciences, Elblag, Poland

INTRODUCTION: The consumption of energy drinks is a rising global phenomenon, particularly among university students. While general motivations like combating fatigue are known, the role of specific neurodevelopmental conditions is less understood. Attention-Deficit/Hyperactivity Disorder (ADHD), with its core symptoms of inattention, presents a significant yet underexplored factor. The use of widely available stimulants could represent a form of self-medication for students managing these challenges. This study investigates the link between self-reported ADHD and energy drink consumption patterns among Polish medical students. **MATERIALS AND METHODS**: A cross-sectional survey was conducted among 1089 Polish medical students. The questionnaire collected data on ED consumption frequency, motivations, and adverse effects. Participants were stratified based on a self-reported ADHD diagnosis (ADHD vs. non-ADHD). The Chi-square (x2) test was used for between-group comparisons, with a significance level of p « 0.05. **RESULTS**: Of 1089 participants, 11.9% (n=129) reported an ADHD diagnosis. A significant association was found between ADHD and consumption frequency (x2(5)=29.88,p <0.0001), with the ADHD cohort consuming EDs at least weekly more often than their non-ADHD peers (67.4% vs. 46.5%). Motivations also differed significantly (x2(8)=22.15,p=0.004); students with ADHD were nearly twice as likely to cite 'improving concentration and focus' as their primary reason (20.2% vs. 11.0%). The ADHD group also reported a higher incidence of adverse effects, including insomnia (p = 0.02) and anxiety/irritability (p = 0.01). **CONCLUSION**: This study identifies a significant link between self-reported ADHD and a high-risk pattern of energy drink use among Polish medical students. The findings strongly suggest that students with ADHD utilize these beverages differently, prioritizing their stimulant properties to manage attention deficits. High-frequency ED use could be a clinical red flag for undertreated ADHD in this population. This highlights a critical need for awareness and targeted health interventions for this vulnerable subgroup in the demanding medical academic environment.

Keywords: energy drinks, ADHD, medical students, Poland

04. **BEYOND CD4+: MYELOID-DERIVED SUPPRESSOR CELLS AS EMERGING MARKERS OF IMMUNE IMBALANCE IN HIV**

Jelena Mićić [1], Nikola Trifunović [1], Prof. Danilo Vojvodić. MD, PhD [2]

[1] Faculty of Medicine, Military Medical Academy, University of Defence, Belgrade, Serbia,

[2] Institute for Medical Research, Faculty of Medicine, Military Medical Academy, University of Defence, Belgrade, Serbia

INTRODUCTION: HIV infection causes profound immune dysregulation characterized by chronic inflammation and depletion of CD4 T lymphocytes. Myeloid-derived suppressor cells (M DSCs), a population of immature myeloid cells with potent immunosuppressive properties, have recently been implicated in this process. Through mechanisms such as PD-L 1-mediated T-cell inhibition, MDSCs may contribute to immune exhaustion and persistent viral activity. However, their precise role in relation to clinical presentation, CD4 count, and therapy type remains unclear. **MATERIALS AND METHODS:** Peripheral blood samples from 41 HIV-positive patients and l 0 healthy controls were analyzed by flow cytometry to quantify MDSCs (absolute values and percentage of CD45 cells), PD-L l expression on MDSCs, and CD4 T-cell counts. Patients were classified as symptomatic or asymptomatic, and stratified by CD4 count (<200/µI, 200-500/µI, >500/µI) and ART type (Pl+NRTI, Pl+NNRTI, NRTl+NNRTI, or no therapy). Statistical analysis was performed using SPSS v26. Group differences were assessed with t-test, ANOVA, Mann-Whitney U, or Kruskal-Wallis test, depending on distribution, while correlations were evaluated using Spearman's coefficient. **RESULTS**: MDSC percentages were significantly higher in HIV patients compared to controls (p = 0.007). Among HIV-positive individuals, symptomatic patients had elevated MDSC levels (p = 0.045) and lower CD4 counts (p = 0.032) compared to asymptomatic ones. A gradual rise in MDSC percentage was observed with disease progression, though not statistically confirmed (p = 0.077). PD-L l expression showed no significant correlation with either CD4 counts or MDSC percentages (p > 0.1), nor were there differences between therapy groups (p > 0.5). **CONCLUSION**: These findings reveal that elevated MDSC levels are closely linked to HIV infection and symptomatic disease, highlighting their potential contribution to immune imbalance beyond CD4 depletion. Although PD-L l expression was not associated with disease stage or therapy, MDSCs may serve as complementary markers of immune dysfunction. Larger, functional studies are needed to clarify their diagnostic and therapeutic value in chronic HIV infection.

Keywords: HIV, myeloid-derived suppressor cells, PD-L1, CD4+ lymphocytes, immunosuppression

05. **EFFECTS OF INSULIN THERAPY ON SKIN MATRIX METALLOPROTEINASES IN A RAT MODEL OF TYPE I DIABETES MELLITUS**

Roman Cemaga [1], Natalia Dorf [2], Assoc. Prof. Mateusz Maciejczyk, Pharm.D [3]

[1] Medical University of Bialystok, Poland,

[2] Independent Laboratory of Cosmetology, Medical University of Bialystok, 2c Mickiewicza Street, 15 233 Bialystok, Poland,

[3] Department of Hygiene, Epidemiology and Ergonomics, Medical University of Bialystok, 2c Mickiewicza Street, 15-233 Bialystok, Poland

INTRODUCTION: Matrix metalloproteinases (MMPs) are zinc-containing proteases capable of remodeling the extracellular matrix (ECM) components. The breakdown of the ECM is essential for many physiological processes including embryonic development, reproduction, tissue resorption and remodelling. However, excessive or dysregulated MMPs were linked to the pathogenesis of several diseases including cardiovascular disease, diabetes, cancer and premature aging. In the skin, MMPs play a central role in maintaining structural integrity by degrading key ECM components such as collagen, elastin, gelatin, and casein. Alterations in MMPs expression are associated with impaired wound healing, wrinkle formation, and premature skin aging. Since diabetes mellitus is known to impair skin structure and repair through dysregulation of MMP activity we assessed whether insulin therapy could counteract these effects and restore ECM balance. Therefore, we investigated the activity of MMPs in the skin of type l diabetic (DM-1) rats. **MATERIALS AND METHODS:** Male Wistar rats were randomly assigned to three groups (n= 10 per group): control (C), DMl-induced group (DM-1) and DM-1 induced group with intra peritoneal insulin injection (DM-1+ insulin). An intraperitoneal injection of streptozotocin (STZ; 60 mg/kg) was used to induce diabetes. Rats in the DMl+insulin group were given daily intraperitoneal insulin injection (0.5 IU/kg) for the next 8 weeks. After 8 weeks skin tissue samples were collected, and ftuorometric assay was used to measure MMPs activity. **RESULTS**: Matrix metalloproteinases (MMP-1, -2, -3, -7, -9, -11 and -13) activity was significantly higher in the DM-1 group vs control. Insulin treatment significantly lowered MMP-2, MMP-9 and MMP-13 activity($p<0.01$, $p<0.001$ and $p<0.5$ respectively). **CONCLUSION**: Our findings show that insulin may partially restore ECM integrity by selectively reducing the activity of skin MMPs. This supports the hypothesis that insulin has a beneficial effect on skin ECM remodeling under diabetic conditions. Given that skin alterations such as skin ulcers, skin atrophy and delayed wound healing are common in diabetic patients, and that MMPs play a key role in these complications further research is needed to determine whether insulin therapy could reduce skin-related disturbances in patients with type l diabetes mellitus.

Keywords: metaloproteinases, diabetes mellitus, skin complication, insulin therapy

06. **EXPERIMENTAL INSIGHTS INTO ANTINOCICEPTIVE EFFECTS OF AN NMDA RECEPTOR ANTAGONIST IN MICE**

Matei-George Ilie [1], Maya Panaitescu [1], Anastasia-Parascheva Sandu [1], Prof. Liliana Tarțău, MD, PhD, Dr. Habil [2]

[1] "Grigore T. Popa" University of Medicine and Pharmacy, Iași, Romania, Faculty of Medicine,

[2] Department of Pharmacology, Clinical Pharmacology and Algesiology, Faculty of Medicine, "Grigore T. Popa" University of Medicine and Pharmacy, Iași, Romania

INTRODUCTION: The NMDA (N-Methyl-D-Aspartate) receptor is a subtype of the glutamate receptor, the most abundant excitatory neurotransmitter receptor in the central nervous system. Early animal studies have highlighted the critical role of NMDA receptors in the development of central hyperexcitability and demonstrated that NMDA receptor antagonists may reduce this condition in both animals and humans. 3-(2-Carboxypiperazin-4-yl)propyl-1-phosphonic acid (CPP), a rigid analog of 2-amino-7-phosphonoheptanoate, is a potent, selective, and competitive NMDA receptor antagonist with known anticonvulsant properties. We aimed to evaluate the effects of the NMDA receptor antagonist on the nociceptive reactivity in mice. **MATERIALS AND METHODS**: The experiment was conducted using white Swiss mice (weighing 20-25 g), randomly divided into four groups of seven animals each. All groups received intraperitoneal injections of the same volume of solution as follows: Group I (Control): 0.1 ml distilled water/10 g bodyweight (bw); Group II (MTZ): Metamizole 10 mg/kg bodyweight; Group Ill (CPP 0.2): CPP 0.2 mg/kg bw; Group IV(CPP 0.5): CPP 0.5 mg/kg bw. Somatic nociception was assessed using the hot plate test, while visceral nociception was evaluated through the acetic acid (0 .6%) writhing test. Data were statistically analyzed using SPSS for Windows, version 24.0, with one-way ANOVA. All procedures adhered to the ethical guidelines established by the University's Research and Ethics Committee. **RESULTS**: CPP administration produced a dose-dependent increase in response latency in the hot plate test, indicating reduced somatic nociceptive sensitivity. The 0.5 mg/kg dose significantly prolonged reaction time compared to controls, although the effect was less pronounced than that of metamizole. In the writhing test, CPP induced a dose-dependent reduction in abdominal constrictions, with the 0.5 mg/kg dose showing greater efficacy. However, its antinociceptive effect remained less potent than that of metamizole. **CONCLUSION**: The results demonstrate that CPP exerts dose-dependent antinociceptive effects in both somatic and visceral pain models in mice. While effective, CPP's analgesic potency was inferior to that of metamizole under the experimental conditions used. These findings support the involvement of NMDA receptors in nociceptive pathways and suggest that NMDA antagonists like CPP could contribute to the development of novel pain management strategies.

Keywords: CPP, NMDA receptor, antinociception, hot plate test, writhing test

07. **FRAMEWORK PROPOSALS FOR THE DEVELOPMENT OF SAMPLE HOLDERS FOR LASER DRIVEN SOURCES EXPERIMENTS INVOLVING ZEBRAFISH LARVAE AS A MODEL ORGANISM**

Robin-Cristian Bucur-Portase [1, 2], Prof. Katalin Hideghety, PhD, Dr. Habil [3]
[1] ELI NP,
[2] University of Medicine and Pharmacy Carol Davila,
[3] University of Szeged

INTRODUCTION: Zebrafish (Danior rerio) are often used in biomedical research as a model organism to study disease progression or various physiological processes. They present several advantages compared to other vertebrate model organisms, such as ease of handling, rapid proliferation and semi-transparent bodies. The larvae, in particular, are preferred due to their reduced phylogenetic divergence from humans. Laser driven sources are used to generate specific, repeatable and well-controlled beams of particles, such as protons, electrons, neutrons or photons. They represent a developing high-potential technology for in-hospital therapies that target various oncological diseases. Studying their effect on model organisms is a key step towards advancing this type of care. For biomedical research involving laser driven sources, adequate sample holders need to be developed to ensure that, on one hand, the model organism retains its morphofunctional properties, and on the other, that the particle beam does not lose its brilliance (i.e. power and precision parameters). Thus, the sample holders can ensure the highest degree of methodological validity to the biophysical experiments, streamlining translational research. Certain sample holder designs may also be extended directly to patient applications depending on the context and therapeutic needs, as such furthering their scope and purpose. **MATERIALS AND METHODS:** Pertaining to the incipient stages of the project, a thorough literature review was conducted. Afterwards, the biophysical parameters have been determined qualitatively using: 10 zebrafish larvae (3dpf), a microscope slide, a 2/2 cm square glass slide, larvae maintenance solution and a micropipette. The larvae were positioned between the microscope slide and the square slide with a variable amount of water content. This parameter was then correlated with the morphofunctional changes that the larvae suffered. The relationship between the water volume and hydrostatic pressure was then determined via a mathematical model derived from the Young-Laplace equation of capillary pressure. **RESULTS**: Multiple sample holder design solutions have been developed that take into account the complex homeostatic needs of zebrafish larvae. Lycopodium powder, glycerin foams and magnesium based surfactants are a couple of promising techniques that enable unhindered usage of zebrafish larvae without reducing the power or precision of laser driven sources. Moreover, submerging the larvae in sub milliliter volumes of water represents a viable simple technique when adequately taking into account the hydrodynamic parameters that the zebrafish larvae require to remain viable (above 10 ul/ cm^2 or involving volume subtracting techniques). **CONCLUSION**: These findings serve towards the development of biomedical sample holders that can be used for high quality research involving laser driven sources. This, in turn, enables the studying of these therapies on various medical conditions using the highly customisable disease models developed from wild-type aquatic organisms such as zebrafish.

Keywords: zebrafish, laser driven sources, sample holders, characterisation

Fundamental Poster Presentations
Review

08. **MATERNAL DETERMINANTS OF TELOMERE LENGTH IN NEWBORNS: FINDINGS FROM AN UMBRELLA REVIEW**

Bogdan Borzei [1], Elena Maria Pîrlici [1], Andreea Maria Bugnar [1], Romana Vulturar, MD, MSc, PhD [2]
[1] Faculty of Medicine, University of Medicine and Pharmacy "Iuliu Hatieganu", Cluj-Napoca, Romania,
[2] Discipline of Cell and Molecular Biology, Department of Molecular Sciences, University of Medicine and Pharmacy "Iuliu Hatieganu", Cluj-Napoca, Romania

INTRODUCTION: Telomere length (TL) at birth represents a critical biomarker of cellular aging and future disease susceptibility. It reflects cumulative intrauterine exposures and may serve as an early indicator of lifelong health trajectories. Over the past decade, numerous systematic reviews have addressed individual maternal determinants-such as air pollution, diet, body mass index (BMI), stress, or chronic disease-but the evidence remains fragmented across exposure domains. Understanding these associations holistically is crucial for identifying modifiable risk factors that affect telomere biology early in life. This umbrella review hypothesizes that adverse maternal exposures during pregnancy, particularly those involving oxidative and inflammatory pathways-are consistently associated with shorter newborn TL. In contrast, protective factors such as adequate nutrition and antioxidant intake may mitigate these effects. **MATERIALS AND METHODS**: A systematic umbrella review of systematic reviews and meta-analyses published up to September 2025 was conducted across PubMed, Scopus, Em base, and Web of Science. Reviews were eligible if they examined maternal exposures or health conditions during pregnancy in relation to newborn or cord blood TL. Studies included both observational cohorts and case-control designs encompassing mothers aged 18-45 years and their neonates. Two independent reviewers extracted data and assessed methodological quality using AMSTAR 2. This approach allows integration of the highest level of evidence to identify consistent biological mechanisms across heterogeneous exposure domains. **RESULTS**: Preliminary findings indicate that prenatal exposure to heavy metals, air pollution, and infections is consistently associated with shorter newborn TL, particularly during the third trimester. Maternal antioxidant intake and folic acid supplementation may attenuate these effects. Poor diet quality, elevated BMI, and vitamin D deficiency correlate with shorter TL, whereas adequate maternal nutrition supports longer telomeres. Psychosocial stress, depression, and anxiety are linked to telomere shortening, while psychological resilience appears protective. Associations for maternal hyperglycemia, hypertension, and sleep apnea remain inconsistent. **CONCLUSION**: This umbrella review supports the hypothesis that adverse maternal exposures-environmental, nutritional, and psychosocial-negatively influence newborn telomere length through oxidative and inflammatory mechanisms. The findings are expected to inform preventive strategies aimed at optimizing maternal health and early-life biological aging trajectories.

Keywords: telomere shortening, pregnancy, maternal exposures, oxidative stress, biological aging, neonatal outcome

09. **WHEN THE POWERHOUSE FAILS, NEURONS MISFIRE: TARGETING MITOCHONDRIA TO CONTROL EPILEPTIC ACTIVITY**

Alexandra-Elena Moldoveanu [1]
[1] University of Medicine and Pharmacy Grigore T. Popa Iasi

INTRODUCTION: Epilepsy is a chronic neurological disease characterized by recurrent seizures, affecting around 50 million people worldwide. The seizures are caused by neuronal hyperexcitability, with many neurons sending signals simultaneously, at a higher rate than normal. Mitochondrial dysfunction is involved in epileptogenesis through ATP synthesis and cellular calcium homeostasis. Recent studies presented the opportunity to reduce seizures by mitochondrial DNA gene editing, therefore restoring neuronal metabolic homeostasis. This review aims to evaluate the recent discoveries on mitochondrial DNA mutation in the context of modelling epilepsy. **MATERIALS AND METHODS**: This review is based on 18 articles from PubMed published between 2010-2025, which resulted from our search using keywords such as " epilepsy"; "mitochondrial DNA editing"; "mitochondrial DNA mutation " and "gene editing". For this systematic review, the studies were included based on criteria such as their type (original papers and clinical trials) and if they reported molecular or genetic editing of the mitochondrial function in animal or human subjects with epilepsy. The rejected studies were the review one and those unrelated to epilepsy with a mitochondrial cause. PRISMA guidelines were used for data synthesis. **RESULTS**: Out of 142 initial records, 18 studies met the inclusion criteria (12 preclinical and 6 clinical case reports). Both preclinical and clinical evidence demonstrated that mitochondrial DNA (mtDNA) mutations-most frequently m.3243A>G and m.8344A>G—were associated with epileptic episodes characterized by reduced ATP synthesis, disrupted calcium buffering, and impaired oxidative phosphorylation. Experimental studies involving the transfer of exogenous mitochondria reported amelioration of post-epileptic hippocampal injury, suggesting a potential neuroprotective effect. Furthermore, a promising gene therapy strategy, double-stranded DNA deaminase-derived cytosine base editing (DdCBE), was shown to partially restore ATP production and normalize calcium homeostasis, resulting in decreased seizure frequency in murine models. Despite these encouraging findings, mitochondrial gene editing remains limited by delivery inefficiency, lack of comprehensive in vivo epilepsy data, and uncertain long-term genomic stability. **CONCLUSION**: The current evidence supports a correlation between mitochondrial DNA (mtDNA) mutations and epileptic activity. Although emerging approaches, such as those presented above, present potential in modeling epilepsy, further studies are necessary before mitochondrial gene editing can become a therapeutic strategy.

Keywords: mitochondrial DNA, epilepsy, gene editing, mitochondrial dysfunction, neuronal hyperexcitability

10. **REGENERATIVE CARDIAC THERAPY USING STEM CELLS FOR FAILING HEART**

Tamara Hossein [1], Yara Shhab, MD [2]
[1] University of Medicine and Pharmacy of Craiova, General Medicine,
[2] Carol Davila University of Medicine and Pharmacy

INTRODUCTION: End-stage heart failure remains one of the primary causes of death that is best treated by heart transplantation, although limited by lack of donors. Regenerative medicine strives to utilize cardiomyocytes (CM) derived from human pluripotent stem cells (hPSC) as a possible treatment option. Heart functions such as contractility and electrical conduction could be restored. The goal of this review is to summarize the use of cardiac patches that could remuscularize myocardium. **MATERIALS AND METHODS**: Seven studies were gathered from PubMed and Google Scholar, focusing on hPSC-derived CM for heart repair, tested in vitro, animal models, or early human trials. Data from selected investigations were analyzed based on cell type and recency including engineered cardiac microtissue (CMT) and engineered heart muscle (EHM). Findings from studies were compared to see how well the cells were retained, how long they survived, and how effectively they integrated in different settings. **RESULTS**: Across studies, CM from induced pluripotent stem cells (iPSC) started beating on their own, which showed they could function like real CM. Experimental approaches using pigs with myocardial infarction demonstrated better retention of engineered CMTs made from human iPSC-CM aggregates than dissociated human iPSC, supporting their use in patches. Researchers implanted EHM allografts containing iPSC-derived CM and stromal cells in rhesus macaques with chronic heart failure induced by myocardial infarction and the reports documented the long-term retention of the patch with vascularization, functional improvements regarding contractility and ejection fraction, and absence of major risk factors such as tumor formation or arrhythmia. The first in-human trial involved a 46-year-old woman with advanced heart failure who received ten epicardial patches containing 40 million human iPSC-CM each, under immunosuppressive therapy. The patches remained in place, became vascularized, and caused no major adverse events, confirming the safety and feasibility of this regenerative approach for cardiac repair. **CONCLUSION**: The studies show the possibility of using stem cell synthesized CM patches to remuscularize the failing heart, which can ease the shortage of donor hearts. Extensive research is needed to improve this therapy before it can be standardised.

Keywords: heart failure, cardiac regeneration, heart transplantation, human pluripotent stem cells (hPSC), induced pluripotent stem cells (iPSC), cardiomyocytes, engineered heart tissue, cardiac patches

11. **EXERCISE-INDUCED MITOCHONDRIAL ADAPTATION: CITRATE SYNTHASE AND COMPLEX PROTEINS AS CLINICAL BIOMARKERS**

Radu-Ionuț Bolborea [1], Alexandru Adam [1], Asst. Lect. Laura Oana Stroica, MD, PhD [1]

[1] Carol Davila University of Medicine and Pharmacy

INTRODUCTION: Biomarkers, such as enzymes, provide quantitative insight into the adaptation of the human muscle to physical exercise. Modulation of citrate synthase (CS) and respiratory complex proteins (CP) provides valuable tools for understanding the response of the metabolic function. This systematic review aims to explore the relationship between CS and CP proteins in correlation with VO2 peak, providing a framework for mitochondrial responses. **MATERIALS AND METHODS:** An extensive search was conducted on Pub Med using the keywords" exercise", "protein complex", and "citrate synthase", including articles published since 2016. Inclusion criteria for studies consisted of exercise-induced changes in CS and CP activity alongside VO peak. Excluded studies were articles with different outcome evaluation methods, lacking the inclusion criteria, overlapping reviews and those involving pathological conditions, pharmacological interventions, or non-comparable outcomes. Bias risk was not evaluated. PRIS MA guidelines were used. **RESULTS:** Out of 33 initially selected clinical trials and RCTs, 6 studies comprising 126 patients met the selection criteria. Fritzen et al. (2019) reported a significant increase in CS activity of 51%, as well as a 46-61% increase in CP activity within the first 6weeks ($p < 0.001$). In the same study, after4 weeks of deconditioning, CS activity fell by 31.7% ($p < 0.05$) and CP activity fell 28.9-36% ($p < 0.05$)when compared to pre-training levels. In another study, Giarone et. al (2019) reported that a -50% increase ($p<0,05$) in CS activity correlates to a nearlyl0% increase in VO2 ($p =0.01$) peak over the course of 2 weeks. All of the 6 selected studies highlight data regarding VO2 and its relationship between mitochondrial biomarkers, providing a relevant pattern for quantifying and understanding the metabolic function. **CONCLUSION:** Exercise-induced increases in citrate synthase and complex protein activity, alongside VO peak improvements, enhances mitochondrial efficiency and aerobic capacity. These adaptations support cardiovascular performance, optimize oxygen utilization, and improve systemic metabolic function, offering molecular insights into human resilience and potential targets for precision cardiometabolic medicine. Further research is warranted to clarify the significant metabolic relations of the mitochondrion.

Keywords: mitochondrion, citrate synthase, complex proteins, VO_2 peak, exercise, metabolism

12. **SYNTHETIC GENE SWITCHES FOR INDUCIBLE INSULIN EXPRESSION IN TYPE 1 DIABETIC MODELS**

Andrei-Ioan Ciobanu [1], Radu Nicolae Tăerel [1]

[1] "Carol Davila" University of Medicine and Pharmacy

INTRODUCTION: Synthetic gene switches control gene expression in an ON/OFF manner. Their high controllability and specificity suggest potential in regulating pathological gene expression. This review evaluates strategies for implementing an insulin gene switch in treating diabetic mice and identifies the most effective approach. **MATERIALS AND METHODS**: A PubMed search was conducted for articles published in the past 10 years, using specific terms: "synthetic gene switch", "living cells", "gene expression", "diabetic". Inclusion criteria required data for biological mechanism, induction fold, spatiotemporal precision, reversibility and cycling, as well as an experiment duration of at least 72 hours. Exclusion criteria eliminated articles lacking in vivo proof. The bias risk was not evaluated and PRISMA guidelines were used. **RESULTS**: Out of thirty articles found, three publications by the same research group met the inclusion criteria. They investigated three distinct switches: Advanced Synthetic Platform Inducible by Risk-Free Input Medication (ASPIRIN), Spatiotemporal Ultrasound-Induced Protein Expression Regulator (SUPER) and an Ultrashort-Peptide-Responsive gene switch. Following in vitro experimentation, it was assessed that implantation of the modified cells reestablished normoglycemia in diabetic mice. The induction of reporter genes (secreted alkaline phosphatase(SEAP), insulin) reached up to 44.1-fold ($p < 0.0001$) with the peptide-responsive switch (Huang et al., 2024), 12.7-fold ($p < 0.05$) with ASPIRIN (Huang, Teixeira, et al., 2025), and 7.9-fold ($p < 0.0001$) with SUPER (Huang, Xue, et al., 2025). Within 24 hours after switching OFF, gene switches showed good reversibility, between approximately 90% (SUPER) and 99% (others). Two or three cycles were induced, displaying remarkable kinetic fidelity. In vitro, spatial resolution relied on nuclear specificity of DNA operators. In vivo, each of the three studies used arginine-based encapsulation for implanting modified cells. Transcriptional response became detectable as early as 2 hours after activation (Huang, Xue, et al., 2025), with all cell cultures responding in under 12 hours. **CONCLUSION**: With all switches effectively stimulating gene expression, the Ultrashort-Peptide-Responsive gene switch exhibited the highest performance and may be considered for further type 1 diabetes research.

Keywords: synthetic gene switch, insulin regulation, type 1 diabetes, preclinical gene therapy

13. **FROM GENES TO CURRENTS: iPSC AND ELECTROPHYSIOLOGICAL APPROACHES TO CARDIAC CHANNELOPATHIES**

Diana-Elena Lupașcu [1]

[1] Grigore T.Popa University of Medicine and Pharmacy, Iasi, Romania

INTRODUCTION: Cardiac channelopathies are diseases caused by alterations in genes encoding ion channels, primarily sodium, potassium, and calcium channels, leading to arrhythmias and sudden cardiac death. Understanding the pathophysiology of inherited arrhythmias remains challenging due to the lack of suitable model systems that appropriately mimic human cardiac electrophysiology. **MATERIALS AND METHODS:** This review is based on 10 articles published between 2018 and 2024, including systematic reviews and original studies. The selected literature explores both traditional and emerging techniques to study the mechanism of genetic diseases or mimic drug responses in vitro. The primary focus is on studies that combine induced pluripotent stem cell-derived cardiomyocytes (iPSC-CM) technology with electrophysiological approaches, such as patch-clamp recording, multi electrode array analysis, fluorescence microscopy, and impedance measurements. **RESULTS:** Pluripotent stem cells derived from adult human tissues are widely used to model arrhythmogenic diseases, offering the advantage of being genetically matched to patients. iPSC-CMs have been used to model inherited cardiac diseases such as long QT syndrome (LQTS), Brugada syndrome, and catecholaminergic polymorphic ventricular tachycardia (CPVT). Another important aspect of iPSC-CMs is the ability to test drug responses in vitro, being a powerful tool in the screening of drug-induced cardiotoxicity. In CPVT models, dantrolene suppressed excessive calcium sparks and triggered beats linked to RYR2 mutations, while ftecainide effectively reduced calcium irregularities, consistent with patient responses. Voltage-clamp studies of LQTS showed prolonged action potentials and early afterdepolarizations, and testing with mexiletine analogues improved drug potency and reduced proarrhythmic effects. **CONCLUSION:** Inherited Arrhythmia Syndromes remain a diagnostic and therapeutic challenge because of the complexity of the disorders and variable disease penetrance. The utility of iPSC-CMs in faithfully recapitulating the key features of these potentially lethal disorders can advance current knowledge by uncovering novel disease mechanisms and facilitating drug discovery. As long as existing limitations can be overcome, this technology holds great potential to drive precision medicine, not only in cardiology but also in the study of channelopathies affecting the nervous system or endocrine system.

Keywords: arrhythmias, iPSC, electrophysiology

14. **TISSUE ENGINEERING: CURRENT STATUS AND FUTURE PERSPECTIVES**

Alexandru Prodan [1], Cristina-Daniela Cozma[1], Mara Georgiana Bandac[1], Prof. Cristian Martu, MD, PhD [1]

[1] Grigore T. Popa" University of Medicine and Pharmacy of Iasi

INTRODUCTION: Tissue engineering (TE) is a field of biomedical engineering that focuses on creating artificial tissues. It has seen remarkable progress, opening new possibilities in biomaterials, stem cells, and bioprinting for functional tissue and organ regeneration. Here, we explore the methods and applications of tissue engineering, highlighting potential future developments and emerging opportunities in the field. **MATERIALS AND METHODS**: This review provides an analysis of articles, reviews, and original studies published on PubMed, the International Journal of Molecular Sciences, and Elsevier Library between 2020-2025. The inclusion criteria consisted of studies focusing on bioprinting techniques, biomaterials, cell viability, tissue functionality, and clinical applications. Non-English articles were excluded, as well as studies not involving 3D bioprinting, stem cells, or personalized drug development. **RESULTS**: Advances in TE including stem cells, gene editing, 3D bioprinting, nanotechnology, and Al, enable the creation of complex, functional tissues individualized to each patient. Smart biomaterials, which interact with cells, could offer an improved extracellular matrix (ECM) simulation compared to those currently available. This can have impacts on drug delivery and treatment monitoring, while also reducing healthcare costs. The integration of multiple technologies allows for precise control over cell behavior, tissue architecture, and functional properties, which enhances the reproducibility and effectiveness of the engineered tissue. The critical shortage of transplantable organs can be addressed by generating biocompatible scaffolds that can be repopulated with a patient's own cells, thereby minimizing the risk of immune rejection. **CONCLUSION:** As a relatively new concept, TE shows a promising future with further research into reproducibility, quality control, and automation. Overcoming these hurdles will revolutionize regenerative medicine, making the techniques more efficient, personalized, and widely accessible.

Keywords: tissue Engineering, 3D bioprinting, regenerative medicine, drug effects, personalized medicine, stem cells

Fundamental Slideshow Presentations
Review

15. **GUT MICROBIOTA AND DEPRESSION: UNRAVELING THE MICROBIAL LINK TO MENTAL HEALTH**

Raluca Novac [1], Răzvan Lisă [1], Teofana-Maria Borș [1], Alexandru Duhaniuc, MD, PhD [1]
[1] "Grigore T. Popa" University of Medicine and Pharmacy, Iași, Romania

INTRODUCTION: The gut micro biota has been increasingly recognized as a crucial factor influencing the development and progression of depression through the gut-brain axis. Dysbiosis of the gut microbiome has been implicated in the pathophysiology of depression, representing a potential target for novel diagnostic and therapeutic strategies. This review aims to summarize current evidence on how gut microbiota modulates depressive symptoms and to highlight its potential clinical implications. **MATERIALS AND METHODS**: We conducted a narrative review examining the relationship between gut microbiota and depression, focusing on studies published between 2020 and 2025. Articles were selected from PubMed, Web of Science and Scopus databases using keywords like "gut microbiota", "depression", and "gut-brain axis", and a total of 11 articles were included in this study. Studies were included if they investigated human subjects and examined aspects such as microbial dysbiosis, metabolite alterations, immune activation, or therapeutic interventions like probiotics or fecal microbiota transplantation. The focus was on data relevant to microbial influence on depression's pathophysiology and potential clinical applications. **RESULTS**: Consistent evidence reveals that gut dysbiosis correlates with depressive disorders. Common findings include decreased levels of beneficial bacteria such as Lactobacillus and Bifidobacterium, along with increased levels of pro-inflammatory genera like Alistipes and Enterobacteriaceae. Microbial imbalances lead to disrupted production of short-chain fatty acids and altered tryptophan metabolism, which impairs intestinal barrier integrity and increases systemic inflammation. Elevated inflammatory cytokines and bacterial endotoxins activate neuroimmune pathways, contributing to hypothalamic pituitary-adrenal axis dysregulation. Several studies identified gut-derived biomarkers associated with depression severity and response to treatment. Therapeutic approaches targeting the microbiome, including probiotics and fecal microbiota transplantation, showed promising results in improving depressive symptoms. **CONCLUSION**: Current evidence supports a strong association between gut microbiota composition and depression, mediated by inflammatory, metabolic, and neuroendocrine mechanisms. Although causality is not fully established, modulation of gut microbiota represents a potential adjunctive treatment strategy. Future research should focus on longitudinal clinical trials to define microbial signatures specific to depression and optimize microbiome-based therapies.

Keywords: gut microbiota, depression, dysbiosis, gut-brain axis, probiotics

16. **ADHD-OCD COMORBIDITY: CLINICAL AND NEUROBIOLOGICAL LINKS**

Erika-Maria Cristea [1]
[1] Carol Davila University of Medicine and Pharmacy

INTRODUCTION: It is well known that OCD and ADHD are two of the most common neuropsychiatric disorders and their symptomatologies can influence one another. Moreover, adults with ADHD have a higher risk of developing other neuropsychiatric disorders. The aim of this study is to explore the prevalence of comorbidity between ADHD and OCD, assessing relevant comparisons between these two conditions. **MATERIALS AND METHODS**: The method used involved introducing the keywords: ADHD, OCD, comorbidity, and neurobiological links into the PubMed search engine. The review is based on eleven articles dated from 2007 to 2025. The inclusion criteria were: statistics about comorbidity, clinical overlap, neurobiological overlap, and shared alleles. Studies discussing the linkage between ADHD-OCD comorbidity and other | neurobiological disorders were excluded. The PRISMA protocol was applied, although bias risk was not considered. **RESULTS**: Studies show an increased chance of ADHD-OCD comorbidity in pediatric patients (25.5%) rather than in adults (11.8%). Both disorders present dysfunctions in the frontostriatal pathophysiology, basal ganglia, insula, but they exhibit opposing activation patterns associated with these brain regions. D. V. Cotovio et al. (2025) note that electrophysiological studies reveal contrasting error-monitoring profiles: elevated error-related negativity (ERN) in OCD and reduced ERN in ADHD, despite shared deficits in | inhibitory control. Amitai Abramovitch et al. (2011) conducted a study involving 30 individuals with ADHD, 30 with OCD, and 30 with no psychiatric diagnosis and concluded that the OCD and ADHD groups differed significantly only on the Attention, Motor Skills, and Memory indexes (all $p < .01$). Daniel Geller assessed 1533 first-degree relatives for ADHD and OCD of three groups of index children: ADHD and OCD, ADHD but no OCD, and matched controls with neither disorder. The results indicated that relatives affected with ADHD had a significantly elevated risk of OCD compared to unaffected ones (7.4% vs. 1.3%; $p < .001$), suggestive of co-segregation between these disorders. **CONCLUSION**: Evidence from clinical, neuropsychological, and neurobiological domains links ADHD and OCD. Some studies suggest the existence of a unique familial subtype at the genomic level among patients with ADHD-OCD comorbidity. However, more studies are needed on this matter.

Keywords: ADHD, OCD, comorbidity, neuropsychology, neurobiology

17. **AURICULAR TRANSCRANEOUS VAGUS NERVE STIMULATION IN GENERALIZED ANXIETY DISORDER: DUAL MODULATION OF EMOTIONAL AND AUTONOMIC CIRCUITS**

Daniel Buznean [1], Diana Barbuta [1], Asst. Lect. Radu Gavril, MD, PhD [1, 2]

[1] "Grigore T. Popa" University of Medicine and Pharmacy, Iași, Romania,

[2] Socola Institute of Psychiatry, Iași, Romania

INTRODUCTION: Generalized Anxiety Disorder (GAD) is a chronic and disabling condition characterized by excessive worry, amygdala hyperactivity, and impaired prefrontal control, often associated with autonomic dysregulation. Conventional pharmacological and psychotherapeutic treatments show limited efficacy and often take weeks to achieve clinical benefit. Auricular transcutaneous vagus nerve stimulation (taVNS) has emerged as a non-pharmacological intervention capable of modulating both emotional and physiological components of anxiety. By stimulating the auricular branch of the vagus nerve, taVNS activates projections to the nucleus tractus solitarius (NTS) and locus coeruleus (LC), influencing amygdala-prefrontal connectivity and restoring autonomic balance. This review aimed to explore the clinical and physiological effects of taVNS in GAD. **MATERIALS AND METHODS**: This review analyzed 15 studies published between 2018 and 2025, including randomized controlled trials, systematic reviews and meta-analyses. Stimulation was applied at the cymba conchae or tragus, using frequencies of 20-25 Hz, intensities between 0.5 and 1.5 mA, and durations of 20-30 minutes. Inclusion criteria involved adults with clinically diagnosed or high-trait anxiety, baseline anxiety confirmed by validated scales, and no recent adjustments in psychotropic medication. Clinical outcomes were assessed using the Hamilton Anxiety Rating Scale (HAMA), while salivary cortisol and skin conductance were measured as physiological indicators of stress reactivity and autonomic regulation. **RESULTS:** Most studies reported significant reductions in anxiety, with mean decreases of 25-40% on HAMA scores ($p < 0.01$). Salivary cortisol responses to stress were attenuated by nearly 50% ($p = 0.03$), while skin conductance levels decreased significantly ($p < 0.05$), indicating reduced sympathetic arousal and improved autonomic regulation. Neuroimaging findings further supported strengthened amygdala prefrontal connectivity, consistent with enhanced emotional control and improved top-down regulation of fear processing. No severe adverse effects were reported. **CONCLUSION**: Auricular taVNS emerges as a promising and well-tolerated neuromodulatory approach for GAD, offering dual therapeutic effects through the restoration of amygdala-prefrontal connectivity and improved autonomic regulation mediated by vagus nerve activation. While current evidence supports its potential as an adjunct and home-based therapy, variability in stimulation parameters and study designs still limits direct comparison across trials. Future research should aim to standardize protocols, refine physiological biomarkers, and confirm long-term efficacy through large-scale randomized studies.

Keywords: taVNS, generalized anxiety disorder, stress reactivity, non-pharmacological therapy

18. **PHOTOPROTECTION AND BEYOND: BENEFITS AND RISKS OF SUNSCREEN USE**

Ana-lulia Sturzu [1], Daria-Maria Sava [1], Asst. Lect. Lucian G. Scurtu, MD, PhD [1, 2]

[1] "Carol Davila" University of Medicine and Pharmacy,

[2] Dermatology Department, Colentina Clinical Hospital, Faculty of Medicine

INTRODUCTION: Sunscreen use has increased substantially over recent decades due to its proven role in preventing ultraviolet (UV)-induced skin damage, photoaging, and photocarcinogenesis. However, growing evidence highlights possible drawbacks associated with certain UV filters, including photoallergic reactions, systemic absorption, and endocrine-disrupting potential. Organic filters such as benzophenones, cinnamates, and octocrylene have been investigated for hormonal and reproductive effects, while nanoparticle-based inorganic filters raise questions regarding systemic bioavailability and environmental persistence. In contrast, mineral filters containing zinc oxide (ZnO) and titanium dioxide (TiO2) are considered the safest and most photostable options for sensitive skin and pediatric use, as they act by surface reflection and scattering rather than chemical absorption and show negligible systemic penetration. Balancing the benefits and risks of sunscreen use is essential for evidence-based clinical and public health recommendations. **MATERIALS AND METHODS**: We conducted a critical literature review of clinical, epidemiological, and mechanistic studies published between 2007 and 2024. Databases searched included PubMed, Scopus, and Web of Science. Eligible studies evaluated adverse skin reactions, systemic absorption, hormonal outcomes, and metabolic effects associated with topical photoprotective agents. Excluded were animal-only studies and those addressing exclusively environmental toxicity. Extracted data included population characteristics, sunscreen composition, usage patterns, and dermatologic or systemic outcomes. **RESULTS**: Sunscreens consistently reduce the incidence of sunburn, photoaging, and UV-induced malignancies. Certain chemical filters - particularly oxybenzone and octinoxate-remain under scrutiny for possible endocrine and reproductive effects, though human evidence is inconsistent. Systemic absorption of some filters has been demonstrated, yet detected plasma concentrations remain below established safety thresholds. Conversely, physical (mineral) sunscreens demonstrate superior cutaneous tolerance, no significant dermal absorption, and are widely recommended for infants and young children. Real-world studies further indicate that habitual sunscreen use does not significantly alter serum 25(OH)D levels, suggesting minimal impact on vitamin D status. **CONCLUSION**: Sunscreens remain a cornerstone of effective photoprotection. While vigilance toward potential hormonal and toxicological risks of organic filters is warranted, mineral-based formulations represent a safe and well-tolerated alternative, particularly for pediatric and sensitive populations. Public health strategies should emphasize correct application, regular reapplication, and complementary protective behaviors such as shade-seeking and protective clothing.

Keywords: sunscreen, UV radiation, photoprotection, endocrine disruption, mineral filters, zinc oxide, titanium dioxide, vitamin D, photoallergy, safety profile, photoaging, pediatric dermatology, public health

19. **CAFFEINE AND INFLAMMATION: A DOUBLE-EDGED EFFECT - A SYSTEMATIC REVIEW**

Adil Shaikenov [1], Mereke Satkanov, M.Chem., MSc [2]
[1] School of Medicine, Astana Medical University, Astana, Kazakhstan,
[2] Research Institute of Cell Biology and Biotechnology, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan

INTRODUCTION: Caffeine is one of the most widely consumed psychoactive compounds worldwide and is increasingly studied for its potential immunomodulatory and anti-inflammatory properties. However, the evidence remains contradictory: some reports indicate reductions in inflammatory markers, while others show cytokine activation. This systematic review aimed to evaluate the influence of caffeine on cytokine production-particularly interferon gamma (IFN-γ)-and its implications for chronic inflammatory diseases such as gout. **MATERIALS AND METHODS**: A systematic search was conducted in PubMed, Scopus, and Web of Science for studies published between 2000 and 2025. Inclusion criteria comprised clinical trials, in vivo, and in vitro studies assessing caffeine or coffee intake and cytokine expression (IFN-γ, IL-6, IL-18, TNF-α). Exclusion criteria included studies without quantitative cytokine data or those focused solely on caffeine metabolism. Nine studies were included, encompassing randomized controlled trials and mechanistic studies in adults aged 18-70 years. The risk of bias was qualitatively assessed based on study design, sample size, and reporting transparency. A narrative synthesis approach was applied to summarize findings. **RESULTS**: Across studies, caffeine demonstrated both pro- and anti-inflammatory actions. Gloyer et al. (2022) reported increased IFN-γ in rheumatoid arthritis patients due to adenosine A2A receptor blockade, suggesting a pro-inflammatory pathway. In contrast, Kempf et al. (2010) observed an 8% reduction in IL-18 and improved HDL profiles after regular coffee consumption, indicating anti-inflammatory potential. Zampelas et al. (2004) found higher IL-6 and CRP levels in high coffee consumers, while genetic variability, particularly the ADORA2A TT genotype, influenced caffeine sensitivity and cytokine response patterns. **CONCLUSION**: Evidence remains inconclusive regarding caffeine's overall inflammatory impact. Its dual behavior appears to depend on dosage, duration, and individual genetic background. Further controlled studies are warranted to determine caffeine's role in modulating IFN-γ and other cytokines, especially in gout pathogenesis.

Keywords: caffeine, inflammation, cytokines, adenosine receptors, gout

Fundamental Poster Presentations
Case Reports

20. **DIAGNOSTIC CHALLENGES IN PALLISTER-KILLIAN SYNDROME WITH MOSAICISM**

David-Cristian Păducel [1], Ana-Maria Efrem [1], Vlad Pastor [1], Asst. Lect. Florina Nazarie, MD, PhD [1, 2]
[1] "Iuliu Haţieganu" University of Medicine and Pharmacy, Cluj-Napoca,
[2] SCJU Cluj-Napoca, Imogen Institute

BACKGROUND: Pallister-Killian syndrome is a rare and sporadic illness that consists of a 12p tetrasomy, usually due to an extra 12p isochromosome. Even though the final diagnosis is made via genetic testing, clinical features can be highly suggestive, such as the particular cranio-facial dysmorphism and neurological disorders. **CASE PRESENTATION**: A female neonate was born via C-section at 39 weeks from a mother previously known with thrombophilia. The Apgar score was 4, and 8 after 5 minutes, showing the following clinical signs: axial hypotonia, central cyanosis, upper respiratory tract secretions and respiratory failure. On examination, a cranio-facial dysmorphism was later noted with the following signs: short neck, hypertelorism, anti mongoloid palpebral fissures, small nasal pyramid, anteverted nostrils, lower implanted left ear, high nasal philtrum, thin upper lip, supernumerary nipple, square palm, short fingers, polydactyly. On transfontanellar ultrasound, a hyperechogenic mass anterior to the frontal corn of the left lateral ventricle is identified. The right lateral ventricle is significantly smaller, being visualized only posteriorly. No ventriculomegaly is shown. Moreover, a choroid al plex cyst is identified on the right. A neurological consult was called, following some clonus during the admission. It also revealed absent deep tendon reflexes on the left side and horizontal nystagmus. On sleep EEG, a rapid alpha rhythm was identified on the right side. The diagnosis was a genetic plurimalformative encephalopathy with the suspicion of polymicrogyria. Lastly, an echocardiography revealed patent foramen ovale and a dysplastic pulmonary valve. Consequently, given the presence of facial dysmorphism in association with congenital neurological anomalies, neonatal seizures, and polydactyly, genetic testing was undertaken. The initial karyotype appeared to be normal, therefore chromosomal microarray analysis was performed, where the 12pl3.3-pll.l region was duplicated. Finally, a second karyotype revealed a supernumerary 12p isochromosome, which confirmed the clinical suspicion of Pallister-Kilian syndrome. **CONCLUSION**: This case illustrates the challenge of diagnosing Pal lister-Killian syndrome due to its mosaic pattern, which may lead to false-negative results on standard karyotyping. Conversely, the distinctive dysmorphism, simultaneous with the hypotonia, the seizures, the abnormal lateral ventricles and the cardiac malformations are highly suggestive features that guide further genetic testing, such as microarray analysis.

Keywords: Pallister-Killian, mosaicism, isochromosome 12p, microarray

Clinical Poster Presentations
Original Study

1. **OUTCOMES OF ICU PATIENTS WITH ACUTE KIDNEY INJURY REQUIRING RENAL REPLACEMENT THERAPY**

Tea Korosec [1], Barbara Kobal [1], Robert Ekart [1, 2]
[1] Medical Faculty, University of Maribor, Taborska 8, Maribor 2000, Slovenia,
[2] Department of Dialysis, Clinic for Internal Medicine, University Medical Centre Maribor, Ljubljanska 5, Maribor 2000, Slovenia

INTRODUCTION: In intensive care unit (ICU) patients, acute kidney injury treated with renal replacement therapy (AKI-RRT) is associated with adverse outcomes. The aim of our study was to investigate clinical characteristics and short- and long-term outcomes of patients receiving AKI-RRT in the ICU. **MATERIALS AND METHODS**: We performed a retrospective cohort study in a tertiary hospital with a 12-bed ICU over a 4-year period (2017-2020). During this period, 2939 patients were admitted to the ICU, 503 (17.11%) were diagnosed with AKI and 210 (7.15%) required RRT. Due to missing data, 191 patients were analyzed. Demographic and laboratory data at ICU admission, Sequential Organ Failure Assessment (SOFA), and Acute Physiology and Chronic Health Evaluation (APACHE-II) scores were calculated, and 30-, 60- and 90-day mortality after ICU admission was obtained from the medical record. Follow-up of survivors was completed on December 31, 2023. **RESULTS**: Mean age was 63.2~12.9 years; 66.5% were male. Median SOFA and APACHE-II scores were 11 (IQR 9-13) and 29 (IQR 20-34), respectively. Median ICU stay was 12 days (IQR 5-21). The most common reasons for ICU admission were acute respiratory failure (35.1%), cardiopulmonary resuscitation (14.1%) and shock (11%). Eighty-three (43.5%) patients had AKI at ICU admission, and 57 (29.8%) had pre-existing chronic kidney disease (CKD). Continuous RRTwas the first treatment modality in 145 (75.9%) patients and intermittent hemodialysis (IHD) in 46 (24.1%) patients. Thirty-three (17.3%) patients received additional hemoadsorption (Cytosorb). Low-molecular-weight heparin was used for anticoagulation in 36.1% of patients and citrate in 27.2%; the rest received both. The 30-, 60- and 90-day mortality rates were 61.8%, 72.3% and 74.9% respectively. After a follow-up period of 325±648 days (1-2556 days), only 26 (13.6%) patients were still alive. In multivariate Cox regression analysis, including age, gender, hemoglobin, serum creatinine, C-reactive protein, albumin, total ultrafiltration (UF) during RRT and SOFA score, only age (HR 1.027; 95%CI 1.009-1.045; p=0.003) and UF (HR 1.0; 95%CI 1.0-1.0; p=0.009) were independent predictors of 30-day mortality. **CONCLUSION**: Our study shows poor short- and long-term survival after AKI-RRT. Age and total ultrafiltration during AKI-RRT were independent, highly prognostic factors for death.

Keywords: acute kidney injury, renal replacement therapy, intensive care unit, mortality, prognostic factors; retrospective study

Clinical Slideshow Presentations
Original Study

2. **CORTICAL EXCITABILITY CHANGES IN STROKE FOLLOWING FUNCTIONAL ELECTRICAL STIMULATION GAIT TRAINING**

Cristina Butnariu [1], Ștefan-Dragoș Ignat [1], Assoc. Prof. Emilian-Bogdan Ignat, MD, PhD [1]
[1] Grigore T. Popa University of Medicine and Pharmacy, Iași

INTRODUCTION: Neuroplasticity is the support of improvement in motor performance, both during motor learning of new skills in healthy subjects and during rehabilitation of neurologic conditions. While effective rehabilitation techniques should trigger meaningful clinical changes, associated neuronal changes cannot always be highlighted. Motor area excitability can be appreciated with transcranian magnetical stimulation (TMS). **MATERIALS AND METHODS**: We have measured the changes in cortical excitability in 15 hemiparetic stroke survivors. Subjects completed a 10 days program of gait training (30 minutes daily) using functional electrical stimulation (FES). Synchronized FES was used to assist dorsiftexion during gait and was delivered with ODFS 3 devices. Mapping of the motor area of the lower limbs was achieved with a 90 mm round coil and a Magstim Rapid 2 stimulator. Motor evoked potentials (MEP) were recorded in the tibialis anterior muscle. Speed gait, MEP amplitude, number of responsive points on both the affected and the healthy hemisphere were recorded before and after the training program. Mapping of the lower limb cortical projection was done by repeatedly stimulating at 1 cm distances on four axes starting from the motor hotspot. **RESULTS**: Average speed gait increased from 0.45±0.13 m/s to 0.59±0.14 m/s. MEP amplitude density (total amplitude divided by the number of TMS responsive points) changed from 238. 79± 115. 97 µV /point to 280.67±90 µV/point in the healthy hemisphere (an 11.62% increase), and changed from 71±42.52 µV/point to 181.42±84.82 µV/point in the affected hemisphere (an 155.51% increase). Surface of the cortical projection of the lower limb increased with 24.79% in the healthy hemisphere (on average a 3.6±2.06 responsive points increase) and with 56.86% in the affected hemisphere (an average increase of 4.73±3.74 points). **CONCLUSION**: FES assisted training led to an increase of the gait speed. The projection of the lower limb changed in both the healthy and the affected hemisphere. The excitability of the projection areas increased both in terms of surface (recruitment of neighboring areas) and reactivity (increase of the number of muscle fibers recruited by magnetical stimulation of the cortex reflected in the amplitude of the MEP). Changes were more important in the affected hemisphere, reaching statistical significance.

Keywords: cortical mapping, stroke, functional electrical stimulation)

3. **COMPARISON OF EZETIMIBE-ROSUVASTATIN COMBINATION VERSUS ROSUVASTATIN MONOTHERAPY IN LDL-CHOLESTEROL TARGET ACHIEVEMENT POST-PCI**

Ruxandra Cristea [1], Snr. Lect. Vasile Bogdan Halațiu, MD, PhD [1, 2]
[1] George Emil Palade University of Medicine, Pharmacy, Science and Technology of Targu Mureș
[2] Târgu Mureș County Emergency Clinical Hospital

INTRODUCTION: Secondary prevention in patients with stable angina undergoing PCI emphasizes lowering low-density lipoprotein (LDL) cholesterol below 55 mg/dl.This study aimed to compare lipid-lowering therapy with statin monotherapyversus statin combined with ezetimibe in high-risk patients with stable angina post-PCI. According to ESC guidelines, high-intensity statin monotherapy is recommended as the initial treatment for all statin-naive high-risk patients to attain the target LDL-C levels. Nevertheless, many patients do not reach their LDL-cholesterol target in the short term. **MATERIALS AND METHODS**: This prospective study included 120 consecutive statin-naive patients admitted with stable angina who underwent PCI. Patients were randomly assigned to two groups: Group 1 - rosuvastatin 40 mg (n=60) and Group 2- rosuvastatin 40 mg plus ezetimibe 10 mg (n=60). Lipid profiles were assessed at baseline and after one month of treatment. **RESULTS**: At baseline, none of the patients exhibited LDL cholesterol levels below 55 mg/dl. There were no statistically significant differences in lipid profiles between the two groups at baseline (all $p > 0.05$). Additionally, the baseline deviation of LDL cholesterol from the target was similar between groups (105.2% vs.100.3%; p=0.78). Consistent with expectations, the combination therapy resulted in a significantly greater reduction in LDL cholesterol after one month compared to high-dose statin monotherapy(-61.30% vs. -40.22%; $p < 0.0002$). At the one-month follow-up, 52.50% of patients in the monotherapy group achieved the LDL-C goal (<55 mg/dL), whereas 85.00% of patients in the combination therapy group reached this target (p=0.0005; R.R.=0.61). **CONCLUSION**: The study demonstrates that combining ezetimibe with high-dose rosuvastatin significantly enhances LDL cholesterol reduction compared to monotherapy in high-risk post-PC I patients. A greater proportion of patients in the combination group achieved the LDL-C target of below 55 mg/dl after one month. These findings support early initiation of combination therapy to optimize secondary prevention and improve lipid management in high-risk individuals.

Keywords: ezetimibe, lipid management, LDL-cholesterol, stable angina, statin therapy

Clinical Poster Presentations
Original Study

4. **BEYOND THE NAKED EYE: DERMOSCOPIC FEATURES OF BASAL CELL CARCINOMA IN ROMANIA**

Ecaterina Hristea [1], Roxana Ioana Nedelcu [1, 2], Alice Brînzea [1, 2], Asst. Lect. Alexandra Dobre, MD, PhD(s) [3]
[1] "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania,
[2] Derma 360 Clinic, Bucharest, Romania,
[3] "Elias" University Emergency Hospital, Bucharest, Romania

INTRODUCTION: Basal cell carcinoma (BCC) is the most common cancer worldwide, with a steadily increasing incidence. Although metastasis is rare, BCC causes significant morbidity through local invasion and recurrence. Therefore, early diagnosis is essential to prevent functional and aesthetic complications. Dermoscopy plays a key role in the early identification and differentiation of malignant skin lesions. This study evaluates the clinical and dermoscopic features of BCC in a Romanian cohort, aiming to identify the most frequent dermoscopic patterns and assess potential differences compared to data reported in international literature. **MATERIALS AND METHODS**: We conducted an observational cross-sectional study including 26 BCC from 25 patients at a private dermatology center in Bucharest, between January 2023 and December 2024. Clinical and dermoscopic data were collected and organized into a custom database using Microsoft Excel, | comprising 47 variables. Statistical analysis was performed using Microsoft Excel and Word. **RESULTS**: The patients' mean age was 58.5 years, with the majority being females. Regarding skin phototype, 73% had Fitzpatrick type II and 27% type III. The face was the most common site (48.5%). Gender-based analysis suggested a wider distribution of lesions in women, while lesions in men were primarily located in photo-exposed areas. Clinically, 53.8% of lesions were flat, predominantly pink (50%), with surface changes including erosions (30%), crusts (27%), ulcers (23%), and scales (19.2%). Dermoscopically, vascular structures appeared in 84.6% of lesions, mainly linear (65,3%) and focally arborizing vessels (46,1%). Dotted vessels were typically associated with other vascular types. Pigmented structures were observed in 73%, predominantly blue-gray globules (42.3%) and maple leaf-like areas (34.6%). White structures appeared in 46.1%, mostly white structureless areas and white strands (30.7%). **CONCLUSION**: This study highlights specific clinical and dermoscopic patterns of BCC in Romanian patients, with a female predominance and lesion distribution influenced by sun exposure. Dermoscopic features— particularly vascular, pigmented, and white structures —were key diagnostic features. Findings align with international data, though some gender-based and dermoscopic differences were noted. Linear vessels were more common than previously reported, suggesting that vascular morphology is an important dermoscopic feature of BCC and warrants further study to enhance early detection.

Keywords: basal cell carcinoma, BCC, dermoscopy, clinical features, dermatoscopic features

Clinical Slideshow Presentations
Original Study

5. **MOTOR EVOKED POTENTIALS CORRELATE WITH LONG TERM CLINICAL DISABILITY IN MULTIPLE SCLEROSIS: AN ORIGINAL STUDY**

Ștefan-Dragoș Ignat [1], Cristina Butnariu [1], Orest Bolbocean [1], Assoc. Prof. Emilian-Bogdan Ignat, MD, PhD [1]
[1] Grigore T. Popa University of Medicine and Pharmacy, Iași

INTRODUCTION: Multiple sclerosis (MS) is one of the most important causes of disability in young adults. Although early efficient treatment may prevent disease progression and disability accumulation, more efficient drugs cary higher risks. Identifying risk markers for an unfavourable functional prognosis is important, as it would allow the early choice of a more aggressive disease modifying therapy in patients at risk on one side and avoidance of unnecesary exposure in patients with a milder disease course on the other side. Motor function is critical for a good functional status. Beyond clinical tests, motor evoked potentials (MEP) reflect motor pathway involvement. **MATERIALS AND METHODS**: We have retrospectively evaluated a cohort of 60 MS patients that were initially evaluated by MEP and then monitored clinically (median time 15 years). MEP were triggered using a Magstim Rapid 2 device with a butterfly coil (cortical and cervical stimulation) and recorded with surface electrodes from the abductor digiti minimi. EDSS evolution and relapse occurence were collected from patient's files. **RESULTS**: Relapses occurred in 36 patients; initial median Expeded Disability Status Scale (EDSS) was 2, final median EDSS was 3.25, EDSS increased in 36 patients. Average maximal central motor conduction time (mCMCT) was 11.55 ms (‡4.99ms), with 40% above the normal threshold and 21.67% showing an abnormal interhemispheric difference. We found significant correlations ($p<0.05$) between mCMCT and final EDSS (rho=0.627), EDSS difference (rho=0.541), number of relapses (rho=0.35) and time to first relapse (rho=-0.333). Similarly, a pathological interhemispheric CMCT difference correlated with final EDSS (rho=0.412), EDSS difference (rho=0.405) but not with relapse number and time to first relapse. In a regression model, mCMCT predicted final EDSS ($R2=0.425$, $p<0.001$) and EDSS increase ($R2=0.188$, $p=0.01$). **CONCLUSION**: In our study initial MEP abnormalities correlated with worse clinical outcomes in the long term follow-up.

Keywords: MS, MEP, disability progression, CMCT, EDSS

6. **BREATHING, INFLAMMATION, AND MOOD: THE SIGNIFICANCE OF HMBGI IN OBSTRUCTIVE SLEEP APNEA**

Julia Jaromirska [1], Szymon Turkiewicz [1], Marcin Sochal[1], Asst. Lect. Agata Gabryelska, MD, PhD [1]
[1] Department of Sleep Medicine and Metabolic Disorder, Medical University of Lodz, Lodz, Poland

INTRODUCTION: Obstructive sleep apnea (OSA) is a chronic respiratory disorder marked by recurrent airway obstruction, leading to sleep fragmentation and intermittent hypoxia. It is strongly associated with neuropsychiatric comorbidities, particularly depression. Both OSA and depression involve systemic inflammation. Highmobility group box I (HMGBI), a ligand of TLR4, promotes proinflammatory cytokine secretion and has been linked to depression. Its secretion can be induced by reactive oxygen species. This study aimed to assess HMGBl concentrations in OSA patients and examine their relationships with polysomnography (PSG) parameters, hypoxia-inducible factor 1 (HIF-1), and depressive symptoms. **MATERIALS AND METHODS**: The study included 152 participants undergoing PSG. Based on apnea-hypopnea index(AHI), they were divided into OSA (AH I 5; n= l 02) and non-OSA (n=50) groups. Depression was assessed with the Montgomery-Asberg Depression Rating Scale (MADRS), and insomnia with the Insomnia Severity Index (ISi). Serum HMGBl and HIF-1 levels were measured using ELISA. Participants were further categorized into control (n=21), depression only (n=29), OSA only (n=57), and OSA with depression (n=45) subgroups. **RESULTS**: HMGBl levels differed between groups ($p=0.014$). Controls had lower concentrations (40.0 pg/ml) compared to depression (45.6 pg/ml, $p=0.013$) and OSA+depression (44.9 pg/ml, $p=0.049$). Across all participants, HMGBl correlated with MADRS scores ($R=0.178$, $p=0.028$), but not within subgroups. HMGBl and HIF-1 were correlated in the whole sample ($R=0.278$, $p=0.011$) and particularly in depression and OSA subgroups. No association was observed between OSA severity and HMGBl levels. **CONCLUSION**: In conclusion, elevated HMGBl is linked to depression, independent of OSA presence, and relates to depressive symptom severity. HMGBI dysregulation may contribute to depression development, warranting further investigation.

Keywords: OSA, depression, HMGBI

7. **GENETIC AND SOCIOCULTURAL DETERMINANTS OF SUICIDE RATES IN ISOLATED COMMUNITIES**

Ágnes-Boglárka Filep [1], Snr. Lect. Dana-Cristina Herța, MD, PhD [1]
[1] "Iuliu Hațieganu" University of Medicine and Pharmacy, Cluj-Napoca

INTRODUCTION: When assessing suicide risk factors, a multidimensional approach is essential to understand not only the act itself but also the neuropsychiatric disorders associated with suicidal ideation and behaviour. Sociocultural isolation and genetic homogeneity, often shaped by transgenerational trauma, may play a key role in suicide prevalence within isolated populations. **MATERIALS AND METHODS**: We analyzed all recorded causes of death between 1970 and 2020 from the municipal archives of two demographically similar communities in Cluj County: Sic and Unguraș. Suicide rates per 100,000 inhabitants were calculated annually and by decade using census data. The degree of inbreeding was estimated through surname frequency (isonymy coefficient), from which an approximate inbreeding coefficient (F) was derived. In 2024, Sic had 1,712 adults with 154 surnames (F = 0.007), while Unguraș had 2,056 adults and 240 surnames (F = 0.004). Historical and sociocultural factors were compared using available literature. Sic's genetic and cultural isolation originates from the Tatar invasion of 1717, which left only 100 survivors, followed by economic decline due to the closure of the salt mine, railway line built to bypass the village, and a major fire in 1889. **RESULTS**: Sic showed an estimated inbreeding coefficient 1.75 times higher than Unguraș. According to Poisson regression analysis, the suicide rate in Unguraș was O.44 times lower, a statistically significant result ($p < 0.05$). There was no significant temporal variation in suicide rates ($p > 0.05$). **CONCLUSION**: Statistical analysis suggests that sociocultural isolation and its multifactorial consequences increase suicide rates in isolated populations. Further investigations will explore the potential correlation between reduced genetic diversity and elevated suicide incidence using molecular genetic testing.

Keywords: suicide rates, genetic isolation, sociocultural factors, inbreeding, transgenerational trauma

Clinical Slides Presentations
Reviews

8. **THERAPEUTIC POTENTIAL OF MYOSTATIN INHIBITION IN MUSCULAR DYSTROPHIES: UNCOVERING CLINICAL TRIAL EVIDENCE**

Luca-Sebastian Smântână [1], Alexia-Cătălina Matei [1], Răzvan Rusu, PharmD, PhD [1]
[1] Grigore T. Popa University of Medicine and Pharmacy

INTRODUCTION: Myostatin, a negative regulator of muscle growth, has become a therapeutic target in muscular dystrophies, aiming to increase muscle mass and potentially improve function. Multiple myostatin inhibitors-including MYO-029, ACE-031, and domagrozumab-have been tested clinically across various muscular dystrophy subtypes. While biological effects have been observed, their translation into functional benefits remains uncertain.
MATERIALS AND METHODS: We conducted a structured review of clinical trials investigating the use of myostatin inhibitors in the treatment of muscular dystrophies. Eligible studies had to meet the following inclusion criteria: human subjects, interventional clinical trial design (for example, randomized controlled trials, open-label trials, or phase 1-11 studies), and inclusion of a myostatin inhibitor (for example, domagrozumab, ACE-031, or MYO-029) as the investigational product. We excluded studies conducted exclusively on animal models, preclinical or purely mechanistic studies without clinical endpoints, and studies for which full text versions could not be retrieved or verified. Searches were performed in PubMed/MEDLINE, Scopus, and Web of Science, covering literature published from 2005 to 2025. Two independent reviewers performed screening, data extraction, and quality appraisal. Disagreements were resolved through discussion and consensus. Data synthesis was descriptive due to heterogeneity across study designs and outcomes. **RESULTS**: MYO-029 was well tolerated, showing mild hypersensitivity at higher doses and modest increases in muscle fiber size and lean mass, but no functional gains. ACE-031 showed trends toward increased lean mass, preserved 6-minute walk distance (a standard functional mobility test), and higher bone density, but development stopped due to vascular side effects. Domagrozumab increased muscle volume and improved magnetic resonance imaging biomarkers without meeting functional endpoints. Overall, adverse events were mild to moderate, and magnetic resonance imaging biomarkers were sensitive to structural changes, though these did not consistently translate into functional improvement. **CONCLUSION**: Overall, myostatin inhibition shows potential for muscular dystrophies, but consistent clinical benefits remain unclear. Variability in baseline myostatin, disease heterogeneity, and outcome measures may explain these discrepancies. Larger, well-designed trials are needed to clarify the therapeutic role of myostatin inhibitors across different muscular dystrophy subtypes and stages.

Keywords: myostatin inhibition, activin A, muscular dystrophy, muscle mass, magnetic resonance imaging biomarkers, muscle volume, domagrozumab

9. **RETHINKING MULTIPLE SCLEROSIS TREATMENT: TOLEBRUTINIB AND THE BRUTON TYROSINE-KINASE REVOLUTION**

Ileana Grigore [1], Maia-Ioana Boureanu [1], Assoc. Prof. Emilian-Bogdan Ignat, MD, PhD [1, 2]
[1] Grigore T. Popa University of Medicine and Pharmacy,
[2] Clinical Rehabilitation Hospital Iași

INTRODUCTION: Multiple sclerosis (MS) is a chronic, auto-immune pathology, that mainly affects young patients and currently has no therapy that effectively slows down disability progression. Bruton tyrosine-kinase (BTK) is an essential part of an intracellular signaling pathway found in B cells, microglia and macrophages, cells that play a major role in the demyelination process. This review analyses the efficacy of BTK inhibitors (BTKi), especially tolebrutinib, as an up-and-coming treatment, assessing whether it could stand out amongst current therapies and suppress key pathological features of MS. **MATERIALS AND METHODS**: For this study, 10 articles, published between 2019 and 2025, were selected from PubMed, ClinicalKey and The New England Journal of Medicine, of which 6 were clinical trials. These articles analyse different BTKis - evobrutinib, fenebrutinib and tolebrutinib, mainly focusing on the latter, as well as compare their efficacy, selectivity and safety. The total of 1260 patients enrolled in Tolebrutinib trials were selected considering the following inclusion criteria: age between 18 and 60 years old and an Expanded Disability Status Scale (EDSS) score of more than 3.0 and less than 6.6 at screening, Exclusion criteria consisted of significant hepatic impairment, recent use of immunosuppressive therapies and a diagnosis of primary progressive MS. **RESULTS**: According to the abovementioned clinical trials, Tolebrutinib is shown to penetrate the blood-brain barrier, with concentrations exceeding the IC50 (half maximum inhibitory concentration) and 60mg being the most effective dose. It has the highest efficacy among the BTKis, reducing new lesions by 85% more than placebo and providing a 31% less risk of disability progression during phase 3 trials. Evobrutinib also significantly reduced lesions, but proved no major difference in disability progression to placebo, while fenebrutinib has shown potential to inactivate pathological pathways in MS, but is still under investigation. These results prove that BTK inhibitors show potential in treating the accumulation of disability and reducing gadolinium-enhancing lesions in secondary progressive MS. **CONCLUSION**: While still under active research, Tolebrutinib and BTKis show a positive benefit-risk balance and great potential to be the future in MS treatment and immunotherapy, providing a novel approach to this previously impossible to treat diagnosis.

Keywords: BTK inhibitors, tolebrutinib, progressive multiple sclerosis, disability progression

Clinical Poster Presentations
Case Reports

10. **WHEN MEMORY FADES: THE CHALLENGE OF LATE-DIAGNOSED ANTI-LGII LIMBIC ENCEPHALITIS**

Dragoș Budiul-Berghian [1], Iulia Berariu[1], Ioana Berariu [1], Viorel Cacuci, MD [2]
[1] "Iuliu Haţieganu" University of Medicine and Pharmacy, 400347 Cluj-Napoca, Romania
[2] Clinique Romande de Réadaptation (CRR), SuvaCare, 1951 Sion, Valais, Switzerland

BACKGROUND: Autoimmune limbic encephalitis associated with anti-leucine-rich glioma-inactivated 1(anti-LGI1) antibodies is a rare but increasingly recognized cause of rapidly progressive cognitive decline, seizures, and behavioral disturbances, profoundly affecting patients' quality of life and independence. The disorder predominantly targets the limbic system through antibody-mediated synaptic dysfunction, resulting in neuronal hyperexcitability and inflammation. Early recognition is essential, as timely immunotherapy can lead to significant neurological recovery, while delayed diagnosis may cause irreversible hippocampal damage and persistent cognitive deficits. This case illustrates the diagnostic and therapeutic challenges of late-diagnosed anti-LGIl encephalitis and underscores the importance of early immunomodulatory treatment and cognitive rehabilitation. **CASE PRESENTATION**: A 56-year-old man with no significant medical history, employed as a paint shop administrator and construction painter, was admitted on 25 August 2025 for progressive cognitive decline since December 2024, characterized by fatigue, behavioral changes, and memory impairment. Initially considered stress-related, his condition gradually worsened, accompanied by recurrent 30-second episodes of abdominal pain later identified as focal seizures. Electroencephalogram (EEG), computed tomography (CT), and magnetic resonance imaging (MRI) were initially normal. Upon transfer to the Neurology Department in September 2025, repeated MRI demonstrated bilateral, left-predominant limbic hyperintensities. Cerebrospinal fluid (CSF) analysis confirmed anti-LGIl antibodies, establishing the diagnosis of autoimmune limbic encephalitis, while PET-CT excluded underlying neoplasia. The patient received high-dose intravenous corticosteroids for five days, followed by intravenous immunoglobulin (IVlg) for three days, continued with monthly corticosteroid pulses (1 g/day for three days). Rituximab was planned after vaccination prophylaxis, and levetiracetam was initiated for seizure control. Cognitive and behavioral symptoms showed partial improvement; however, persistent memory and executive impairments required ongoing supervision, structured rehabilitation, and resulted in complete work incapacity at discharge. **CONCLUSION**: This case emphasizes the critical importance of early diagnosis and prompt immunotherapy in anti-LGII autoimmune limbic encephalitis. Delayed recognition, often masked by subtle initial symptoms, can lead to enduring cognitive and functional deficits. While current literature strongly supports rapid identification and early initiation of immunomodulatory therapy, translating this into clinical practice remains challenging. The patient's partial recovery following intensive treatment highlights the necessity of timely intervention to prevent irreversible neurological damage.

Keywords: autoimmune limbic encephalitis, immune-mediated neuronal dysfunction, cognitive recovery.

11. **ANDROGEN INSENSITIVITY SYNDROME/XX MALE SYNDROME: CASE REPORT**

Sever-Ștefan Ungureanu [1], Catherine Teodora Costan [1], Ana lsabela Dobrin [1], Asst. Lect. Alexandru Florin Florescu, MD, PhD [2]
[1] Grigore T. Popa University of Medicine and Pharmacy, Iași

BACKGROUND: The sex has several levels: genetic sex (46 XX or XY), gonadal sex (ovaries or testicles), hormonal sex (estrogens or testosterone), somatic sex (body anatomy and physiology) and sexual identity. I will present two cases where the genetic sex is completely different from the somatic and psychosocial sex. **CASE PRESENTATION**: A 33 year-old male presented for infertility investigation. Clinical and lab tests showed absence of chest and facial hair, reduced pubic hair, testes present in the scrotum but reduced in size, and a normal penis. The patient's gender identity was male. Cytogenetics revealed a 46, XX karyotype. DNA(deoxyribonucleic acid) sequence testing confirmed the presence of the SRY(Sex-determining region Y protein)on one of the X chromosome-indicating the patient had two normal X chromosomes, with the SRY having been trans located onto one of the X chromosomes. Therapy with androgens was decided. Infertility was considered definitive. A 16 year-old female patient presented with primary amenorrhea. Clinically, she exhibited tall stature, normal breast development, absence of axillary hair, and reduced pubic hair. Biologically, testosterone levels were ten times above the upper limit for females. MRl(magnetic resonance imaging) showed absence of ovaries and uterus, and a hypoplastic vagina. Her sexual identity was female. Genetically, the karyotype was XY, and sequencing of the androgene receptor gene identified a pathogenic mutation indicative of complete androgen insensitivity syndrome in individuals with XY karyotype. Bilateral gonadectomy was performed. The patient is currently on estrogen replacement therapy and has normal sexual intercourse. **CONCLUSION**: Discordance between karyotype and phenotype is rare but can occur. In 46 XY individuals with a female phenotype, this often results from mutations in the androgen receptor gene causing complete androgen insensitivity. Conversely, 46 XX males develop male characteristics due to the presence of the SRY gene, which triggers testicular development despite the female karyotype. Management of such individuals requires a multidisciplinary approach, including hormonal therapy to develop secondary sexual characteristics, surgical removal of undescended testes to reduce cancer risk, and psychological support. Fertility options are very limited or practically absent; therefore, counseling and personalized treatment plans are essential to address physical health and psychosocial well-being.

Keywords: genetic/phenotype sex case report

12. **UNMASKING LIGHT CHAIN CARDIAC AMYLOIDOSIS**

Oana-Cătălina Tanasie [1], Vlad-Ovidiu Smarandache [1], Naomi-Stefania Duta [1], Roxana-Daniela Stroescu, MD [2]
[1] University of Medicine and Pharmacy of Craiova,
[2] Emergency County Hospital of Craiova, Department of Cardiology

BACKGROUND: Light-chain (AL) cardiac amyloidosis is a form of restrictive cardiomyopathy caused by extracellular deposition of misfolded monoclonal light chains, secondary to a plasma cell dyscrasia. It is often underdiagnosed due to its nonspecific clinical presentation, with unspecific cardiac and extracardiac symptoms. Several cardiac red fiags may raise suspicion, including heart failure disproportionate to echocardiographic findings, low QRS voltage or conduction abnormalities. This case highlights the importance of multimodal imaging and clinical reasoning in diagnosing AL cardiac amyloidosis. **CASE PRESENTATION**: A 70-year-old woman, non-smoker and non-drinker was admitted to the Emergency Room for dyspnea at rest and generalized weakness, progressively worsening over the previous week. She had no relevant family history. Her medical history included atrial fibrillation treated with a non-vitamin Koral anticoagulant (NOAC) and dual-chamber pacemaker implantation five years earlier for sinoatrial block. She also had polyneuropathy and had undergone bilateral carpal tunnel release surgery eight years ago. Laboratory tests revealed elevated levels of NT-pro BNP, high-sensitivity troponin T and Creatinine. The electrocardiogram showed atrial fibrillation with ventricular pacing rhythm and low QRS voltage. Transthoracic echocardiography demonstrated concentric left ventricular hypertrophy, a left ventricular ejection fraction (LVEF) of 38%, a restrictive filling pattern and global longitudinal strain (GLS) of-7,9% with an apical sparing pattern. Cardiac magnetic resonance imaging confirmed concentric left ventricular hypertrophy with reduced ejection fraction and subendocardial late gadolinium enhancement. Native Tl mapping was elevated and abnormal gadolinium kinetics were observed on Tl scout imaging. To differentiate from transthyretin amyloidosis, 99mTc-HMDP bone scintigraphy was performed and showed no cardiac tracer uptake. Given the clinical suspicion of AL amyloidosis, serum protein electrophoresis revealed a monoclonal component. Abdominal fat pad biopsy with Congo red staining confirmed amyloid deposition, establishing the diagnosis of amyloidosis. **CONCLUSION**: Atrial fibrillation may represent one of the earliest manifestations of cardiac amyloidosis, while carpal tunnel syndrome can precede the onset of heart failure by several years. The mismatch between low QRS voltage and increased left ventricular mass, combined with extracardiac manifestations suggested amyloidosis. Multimodal imaging and tissue biopsy were essential to confirm the diagnosis. The patient was referred to Oncohaematology for disease-specific therapy and remains under cardiology follow-up.

Keywords: light-chain amyloidosis, restrictive cardiomyopathy, carpal tunnel syndrome, voltage-mass mismatch, speckle tracking

13. **AN UNEXPECTED GUEST IN THE GALLBLADDER: A CASE REPORT OF HYDATID CYST COMPLICATED BY ACUTE CHOLANGITIS**

Rareș-Vasile Costea [1], Abdulrahman Ismaiel, MD, PhD [1, 2]
[1] Faculty of Medicine, "luliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca,
[2] 2nd Department of Internal Medicine, "luliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca

BACKGROUND: Hydatid cysts of the gallbladder are an exceptionally rare presentation of Echinococcus granulosus infection, often challenging to diagnose due to nonspecific symptoms. This case report illustrates the complex interaction between parasitic infection and biliary disease, further complicated by acute cholangitis. **CASE PRESENTATION**: We report the case of a 57-year-old woman with a history of cholelithiasis and prior right adnexectomy, who was admitted to our internal medicine department for right upper quadrant abdominal pain, vomiting, jaundice, and nausea. At initial admission in December 2024, examination revealed jaundice, tenderness in the right upper quadrant, and laboratory findings indicating hepatocellular injury, cholestasis, direct hyperbilirubinemia, and systemic inflammation. Imaging studies, including abdominal ultrasound and contrast-enhanced magnetic resonance cholangiopancreatography (MRCP), demonstrated a gallbladder hydatid cyst, along with acute cholangitis (Tokyo I), biliary pancreatitis, and hepatic steatosis. Serology confirmed Echinococcus infection. The patient was treated with intravenous antibiotics, hepatoprotective therapy, and supportive care, leading to clinical and laboratory improvement. In January 2025, she was readmitted for elective surgical management. Laparoscopic retrograde cholecystectomy with pericholecystic adhesiolysis and subhepatic drainage revealed a hydatid cyst measuring 1 cm at the gallbladder fundus, with no hepatic or serosal involvement. Histopathology confirmed chronic calculous cholecystitis associated with a hydatid cyst, showing biliary epithelial lining and acellular membranes characteristic of Echinococcus spp. Postoperative recovery was uneventful, with appropriate antibiotics, analgesics, anti-inflammatory therapy, and anticoagulant prophylaxis. The patient resumed bowel movements early, drainage was minimal, wounds healed well, and she was discharged in good condition with dietary guidance, wound care instructions, and outpatient follow-up. **CONCLUSION**: This case highlights the need to consider hydatid disease in patients presenting with unusual biliary conditions, particularly in endemic areas. The presence of acute cholangitis complicated diagnosis, underscoring the importance of prompt imaging and serologic testing. Therefore, successful management depends on early recognition, individualized therapy, and a multidisciplinary approach. Surgical treatment is essential to prevent complications such as cyst rupture or biliary obstruction, ultimately improving patient outcomes.

Keywords: hydatid cyst, gallbladder, acute cholangitis, laparoscopic cholecystectomy, echinococcus granulosus

14. **A SILENT STORM: AGGRESSIVE MELANOMA OF UNKNOWN PRIMARY WITH UNCOMMON METASTASES**

Roberta-Andreea Luca [1], Andrei Marina-Fiț [1], George-Iulian Fericel [1], Assoc. Prof. Lavinia-Manuela Lenghel, MD, PhD [1, 2]
[1] Faculty of Medicine, "luliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca
[2] Radiology Department, "luliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca

BACKGROUND: Melanoma is a highly aggressive malignancy derived from melanocytes. While most melanomas have an identifiable primary site, approximately 3.2% manifest as distant metastases without an evident origin, condition referred to as melanoma of unknown primary (MUP). The cause may be an immune-mediated regression of the primary tumor, characterized by partial or complete replacement of cutaneous melanoma by fibrotic tissue. **CASE PRESENTATION**: A 45-year-old female, otherwise asymptomatic, presented with a firm, non-tender supraclavicular mass. Laboratory findings revealed marked leukocytosis with a left shift, raising suspicion of a hematologic malignancy. However, peripheral blood smear examination excluded the presence of blasts or atypical cells. The biopsy demonstrated features consistent with metastatic malignant melanoma. Extensive dermatological examination and medical history review identified no evidence of a primary lesion, confirming the diagnosis of MUP. Contrast-enhanced Computed Tomography scan revealed widespread metastases, including multiple brain lesions, soft tissue scalp metastases with scalloping of the underlying bone, extensive bilateral pulmonary nodules with hilar and mediastinal invasion, pleuro-pericardial infiltration involving the major thoracic vessels and esophageal structures. Abdomino-pelvic imaging showed hepatic, splenic, adrenal, renal, ureteral, bladder, and gallbladder wall metastases, with additional psoas muscle involvement. Retroperitoneal and mesenteric lymphadenopathy, along with peritoneal nodules, suggested peritoneal carcinomatosis. Bone metastases involved the femur, acetabular and iliac bones, sacrum, and thoracolumbar vertebrae, with spinal canal and adjacent paravertebral soft tissues extension. Although asymptomatic prior to diagnosis, the patient developed acute respiratory failure within days, with altered mental status and clinical suspicion of septic shock. Emergent orotracheal intubation, vasopressor support, and broad spectrum antibiotics were initiated, without any improvement. The clinical status deteriorated rapidly, culminating in multi-organ failure and refractory cardiac arrest. **CONCLUSION**: The particularity of the case is underscored by a clinical paradox: a completely asymptomatic presentation despite severe clinical and paraclinical findings, followed by a fulminant patient deterioration. Furthermore, the case demonstrates numerous rare metastatic sites for MUP: intrathoracic spread with major vascular invasion, as well as renal, genitourinary, and muscular involvement. Most notably is the presence of osseous dissemination-a manifestation reported in only 0.7% of patients within this category.

Keywords: melanoma of unknown primary, malignant melanoma, metastasis, computed tomography

15. **WHEN THE HEART BLEEDS FROM WITHIN: AN INTRAMURAL DISSECTING HEMATOMA: CASE REPORT**

Vlad Pastor [1], Adelin Andrei Cosmin Popescu [1], David-Cristian Păducel [1], Madalina Moldovan, MD, PhD [2]
[1] Faculty of Medicine, "luliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca,
[2] Heart Institute Niculae Stăncioiu Cluj-Napoca

BACKGROUND: Intramyocardial dissecting hematoma (IDH) is a rare incomplete cardiac rupture, most frequently occurring after anterior Myocardial Infarction (Ml). It carries a high mortality risk, approaching 50% when diagnosis is delayed beyond 24 hours from symptom onset. Echocardiography is vital for diagnosis and follow-up, often supplemented by Angie-Computed Tomography(CD and cardiac Magnetic Resonance Imaging. **CASE PRESENTATION**: We report the case of an 83-year-old patient with ST-elevated myocardial infarction (STEMI), initially presenting as chest pain, progressing to dyspnea and loss of consciousness. On presentation, the patient became alert; vital signs were: blood pressure: 142/77 mmHg, heart rate 90 beats/min, and oxygen saturation 100% with 5 L/min oxygen. The admission electrocardiogram indicated atrial fibrillation (AF), complete right bundle branch block, Q waves in V3-V6, l to 2 mm ST elevation in V3-V6, and T-wave inversion in V2-V6. Elevated levels of creatine kinase MB and troponins indicated myocardial necrosis. Echocardiography revealed a non-dilated left ventricle exhibiting severe systolic dysfunction with an ejection fraction of 25% and regional anteroseptal hypokinesia. A 20-mm echogenic apical mass suggested mural thrombosis. Shortly after, AF progressed to complete atrioventricular block and cardiac arrest, successfully resuscitated. Angiography showed proximal-mid Left Anterior Descending artery thrombotic occlusion, treated with a drug-eluting stent and intracoronary nitroglycerin. Circumflex and right coronary arteries had no significant atherosclerosis. Suspected apical thrombosis prompted low-molecular-weight heparin therapy. The patient subsequently developed non-sustained ventricular tachycardia (NSVD. Amiodarone was initiated and follow-up echocardiography demonstrated no resolution of the mass despite anticoagulation. IDH was suspected, and the absence of a ventricular septa I defect supported the differential. Angio-CT confirmed IDH and also identified multiple thrombi within both atria and the right ventricle. Due to advanced age and comorbidities, surgical intervention was deemed to carry greater risk than benefit. The patient stabilized without significant improvement and no IDH progression on follow-up imaging. **CONCLUSION**: In conclusion, IDH is a rare STEMI complication requiring careful diagnosis and management. Persistent ST elevation is a key diagnostic factor. The surgical approach is indicated for rapid progression or hemodynamic instability, while stable cases favor conservative treatment. Prognosis depends on age, hemodynamics, hematoma features, and complications.

Keywords: intramural dissecting hematoma, myocardial infarction, echocardiography, conservative treatment

16. **A THROMBUS TOO FAR - WHEN PREGNANCY UNMASKS A HIDDEN POLYCYTHEMIA VERA**

Diana Ciubotariu [1], Dragoș-Gabriel Popescu [1], Francesca Rămășcanu [1], Asst. Lect. lon Antohe, MD, PhD [2]
[1] Grigore T. Popa University of Medicine and Pharmacy, Iași
[2] Regional Institute of Oncology, Iași

BACKGROUND: Polycythemia vera (PV) is a chronic myeloproliferative neoplasm characterized by clonal erythrocytosis and an increased risk of thrombosis.It accounts for approximately 15-25% of all myeloproliferative neoplasms, with an annual incidence of 0.7-2.6 cases per 100,000 people. In women of reproductive age, PV is rare and often underdiagnosed, with only a limited number of cases reported in literature. Physiological hemodilution and iron deficiency during pregnancy can mask the disease. of Early recognition is crucial since the high risk of miscarriage and maternal thrombosis are the main challenges for the treating physicians. This case illustrates how delayed diagnosis and pregnancy-related masking can culminate in life-threatening portal vein thrombosis. **CASE PRESENTATION**: A 34-year-old woman had documented elevated hemoglobin (18 g/dL) and hematocrit (58%) since 2018, associated with splenomegaly identified in 2019, but no hematologic investigation was pursued. In 2020, during pregnancy, she developed intrauterine growth restriction (IUGR) at 24 weeks and underwent cesarean delivery. Postpartum, she experienced marked fatigue and left upper quadrant pain. She was subsequently referred to the Hematology Department of the Regional Institute of Oncology (IRO) for an etiologic evaluation of splenomegaly. Laboratory findings revealed persistently elevated hematocrit, low erythropoietin levels, and the JAK2 V617F mutation, confirming PV. Despite phlebotomy and cytoreductive therapy with hydroxyurea, follow-up imaging demonstrated chronic portal vein thrombosis with cavernous transformation and massive splenomegaly. Upper endoscopy revealed grade Ill esophageal varices and portal hypertensive gastropathy. These findings supported the diagnosis of PV complicated by portal hypertension secondary to chronic portal vein thrombosis. **CONCLUSION**: This case highlights how subtle or ignored erythrocytosis can precede the diagnosis of PV, with pregnancy acting as both a masking and triggering factor. Portal vein thrombosis, although rare, represents a severe - and sometimes initial - manifestation of PV in young women. These findings emphasize that longstanding unnoticed erythrocytosis should always prompt investigation for an underlying myeloproliferative disease. In pregnancy, vigilance is crucial, as concealed PV may surface dramatically through thrombotic complications - events that endanger not only maternal health but also fetal survival.

Keywords: polycythemia vera, pregnancy, thrombosis

17. **POSSIBLE DRUG-INDUCED LUPUS PRESENTING AS A MULTISYSTEM DIAGNOSTIC PUZZLE**

Elisabeta Sasu [1], Stefan Lacatusu [1], John Ion Slanina, MD [2]
[1] Grigore T. Popa University of Medicine and Pharmacy, Iași,
[2] Nottingham Clinic Sherwood Park Alberta

BACKGROUND: Drug-induced lupus erythematosus (DILE) is a rare, reversible autoimmune condition characterized by lupus-like symptoms and anti-histone antibody formation after exposure to certain medications. While classically linked to hydralazine and procainamide, proton pump inhibitors are rare causes that may complicate diagnosis. **CASE PRESENTATION**: A 63 year old female presented to the University of Alberta hospital with progressive dysphagia, a 20 kg weight loss, fevers, night sweats, and rash. Endoscopy identified findings consistent with H. pylori infection, which was treated with clarithromycin based quadruple therapy. Despite eradication of the infection, she continued to experience post-prandial nausea, epigastric pain, and dysphagia, prompting further evaluation. Weeks later, she developed bicytopenia and a rash on her face and upper chest rash with lymphocytic infiltration on biopsy. PET scan revealed widespread hypermetabolic lymphadenopathy above and below the diaphragm; however, no nodes were accessible to biopsy. Laboratory evaluation showed ANA/ENA positivity, mild normocytic anemia, mild neutropenia, and declining ferritin. The combination of fever, cytopenias, hypertriglyceridemia, and elevated ferritin raised concern for hemophagocytic lymphohistiocytosis (HLH), but the patient's stability and improving parameters made this diagnosis unlikely. The lymphadenopathy suggested a lymphoproliferative process, though fluctuating counts and the absence of a viable biopsy target argued against lymphoma. Bone marrow biopsy was deemed to have limited diagnostic yield. A drug-induced lupus-like reaction to pantoprazole was thus suspected based on partial clinical, serologic, and histopathologic evidence. Diagnostic uncertainty persists due to incomplete symptom chronology and the absence of definitive confirmatory findings. The therapeutic dilemma centers on whether to initiate immunosuppression in the absence of definitive exclusion of malignancy or infection. **CONCLUSION**: Drug-induced lupus may present as a diagnostic chameleon, imitating both malignancy and HLH. Careful integration of history and clinical trajectory is key to unraveling such complex clinical puzzles. Awareness of DILE as being a potential masquerader is essential to avoid invasive investigations and to administer timely treatment.

Keywords: drug-induced lupus erythematosus (DILE), pantoprazole, hemophagocytic lymphohistiocytosis (HLH), lymphadenopathy

18. **MULTIDISCIPLINARY MANAGEMENT OF A POLYTRAUMA PATIENT WITH TRAUMATIC RIGHT CORONARY ARTERY DISSECTION: CASE REPORT**

Andreea-Elissa Dragomir [1], Mihnea-Antoniu Hîrceagă [2], Assoc. Prof. Alexandru Scafa-Udriște, MD, PhD [2]
[1] Carol Davila University of Medicine and Pharmacy, Bucharest
[2] Floreasca Clinical Emergency Hospital of Bucharest

BACKGROUND: Traumatic coronary artery dissection secondary to blunt chest trauma represents a rare but life-threatening event which can result in acute myocardial infarction and may be in some instances accompanied by other acute ischemic vascular events - which proved to be the case of a young polytrauma patient. **CASE PRESENTATION**: A 42-year-old male was admitted after a motorcycle accident with severe polytrauma including multiple rib fractures with hemopneumothorax, latero-thoracic subcutaneous emphysema and extensive pulmonary contusions with pneumatoceles. Although vital signs were initially stable, during monitoring in the Emergency Department the patient suddenly developed inferior ST-segment elevations and third-degree atrioventricular block. He was urgently transferred to the catheterisation laboratory, where coronary angiography revealed a flow-limiting dissection of the proximal right coronary artery; the vessel was successfully revascularized by implantation of a drug-eluting stent. Following angioplasty, the patient developed a paroxysmal episode of atrial fibrillation, prompting initiation of triple antithrombotic therapy. Subsequently, he was transferred to the operating room, where right pleural drainage was performed. Before admission to the ICU, the patient developed sudden focal neurological deficits with complete left upper limb plegia and left lower limb weakness. Cerebral Computed Tomography confirmed an acute fronto-parieto-temporal ischemic stroke in the right middle cerebral artery territory. Conservative therapy was initiated due to contraindication for thrombolysis. Further 24-hour Holter ECG monitoring revealed no recurrent episodes of atrial fibrillation, thus leaving the precise stroke mechanism unknown. Further management included oxygen therapy, fluid resuscitation, vasopressor support adjusted according to hemodynamic requirements, analgesia, dual anti-platelet therapy and cautious anticoagulation adapted to bleeding risk. Under conservative treatment, the patient gradually showed partial motor recovery, regaining some movement of the left upper limb while mobility of the left lower limb remained preserved and he was subsequently transferred to a medical rehabilitation facility in a hemodynamically stable condition. **CONCLUSION**: Polytrauma complicated with acute coronary artery dissection and subsequent ischemic stroke represents a complex clinical scenario which requires early recognition, prompt intervention and continuous multidisciplinary collaboration. Although quite rarely encountered, acute cardiovascular complications may occur following severe trauma, highlighting the critical need of increased clinical vigilance in such instances.

Keywords: polytrauma, traumatic coronary dissection, myocardial infarction, ischemic stroke

19. **AGGRESSIVE NATIVE DOUBLE-VALVE ENDOCARDITIS CAUSED BY COAGULASE-NEGATIVE STAPHYLOCOCCUS. CASE REPORT**

Rebeca-loana Rus [1], Maria-Cristina Simian [1], Norina Șipoș [1], Paula Cornelia Gocan, MD, PhD [2]

[1] Faculty of Medicine, "luliu Hațieganu" University of Medicine and Pharmacy Cluj-Napoca,

[2] "Niculae Stăncioiu" Heart Institute, Cluj-Napoca, Romania

BACKGROUND: Infective endocarditis (IE) remains a severe condition with high morbidity and mortality, especially when complicated by peri-annular extension and systemic embolic events. Coagulase-negative staphylococci (CoNS) are typically associated with prosthetic-valve or nosocomial infections, and rarely cause destructive native-valve IE. We present an exceptional case of native double-valve IE caused by Co NS, marked by extensive peri-valvular abscess formation, fistulization, and multiple embolic complications. **CASE PRESENTATION**: A 64-year-old hypertensive and dyslipidemic male presented with high-grade fever (39.5°C), weight loss (10 kg in two months), reduced exercise tolerance, and neurological deficits. His history included sigmoid polypectomy and diverticulitis, followed by an ischemic stroke. Blood cultures were positive for coagulase-negative staphylococci. Echocardiography revealed large, mobile vegetations on both the native aortic and mitral valves (up to 18 mm), severe acute aortic and mitral regurgitation, and periannular abscesses - one fistulized from the right coronary aortic cusp into the left ventricular outflow tract and another from the mitral annulus into the left ventricle. The patient developed an embolic stroke, splenic infarction, and antibiotic-induced acute renal failure. Despite significant operative risk, he underwent urgent double valve replacement with mechanical prostheses (aortic 21 mm, mitral 27 mm). The postoperative course was favorable, with resolution of fever, negative valve cultures, partial renal recovery, and normal prosthetic function on echocardiographic follow-up. **CONCLUSION**: This case illustrates an uncommon but highly aggressive form of native-valve endocarditis due to coagulase-negative staphylococcus, featuring rapid peri-annular extension, fistulization, and multiple embolic and renal complications. It emphasizes the critical role of early echocardiographic diagnosis, multidisciplinary management, and timely surgical intervention. Given the rare etiology and fulminant presentation, this case contributes valuable insight into the unpredictable behavior of CoNS on native valves and reinforces the need for vigilance following gastrointestinal procedures in inflammatory settings.

Keywords: infective endocarditis, coagulase-negative staphylococcus, peri-annular abscess, native valve, case report

20. **LATE DIAGNOSIS OF EISENMENGER SYNDROME DUE TO UNCORRECTED ATRIAL SEPTAL DEFECT**

Prinshu Gupta [1], Adina Mihailovici [2], Anda Tesloianu [2], Asst. Lect. Dragoș Marcu, MD, PhD [1, 2]

[1] Grigore T. Popa University of Medicine and Pharmacy, Iași,

[2] Clinical Hospital of Pneumophthisiology, Iași

BACKGROUND: Atrial septal defect (ASD) is often asymptomatic until late adulthood, when irreversible complications, including pulmonary arterial hypertension (PAH) and Eisenmenger physiology, may develop. Misdiagnosis or delayed recognition can result in significant morbidity. Early signs may mimic primary pulmonary or hepatic pathology, further complicating diagnosis. **CASE PRESENTATION**: A 65-year-old man presented to the emergency department with progressive shortness of breath and hemoptysis. He had been previously evaluated for suspected pulmonary fibrosis and was referred to our pulmonology service. High-resolution chest CT ruled out interstitial lung disease but revealed markedly dilated pulmonary arteries and enlarged cardiac chambers. He was admitted for further evaluation due to signs of right heart failure, including peripheral edema, ascites, and laboratory findings of hyponatremia and hyperkalemia. Liver ultrasound and laboratory parameters raised suspicion of cardiac cirrhosis. ECG showed fast atrial fibrillation, right axis deviation, and signs of right ventricular hypertrophy. Echocardiography demonstrated a dilated right ventricle with preserved left ventricular systolic function, biatrial enlargement, moderate mitral and tricuspid regurgitation, and a thin interatrial septum with apparent discontinuity, showing a bidirectional shunt. A secundum-type ASD was suspected. Right heart catheterization confirmed the diagnosis of severe PAH with increased pulmonary vascular resistance, consistent with Eisenmenger syndrome due to the ASD. The patient was deemed inoperable and enrolled in the national PAH program. He was initiated on dual-specific vasodilator therapy with sildenafil and bosentan, alongside diuretics, anticoagulation (apixaban), and other supportive medications. On follow-up, he reported clinical improvement in symptoms and functional status (WHO class II), with stable vitals and preserved oxygen saturation. Repeat echocardiography confirmed a non-dilated left ventricle, preserved systolic function, and persistent pulmonary hypertension with right-sided overload. **CONCLUSION**: This case highlights the importance of considering congenital heart disease in adults presenting with unexplained dyspnea and signs of right heart failure. Timely echocardiography and right heart catheterization are essential for diagnosis. Although surgical correction was not feasible, targeted PAH therapy led to clinical improvement and disease stabilization. This aligns with literature describing delayed ASD diagnoses often misattributed to primary pulmonary conditions in older adults.

Keywords: Eisenmenger syndrome, atrial septaI defect, pulmonary hypertension, right heart failure, adult congenital heart disease, case report

21. **EXTREME HbA1c IN TYPE 2 DIABETES: A CLINICAL PARADOX**

Sara-Alexandra Silaghi [1], Asst. Lect. Georgeta Inceu, MD, PhD [1, 2]
[1] "Iuliu Haţieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania,
[2] Emergency Clinical County Hospital, Diabetes, Nutrition and Metabolic Diseases Department, Cluj-Napoca, Romania

BACKGROUND: Type 2 diabetes mellitus (T2DM) is a chronic metabolic disorder characterized by hyperglycemia leading to both micro- and macrovascular complications. Exceptionally high HbAlc levels, such as those above 20%, are rarely seen in clinical practice and usually indicate long-standing, poorly controlled diabetes. Despite this, the degree of organ damage can vary widely between individuals. This case presents a patient with extremely elevated HbA1c and relatively limited microvascular involvment, emphasizing the variability in tissue susceptibility to chronic hyperglycemia. **CASE PRESENTATION:** A 63-year-old male, daily alcohol consumer but non-smoker, initially presented to a cardiology service for dyspnea, decreased exercise tolerance, and episodes of apnea. Cardiologic evaluation revealed cardiomegaly and chronic heart failure (NYHA III) of mixed alcoholic and diabetic etiology. Given the metabolic profile and suspicion of glucose metabolism disorder (symptoms such as polyuria, polydipsia, significant weight loss), the patient was referred to a diabetologist, where laboratory tests confirmed newly diagnosed type 2 diabetes mellitus with an HbA1c of 20.05%, fasting glucose of 394 mg/dl, serum creatinine 1.53 mg/dl, eGFR49 ml/min/1.73 m2, and marked proteinuria. Ophthalmologic and nephrological assessments revealed proliferative diabetic retinopathy and stage 3bA3 chronic kidney disease (KDIGO). The patient refused hospitalization and demonstrated poor adherence to treatment and lifestyle recommendations. He was started on urgent insulin therapy and later transitioned to oral antidiabetic agents with demonstrated cardiovascular and renal protective benefits. After four years of follow-up, HbA1c remained between 8-9%, reflecting persistently suboptimal glycemic control. In January 2024, the patient suffered a left insular ischemic stroke, representing a new macrovascular complication. Remarkably, despite long-standing severe hyperglycemia, no diabetic polyneuropathy or ulcerative lesions developed. **CONCLUSION:** This case illustrates the dissociation between biochemical severity and clinical expression in T2DM. The coexistence of diabetic and alcoholic cardiac damage, moderate microvascular involvement, and newonset macrovascular complications demonstrates the heterogeneous systemic effects of chronic hyperglycemia. The absence of diabetic polyneuropathy despite extremely high HbA1c highlights the unpredictable nature of microvascular injury and suggests individual variability in neural susceptibility to glucose toxicity. These findings reinforce the importance of individualized, multidisciplinary management and strict long-term monitoring, particularly in noncompliant patients presenting atypical complication patterns.

Keywords: Type 2 diabetes mellitus; extreme HbA1c, limited microvascular complications, poor compliance, chronic kidney disease, diabetic retinopathy

22. **GERHARDT SYNDROME: NAVIGATING UNPREDICTABLE EVOLUTION WITH VOCAL THERAPY**

Maria-Daria Brăgaru [1], David-Ștefan Oarga [1], Silvia-Maria Știrbu [1], Rania Malhem, MD [1]
[1] "Iuliu Haţieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

BACKGROUND: Gerhardt syndrome is a distinct form of vocal cord paralysis mainly involving the abductor muscles. The affected cord remains paramedian, causing variable dyspnea while usually preserving phonatory function. A recognized cause is iatrogenic injury after thyroidectomy, as the recurrent laryngeal nerve is highly vulnerable to intraoperative trauma. Although it innervates both adductor and abductor muscles, fibers controlling the abductors appear particularly susceptible. Given the regenerative capacity of peripheral nerves, when respiratory compromise is not severe, current management emphasizes adaptation followed by early targeted laryngeal and vocal rehabilitation to optimize functional outcomes. **CASE PRESENTATION**: We present the case of a 65-year-old female with papillary thyroid carcinoma treated with thyroidectomy and radioiodine therapy, who developed immediate postoperative dysphonia, strider, dysphagia, and aspiration. Indirect laryngoscopy revealed bilateral vocal cord immobility, narrowed airway, and salivary stasis in the piriform sinuses with aspiration and penetration phenomena. Initial management focused on SO monitoring to assess tracheostomy need, maintaining upright position for easier breathing, swallowing exercises (chin-tuck, Mendelsohn maneuver), and supportive care. By postoperative day 14, slight left arytenoid mobility was observed, prompting supervised vocal therapy using mobilization and accent methods, improving breathing and sleep quality. Laryngeal reexamination on day 21 showed partial left vocal cord mobility (hypomobile), right vocal cord immobile in para median position, and mild glottic insufficiency; the patient gradually adapted to vocal and physical effort. At one-year follow-up, although voice strength was acceptable, she reported vocal fatigue. Laryngoscopy confirmed persistent right vocal cord paralysis, full left cord mobility, adequate airway passage, and slight medic-posterior glottic insufficiency. Semi-occluded vocal tract therapy (LaxVox) was initiated, improving voice quality and effort tolerance within one month. **CONCLUSION**: Management of Gerhardt syndrome is closely linked to its unpredictable clinical course. This case highlights the importance of early intervention and patient cooperation. Timely diagnosis allows for interventions that may prevent the need for surgical procedures. Targeted laryngeal and vocal therapy represents an innovative approach, improving swallowing and voice function while sparing patients from the discomfort and risks associated with invasive interventions addressing vocal cord paralysis or glottal insuflciency.

Keywords: Gerhardt syndrome, recurrent laryngeal nerve injury, thyroidectomy, voice therapy, laryngeal rehabilitation

23. **INCLUSION BODY MYOSITIS OVERLAPPING WITH PRIMARY BILIARY CHOLANGITIS: DIAGNOSTIC LESSONS**

Ioana-Daria Mastan [1], David Ioan Hirșman[1], Cristiana Guzu [1], Asst. Lect. Maria Bădărânză, MD, PhD [1]

[1] "Iuliu Haţieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

BACKGROUND: Inclusion body myositis (IBM) is the most common acquired myopathy in adults over 50, marked by a slowly progressive course, asymmetric muscle weakness, and poor response to immunosuppressive therapy. Despite these characteristics, IBM is frequently misdiagnosed with conditions such as polymyositis or neuromuscular junction disorders frequently considered in the differential diagnosis. The diagnostic process can become even more difficult when associated with other diseases, particularly autoimmune disorders, which may produce misleading laboratory findings and similar symptoms. **CASE PRESENTATION**: A 64-year-old woman with an 11-year history of progressive proximal lower limb weakness, muscle pain, and gait impairment showed creatine kinase elevation to five times normal and high-titer ANA(l:320), suggestive of an autoimmune process, although myositis-specific antibodies were negative. An initial diagnosis of polymyositis was made, and corticosteroid with methotrexate therapy was started. With ongoing corticosteroid and methotrexate therapy, the patient's condition progressively worsened, developing dysphagia for solids, proximal upper limb pain, reduced muscle strength in both upper and lower limbs, and palpebral ptosis. Electroneuromyography revealed a chronic myogenic pattern with active denervation. Muscle biopsy from the deltoid was inconclusive, showing only nonspecific changes. Secondary causes of myopathy (thyroid dysfunction, vitamin D deficiency, metabolic or druginduced myopathies) were excluded. Myasthenia gravis was ruled out, as anti-MuSK and anti-acetylcholine receptor antibodies were negative. Manometry showed a mild reduction in peristaltic wave amplitude. Given the clinical course, inclusion body myositis was suspected and later confirmed by a second muscle biopsy of the right vastus lateral is, selected based on prior MRI findings, which demonstrated fiber size variability with atrophy, rimmed vacuoles, mitochondrial aggregates, regenerating and necrotic fibers, focal inflammatory infiltrates, and MHC class I overexpression. The ANA positivity was subsequently attributed to an underlying primary biliary cholangitis, confirmed by cholestatic liver tests and anti-mitochondrial antibodies. Final management focused on supportive measures including physiotherapy, L-carnitine, and coenzyme QlO, as other immunosuppressive therapies had proven ineffective. **CONCLUSION**: This case highlights the difficulty of distinguishing inclusion body myositis from other inflammatory myopathies and emphasizes the key role of muscle biopsy, guided by ultrasound/MRI findings, in securing a definitive diagnosis, preventing unnecessary immunosuppression, and guiding supportive care.

Keywords: inclusion body myositis, polymyositis, primary biliary cholangitis, muscle biopsy, ANA

24. **FROM DARKNESS TO LIGHT: AUTOSOMAL RECESSIVE LEBER HEREDITARY OPTIC NEUROPATHY**

Ilyas El Harous [1], Daria Vreme [1], Doha Choujaaddine [1], Raluca Eugenia Iorga, MD, PhD [1, 2]

[1] "Grigore T.Popa" University of Medicine and Pharmacy, Iași, Romania,

[2] "Prof. Dr. Nicolae Oblu" Emergency County Hospital, Iași, Romania

BACKGROUND: Leber's Hereditary Optic Neuropathy (LHON) is classically a mitochondrial disorder causing irreversible bilateral visual loss in young males. Recently, a novel autosomal recessive form (arLHON) linked to DNAJC30 mutations has emerged, exhibiting a distinct clinical course and remarkable potential for visual recovery. We report a case of a young patient whose vision was almost completely restored following idebenone therapy. **CASE PRESENTATION**: A previously healthy 7-year-old male presented with a subacute, painless decline in vision-first in the right eye, then the left within one month. At admission, best-corrected visual acuity (VA) was profoundly reduced (right eye l/10, left eye 8/10). lntraocular pressure measured 15 mm Hg bilaterally. The anterior segment was normal, yet fund us examination revealed strikingly congested and elevated optic discs with attenuated vessels and absent macular reflexes. Extensive investigations excluded inflammatory, infectious, and demyelinating causes: serologies for Borrelia, Treponema pallidum, anti-AQP4, and antiMOG antibodies were negative, while MRI showed no demyelinating lesions. Routine laboratory parameters were unremarkable. Mitochondrial LHON mutations (m.11778G>A, m.3460G>A, m.14484T>C) were negative. However, nuclear DNA sequencing identified a homozygous DNAJC30 c.152A>G (p.Tyr51Cys) mutation, confirming autosomal recessive LHON. Optical coherence tomography revealed thinning of the retinal nerve fiber layer (RNFL) and ganglion cell layer (GCL). ldebenone (Raxone®) therapy was initiated immediately. Remarkably, after six months, the patient's VA improved to 9/10 in the right eye and 10/10 in the left, with corresponding fundoscopic and structural stabilization. **CONCLUSION**: The arLHON represents often an overlooked but crucial diagnostic consideration in young males with subacute bilateral optic neuropathy and negative mt DNA results, particularly in Eastern European populations. Compared to mtLHON, arLHON manifests earlier, progresses faster between eyes, and demonstrates a superior response to idebenone. Early recognition and treatment may alter the prognosis of what was once considered an irreversible cause of blindness.

Keywords: arLHON, DNAJC30 mutation, idebenone response

25. **GRANULOMATOSIS WITH POLYANGIITIS MASQUERADING AS TUBERCULOSIS: A DIAGNOSTIC CHALLENGE IN CAVITARY LUNG DISEASE**

Miruna-Antonia Ilea [1], Daria-Maria Jidavu [1], Andrei-Mihai Muntean [1], Snr. Lect. Maria Magdalena Tămaș, MD, PhD [1]

[1] "Iuliu Haţieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

BACKGROUND: Granulomatosis with polyangiitis (GPA) is a rare antineutrophil cytoplasmic antibodies (ANCA)-associated small-vessel vasculitis characterized by granulomatous and necrotizing inflammation primarily affecting the respiratory tract and kidneys. Cavitated pulmonary nodules, a hallmark of GPA reflecting necrotizing granulomatous inflammation, may mimic tuberculosis, complicating diagnosis. Alveolar hemorrhage is another significant manifestation causing ground-glass opacities and consolidations. Notably, hemoptysis may be absent in up to one-third of GPA, underscoring the need for high clinical suspicion when concurrent lung and kidney involvement. **CASE PRESENTATION**: A 74-year-old female presented with fever (39°C), night sweats, weight loss, dry cough, dyspnea, arthralgia, and nasal crusting. Past medical history included autoimmune thyroid it is and renal cystic disease. Physical examination revealed pallor and crackles at lung bases. Laboratory testing showed elevated C-reactive protein (151 mg/L), iron deficiency anemia with hemoglobin declining from 10 to 7.2 g/dl, significant microscopic hematuria, mild proteinuria, and serum creatinine increased from 0.98 to 1.75 mg/dl. Thoracic computed tomography (CT) revealed multiple nodules in the right upper and left lower lobes, some cavitated, with consolidation and ground-glass opacities. Bronchoscopy revealed an ulcerative lesion in the left main bronchus. Biopsy demonstrated necrotizing noncaseating granulomatous inflammation. Bronchoalveolar lavage (BAL) showed >80% lymphocytes and was negative for acid-fast bacilli; however, GeneXpert was weakly positive, creating diagnostic uncertainty. Progressive iron deficiency anemia combined with CT findings of ground-glass opacities suggested occult alveolar hemorrhage. Immunologic testing detected c-ANCA (1:320) with anti-proteinase 3 (PR3) antibodies >200 UR/ml, supporting the diagnosis of ANCA-associated vasculitis. The patient received high-dose corticosteroids and cyclophosphamide with empiric antituberculosis therapy. After two months, negative mycobacterial cultures excluded tuberculosis, allowing antimicrobial cessation. Multidisciplinary evaluation confirmed the GPA diagnosis, and the patient continued immunosuppression with favorable clinical response. **CONCLUSION:** This case underscores the diagnostic complexity of distinguishing GPA from tuberculosis in cavitary lung disease. Comprehensive assessment integrating clinical presentation, radiologic findings, histopathology, and ANCA serology is essential for timely diagnosis. Recognition of atypical presentations, particularly silent alveolar hemorrhage, and multidisciplinary collaboration are vital to prevent irreversible organ damage and initiate appropriate immunosuppressive therapy.

Keywords: granulomatosis with polyangiitis, cavitated pulmonary nodules, tuberculosis mimic

26. **CASE REPORT - SPIKING FEVER, RASH, ODYNOPHAGIA, MYALGIA AND HYPERFERRITINEMIA: UNMASKING STILL'S DISEASE**

Alexandru Șomlea [1], Costina Stafie [1], Irina-Maria Rusu [1], Assoc. Prof. Laura Muntean, MD, PhD [1, 2]

[1] "Iuliu Haţieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania,

[2] Rheumatology Clinic, Cluj County Emergency Clinical Hospital, Cluj-Napoca, Romania

BACKGROUND: Still's disease is an autoinflammatory condition encompassing polyarthritis, fever, a salmon-pink nonpruritic maculopapular rash, myalgia, and pharyngitis. Serum ferritin levels, often exceeding 1000 ng/ml, are commonly present and indicative of disease activity. Although diagnostic criteria have not been defined, multiple sets of classification criteria have been proposed. Recognising this disease may be challenging due to the wide array of differential diagnoses. While mild presentations may respond to nonsteroidal anti-inflammatory drugs, severe cases require associating corticotherapy with biological therapy. **CASE PRESENTATION:** A 55-year-old female presented with odynophagia, severe generalised myalgia, fatigue, and fever. Patient's history revealed a radiocarpal monoarthritis of unknown etiology, right partial nephrectomy for renal cell carcinoma, and subacute thyroiditis. Physical examination revealed a transient nonpruritic maculopapular rash on the chest and in the left axillary region, occurring simultaneously with fever spikes of up to 39.4°C and symptom exacerbation. During hospitalization, the patient developed arthritis in the left knee. No signs of splenomegaly or lymphadenopathy were present. Laboratory results showed leukocytosis with neutrophilia, increased levels of C-reactive protein (23.43 mg/di), elevated serum ferritin up to 4338 ng/ml, elevated hepatic transaminases, alkaline phosphatase, and gamma-glutamyl transferase levels. The patient was thoroughly evaluated to establish an infectious etiology, resulting in no relevant findings. Imaging methods included musculoskeletal ultrasonography, computed tomography for the head, neck, and thoraco-abdominal regions, and contrast-enhanced magnetic resonance imaging of the lumbosacral region, indicating no related abnormalities. After excluding a paraneoplastic etiology and ruling out other rheumatologic disorders, the diagnosis was established as Still's disease. The treatment consisted of dexamethasone and anakinra, an interleukin-1 receptor antagonist, which showed symptom relief and a decrease in ferritin, C-reactive protein, and liver enzyme levels. **CONCLUSION**: Patients with the co-occurrence of generalised muscle pain and spiking fever coinciding with a transient rash who also present elevated levels of serum ferritin and leukocytosis may be diagnosed with Still's disease. Due to the lack of diagnostic criteria, identifying this condition remains a diagnosis of exclusion, based on the clinical presentation and laboratory results.

Keywords: Still's disease, rash, ferritin, spiking fever, case report

27. **DIAGNOSTIC PITFALL: A SEEMINGLY COMMON CECUM NEOPLASM UNMASKING A RARE TUMORAL PATTERN**

Tudor-Călin Cozmuța [1], Andrei Szasz, MD [1, 2]
[1] "Iuliu Hațieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania,
[2] "Dr. Constantin Opriș" County Hospital, Baia Mare, Romania

BACKGROUND: Small bowel adenocarcinomas are themselves rare, accounting for less than 2% of gastrointestinal neoplasms, but their occurrence in the jejunum makes them even rarer (29% of the total). The jejunum is the second segment of the small bowel and, due to the nonspecific symptomatology, jejunal neoplasms are usually diagnosed at advanced stages of disease. The cecum marks the transition from the small intestine to the colon and is most often associated with primary cancers rather than metastases. Metastatic spread from this small bowel adenocarcinoma to the cecum is extremely rare and makes this case so unique. **CASE PRESENTATION**: A 34-year-old female patient presented with a protrusive, firm structure in the right iliac fossa. CT scan revealed an approximately 5cm mass attached to the cecum and an abdominal wall biopsy revealed malignancy of gastrointestinal origin. An infiltrative tumor invading the soft tissues and abdominal wall up to the skin was found intraoperatively and right hemicolectomy was performed, resecting all the invaded tissues. Exploratory laparotomy revealed another tumor on the first jejunal loop, which was resected. Histopathology confirmed that the jejunal tumor was the primary tumor, a NOS moderately differentiated G2 adenocarcinoma, and the infiltrative tumor in the cecum was actually a metastasis. This excluded the initial differential diagnosis: primary cecal neoplasm or abdominal wall tumors. The patient had a favorable recovery, but three years later chemotherapy was initiated after new metastatic recurrence was detected. **CONCLUSION**: This case illustrates an extremely rare stage IV jejunal adenocarcinoma in young patient, metastasizing to lymph nodes, peritoneum and a very rare location: the cecum. This case highlights unusual metastatic patterns and diagnostic challenges in patients with rare pathologies and nonspecific symptoms.

Keywords: jejunal adenocarcinoma, gastrointestinal neoplasm, cecum metastasis

28. **ALLERGOLOGIC SURVEY IN PERIANAESTHETIC ANAPHYLAXIS: A CASE REPORT**

David-Ștefan Oarga [1], Maria-Daria Brăgaru [1], David-Cristian Păducel [1], Lect. Nadia Onițiu-Gherman, MD, PhD [1]
[1] "Iuliu Hațieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

BACKGROUND: Perioperative anaphylaxis is a rare but potentially fatal complication, most frequently occurring during the induction of general anesthesia. Neuromuscular blocking agents (NMBAs) are among the leading causative agents. Rapid onset, hemodynamic instability, and nonspecific cutaneous signs make diagnosis challenging in the operative setting. Early identification and appropriate management are crucial, given the potential for multi-organ failure and cardiac arrest. Cases involving multiple drug sensitivities highlight the diagnostic and therapeutic complexity of perioperative anaphylaxis. **CASE PRESENTATION**: We present the case of a 26-year-old female patient admitted to our outpatient allergoanaesthesia clinic for perioperative allergologic survey, in order to identify the culprit agent/agents involved in a perianaesthetic anaphylactic reaction, and for offering safe therapeutic alternatives for subsequent anaesthesia. Following induction of general anesthesia for gynecological surgery- consisting of midazolam, fentanyl, propofol, dexamethasone, and atracurium - the patient developed signs of anaphylactic shock within minutes: generalized erythema, urticaria! pa pules on the thighs, and severe hypotension (45/20 mmHg). Immediate management included intravenous administration of adrenaline, norepinephrine, corticosteroids, and fluid resuscitation, with favorable resolution of symptoms. The patient was subsequently referred to an allergist for specialized testing. Skin prick and intradermal tests revealed sensitization to atracurium and equivocal result to fentanyl. Tramadol, tested as an alternative opioid, gave skin test and specific lgE positive results. Rocuronium and suxamethonium, tested for NMBA cross-reactivity were negative. Tryptase level measured 20 minutes post-event was 10.8 µg/l, greater than basal value 5.94 µg/L, consistent with an anaphylactic reaction. Total serum lgE was elevated (162.3 IU/ml), specific lgE to tramadol was positive (3.29 kU/L), specific lgE to suxamethonium and morphine were negative one month after the event. We identified a latent sensitization for cefazolin. **CONCLUSION**: This case highlights the potentially life-threatening nature of perioperative anaphylaxis, even in patients without a known atopic background. It emphasizes the need for heightened awareness regarding drug- induced hypersensitivity reactions during anesthesia, particularly with commonly used agents such as atracurium. Comprehensive allergologic evaluation plays a key role in identifying the causative agents, guiding the selection of safe therapeutic alternatives, and enabling individualized perioperative planning to prevent recurrence in future surgical procedures.

Keywords: perioperative anaphylaxis, allergoanesthesia, atracurium sensitization, tryptase, multidrug allergy 86

29. **ELUDING THE RIGHT HEART MANAGING SINGLE-VENTRICLE PHYSIOLOGY IN TETRALOGY OF FALLOT**

Silvia-Maria Știrbu [1], Maria-Daria Brăgaru [1], Iulian Fericel [1], Prof. Václav Chaloupecký, MD, PhD [2]

[1] "Iuliu Haţieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania,

[2] Second Faculty of Medicine, Charles University, Prague

BACKGROUND: Atypical forms of Tetra logy of Fallot overlapping with elements of hypoplastic right heart syndrome result in a functionally single-ventricle physiology. When the right heart cannot sustain effective inflow or outflow, the entire circulation depends on the integrity of the left ventricle and mitral valve to maintain systemic and pulmonary balance. Management typically follows a staged palliative course aimed at securing controlled pulmonary blood flow through shunt placement, followed by cavopulmonary anastomosis and eventual Fontan completion. In such cases, where tricuspid valve dysplasia further limits right-sided inflow, the physiopathological challenges are amplified, requiring early surgical adaptation, such as Sano shunt creation and subsequent Glenn anastomosis to bypass the dysfunctional right heart and sustain effective oxygenation. **CASE PRESENTATION**: A female neonate was delivered by cesarean section at 36+6 weeks (2975 g, 47 cm, Apgar 7-8-9). Postnatal echocardiography, prompted by prenatal suspicion of congenital heart disease, confirmed an atypical form of Tetralogy of Fallot. The defect included a hypoplastic and hypertrophic right ventricle with tricuspid valve dysplasia, anomalous pulmonary venous return, and an unusual coronary origin, findings consistent with a hypoplastic right heart syndrome. To compensate for the noncontractile right ventricle and to ensure pulmonary perfusion, a Sano shunt was created with patch augmentation of the hypoplastic pulmonary arteries and surgical closure of the severely dysfunctional pulmonary valve to prevent regurgitation. The postoperative course was complicated by arrhythmia and hemodynamic instability, requiring re-intubation and catheterization. At 18 months, the patient underwent the Glenn procedure with favorable recovery, stable oxygenation, early extubation and low peripheral vascular resistance. Completion of total cavopulmonary connection, with the Fontan procedure planned at 4-5 years of age, is anticipated. **CONCLUSION**: This case illustrates the complex hemodynamic balance required before completion of Fontan circulation. The coexistence of a dysplastic pulmonary valve and hypoplastic right heart posed a major management challenge, prompting a Sano shunt as preparation for cavopulmonary anastomosis. Its relevance lies in the combination of multiple rare anomalies that redefine the physiopathology of Tetralogy of Fallot and underscores the rationale for staged palliation through Glenn and Fontan procedures.

Keywords: hypoplastic right heart syndrome, atypical Tetralogy of Fallot, Sano shunt, Glenn procedure, Fontan circulation, cavopulmonary anastomosis

30. **PEDIATRIC INTRACRANIAL ANEURYSMS: INSTITUTIONAL EXPERIENCE AND ENDOVASCULAR MANAGEMENT OF A TRAUMATIC ANEURYSM**

Smaranda-Elena Vataman [1], Ilinca Sfarti [1], Ana Isabela Dobrin [1], Nicolae Dobrin, MD, PhD [2]

[1] "Grigore T.Popa" University of Medicine and Pharmacy, Iași, Romania,

[2] "Prof. Dr. Nicolae Oblu" Emergency County Hospital, Iași, Romania

BACKGROUND: Pediatric intracranial aneurysms (PIAs) are rare and distinct vascular lesions, accounting for less than 5% of all cerebral aneurysms. Their etiology, morphology, and clinical presentation differ significantly from those seen in adults. Compared to adults, pediatric aneurysms are more frequently located in the anterior circulation, often larger in size, and associated with traumatic, infectious, or congenital factors. Congenital vessel wall anomalies, infections, and trauma are more common contributing factors. Over the last few decades, treatment strategies have progressed from microsurgical clipping to advanced endovascular techniques. Because of the anatomical and physiological characteristics of the developing brain, therapeutic decisions must be highly personalized, weighing efficacy, vessel preservation, and long-term outcomes. Endovascular therapy has emerged as the preferred option in many centers due to its minimally invasive nature and low morbidity. However, challenges remain, such as small vessel caliber, increased radiation sensitivity, long-term implant durability, and the need for customized devices. Recent reports show that endovascular approaches produce positive outcomes. **CASE PRESENTATION:** The case refers to a 4-year-old patient who was on holiday with his parents, who suffered a traumatic fall from a horse. The initial evolution was favourable, with a cervical CT scan revealing only a minor rotation of the upper cervical spine and a normal cranio-cerebral CT scan with no vascular modifications, which were not clinically suspected. After three days, the patient suddenly went into cardiorespiratory arrest and was successfully resuscitated. A subsequent CT scan and CT angiography revealed a progressive dissecting aneurysm of the left vertebral artery at the PICA junction, which is an extremely rare and difficult condition that is frequently associated with a poor prognosis. Endovascular treatment was performed using embolization with microcoils. After the procedure, the patient subsequently underwent rehabilitation therapy and a follow-up MRI examination. **CONCLUSION:** Endovascular treatment is a safe and effective treatment option for pediatric intracranial aneurysms, with favorable clinical outcomes when performed in specialized centers. This case demonstrates the possibility of traumatic dissection-related aneurysms even after mild trauma, emphasizing the importance of prompt vascular imaging in pediatric head and neck injuries. Individualized treatment planning and multidisciplinary collaboration remain critical for improving outcomes and maintaining vessel integrity in the developing brain.

Keywords: pediatric intracranial aneurysm, traumatic aneurysm, endovascular treatment, embolization, microcoils

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31. **WHEN THE EYES DECEIVE THE BRAIN: A RARE HEIDENHAIN VARIANT OF SPORADIC CREUTZFELDT-JAKOB DISEASE**

loana-Delia Dumitrescu [1], Mihaela Bustuchina Vlaicu, MD, PhD [2, 3]
[1] "Carol Davila" University of Medicine and Pharmacy,
[2] Neurology Department of Port Royal Clinique, Universite Paris-Est Creteil, INSERM - U955 - Translational Neuropsychiatry,
[3] IMRB- Institut Mondor de Recherche Biomedicale, Paris, France

BACKGROUND: Creutzfeldt-Jakob disease (CJD) is a rare, rapidly progressive and fatal neurodegenerative disorder caused by the accumulation of misfolded prion proteins. The Heidenhain variant is characterized by early visual disturbances due to occipital cortical involvement. Because of its atypical presentation, patients are often initially referred to ophthalmologists, leading to diagnostic delays and increasing the risk of iatrogenic transmission through ocular procedures. **CASE PRESENTATION**: We present the case of a 65-year-old woman with no significant medical history who developed progressive visual disturbances while on vacation in Vietnam, followed by aphasia, disorientation, and behavioral changes. The initial differential diagnosis included infectious and metabolic encephalopathies, given the geographic context. Brain MRI revealed cortical hyperintensities on FLAIR and diffusion sequences predominantly in the occipital and frontal regions, with mild cortico-subcortical atrophy, but without the typical caudate nucleus involvement. EEG showed periodic slow- wave complexes consistent with diffuse cortical dysfunction. Cerebrospinal fluid analysis was positive for the 14-3-3 protein, supporting the diagnosis of probable sporadic CJD. Genetic testing of the PRNP gene excluded inherited forms. The clinical and radiological findings were consistent with the Heidenhain variant, characterized by early visual symptoms and rapid cognitive decline. Although a definitive diagnosis was eventually achieved, the patient's condition progressively deteriorated due to the lack of any curative treatment, leading to death within months from symptom onset. **CONCLUSION**: This case highlights the diagnostic challenges of the Heidenhain variant of sporadic CJD, particularly when visual symptoms precede cognitive impairment and MRI findings are atypical. Early recognition of this rare presentation is crucial to avoid misdiagnosis, unnecessary ophthalmologic interventions, and the potential risk of iatrogenic transmission.

Keywords: Creutzfeldt-Jakob disease, Heidenhain variant, prion disease, PRNP gene, visual symptoms, MRI, 14-3-3 protein

32. **EMBOLIZATION FOR ACTIVE SHEATH HEMATOMA SECONDARY TO INFLUENZA A IN ELDERLY**

Michał Kołacz [1], Paweł Niczyporuk [1], Helena Żórawska [1], Assoc. Prof. Marzena Wojewódzka-Żelezniakowicz, MD, PhD [2]
[1] *Poland Students Research Group by Department of Emergency Department, Medical University of Bialystok, Poland,*
[2] *Department of Emergency Medicine, Faculty of Health Science, Medical University of Bialystok, Poland*

BACKGROUND: Rectus Abdominis Muscle Sheath Hematoma (RAM SH) is a rare clinical entity that frequently mimics acute surgical abdomen, often requiring prompt diagnosis. While anticoagulation and trauma are the most common etiologies, vigorous coughing, such as that induced by severe respiratory infections like Influenza, can trigger vessel rupture, especially in elderly or compromised patients. Differentiating RAM SH from malignant or post-surgical complications is critical in patients with a history of cancer. **CASE PRESENTATION**: A 72-year-old woman with a history of recently treated colon cancer, atrial fibrillation, and hypertension presented with fever, a severe cough, and acute lower abdominal pain. Physical examination revealed localized abdominal tenderness. Laboratory tests confirmed Influenza A infection and a significant inflammatory response. An emergency Angio-CT scan, performed to rule out oncological complications, instead revealed a large rectus sheath hematoma with active arterial bleeding. The imaging also showed bilateral lung inflammation. Given the active hemorrhage, the patient underwent successful transcatheter embolization. **CONCLUSION**: This case highlights the importance of recognizing Influenza A-induced cough as a rare but significant mechanical stressor leading to active RAM SH, particularly in frail patients with complex medical histories. The presentation can be highly misleading, overlapping with common complications of oncological disease. Angio-CT is essential for rapid, definitive diagnosis, and endovascular embolization offers a safe, minimally invasive, and effective first-line therapy, circumventing the need for open surgical intervention.

Keywords: hematoma, influenza A, embolization, oncological, CT

33. **AN UNEXPECTED SIDE-EFFECT: DELAYED RADIATION PERICARDITIS TEN YEARS AFTER CANCER TREATMENT**

Paul-Florian Radu [1], Ruxandra-Ioana Petreuș [1], Maria Militaru [1], Lect. Florina-Viorica Pârv, MD, PhD [2]
[1] "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj Napoca, Romania,
[2] "Victor Babes" University of Medicine and Pharmacy, Timisoara, Romania

BACKGROUND: Exudative pericarditis poses a considerable diagnostic and therapeutic challenge, particularly in elderly patients with a significant unafavourable cardiovascular history. Although commonly idiopathic or viral in origin, it can reftect an underlying systemic disorder or malignancy, requiring prompt and comprehensive evaluation. This case report presents a complex instance of refractory pericardia! effusion in a high-risk cardiovascular patient with a prior oncologic history. **CASE PRESENTATION**: A 69-year-old male with a history of hypertension, dyslipidemia, obesity, permanent atrial fibrillation, and previously (10 years ago) treated colorectal cancer (surgery) and adjuvant radio and chemotherapy) presented with progressive dyspnea, orthopnea, and fatigue. On admission, the patient presented a heart rate of 86 bpm, arrythmic heart sounds, pulmonary rales, normal blood pressure, mild oxygen desaturation (SpO = 90%), leg edema. Transthoracic echocardiography demonstrated a moderate pericardia! effusion with non-uniform distribution and no signs of tamponade. Laboratory findings showed elevated inflammatory markers (CRP, ferritin, D-dimer), while serum immunologic, biochemical, and microbiologic and also imagistic (echo, CT, MRI) investigations excluded infectious, autoimmune, metabolic, endocrinologic or other neoplastic causes. There were no signs of pericardia! constriction. The only plausible etiology remained the previous radiotherapy performed for the colorectal cancer. Initial management with diuretics and anti-inflammatory (colchicine) therapy yielded only partial improvement. The patient was referred to the cardiac surgery department where pericardiocentesis, pericardia! biopsy (with non-specific inflammatory findings) and pleuropericardial window were performed, with favorable outcome. **CONCLUSION**: This case shows the diagnostic and therapeutic complexity of exsudative pericarditis in patients with multiple cardiovascular risk factors and a prior malignancy. Despite an extensive workup, the etiology remained non-infectious and non-malignant, a late onset exsudative pericarditis caused by the radiotherapy. A multidisciplinary approach and a careful follow-up are essential for optimizing outcomes in such cases.

Keywords: exsudative pericarditis, pericardiocentesis, radiotherapy

34. **WHEN A BLEEDING ULCER REACHES THE SPLEEN: PEPTIC ULCER PERFORATION MASQUERADING AS SPLENIC RUPTURE**

Sandra Hmidi [1], Ferdous Shili [1], Diana Iov, MD, PhD [2]
[1] Grigore T Popa University of Medicine Iași,
[2] Saint Spiridon County Hospital Iasi

BACKGROUND: Upper gastrointestinal (GI) bleeding is a frequent emergency, but splenic involvement as its source is exceptionally uncommon. Peptic-ulcer perforation into the spleen represents one of the rarest complications of gastric ulcer disease. Because its clinical and imaging findings may resemble splenic rupture or vascular injury, diagnosis is often delayed. Early surgical intervention remains essential for survival. **CASE PRESENTATION**: A 44-year-old man presented with acute epigastric pain and repeated haematemesis. He was haemodynamically stable but anaemic (haemoglobin 8.8 g/dl). His medical history included chronic alcoholic pancreatitis and long-term ethanol and tobacco use. Abdominal ultrasound revealed an altered splenic structure with a 30 mm transonic lesion at the hilum, raising suspicion of a splenic-artery pseudoaneurysm. Upper-GI endoscopy showed the stomach filled with fresh blood and a posterior wall bulge suggesting extrinsic compression, but the source of bleeding could not be clearly identified, prompting further evaluation by computed tomography (CT). Contrast-enhanced CT demonstrated a heterogeneous perisplenic collection inseparable from the posterior gastric wall, consistent with active bleeding. Owing to the lack of interventional radiology, emergency exploratory laparotomy was undertaken. lntraoperatively, the posterior gastric wall was adherent to the spleen and pancreatic tail, forming an inflammatory block. En-bloc resection-partial gastrectomy, distal pancreatectomy, and splenectomy-was performed. Histopathological examination confirmed a chronic peptic ulcer perforating directly into the spleen. Postoperatively, the patient developed a mild left pleural effusion and a small subphrenic collection, both of which resolved with conservative management. He was discharged on postoperative day 14 in good general condition. **CONCLUSION**: This case illustrates a rare cause of upper-GI bleeding-direct gastric perforation into the spleen. Its presentation mimicked splenic rupture, underscoring the diagnostic challenge. Prompt surgical exploration and close collaboration between general surgery, gastroenterology, and radiology ensured a favourable outcome. Awareness of this unusual entity is crucial when upper-GI bleeding coexists with atypical splenic findings.

Keywords: upper gastrointestinal bleeding, peptic-ulcer perforation, spleen, distal pancreatectomy, splenectomy

35. **CASE REPORT: CATHETER-DIRECTED THERAPY IN POSTOPERATIVE HIGH RISK PULMONARY EMBOLISM**

Octavian Nițescu [1], Radu Popescu [1, 2], Mihnea Hîrceaga [2], Assoc. Prof. Alexandru Scafa-Udriște, MD, PhD [1, 2]

[1] "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania,

[2] Floreasca Emergency Hospital, Bucharest, Romania

BACKGROUND: Pulmonary embolism is a potentially life-threatening condition commonly linked to major risk factors such as lower limb fracture. We report a sudden onset of pulmonary embolism after surgical repair of metatarsal and humeral fractures, successfully treated with catheter-directed thrombolysis, considered the best option in this case, despite its associated risk and relative complexity compared to systemic thrombolysis. **CASE PRESENTATION**: A 80-year-old female patient was initially admitted to the orthopedics department with a comminuted fracture of the left humerus, as well as multiple fractures involving the left 11-V metatarsals. The patient had no known cardiac diseases. She underwent successive corrective surgical procedures for both fractures. Upon discharge, during mobilization from the hospital bed to the ambulance stretcher, the patient experienced a sudden onset of resting dyspnea associated with chest pain, progressive oxygen desaturation and hemodynamic instability. The electrocardiogram revealed newly developed right bundle branch block and sinus tachycardia (110-120 BPM) - findings consistent with right ventricular strain found in acute pulmonary thromboembolism. Initial echocardiography showed dilated right ventricle, with marked loss in longitudinal and global systolic function, as well as indirect signs of pulmonary hypertension. Computed Tomography Pulmonary Angiography demonstrated extensive arterial filling defects, confirming the diagnosis of high-risk massive bilateral pulmonary embolism. MANAGEMENT Considering the patient's relative contraindication - recent major surgery and trauma within the previous three weeks, catheter-directed thrombolysis was chosen as the life-preserving option. Two Pigtail catheters were introduced via femoral vein puncture, each directed to a pulmonary artery for thrombolysis using Alteplase. The patient demonstrated a favorable postprocedural clinical course, with full remission of her symptoms. She became hemodynamically stable. The EKG showed a regular sinus rhythm at 95 BPM, with resolution of the previously diagnosed right bundle branch block. Subsequent echocardiography showed gradual normalization of right ventricular size and function and remission of pulmonary hypertension. **CONCLUSION**: This case highlights a high-risk, bilateral massive pulmonary embolism in a patient with surgically treated fractures, despite adequate postoperative thromboprophylaxis. Although systemic thrombolysis was strongly indicated, the hemorrhagic risk related to recent fractures and surgeries was very significant, which led to the choice of catheter-directed thrombolysis, with excellent results.

Keywords: pulmonary embolism, catheter-directed thrombolysis, alteplase, right bundle branch block, high-risk trauma

36. **TUMOR-INDUCED OSTEOMALACIA: RARE AND UNDERDIAGNOSED CAUSE OF BONE FRAGILITY**

Bianca-Isabel Ghetler [1], Patricia Silaghi [1],Diana Răzvanță [1], Lect. Cristina-Alina Silaghi, MD, PhD. [1, 2]

[1] "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,

[2] Endocrinology Clinic, Cluj County Emergency Clinical Hospital, Cluj-Napoca, Romania

BACKGROUND: Tumor-induced osteomalacia (TIO) is a rare para neoplastic syndrome caused by excessive secretion of fibroblast growth factor-23 (FGF-23) by phosphaturic mesenchymal tumors. This results in phosphate wasting, impaired bone mineralization, and progressive musculoskeletal symptoms. Due to its nonspecific presentation, the diagnosis of TIO is often delayed, leading to significant morbidity. **CASE PRESENTATION**: We report the case of a 60-year-old woman who presented with sudden-onset left thigh pain that worsened with weight-bearing, requiring the use of a cane. She also experienced bilateral first metacarpal fractures, rib pain aggravated by respiration and coughing, and persistent lower back and rib cage pain. Over two years, she developed diffuse bone pain, progressive muscle weakness, and recurrent fragility fractures involving the vertebral, sacral, and calcaneal regions. Extensive hematologic, rheumatologic, and orthopedic assessments revealed persistent hypophosphatemia and renal phosphate wasting, indicated by a low tubular maximum reabsorption of phosphate to glomerular nitration rate (TmP /GFR). Elevated fibroblast growth factor-23 (FGF-23) levels, combined with low 25-hydroxyvitamin D and 1,25-dihydroxyvitamin D, suggested an FGF-23-secreting tumor. Whole-body MRI identified multiple fractures and a 50 x 24 x 64 mm retrocrural mass initially suspected to be a paraganglioma. However, biochemical testing excluded a secretory tumor. CT-guided biopsy confirmed a phosphaturic mesenchymal tumor, establishing the diagnosis of tumor-induced osteomalacia (TIO). The patient underwent surgical excision, resulting in marked improvement in pain, mobility, and mood. Postoperative monitoring showed normalization of serum phosphate, vitamin D, and FGF-23 levels. Follow-up imaging in 2025 demonstrated no evidence of tumor recurrence, confirming successful treatment and recovery.TIO is challenging to diagnose due to overlap with metabolic bone disorders like osteoporosis. Elevated FGF-23 and targeted imaging are vital for tumor localization. Surgical resection remains the gold standard, though radiofrequency and cryoablation show promise. Long-term follow-up is essential to detect recurrence or persistent osteomalacia. This case's unusual retrocrural tumor location highlights the importance of early recognition and comprehensive biochemical and imaging evaluations for accurate, timely management. **CONCLUSION**: TIO should be suspected in patients with unexplained bone pain and fractures with phosphate abnormalities. Early diagnosis, surgical removal, and multidisciplinary care ensure recovery, prevent complications, and improve long-term outcomes.

Keywords: tumor-Induced Osteomalacia (TIO), phosphaturic mesenchymal tumor, fibroblast Growth Factor-23 (FGF-23)

37. **CLINICAL RELEVANCE OF AN ACCESSORY PULMONARY VEIN IN A PEDIATRIC PATIENT**

Cezar Grecu [1], Mihaela Grecu, MD, PhD [2]
[1] University of Medicine and Pharmacy "Gr. T. Popa" Iași,
[2] Cardiovascular Diseases Institute "George I.M. Georgescu"

BACKGROUND: Atrial fibrillation (AF) is extremely rare in children and adolescents with structurally normal hearts. Pulmonary vein (PV) isolation is a key treatment for AF, aiming to eliminate ectopic electrical foci typically located within the pulmonary veins. Anatomical variants such as accessory PVs, though rare, may harbor additional arrhythmic foci and should be identified prior to intervention to prevent incomplete ablation. **CASE PRESENTATION**: The patient is a 17-year-old previously healthy male who presented with progressive dyspnea over the past year. Clinical examination was unremarkable, except for an irregular heart rhythm. Electrocardiography revealed atrial fibrillation with a ventricular rate of 98 beats per minute. Notably, the patient's father also has a history of lone AF. Due to persistent symptoms despite medical therapy, the patient was referred for catheter ablation (CA). As part of the preprocedural evaluation, cardiac computed tomography was performed, revealing a rare anatomical variation: a fifth, right-sided accessory pulmonary vein in addition to the usual four. The primary focus of the CA procedure was the elimination of rapid electrical activity originating from this accessory PV, which was identified as the source of paroxysmal AF. In addition, the remaining four pulmonary veins were isolated due to the detection of high-amplitude electrical potentials, which could potentially trigger AF in the future. No procedural complications occurred. By the end of the intervention, the patient was in stable sinus rhythm. He remained asymptomatic, with no recurrence of tachyarrhythmia, and required no antiarrhythmic medication. Follow-up monitoring with ECG and Holter was performed at 3 and 12 months post-procedure. **CONCLUSION**: Accessory pulmonary veins can act as hidden sources of ectopic activity and must be considered during ablation to achieve complete and long-lasting rhythm control. Preprocedural imaging plays a crucial role in identifying PV anatomical variants, especially in young patients without an evident cause of AF. This anatomical variant may also contribute to familial aggregation of AF. Identification of the accessory vein was clinically significant, as failure to ablate it might have allowed arrhythmic foci to persist.

Keywords: accessory pulmonary vein, atrial fibrillation, pediatric

38. **CONFRONTING COINCIDENTAL CANCERS: A TRIAD OF PRIMARY MALIGNANCIES IN THE SAME PATIENT**

Alexandru-Ioan Drăghici [1], Paul-Florian Radu [1], Ruxandra-Ioana Petreuș [1], Claudia Ordeanu, MD, PhD [1, 2]
[1] "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,
[2] Institute of Oncology "Prof Dr. Ion Chiricuta", Cluj-Napoca, Romania

BACKGROUND: Multiple Primary Neoplasms (MPNs) are defined as the presence of two or more primary malignancies in a single patient, excluding relapse or metastasis of another cancer. Multiple conditions (Li-Fraumeni, Von Hippel-Lindau Syndrome), which can explain the presence of multiple neoplasms, have been described and included in the current screening, prevention, and treatment guidelines. Despite these significant clinical advancements, the management of such cases, especially those that don't fall into the well-defined Multiple Neoplasm Syndromes, continues to pose a major challenge to clinicians, requiring a complex multi-disciplinary approach. **CASE PRESENTATION**: We present the case of a 60-year-old woman who presented to the routine post-oncologic follow-up with a mass in the left breast. In 2015, the woman underwent chemotherapy and radiation treatment for a FIGO 3B Squamous Cell Carcinoma, which had been managed successfully. Contrast-enhanced CT of the chest, abdomen, and pelvis revealed a suspicious left breast lesion with axillary lymph node involvement as well as pulmonary lesions suggestive of metastases. Along with these, a suspect nodular irregularity in the bladder wall was spotted. Due to these findings, further investigations had to be performed. Bilateral 2D+3D mammography identified an opaque spiculated lesion in the left breast with associated axillary lymphadenopathy (BIRADS 5). The result of the subsequent Ultrasound-Guided Core Needle Biopsy showed it to be an invasive ductal carcinoma; immunohistochemistry showed it to be a triple-negative phenotype (ER-, PR-, HER2-). In order to diagnose the bladder formation, a TUR-V biopsy was performed. Pathology indicated it to be high-grade urothelial carcinoma. A lung biopsy was planned in order to assess pulmonary nodules. These results were reviewed by a multidisciplinary tumor board, and at the time of writing, the patient is still undergoing treatment. **CONCLUSION**: This case highlights the importance of a comprehensive post-treatment monitoring strategy for all patients, even those who do not appear to fall in the well-known Multiple Neoplasms Syndromes. At the same time, a thorough analysis of these kinds of cases is needed in order to optimize treatment options and follow-up protocols, improve patient outcomes, and identify underlying genetic defects and environmental factors, which could explain the multiple neoplasms.

Keywords: multiple neoplasms, squamous cell cervical carcinoma, invasive ductal carcinoma, urothelial carcinoma, post-oncologic follow-up

39. **RECURRENT NEPHROLITHIASIS REVEALS PH1 IN COMPLEX CONGENITAL RENAL ANOMALIES: A CASE REPORT**

Monica Iacoboaia [1], Mădălina Andreea Beldie [1, 2], Marinică Ciprian Buta [1], Iuliana Magdalena Stârcea, MD, PhD [1, 2]
[1] Grigore T. Popa University of Medicine and Pharmacy,
[2] Semmelweis University, Budapest, Hungary

BACKGROUND: Primary Hyperoxaluria Type 1 (PH1) is a rare, autosomal recessive disorder caused by mutations in the AGXT gene, leading to hepatic overproduction of oxalate. This process results in recurrent nephrolithiasis, nephrocalcinosis, and progressive chronic kidney disease, frequently culminating in end-stage renal failure. The diagnostic and therapeutic management of PH1 can be particularly challenging when the disease coexists with significant congenital renal anomalies and complex neurological conditions, which may mask the underlying metabolic defect. **CASE PRESENTATION**: We present the case of a 15-year-old male patient with a known history of horseshoe kidney, right rena pyelocaliceal duplication, right renal malrotation, generalized epilepsy, and moderate intellectual disability. The patient had a history of renal lithiasis, which required a right ureterolithotomy in February 2024. Following surgery, a renal ultrasound performed in August 2024 revealed the presence of newly formed microlithiasis in the left kidney. This recurrence raised suspicion of an underlying metabolic disorder. A 24-hour urine collection revealed significant hyperoxaluria (141.98 mg/24h). Consequently, genetic testing was performed, confirming the diagnosis of Primary Hyperoxaluria Type 1 through the identification of two mutations in the AGXT gene. Treatment with Lumasiran, a small interfering RNA (SiRNA) therapy targeting a key enzyme in oxalate production, was initiated in November 2024. The patient received 3 monthly doses for the loading phase (November 2024 - January 2025), followed by maintenance doses administered every 3 months. At the most recent evaluation in August 2025, the patient remained clinically stable with normal laboratory parameters. **CONCLUSION**: This case emphasizes that metabolic disorders, such as PH1, must be considered in patients with recurrent nephrolithiasis, even in the presence of pre-existing anatomical anomalies. It further| underscores the role of genetic testing in establishing an accurate diagnosis, which is fundamental for initiating targeted therapy. This case presentation also reveals the successful and safe implementation of Lumasiran therapy in a complex patient, highlighting a therapeutic pathway that can modify the natural history of this severe disease and prevent progression to renal failure.

Keywords: nephrolithiasis, genetic testing, primary hyperoxaluria type 1 (PH1)

40. **FROM EOSINOPHILIA TO CRISIS: UNMASKING CHURG-STRAUSS SYNDROME**

Ruxandra-Ioana Petreuș [1], Paul-Florian Radu [1], Maria Militaru [1], Assoc. Prof. Ovidiu Fira-Mladinescu, MD, PhD [2]
[1] "luliu Hatieganu" University of Medicine of Pharmacy Cluj-Napoca, Romania,
[2] Discipline of Pneumology, Center for Research and Innovation in Personalized Medicine of Respiratory Diseases

BACKGROUND: Churgh-Strauss syndrome, also known as eosinophilic granulomatosis with polyangiitis (EGPA) is a rare disease that is denned by necrotizing vasculites of small and medium-sized blood vessels with extravascular granulomas. EGPA is part of the antineutrophil cytoplasmic autoantibody (ANCA)associated vasculitis (MV), despite the fact that ANCA is positive in only 40% of cases. The association with sthma, rhinosinusitis and peripheral eosinophilia is the key feature that sets EGPA apart from other types of MV. **CASE PRESENTATION:** Our case involves a 20-year-old male patient (C.A.) that complained of persistent irritating cough, progressive dyspnea, orthopnea that began two months before. His general condition was altered, and he experienced a febrile syndrome as well. He has a known history with asthma for 3 years, treated with Fluticozone/Salmeterol (inhaled corticosteroid and long-acting beta-agonist) and Montelukast (leukotriene receptor antagonist). He also associated Betametazone (corticosteroid), that was stopped 2 months before his symptoms started. Laboratory testing shows high eosinophilia of 42. 7%. Chest X-rays revealed extensive pulmonary infiltrations, which initially showed partial improvement but then worsened upon re-admission. Immunological and serological tests came back negative. Spirometry revealed obstructive pattern. He also associated inflammatory syndrome. Initially, the patient was started on antibiotics and corticosteroids. Unfortunately, his condition deteriorated rapidly, necessitating re-hospitalisation and mechanical ventilation for three days due to respiratory failure. Aggressive immunosuppressive treatment was initiated, including pulse therapy with Methylprednisolone (lg/day for 3 days) combined with oral Cyclophosphamide (lO0mg/day). Following this intensive regimen, the patient experienced marked clinical recovery. At 4 months post-discharge, he maintained good evaluation of oral Methylprednisolone and Cyclophosphamide, with eosinophil counts normalizing and chest X-rays showing near-complete resolution of infiltrates. **CONCLUSION:** The diagnosis established was Churg-Strauss Syndrome, also known as Eosinophilic Granulomatosis with Polyangiitis. This diagnosis was based on the presence of bronchial asthma, marked peripheral eosinophilia, pulmonary infiltrates, and the development of polyneuropathy, fulfilling ARC diagnosis criteria for the syndrome. This case exemplifies a severe presentation of Churg-Strauss Syndrome. It underscores the critical importance of prompt diagnosis and aggressive, multi-modal immunosuppressive therapy to manage disease progression, prevention of irreversible organ damage and achieve a favourable long-term outcome in this complex vasculitic condition.

Keywords: asthma, peripheral eosinophilia, pulmonary infiltrates

41. **COUGH-INDUCED PNEUMOVESTIBULOPATHY IN A COCHLEAR-IMPLANTED PATIENT: A RARE VESTIBULAR EMERGENCY**

Cristina Dora Cozma [1], Ruxandra Maria Galan [1], Aida Nicoleta Grecu [1], Asst. Lect. Raluca Olariu, MD, PhD [1]
[1] "Grigore T. Popa" University of Medicine and Pharmacy Iași

BACKGROUND: Pneumovestibulopathy (also known as pneumolabyrinth) is a rare and likely underdiagnosed condition caused by the presence of air within the vestibular labyrinth. It is typically associated with trauma, barotrauma, or otologic surgery. Cough-induced pneumovestibulopathy is exceptionally uncommon, and its occurrence in a cochlear-implanted patient introduces additional diagnostic complexity. **CASE PRESENTATION**: We report the case of a young female patient with a history of bilateral cochlear implantation, who was admitted through the vestibular emergency pathway following sudden-onset rotational vertigo, inability to maintain gait, intense nausea, and repeated vomiting, after a forceful coughing episode during an upper respiratory infection. Emergency treatment consisted of vestibuloplegics, systemic corticosteroids, antibiotic coverage, and antiemetics. Otoscopy revealed no abnormalities. Audiovestibular assessment confirmed unilateral vestibular hypofunction. High-resolution temporal bone CT demonstrated air bubbles located in the left utricle and extending into the left semicircular canals, confirming left-sided pneumovestibulopathy, most likely due to a pressure-induced microbreach of the oval or round window. Discussion / Differential Diagnosis: The acute vestibular syndrome initially suggested perilymphatic fistula related to cochlear implantation, viral vestibular neuritis, or acute endolymphatic hydrops. However, the Valsalva-type trigger (cough) combined with the anatomically precise radiological finding of intralabyrinthine air limited to the left vestibular system redirected the diagnosis toward pneumovestibulopathy. Imaging interpretation in cochlear-implanted patients can be challenging, and delayed recognition increases the risk of irreversible cochleovestibular impairment. **CONCLUSION**: This case illustrates a rare presentation of unilateral, left-sided cough-induced pneumovestibulopathy in a cochlear-implanted patient, emphasizing the need to consider this diagnosis in acute vestibular emergencies following sudden pressure changes. Prompt imaging with attention to subtle intralabyrinthine air patterns is crucial to guide targeted treatment and prevent permanent sequelae.

Keywords: pneumovestibulopathy, pneumolabyrinth, cochlear implant, vestibular emergency, acute vestibular syndrome

42. **MEGAESOPHAGUS UNDER PRESSURE: ACHALASIA PUSHING THE LIMITS**

Lisa Răzvan [1], Ilinca Sfarti [1], Raluca Novac [1], Asst. Lect. Ilie-Andreas Savin, MD, PhD [1, 2]
[1] "Grigore T. Popa" University of Medicine and Pharmacy Iasi,
[2] Saint Spiridon County Hospital, Iași

BACKGROUND: Achalasia is a primary disorder of the esophageal musculature characterized by the absence of esophageal peristalsis and by the inability of the lower esophageal sphincter to relax during swallowing. It may be associated with dysphagia, weight loss, and chest pain. Although the etiology of this condition has not been fully elucidated, it is thought to be related to degeneration of the myenteric (Auerbach's) plexus. **CASE PRESENTATION**: A SO-year-old woman with a history of persistent dysphagia for over 10 years, previously managed with psychiatric treatment after an earlier endoscopic evaluation failed to reveal any abnormalities-a difficulty commonly encountered in the diagnosis of achalasia-presented to the emergency department with acute respiratory failure. She subsequently developed a cardiorespiratory arrest, caused by the markedly increased intrathoracic pressure due to esophageal stasis, compounded by compression of adjacent organs. The patient was successfully resuscitated and transferred to the Institute of Gastroenterology and Hepatology at St. Spiridon Hospital in la9i for endoscopic management of distal esophageal stenosis. Endoscopic examination revealed a markedly dilated esophagus with approximately half of its lumen occupied by mixed food debris, along with a papular appearance suggestive of chronic inflammation. Passage into the stomach was difficult due to obstruction of the cardial orifice by food remnants. With considerable effort, the stomach was reached; it appeared reduced in size but without mucosa I lesions. No abnormalities were observed in the duodenum. The cardial stenosis persisted throughout imaging evaluations. The patient's current condition did not allow for esophageal manometry, and therefore she was referred to the surgical clinic for further management. **CONCLUSION**: This case highlights the severe nature of achalasia of the cardia, which, through its chronic progression and complications such as food stasis and acute respiratory failure, can become life-threatening. It emphasizes the importance of physician adaptability when standard diagnostic methods cannot be applied (for example, the impossibility of performing manometry, the gold standard), as well as the critical role of multidisciplinary collaboration (gastroenterology, surgery, intensive care) in ensuring effective patient management and achieving recovery.

Keywords: achalasia, case report, dysphagia, megaesophagus, high-resolution manometry

43. **POST-PNEUMONIC PERICARDITIS, ELEVATED CA-125 AND PULMONARY NODULE: A DIAGNOSTIC DILEMMA**

Andrei-Vlad Pricop [1], Robert Aradei [1], Francesca Rămășcanu [1], Maria-Ruxandra Cepoi, MD [1, 2]
[1] "Grigore T. Popa" University of Medicine and Pharmacy Iași,
[2] Saint Spiridon County Hospital, Iasi, Department of Cardiology

BACKGROUND: In the antibiotic era, pericarditis as a complication of bacterial pneumonia has become rare. When accompanied by cytopenia, a pulmonary nodule, and elevated CA-125, this presentation can closely mimic malignancy and create diagnostic uncertainty. We report the case of a 66-year-old woman who developed post-pneumonic pericarditis with reactive CA-125 elevation, an incidental pulmonary nodule, and hematologic abnormalities, underscoring the importance of multidisciplinary evaluation. **CASE PRESENTATION**: A 66-year-old woman with hypertension presented with fever, shivering, and dyspnea. Chest X-ray revealed bilateral diffuse opacities and left pleural effusion, with markedly elevated inflammatory markers. She was diagnosed with bilateral basal pneumonia and parapneumonic effusion, along with a urinary tract infection of unspecified etiology. Laboratory tests showed anemia and thrombocytopenia. She received ceftriaxone with transient improvement. One month later, she was readmitted with anterior chest pain radiating posteriorly, worsened by inspiration and relieved by leaning forward, accompanied by dyspnea and fever. Physical examination revealed bilateral leg edema and a pericardial friction rub. Laboratory tests again showed anemia, thrombocytopenia, and elevated inflammatory and cardiac markers. ECG demonstrated diffuse PR-segment depression, and echocardiography revealed a circumferential pericardial effusion of 10 mm with fibrin deposits and preserved ventricular function. Non-contrast chest CT identified a 7 mm subsolid pulmonary nodule in the right upper lobe, small right pleural fluid, and pericardial effusion adjacent to the left ventricle Serum CA-125 was mildly elevated (41.2 U/mL). Thoracic surgery advised imaging follow-up at three months. Treatment with NSAIDs and colchicine led to clinical and echocardiographic improvement. **CONCLUSION**: This case shows how post-infectious pericarditis, though rare today, may mimic malignancy when associated with pleuropericardial effusion, pulmonary nodules, elevated CA-125, and cytopenias. Recognizing inflammatory patterns and coordinating multidisciplinary follow-up are essential to ensure accurate diagnosis and avoid unnecessary oncologic interventions.

Keywords: post-infectious pericarditis, pleuropericardial effusion, pulmonary nodule, reactive CA-125, post-pneumonic complication, cytopenia

44. **WHEN COVID LINGERS: HIGH-RISK SADDLE PULMONARY EMBOLISM UNVEILED**

Francesca Rămășcanu [1], Robert Aradei [1], Andrei-Vlad Pricop [1], Prof. Viviana Onofrei, MD, PhD [1, 2]
[1] Grigore T. Popa University of Medicine and Pharmacy,
[2] Saint Spiridon County Hospital, Iasi, Romania

BACKGROUND: Pulmonary embolism (PE) represents a major medical emergency, with a mortality reaching up to 30% in the absence of prompt treatment. SARS-CoV-2 infection has been recognised to induce a sustained increased risk of venous thromboembolism (VTE) up to 2-6 months after COVID-19 infection, even in non-hospitalised patients. In this context, a "saddle" thrombus represents a rare and severe form of PE, associated with an immediate life-threatening risk. **CASE PRESENTATION**: We present the case of a 68-year-old female patient with arterial hypertension, insulin-treated type 2 diabetes mellitus, and grade I obesity, who presented to the emergency department with worsening dyspnea in the last four days. Her recent medical history was notable for a COVID-19 infection approximately one month prior. On admission, the patient was normotensive, tachycardic, and Sp02 of 95% under oxygen therapy. Laboratory tests revealed elevated D-dimer levels, the ECG and echocardiography showed right heart strain (S1Q3T3 pattern, VD>VS, TAPSE 17 mm, septal bowing). Pulmonary CT angiography confirmed a massive PE with a "saddle" thrombus at the bifurcation of the pulmonary trunk, with bilateral extension and Doppler examination revealed thrombosis of the left popliteal vein. During the course, her general condition deteriorated, with persistent hypotension indicating hemodynamic instability. Given the classification of the PE as high-risk, systemic thrombolysis with alteplase was administered, resulting in a favourable outcome. **CONCLUSION**: This case illustrates a massive PE following a COVID-19 infection, in the absence of a classic triggering factor, supporting the hypothesis that SARS-CoV-2 may act as an additional trigger through endothelial inflammation, platelet activation and upregulation of the coagulation cascade both during and after the acute infection. The diagnosis of a "saddle" thrombus, with an estimated prevalence of approximately 10%, is associated with severe hemodynamic compromise and high mortality rate if untreated. This case highlights the need for vigilant post-COVID surveillance for VTE, emphasizing the importance of rapid multimodal imaging and an assertive management approach, even in patients who may initially appear clinically stable. Furthermore, this case raises the question of the potential benefits of individualized LMWH thromboprophylaxis in selected high risk post-COVID patients to prevent thromboembolic events.

Keywords: pulmonary embolism, saddle thrombus, COVID-19, venous thromboembolism, thrombolysis, hemodynamic instability, thromboprophylaxis

45. **WHEN RARE DISORDERS COLLIDE: AUTOIMMUNE HEMOLYTIC ANEMIA AND NEPHROTIC SYNDROME IN PREGNANCY**

Iarina-Emma Ivanovici [1], Elena Mihalceanu [1, 2], Ștefan-Rareș Maxim [1], Prof. Daniela-Cristina Dimitriu, MD, PhD [1]
[1] Grigore T. Popa University of Medicine and Pharmacy,
[2] Obstetrics and Gynecology Hospital Cuza Voda, Iași

BACKGROUND: Autoimmune hemolytic anemia (AIHA) is a rare disorder, with an estimated incidence of 0.8-3 cases per 100,000 individuals per year; de novo or relapsing cases during pregnancy are even rarer, mostly reported in isolated cases. Nephrotic syndrome affects approximately 0.012-0.025% of pregnancies and carries notable maternal and fetal risks. Their coexistence in pregnancy is clinically relevant, highlighting the complexity of overlapping hematologic and renal disorders. Because anemia is common in pregnancy, autoimmune causes may be overlooked, underscoring the importance of interdisciplinary collaboration and diagnostic vigilance. **CASE PRESENTATION**: A 35-year-old pregnant woman, with a history of partial right nephrectomy for renal tumor five years earlier and secondary grade Ill hypertension, presented with nephrotic syndrome of unknown etiology, under treatment with aspirin (Aspenter) and methyldopa (Dopegyt). Laboratory evaluation revealed severe anemia (6.6 g/dL), elevated reticulocyte count (9.8%), and an intensely positive direct Coombs test, findings consistent with warm-type AIHA. A possible trigger considered was methyldopa (Dopegyt), known for its rare association with drug-induced AIHA. Other causes of anemia were excluded based on normal corresponding parameters. The methyldopa dose was progressively reduced and replaced by antihypertensive therapy including prednisone, nifedipine, and metoprolol. The patient received intravenous immunoglobulin (Privigen) for four consecutive days and methylprednisolone (Medrol) 16 mg daily, as recommended by the hematologist. Proteinuria persisted but renal function remained stable, consistent with the known nephrotic syndrome. Obstetric evaluation revealed normal fetal growth and no signs of distress. The patient's hematologic parameters improved progressively following treatment. Pregnancy continued without major complications and ended successfully at 36 weeks and 4 days, with the delivery of a healthy newborn. Post-treatment hemoglobin and renal values normalized during follow-up. **CONCLUSION**: This case highlights the importance of early recognition and coordinated care in pregnant patients with concurrent hematologic and renal disease. The coexistence of AIHA and nephrotic syndrome represents a diagnostic and therapeutic challenge that can be successfully managed through individualized, multidisciplinary intervention. According to current literature, warm-type AIHA during pregnancy remains rare but has favorable outcomes when promptly diagnosed and appropriately treated.

Keywords: autoimmune hemolytic anemia, nephrotic syndrome, pregnancy, methyldopa, multidisciplinary management

46. **WHEN CLOTTING LOOKS LIKE BLEEDING: A PARADOX OF ELEVATED A PTT IN DVT**

Robert Aradei [1], Francesca Rămășcanu [1], Andrei-Vlad Pricop [1], Asst. Lect. Adriana Chetran, MD, PhD [1]
[1] Grigore T. Popa University of Medicine and Pharmacy

BACKGROUND: Antiphospholipid syndrome is an autoimmune disease characterised by thrombosis and/or pregnancy morbidity in association with persistently positive antiphospholipid antibodies (a PL). What is particular about a PL is that they prolong the activated partial thromboplastin time (a PTT), binding to the usual reagents used for a PTT testing, although in vivo they associate thrombophilia. There are 3 a PL: lupus anticoagulant (LA), anticardiolipin, and anti-2 glycoprotein-1. **CASE PRESENTATION**: We report the case of a 37-year-old female who presented to the ER with a one-week history of pain, oedema, and cyanosis of the left lower limb. Her medical history was notable for two conditions associated with thrombophilia: the presence of LA and a Factor V Leiden mutation (heterozygote), which was discovered following a thrombotic event 10 years prior. She had been on long-term treatment with low-dose aspirin and sulodexide (Vessel Due®). The laboratory results showed an elevated aPTT of 60 seconds. Extensive deep vein thrombosis (DVT) of the left common femoral vein with extension into the saphenofemoral junction was found. CT pulmonary angiography was performed to exclude pulmonary embolism. Therapeutic anticoagulation was initiated with unfractionated heparin (UFH), chosen for its short half-life, ease of titration, and broad inhibition of the coagulation cascade. Dosage adjustment based on the aPTT was made difficult by the presence of the LA. Treatment with a vitamin K antagonist (VKA) was initiated, with maintenance of the INR within the therapeutic range of 2 to 3. Regarding long-term prophylaxis, current guidelines recommend the use of VKAs over direct oral anticoagulants, based on studies showing the superiority of warfarin compared to rivaroxaban in APS. **CONCLUSION**: This case is particular because the presence of LA alters the choice of proper anticoagulation therapy and makes a PTT monitoring of UFH therapy unreliable. Current guidelines suggest that APS patients with an unprovoked venous thrombotic event (VTE) should be offered indefinite anticoagulation. VKA with a target INR range of 2.0-3.0 is the anticoagulant of choice for patients with APS and VTE requiring long-term anticoagulation. Bleeding risk must always be considered. The presence of the FactorV Leiden mutation does not specifically alter the choice of anticoagulant therapy.

Keywords: antiphospholipid syndrome, deep vein thrombosis, lupus anticoagulant, anticoagulants, thrombophilia, unfractionated heparin, vitamin K antagonist

47. **DEFYING THE ODDS: PROLONGED SURVIVAL IN LOCALLY ADVANCED PANCREATIC CANCER: A CASE REPORT**

Ioana Bogatu [1], Asst. Lect. Maria Barbu, MD, PhD [1]
[1] "Carol Davila" University of Medicine and Pharmacy

BACKGROUND: Pancreatic cancer is among the deadliest types of gastrointestinal cancers, with a poor prognosis due to its aggressiveness (l). It is known for its local tumour extension to the liver, other common sites including the lung, bone and distant lymph nodes (2). Despite all the latest advances made in treatment over the years, the 5 year relative survival rate remains at 16% for locally advanced pancreatic cancers and only 3% for the metastatic disease (3). This case underlines the potential benefit of an aggressive multidisciplinary approach in selected patients, combining surgery (4), FOLFIRINOX multi-target treatment (5,6) and radiation therapy (7,8, 9). **CASE PRESENTATION**: This report describes the case of a 69-years old diabetic, hypertensive, obese female patient who progressed to metastatic adenocarcinoma of the pancreas 3 years after initial diagnosis. The patient was first diagnosed in 2021 with locally advanced pancreatic adenocarcinoma. Surgical resection and adjuvant systemic chemotherapy with mFOLFIRINOX allowed for complete oncological response until January 2024 when the patient presented with liver metastasis. Beginning February 2024, 12 cycle regimen of multi-target chemotherapy with mFOLFIRINOX is initiated biweekly, poorly tolerated due to digestive toxicity, followed by SBRT (stereotactic body radiation therapy) for the hepatic metastasis. Post SBRT maintenance treatment is initiated with SFU+Leucovorin. Serial CT and MRI scans show partial reduction of hepatic metastasis. Moreover, tumour markers remain within normal limits. Supportive care is initiated in the form of nausea and allergy prophylaxis, intravenous hydration and dietary regimen and port-a-cath maintenance. **CONCLUSION**: This case highlights that prolonged overall survival in pancreatic cancer, though rare, can be achieved through individualised treatment and close follow-up. Equally important, the active involvement of the multidisciplinary team at each stage of the disease progression ensured timely adaptation of therapeutic strategies, optimised patient care and supported quality of life. Multidisciplinary collaboration remains essential in managing complex oncologic cases and can significantly influence outcomes even in cancers with traditionally poor prognosis.

Keywords: pancreatic cancer, multidisciplinary approach, quality of life, case report

48. **HOW LONG CAN IT TAKE TO FIND INFARCT-RELATED ARTERY (IRA)?**

Anna Stanaszek [1], Michał Chyrchel, MD, PhD [1]
[1] Clinical Department of Cardiology and Cardiovascular Intervention, Faculty of Medicine, Jagiellonian University Medical College, Krakow, Poland

BACKGROUND: In ST-segment elevation myocardial infarction (STEMI), the standard of care involves rapid identification and mechanical reperfusion of the infarct-related artery (IRA), typically visualized by coronary angiography. However, in rare cases-less than 2-3%—IRA cannot be clearly identified despite classical clinical and electrocardiographic presentation. **CASE PRESENTATION**: A 59-year-old male with hypertension, hypercholesterolemia, and HFmrEF was admitted in August due to suspected acute myocardial infarction (AMI). He reported typical anginal chest pain and represented a high-risk demographic profile. ECG showed sinus rhythm at 75 bpm with ST-segment elevations in lateral leads. Laboratory tests revealed significantly elevated troponin | Ultra (35,881 pg/mL) and hyperglycemia (122 mg/dl). Transthoracic echocardiography demonstrated hypokinesia of the apical and mid segments of the lateral and anterior walls, with a left ventricular ejection fraction of 47%, consistent with ischemic myocardial injury, typically associated with an occluded coronary artery. Emergency coronary angiography via radial access revealed non-obstructive coronary artery disease, with up to 30% stenosis in the LAD and left marginal branch. Despite strong clinical, ECG, and biochemical evidence of STEMI, no culprit lesion was identified. This discrepancy posed a diagnostic challenge. After comprehensive evaluation and failure to localize the IRA, the search was concluded, and the patient was managed conservatively with optimal medical therapy. He was discharged in stable condition with a plan for follow-up. In September, repeat coronary angiography revealed a previously undetected critical 90% stenosis in the proximal diagonal branch (DG), suggesting this lesion may have represented the initially missed IRA. The lesion was successfully treated with implantation of a drug-eluting stent (DES, 2.25 × 23 mm), and the patient remained hemodynamically stable and asymptomatic post-procedure. **CONCLUSION**: Such cases represent a critical diagnostic dilemma, where missing the IRA can have serious clinical consequences. In the presence of strong clinical suspicion, reliance on angiography alone may be insufficient, as subtle or concealed lesions can be easily overlooked. In these situations, repeat angiography combined with IVUS or OCT becomes essential-not optional-to uncover the true culprit lesion. Timely identification is crucial, as any delay in diagnosis and treatment risks irreversible myocardial damage.

Keywords: STEMI, infarct-related artery (IRA), coronary angiography, diagnostic uncertainty

Surgical Poster Presentations
Original Study

1. ENHANCING KNEE ARTHROPLASTY DOCUMENTATION: AN AUDIT AND QUALITY IMPROVEMENT INITIATIVE

Bianca-loana Gutu [1], Horia Tomescu [1], George Avram [2], Vlad Predescu [2]
[1] University of Medicine and Pharmacy Carol Davila, Bucharest, Romania,
[2] Ponderas Academic Hospital, Bucharest, Romania

INTRODUCTION: Accurate and comprehensive surgical documentation is essential for patient safety, continuity of care, systematic research, and medico-legal validity. This audit aimed to evaluate the quality and comprehensiveness of total knee arthroplasty operative notes within the Orthopaedics Department of a private hospital in Bucharest, Romania, and to compare current practice with the documentation standards of the British Orthopaedic Association (BOA). **MATERIALS AND METHODS**: A retrospective cohort study was conducted on the operative notes of 72 patients who underwent primary total knee arthroplasty between October 1st and December 31st, 2024. Each transcript was assessed using a standardised checklist based on BOA recommendations, comprising 77 parameters covering patient identifiers, diagnosis, preoperative and intra operative steps, implant data, closure technique, and complications. Data were analysed in Microsoft Excel, and documentation quality was expressed as the percentage of fields appropriately completed. **RESULTS**: Overall documentation accuracy averaged 59.1%. The most consistently recorded aspects were intervention type (94.4%), surgical approach (100%), and radiological assessments (77.8%). While all protocols specified a diagnosis, only 5.5% identified the side affected by arthrosis. Information regarding implant components (femoral, tibial, and patellar)was present in 58% of records, although several component characteristics were never reported. Critical intraoperative details, such as anatomical variations and steps taken to protect key structures, were not described in any case. Documentation of range of motion, vascular and neurological integrity, and antibiotic prophylaxis was rare, appearing in fewer than 5% of notes. In over 90% of procedures, the same lead surgeon operated; however, documentation was completed by multiple team members, demonstrating consistent omissions across individuals. To address these deficiencies, a quality improvement project was implemented, introducing a structured electronic form that guides clinicians through mandatory documentation fields and automatically generates a standardised operative report. The second audit cycle assessing the effectiveness of this intervention is currently ongoing. **CONCLUSION**: The audit revealed notable variability and gaps in surgical documentation for knee arthroplasty compared to BOA standards. Implementing a structured digital reporting tool, along with author identification, has strong potential to enhance accuracy, accountability, and standardisation. Ongoing reaudit and clinician feedback will be essential to sustain improvements in documentation quality.

Keywords: total knee arthroplasty, clinical audit, surgical documentation

Surgical Slideshow Presentations
Review

2. CAROTID WEB

Gabriela Dulgheru [1], Lect. Radu Rogoveanu, MD [2]
[1] Carol Davila University of Pharmacy and Medicine,
[2] University Hospital Birmingham

INTRODUCTION: The carotid web is a non-atherosclerotic intimal lesion that disrupts normal blood flow within the carotid bulb or proximal internal carotid artery, creating turbulence that favors thrombus formation and subsequent ischemic events. Surgical intervention remains the preferred treatment, with both stenting and endarterectomy representing viable options. Current research is focused on determining the most effective therapeutic strategy to minimize recurrence and optimize patient outcomes. **MATERIALS AND METHODS**: This review was conducted through an analysis of the available literature in the PubMed database, published between 2022-2025. The search was performed using the keywords "carotid web," "stroke", "treatment," and "endarterectomy." Original articles, observational studies, case reports, and systematic reviews relevant to the anatomy, pathophysiological mechanisms, diagnosis, and treatment of the carotid web were included. Additional information was gathered from publications in the Journal of Vascular Societies and the Journal of Stroke. **RESULTS**: Based on the reviewed articles, this pathology has been shown to occur more frequently in young individuals, with a mean age between 40 and 45 years, and with a higher prevalence among women and individuals of African origin. Therapeutic options can be either medical or surgical. However, studies have demonstrated that medical therapy carries an increased risk of stroke recurrence, which is why it is recommended to combine it with a surgical intervention. It has been reported that combining | antiplatelet therapy with stenting may lead to bradycardia as an adverse reaction. Furthermore, the analyzed studies indicate that neither stenting nor endarterectomy is associated with immediate or short-term postoperative complications. Nevertheless, some studies raise concerns regarding the long-term efficacy of stenting due to the possibility of restenosis, as the proliferative lesion is not removed but merely isolated. **CONCLUSION**: Carotid web is a rare and often underdiagnosed pathology, typically affecting young patients with cryptogenic strokes. Surgical treatment by stenting or endarterectomy is currently recommended, but existing studies are based on small patient cohorts, making the reported 0% postoperative stroke rate inconclusive. Endarterectomy appears superior by completely removing the lesion and restoring physiological flow, whereas the efficacy of stenting depends on stent characteristics and positioning, which may leave residual turbulence and increase the risk of restenosis. Considering the short follow-up periods of about one year, this does not allow for adequate surveillance of long-term intimal reactions after the two procedures, preventing the identification of a definitive superior approach.

Keywords: carotid web, endarterectomy, stroke, treatment

3. **RECONSTRUCTIVE SURGERY IN COMBAT TRAUMA: CURRENT ADVANCES AND ONGOING CHALLENGES**

Andrei-Lucian Bocea [1], Andrada-Alexandra Drăguț [2]

[1] Military Medicine Institute, University of Medicine and Pharmacy "Carol Davila",

[2] University of Medicine and Pharmacy "Carol Davila"

INTRODUCTION: Combat trauma represents one of the most complex challenges in modern surgery due to massive tissue destruction, disrupted vascularization, and high contamination. Extremity injuries account for 39-54% of all combat wounds, while vascular injuries occur in approximately 12% of cases. The reconstructive effort requires a multidisciplinary approach combining orthopedic, plastic, and vascular expertise to achieve both survival and functional restoration. **MATERIALS AND METHODS**: A narrative and semi-systematic review was performed using PubMed, Scopus, and Cochrane databases (2005-2025). Included publications consisted of clinical series, multicenter cohort studies, and NATO and United States Department of War guidelines. **RESULTS**: In combined vascular and limb reconstruction, overall limb salvage reached 81%: 66% for lower extremities and 100% for upper extremities. Multidisciplinary reconstructive approaches reported flap success rates of 96.3% with an amputation rate of only 12.7%. In bone transport and rail fixator techniques, the average bone defect was 7.0 cm (range 5-9.5 cm), with a healing index of ~ 35.9 days/cm and an average frame duration of 35.8 weeks (range 23-74). Complications of bone transport included pin tract infection in 24%, knee stiffness in 14%, pin loosening in 6%, deep bone infection in 4%, and additional bone graft requirement in 12%. The Masquelet induced-membrane technique has been successfully used for segmental bone defects ranging from 5 to 15 cm, achieving high consolidation rates when stable fixation and vascularized soft-tissue coverage were provided. **CONCLUSION**: Modern reconstructive surgery in combat trauma achieves limb salvage rates exceeding 80-90% through integrated vascular, orthopedic, and microsurgical collaboration. High flap success (≥96%) and progressive bone regeneration methods allow reconstruction of segmental defects up to 15 cm. However, prolonged treatment duration, recurrent infections, and mechanical complications remain major challenges. Future developments should focus on early microsurgical intervention, modular reconstructive protocols, bioengineered scaffolds, and regenerative technologies that shorten healing time and improve functionality.

Keywords: combat trauma, reconstructive surgery, vascular repair, bone transport, limb salvage, flap survival, military surgery

Surgical Poster Presentations
Case Reports

4. **HIGH-GRADE BLADDER TUMOR AND MULTIFOCAL UPPER TRACT RIGHT UROTHELIAL CARCINOMA: CASE REPORT**

Iulian Fericel [1], Bianca Rus [1, 2], Mihaly Zoltan Attila [1, 2], Snr. Lect. Iulia Andras, MD, PhD [1, 2]

[1] *"Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca,*

[2] *"Iuliu Haţieganu" University of Medicine and Pharmacy, Department of Urology, Municipal Hospital, Cluj Napoca*

BACKGROUND: Urothelial carcinoma is a heterogeneous malignancy that can arise throughout the urinary tract. Involvement of the upper urinary tract represents only 5-10% of urothelial carcinomas. The coexistence of high-grade bladder and upper tract urothelial tumors is more frequent than traditionally perceived, reflecting the multifocal nature of urothelial carcinogenesis. Such complex cases require careful individualization of management strategies to optimize oncologic and functional outcomes. **CASE PRESENTATION:** We report the case of a 79-year-old female patient who presented with macroscopic haematuria for one month. Paraclinical investigations revealed severe anemia with 6.8g/dl haemoglobin, kidney injury with 1.48mg/dl serum creatinine (eGFR 33 ml/min/l.73m2), uroculture and hemoculture positive with E.coli and cardiac comorbidities. A tu moral formation of 30 mm was observed on echography, confirmed by an abdomen-pelvis native CT scan. Also a 3rd grade right ureterohydronephrosis was revealed and raised the suspicion of multifocal upper tract urothelial cancer on the same side. An emergencyTURBTwas performed and the histopathological result was high-grade urothelial papillary carcinoma-G3, pTx. A re-staging TURBT was performed and showed no muscular involvement. Once renal function improved, a CT scan including the urographic phase was performed and revealed a 48.5 mm right renal pelvic tumor and a 16 mm right distal ureteral mass. Laparoscopic right radical nephroureterectomy was performed, confirming multifocal high-grade (G3) papillary urothelial carcinoma, pT2(m). Postoperative follow-up shows no local or distal urothelial recurrence. In such complex cases, clinical decisions require careful weighing of risks and benefits. Initially, contrast-enhanced CT was avoided to prevent further renal impairment, as the patient presented with kidney failure and sepsis. Uretero-hydronephrosis, multifocal distribution and dimension of tumoral masses were all criteria to support a radical treatment for right upper tract urothelial cancer. After confirming the non-invasive nature of the bladder tumor, bladder sparing was considered, with imaging and endoscopic follow-up. This approach also considered the patient's septic status and significant comorbidities. **CONCLUSION**: Synchronous high-grade urothelial carcinoma of the bladder and the upper urinary tract is an established, although relatively uncommon clinical entity. Its multifocal nature and patient comorbidities advocate for individualized diagnostic and therapeutic decisions. In practice, clinicians must balance diagnostic yield against risks.

Keywords: multifocal upper tract urothelial carcinoma, transurethral resection of bladder tumor (TURBT), nephroureterectomy

5. **ECHOES IN THE PELVIS: THE PERSISTENCE OF AGGRESSIVE ANGIOMYXOMA - A CASE STUDY**

Bianca-Andreea Pascu [1], Snr. Lect. Marian Marincaş, MD, PhD [1, 2]
[1] Carol Davila' University of Medicine and Pharmacy,
[2] Oncological Institute 'Prof. Dr. AI. Trestioreanu', General Oncological Surgery Department

BACKGROUND: Aggressive angiomyxoma (AA) is a rare mesenchymal tumor that primarily affects the pelvic and perineal regions, predominantly in women of reproductive age. It is slow-growing but locally invasive, with a high recurrence rate. **CASE PRESENTATION**: We present the case of a 47-year-old woman who developed a large recurrence six months after undergoing excision of a pelvic AA invading the bladder dome. The recurrent tumor measured 24.7 x 16 x 32 cm, weighed 8 kg, and was associated with an additional 5.7 x 5.3 cm lipomatous mass located prevesically. Complete surgical excision with tumor-free margins was achieved. Histopathological analysis confirmed AA, and immunohistochemistry showed positivity for SMA receptor, CD31, and calponin, while negative for CD34, h-caldesmon, pSlO0, MDM2, ER, and Ki-67 (20%). Surgical resection with clear margins remains the primary treatment. However, AA's high recurrence rate necessitates long-term follow-up and close monitoring. Adjuvant anti hormonal therapy has shown promise in preventing recurrence, particularly in estrogen and progesterone receptor-positive cases. Although most studies report limited benefits of radiotherapy, it may be considered in select cases, particularly in patients with hormone therapy resistance, recurrent tumors, or high surgical morbidity risks. **CONCLUSION**: Given the tumor's unpredictable course, a multidisciplinary approach involving surgery, pathology, and oncology is crucial to optimizing treatment and improving patient outcomes. Further research is needed to establish standardized guidelines for long-term management and recurrence prevention.

Keywords: aggressive angiomyxoma, mesenchymal tumor, tumor-free margins excision, CD31, SMA receptor

6. **A DECADE LATER: ILLEAL METASTATIC MELANOMA REVEALED BY INTESTINAL OBSTRUCTION**

Daria-Alexia Grigoraş [1], Doha Choujaaeddine [1], Daria-Ioana Vreme [1], Snr. Lect. Alin Vasilescu, MD, PhD [1, 2]
[1] University of Medicine and Pharmacy "Grigore T. Popa" Iaşi,
[2] Clinical Hospital "St. Spiridon" Iaşi

BACKGROUND: Malignant melanoma (MM) frequently metastasizes to the gastrointestinal tract, particularly the ileum. Although up to 60% of patients show gastrointestinal metastases at autopsy, clinical diagnosis occurs in only 2-5% due to nonspecific symptoms such as abdominal pain, bleeding, or obstruction. Recognition may be delayed by these characteristics, and can occur more than 15 years after the primary lesion. Due to the low sensitivity of imaging, intra operative exploration remains the gold standard for diagnosis. Surgical resection with lymphadenectomy is the treatment of choice, yet prognosis remains poor, with a mean survival of 4-6 months. **CASE PRESENTATION**: A 53-year-old man who underwent complete surgical excision of a dorsal malignant melanoma in 2001 was referred with six months of colicky abdominal pain, fatigue, and iron-deficiency anemia. He was initially diagnosed with Crohn's disease and managed on sulfasalazine. Three days before admission, symptoms worsened, with nausea, vomiting, and marked abdominal distension. Examination showed pallor and a tender, distended abdomen, with a palpable, mobile mass in the left flank. Imaging (X-ray and ultrasound) suggested small bowel obstruction caused by an intraluminal lesion. Exploratory laparoscopy, converted to mini-laparotomy, uncovered an ilea I intussusception produced by a tu moral mass, along with a second, smaller proximal lesion. A 30-cm segmental ilea I resection with end-to-end anastomosis was performed, and histopathologic examination revealed metastatic malignant melanoma with sparse pigmentation, partial muscular invasion, and isolated vascular emboli. Postoperatively, recovery was uneventful until day 5, when the transient development of a right sciatic popliteal motor deficit prompted brain imaging showing four cerebral metastases. The patient was discharged on day six for oncologic management. **CONCLUSION**: Although rare, metastatic melanoma of the small bowel must be considered in patients with a prior history of malignant melanoma presenting with an acute abdomen. Nonspecific symptoms and poor imaging sensitivity may lead to a delay in diagnosis until the time of surgery. Resection addresses symptoms and provides a histological diagnosis. This case highlights the necessity for lifelong surveillance of late gastrointestinal and systemic recurrence in melanoma survivors.

Keywords: malignant melanoma, ileal metastasis, small bowel obstruction, intussusception

7. **DECADES-LATE PRESENTATION OF AN ILIO-ILIAC ARTERIOVENOUS FISTULA FOLLOWING LUMBAR SURGERY: ENDOVASCULAR REPAIR**

Andrei Marina-Fit [1], Farran Moustafa [2], Roberta-Andreea Luca [1], Assoc. Prof. Horațiu-Flaviu Coman, MD, PhD [3]

[1] luliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania,

[2] Department of Vascular Surgery, Heart Institute, [3] Department of Vascular, Cardiovascular and Thoracic surgery

BACKGROUND: Iatrogenic arteriovenous fistula (AVF) is a rare, but potentially fatal complication of lumbar disc surgery(LDS). A presentation with symptoms decades after LDS is exceptional. **CASE PRESENTATION**: A 55-year-old woman was referred to our department for intense diffuse abdominal pain, mild right-sided heart failure(HF), digestive symptoms, that started several months ago, but have intensified in the last week, with no history of recent surgery or trauma. The initial working diagnosis was diverticulitis. Given the fact that after five days of antibiotic therapy no clinical improvement was observed, a more detailed history was obtained. She underwent lumbar disc surgery 27 years ago. The abdominal ultrasound revealed a pulsatile sacciform formation in the pelvis, suggestive for pseudoaneurysm. The CT angiogram of the abdomen and pelvis showed a sacciform dilatation with irregular walls and slight adjacent infiltration (without peritoneal rupture or bleeding) communicating with the left Common Iliac Vein(CIV), but also without cleavage plane from the left Common Iliac Artery(CIA). On top of that, opacification of the inferior vena cava at the same time as the infrarenal aorta was seen, concluding the diagnosis of venous pseudoaneurysm with a high flow fistula at this level. The Digital Subtraction Angiography revealed an AVF, between the left CIV and the left CIA. Proximal to the AVF, the vessel measured ~12mm in diameter, whereas distal to the AVF, before the external/internal iliac bifurcation, it measured ~9.5mm. The AVF communication length was 16mm. The treatment of choice was endovascular through the placement of two 14mmx39mm BeGraft endografts with parietal overlapping. After the endovascular repair, the patient had favorable outcome, with the resolution of the symptoms and no evidence or residual flow or recurrence. **CONCLUSION**: Unlike other fistulas, this case is exceptional due to its late clinical onset and the association with digestive symptoms and mild right-sided HF. Although LDS is common in neurosurgery, iatrogenic AVF remains rare, as vascular injury often goes undetected intraoperatively. This case emphasizes the significance of excluding an AVF in patients with a history of LDS, regardless of how many years have passed.

Keywords: case report, iatrogenic iliac arteriovenous fistula, endovascular treatment

8. **NEGATIVE PRESSURE WOUND THERAPY FOR MANAGEMENT OF POSTOPERATIVE WOUND DEHISCENCE**

Andrei-Stefan Tibre [1], Gloria Tauberg [2], Assoc. Prof. Ioan Simon, MD, PhD [2]

[1] "luliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca,

[2] Department of Surgery, Medical IV Clinic Cluj-Napoca, Romania

BACKGROUND: Wound dehiscence is a serious postoperative complication characterized by partial or complete disruption of a previously closed surgical incision. This condition is associated with increased morbidity, prolonged hospitalization, and heightened risk of infectious complications or evisceration. Risk factors include advanced age, malignancy, malnutrition, chronic corticosteroid therapy, and comorbid systemic disease. Notably, pre-existing pulmonary fibrosis increases the risk of wound dehiscence due to chronic cough, impaired tissue oxygenation, and altered healing physiology. Negative Pressure Wound Therapy (NPWT), or Vacuum-Assisted Closure (VAC), has emerged as an effective modality to promote wound healing through continuous negative pressure, enhancing granulation tissue formation, reducing edema, and facilitating exudate removal. **CASE PRESENTATION**: Case Presentation: We report the case of a 58-year-old female patient with a prior diagnosis of pulmonary fibrosis, controlled hypertension, and recently diagnosed colorectal adenocarcinoma. The patient underwent elective anterior resection with colorectal anastomosis. Her underlying pulmonary disease and chronic corticosteroid use represented significant risk factors for postoperative complications. On postoperative day eight, following episodes of persistent cough, the patient presented with sudden serosanguinous discharge and wound separation. Examination revealed partial dehiscence of the skin and subcutaneous tissues measuring approximately 8 × 4 cm, without fascial involvement, and with early granulation tissue evident. Management and Outcome: The wound was irrigated with sterile saline, and broad-spectrum intravenous antibiotics were initiated. Optimization of nutritional status and glycemic control was implemented. NPWT was applied using black polyurethane foam at -125 mmHg continuous negative pressure, with dressing changes performed every 48 hours.Care was taken to ensure an airtight seal and protect underlying structures. Within seven days, there was significant wound contraction, reduction of exudate, and robust granulation tissue formation. By postoperative day 21, complete epithelialization was achieved without need for secondary surgical closure. The patient recovered without further complications and was discharged with scheduled outpatient follow-up. **CONCLUSION**: In high-risk surgical patients with pre-existing pulmonary fibrosis, early recognition of postoperative wound dehiscence and timely initiation of NPWT can substantially improve healing outcomes. VAC therapy represents an effective, safe, and minimally invasive option, reducing morbidity and facilitating recovery in complex postoperative wounds

Keywords: wound dehiscence, negative pressure wound therapy, vacuum-assisted closure, colorectal cancer surgery, pulmonary fibrosis, postoperative complications

9. **TRANSARTERIAL PERIARTICULAR EMBOLIZATION - EFFICIENT ALTERNATIVE TREATMENT FOR PATIENTS WITH MILD TO MODERATE KNEE OSTEOARTHRITIS: A CASE REPORT**

Andrei Bloj [1], Prof. Iana Gheorghe, MD, PhD [1, 2]
[1] Carol Davila University of Medicine and Pharmacy, Bucharest, Romania,
[2] Department 8, Radiology, Medical Imaging, and Interventional Radiology II, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

BACKGROUND: Osteoarthritis (OA) is the most common form of inflammatory and degenerative joint disease, affecting more than 40 million people across Europe [1]. The knee is the most affected anatomical site [2], and total knee replacement (TKR) is the main invasive curative treatment as of today [3]. TKR indications and patient selection are now standardized [4], and an increased number of patients are poor candidates for the procedure. Affecting both men and women the risk of knee OA increases with age and is more frequently seen in women over forty. Transarterial periarticular embolization (TAPE) is a relatively new technique that has emerged as a promising method of delaying knee surgery in individuals suffering from OA. This case report aims to demonstrate the safety and the potential of the minimally invasive procedure. **CASE PRESENTATION**: I present the case of a 63-year-old man accusing knee stiffness and instability debuting 2 years ago with imaging showing a mild to moderate bilateral knee OA (Ahlbäck III). Initially the treatment consisted in pain relief and anti-inflammatory medication combined with physical therapy. The patient was clinically evaluated at different timeframes according to the Western Ontario and McMaster Universities' arthritis index, knee injury, and osteoarthritis outcome scores, and the 36-item short-form survey (WOMAC, KOOS, and SF-36). Due to the lack of improvement of the patient's condition, TAPE was presented as an alternative. The patient underwent TAPE, which consists in supra-selective catheterization and embolization of the genicular arteries using resorbable microparticles to reduce the angiogenesis process in periarticular tissues. **CONCLUSION**: The procedure had considerably positive results and no complications. The next day the patient was discharged and able to regain physical activity. After 1-month follow-up, KOOS and WOMAC improved substantially from 46.6 to 56.5 and 49.5 59.8, respectively. Physical SF-36 improved from 42.1 to 50.0 points. No significant changes in patient reported outcome scores were observed at three, six, or twelve months. TAPE improved the quality of the patient's life with knee inflammation reduction, pain diminishment and post procedure quick recovery.

Keywords: minimally invasive procedure, resorbable microparticles, embolization, supra-selective catheterization, pain treatment, inflammation

10. **WHEN OBSTETRICS MEETS UROLOGY: A RARE CHROMOPHOBE ONCOCYTIC RENAL TUMOR**

Dragoș-Gabriel Popescu [1], Diana Ciubotariu [1], Veronica Hata [1], Asst. Lect. Adelina Vasilica Miron, MD, PhD [2]
[1] Grigore T. Popa University of Medicine and Pharmacy of Iași,
[2] Dr. C. I. Parhon Clinical Hospital of Urology and Renal Transplantation, Iași

BACKGROUND: Chromophobe and oncocytic renal tumors are rare epithelial neoplasms originating from the intercalated cells of the collecting ducts, representing significant diagnostic challenges in differentiating benign from malignant lesions. The uniqueness of this case lies in the incidental discovery of a rare renal mass in a young woman with recent severe postpartum obstetric complications, raising the hypothesis of a potential correlation between postpartum hemodynamic instability andmtumorigenesis, underscoring the importance of a multidisciplinary diagnostic and therapeutic approach. **CASE PRESENTATION**: A 28-year-old woman presented to the emergency department with lower abdominal pain and vaginal discharge. Her recent history included placental abruption complicated by disseminated intravascular coagulation. She underwent total hysterectomy, which was complicated by a pelvic hematoma requiring reoperation with bilateral adnexectomy for hemostasis. The early postoperative course was marked by anuria, severe acute renal failure and respiratory distress. The patient required central venous catheterization and seven sessions of hemodialysis. Abdominopelvic CT revealed a large, heterogeneous 12-cm left renal mass with extensive necrosis and hemorrhage, occupying almost the entire renal parenchyma, without radiological evidence of local invasion. The left renal vein was compressed distally by the superior mesenteric artery, consistent with anterior Nutcracker syndrome. A total left nephrectomywas performed without intraoperative complications. lmmunohistochemistry revealed strong membranous CK7 positivity and negativity for CD117, CDl O, and vimentin - a profile discordant with the morphological features yet consistent with chromophobe renal cell carcinoma with oncocytic differentiation. The postoperative course was favorable, with normalization of renal function and no recurrence so far. **CONCLUSION**: This successfully managed surgical case highlights the crucial role of multidisciplinary collaboration in diagnosing and treating rare renal tumors. The coexistence of an acute obstetric complication and a chromophobe-oncocytic renal carcinoma represents an exceptional finding, suggesting potential associations between oxidative stress, hemodynamic instability and renal carcinogenesis.

Keywords: chromophobe renal cell carcinoma, oncocytic renal tumor, nutcracker syndrome, postpartum complications

11. **RETROGRADE INTRAMEDULLARY NAILING IN A COMPLEX BIFOCAL FEMORAL SHAFT FRACTURE: CASE REPORT**

Arina Gulpak [1], Alexandra Chiriac [2], Cristina Hidoș [2], Assoc. Prof. Adrian Ivănescu, MD, PhD [2]
[1] "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, Romania,
[2] SCJU Târgu Mureș

BACKGROUND: Femoral shaft fractures are severe injuries often resulting from high-energy trauma and are associated with significant morbidity. The treatment goal is to achieve stable fixation, restore limb alignment, and allow early mobilization. Retrograde intramedullary nailing (RIN) is a well-established technique for distal and complex femoral fractures, particularly in elderly patients or those with polytrauma. **CASE PRESENTATION**: We present the case of a 69-year-old male admitted to the Orthopedics and Traumatology Clinic of the Târgu Mureș County Emergency Clinical Hospital following a fall from standing height. Radiological examination revealed a bifocal spiral fracture of the right femoral shaft (middle and distal thirds), associated with bilateral rib fractures.. The patient had a history of chronic alcohol consumption and smoking. After preoperative stabilization, surgical treatment was performed on October 5th, 2025. The procedure consisted of open reduction of the femoral fracture and osteosynthesis using a retrograde intramedullary femoral nail (Stryker T2). The nail was statically locked proximally with one screw and distally with two screws, with additional stabilization achieved through two metallic cerclage wires. The intervention was performed under fluoroscopic (RTG-TV) guidance and spinal anesthesia. Postoperative evolution was favorable, with good alignment, stable fixation, and progressive functional recovery. No early postoperative complications were observed. **CONCLUSION**: Retrograde intramedullary nailing represents an effective, minimally invasive, and biomechanically stable option for managing complex distal or bifocal femoral shaft fractures. This technique allows early weight-bearing and contributes to favorable functional outcomes, even in elderly patients with multiple comorbidities.

Keywords: femoral shaft fracture, retrograde intramedullary nailing, orthopedic trauma, case report, elderly patient

12. **FROM SPINE TO PLEURA: A COMPLEX CASE OF SPONDYLODISCITIS EXTENSION**

Ioana-Ilinca Ursăchianu [1], Mara-Gloria Rotariu [1], Sara-Caterina Apostol [1], Assoc. Prof. Cristina Grigorescu, MD, PhD [2]
[1] "Grigore T. Popa" University of Medicine and Pharmacy of Iași,
[2] Clinical Pulmonology Hospital, Iași

BACKGROUND: Spondylodiscitis (SD) is a rare bacterial infection of the intervertebral disc and adjacent vertebrae, typically arising from hematogenous spread and causing severe spinal pain, neurological impairment and structural damage. Rare complications, such as pleural empyema, represent therapeutic challenges, particularly when infection extends into the thoracic cavity. Patients with endocrinological comorbidities-thyroid disease or adrenal insufficiency-bear heightened risk for infections. This case presents a patient with SD complicated by loculated pleural empyema, highlighting the interplay between systemic co morbidities and infectious complications. **CASE PRESENTATION:** We exhibit the case of a 68-year-old patient with a complex endocrine history, including papillary thyroid microcarcinoma, pituitary macroadenoma, and periodic Cushing's syndrome, admitted for extreme muscle weakness and acroparesthesia. Bloodwork showed severe hypokalemia which required parenteral hydro-electrolytic rebalancing and placement of a central venous catheter due to vascular fragility associated with Cushing's syndrome. During hospitalization, the patient developed chills, fever, and hypotension; blood cultures were positive for Staphylococcus aureus, consistent with a catheter-related bloodstream infection. Radiographic imaging confirmed spondylodiscitis at Tll-L2 with epidural abscess causing spinal cord compression. Antibiotic therapy was promptly initiated and adjusted according to antibiogram. Subsequently, the patient presented with resting dyspnea, wheezing and para paresis. Chest X-ray revealed a moderate right pleural effusion. Ultrasound-guided thoracentesis extracted serocitrin transudate from the left pleura, while drainage on the right was ineffective due to septations. Given the loculated nature of the right pleural empyema, the surgical treatment performed was pleuropulmonary decortication, achieving full lung re-expansion. Postoperatively, decompression of the posterior mediastinal pleura facilitated drainage of a paravertebral abscess, leading to significant motor function recovery. **CONCLUSION**: The presented case highlights the progression of catheter-related S. aureus infection in an immunocompromised patient, leading to both spondylodiscitis and loculated pleural empyema. This emphasises the importance of early infection screening, close monitoring, and multidisciplinary collaboration in high-risk patients to prevent severe complications.

Keywords: spondylodiscitis, pleural empyema, Staphylococcus aureus, pleuropulmonary decortication

13. **A RARE CASE OF SHOULDER INSTABILITY FOLLOWING TRAUMATIC FRACTURE-DISLOCATION**

Ioan Cioran [1], David Puha [1], Mara Doroftei [1], Assoc. Prof. Bogdan Florin Puha, MD, PhD [1]

[1] "Grigore T. Popa" University of Medicine and Pharmacy, Iași, Romania

BACKGROUND: Proximal humerus fracture-dislocations are rare but severe injuries, often resulting from high-energy trauma and associated with significant risk of avascular necrosis, nonunion and reoperation. These injuries present complicated care obstacles, personalized to the patient's age, bone quality and also the fracture characteristics. **CASE PRESENTATION**: We report the case of a 53-year-old male patient, with no medical history, who was presenting for a fall from approximately 2 meters, landing on his left shoulder. Clinical examination showed us that he experienced severe pain, total incapacity of his left arm and the characteristic "epaulette sign". After a radiography and a CT the diagnosis of left Neer type Ill fracture-dislocation, non-displaced fracture of the left coracoid process, Hill-Sachs lesion and also Bony Ban kart lesion was confirmed. Under an infraclavicular plexus block, closed reduction was attempted unsuccessfully. Open reduction through a deltopectoral approach was then performed, with fixation of a bony Bankart lesion using PEEK and titanium anchors, anterior capsulorrhaphy with capsuloplication, autografting of the Hill-Sachs defect and osteosynthesis with a titanium locking plate under fluoroscopic guidance. The shoulder was immobilized post-surgery in an abduction brace. Postoperatively, the trauma was successfully reduced, with implants properly positioned. At 3 weeks, clinical evolution was favorable, and supervised physiotherapy was recommended. At 6 weeks, a minor varus displacement of the fracture site was noted, likely due to the patient performing unsupervised home exercises. At 6 months, the patient had a favorable outcome, with maintained reduction, no signs of avascular necrosis and good functional recovery of the shoulder. **CONCLUSION**: Although it is an unusual and rare lesion, fracture-dislocations of the proximal humerus are among the most severe injuries in this region, presenting a difficult management problem. With this in mind and considering the patient's noncompliance due to performing strength exercises without guidance from a specialist, this case presents a complex clinical scenario characterized by severe soft tissue disruption that may compromise the viability of the humeral head, requiring careful and adapted treatment.

Keywords: proximal humerus fracture-dislocation, avascular necrosis, shoulder fracture, Hill-Sachs lesion

14. **WHEN TWO SHARE ONE PLACENTA: A HIGH-RISK TWIN PREGNANCY CASE**

Cristiana-Maria Trandafir [1], Alexandra Lăzăreanu [1], Asst. Lect. Adina-Elena Tănase, MD, PhD [1, 2]

[1] "Grigore T. Popa" University of Medicine and Pharmacy, Iași, Romania,

[2] "Cuza Vodă" Obstetrics and Gynecology Hospital, Iași, Romania

BACKGROUND: Twin-Twin Transfusion Syndrome (TTTS) is a common complication that typically presents in the second trimester of pregnancy in 10-15% of monochorionic twins due to net transfer of volume and hormonal substances from one twin to the other across vascular anastomoses on the placenta. This disorder highlights the importance of determining the chorionicity and amnionic for all twin gestations, influencing management. The aim of this case report is to emphasize the effectiveness of conservative interventions in achieving favorable outcomes. **CASE PRESENTATION**: A 37-year-old female was admitted at 20 weeks with a monochorionic diamniotic twin pregnancy, uterine scar, and an acute polyhydramnios index (AFI) of 43 cm. Ultrasound showed Twin I with normal bladder, stomach, and Dopplers (biometry 19 weeks), and Twin II with a very small bladder, slightly growth-restricted (17 weeks), but otherwise normal cardiac and Doppler findings. The umbilical cord insertions were< 1 cm apart. Conservative management was chosen, with diagnostic amniocentesis, therapeutic amnioreduction, prophylactic antibiotic, and antispastic treatment. FISH analysis revealed normal female karyotypes. At 24 weeks, persistent polyhydramnios required repeated amnioreduction (2 L). At 30 weeks, cervical shortening (19 mm) and ongoing polyhydramnios were noted with a continuous administration of indomethacin (1 tablet/12h, 5 days), which lead to symptomatic and sonographic improvement. At 35 weeks of gestation, a cesarean section was performed with no maternal complication and uneventful post-operative evolution and the newborns were weighted at 2500 g and 2000 g with a difference of 20% between the two. **CONCLUSION**: Early recognition of severe polyhydramnios and cord proximity in monochorionic diamniotic twins is vital for timely intervention. The complexity of fetal hemodynamics, cord entanglement risk, and maternal symptoms makes both monitoring and management challenging. Early detection, multidisciplinary collaboration, and individualized conservative strategies, including amnioreduction and short-term indometacin, are essential for optimizing maternal and fetal outcomes while minimizing procedural risks in high-risk twin pregnancies.

Keywords: TTTS, polyhydramnios, monochorionic diamniotic

15. **THE DIFFICULTY IN DIAGNOSING AND TREATING SINUSITIS OF DOUBLE AETIOLOGY**

Iulia Berariu [1], Dragoș Budiul-Berghian [1], Ioana Berariu [1], Dan Berariu, MD [2]

[1] "Iuliu Haţieganu" University of Medicine and Pharmacy, Cluj-Napoca,

[2] "Sfantul Constantin" Hospital, Braşov

BACKGROUND: The importance of interdisciplinary collaboration between otorhinolaryngologists and dentists in solving cases of sinus suppuration of multiple aetiology is essential. Some cases regarding blocking the middle meatus because of diverse causes such as nasal polyposis, sinus superinfection can mask a sinus suppuration of odontogenic origin. **CASE PRESENTATION**: A 28-year-old patient presents intense headaches, nasal obstruction, dizziness, hyposmia and purulent posterior rhinorrhoea. The symptoms are 3-month-old, worsening recently, preventing the patient from working. The cranial CT scan shows suppurative material in both maxillary sinuses, ethmoid and right frontal sinuses, the sphenoid remaining clear. Moreover, polypoid growths are shown in both middle meatuses. Flexible nasopharyngeal endoscopy reveals nasal polypoid growths and an abundant purulent secretion which drains from the right middle meatus in the pharynx. A surgical procedure under general anaesthesia restores the sinus drainage and reinstates the normal air flow through the sinuses. Endoscopic-assisted bilateral nasal polypectomy with shaver is performed along with anterior and posterior ethmoidectomy, sphenoidotomy, middle antrostomy, the enlargement of the right frontal recess and reduction of the inferior turbinate hypertrophy using radiofrequency. A sample for bacteriological examination is taken, the right maxillary sinus is opened and enlarged to be irrigated. The patient is discharged the next day and returns after one week for checkup. The headaches, dizziness and nasal obstruction have disappeared but the right facial pressure as well as the hyposmia and rhinorrhoea persist. After nasal and middle meatuses aspiration under endoscopic control, a suppurative discharge emerges from the ostium of the right maxillary sinus despite the ostium irrigation and the seven-day post-operative antibiotics. Another aetiology arises for the sinus suppuration: a dental infectious focal, confirmed by a dental consultation. After extraction and antibiotic treatment, the purulent secretion disappears and symptoms are improved. **CONCLUSION**: Sinusitis of double aetiology is difficult to treat and diagnose. Recent literature (Allevi et al., 2021; Craig et al., 2022; Yoo et al., 2021) highlights that dental infections can be concealed by rhinosinusal inflammation and that identifying the real cause and treatment are mandatory for preventing relapses and reestablishing the sinus function.

Keywords: odontogenic sinusitis, dental infection, maxillary sinus

16. **SAVING THE ARM: A RACE AGAINST TIME IN AXILLARY ARTERY RUPTURE AFTER SHOULDER DISLOCATION**

Diana-Alina Răzvanță [1], Bianca-Isabel Ghetler [1], Horațiu Flaviu Coman, MD, PhD [1, 2]

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

[2] Vascular Surgery Department, Cluj-Napoca County Emergency Clinical Hospital, Romania

BACKGROUND: Traumatic lesions of the axillary artery are rare and frequently associated with high morbidity due to ischemia and neurological damage. Prompt diagnosis and surgical intervention are critical to limb salvage and functional recovery. Most axillary artery injuries arise from penetrating trauma, while blunt trauma causing posterior shoulder dislocation with arterial rupture is uncommon but severe. Diagnosis relies on imaging including CT angiography, and treatment strategy must consider ischemia duration and extent of vascular injury. **CASE PRESENTATION**: A 49-year-old male with no prior chronic illnesses and a history of chronic alcohol use, presented 10 hours after blunt trauma causing intense right shoulder pain and paralysis of the upper limb. Examination revealed edema, extensive ecchymosis from shoulder to elbow, cold pale skin, and absent brachial, radial, and ulnar pulses. Laboratory tests showed severe rhabdomyolysis with markedly elevated creatine kinase levels, indicative of ischemia-related muscle damage, alongside mild anemia. Emergency CT angiography confirmed complete axillary artery rupture with contrast extravasation, along with posterior humeral head dislocation on X-ray. Initial orthopedic reduction was followed by vascular surgery employing a combined infraclavicular and deltopectoral approach. Reconstruction of the axillary and proximal brachial artery used autogenous reversed saphenous vein graft due to extensive arterial damage and prolonged ischemia. The patient developed severe reperfusion syndrome with rhabdomyolysis, anemia, and motor deficits but improved with supportive care over 26 days. **CONCLUSION**: Traumatic axillary artery rupture with posterior shoulder dislocation requires multidisciplinary management and early surgical revascularization to optimize outcomes. Autogenous vein graft reconstruction remains the gold standard in extensive arterial injuries. Delayed presentation increases complications, but limb salvage is possible with timely intervention and comprehensive postoperative care.

Keywords: axillary artery rupture, shoulder dislocation, vascular trauma, rhabdomyolysis, autogenous vein graft, reperfusion syndrome

17. **SURGICAL MANAGEMENT OF ZENKER'S DIVERTICULUM: OPEN CERVICAL DIVERTICULECTOMY WITH STAPLER CLOSURE**

Cristian-Alexandru Profire [1], Alexandru-Sebastian Stoica [1], Dan-Matei Picioreanu [1], Cristian Velicescu, MD, PhD [1, 2]
[1] Grigore T. Popa University of Medicine and Pharmacy, Iași, Romania,
[2] "Sf. Spiridon" County Emergency Clinical Hospital, General Surgery Department, 3rd Clinic, Iași, Romania

BACKGROUND: Zenker's diverticulum (ZD) is a rare acquired pharyngoesophageal pouch that develops at Killian's dehiscence due to impaired cricopharyngeal relaxation and increased intrabolus pressure. It typically affects elderly patients and is characterised by progressive dysphagia, regurgitation of undigested food, halitosis, chronic cough, and aspiration. Diagnosis is most commonly achieved by barium swallow and endoscopy, while treatment is surgical, either endoscopic or by open cervical approach. **CASE PRESENTATION**: We report the case of a 68-year-old male with multiple comorbidities, including arterial hypertension, ischemic heart disease, chronic obstructive pulmonary disease, and autoimmune thyroiditis, who presented with a one-year history of dysphagia for solids, halitosis, regurgitation, and chronic cough. Physical examination revealed a subtle left cervical swelling on neck rotation. Differential diagnoses included achalasia, esophageal neoplasm, strictures, and reflux disease. Laboratory tests showed mild hepatic cytolysis and macrocytosis. A barium swallow demonstrated a posterior hypopharyngeal diverticulum of approximately 3 cm, while computed tomography confirmed a thin-walled air-containing pouch without evidence of extrinsic compression. The patient underwent open surgery via left cervicotomy under general anesthesia. The diverticular sac was carefully dissected and isolated, preserving the recurrent laryngeal nerve. Diverticulectomy was performed with linear stapler closure of the esophageal wall. Postoperatively, nasogastric feeding was maintained for seven days, and a contrast swallow confirmed the absence of fistula. Oral intake was gradually resumed, and the patient was discharged on postoperative day ten. At one-month follow-up he reported complete resolution of dysphagia and regurgitation, with significant improvement in quality of life. **CONCLUSION**: This case highlights the importance of recognizing Zenker's diverticulum in elderly patients with chronic dysphagia and the role of open diverticulectomy with stapler closure as a safe and effective treatment option in carefully selected patients with multiple comorbidities.

Keywords: Zenker's diverticulum, pharyngoesophageal diverticulum, cervical diverticulectomy, cricopharyngeal myotomy, dysphagia, stapler closure

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18. **RECLAIMING LIFE THROUGH SEEG: DEFINING THE EPILEPTOGENIC FOCUS IN A CASE OF TEMPORAL LOBE EPILEPSY**

Daiana-Nicoleta Retezanu [1], Assoc. Prof. Ioana Mîndruță, MD, PhD [1, 2]
[1] Carol Davila University of Medicine and Pharmacy of Bucharest,
[2] The University Emergency Hospital Bucharest

BACKGROUND: Drug-resistant epilepsy (DRE) remains a major therapeutic challenge, particularly in cases where noninvasive investigations suggest bilateral temporal involvement. In such complex scenarios, stereoelectroencephalography (SEEG) provides the most precise tool for defining seizure onset zones and guiding surgical decisions. This case illustrates how SEEG mapping can clarify uncertain lateralization and support a curative approach in temporal lobe epilepsy. **CASE PRESENTATION**: A 41-year-old right-handed woman presented with drug-resistant focal to bilateral tonic-clonic seizures that began at age 24, characterized by loss of consciousness and tonic-clonic evolution. Neurological examination was unremarkable. MRI showed left hippocampal sclerosis, while PET-CT demonstrated left mesiotemporal hypometabolism. Conversely, scalp video-EEG captured a seizure originating from the right hemisphere, raising suspicion of bitemporal epilepsy. Given the discordant findings and preserved cognitive profile, SEEG exploration was performed to determine the precise epileptogenic focus. Depth electrodes were implanted bilaterally in temporal and related regions. SEEG recordings clearly demonstrated a seizure onset confined to the left mesiotemporal structures, with early propagation to the contralateral side. Functional mapping preserved eloquent cortical areas. Based on SEEG data, the case was re-evaluated for surgical eligibility, and limited radiofrequency thermocoagulation (RFTC) was performed through selected electrodes as an initial therapeutic step. **CONCLUSION**: This case highlights the pivotal role of SEEG in differentiating unilateral from bilateral temporal lobe epilepsy when imaging and scalp EEG are inconclusive. By precisely localizing the epileptogenic focus, SEEG enables tailored surgical strategies aimed at seizure control and improved quality of life. Multi modal assessment, including imaging, neurophysiology, and cognitive testing, remains essential for guiding curative decisions in complex temporal epilepsy cases.

Keywords: drug-resistant epilepsy, SEEG, temporal lobe epilepsy, hippocampal sclerosis, presurgical evaluation, invasive EEG, neuroimaging, seizure control, radiofrequency thermocoagulation

19. **RENAL TUMOR TREATED WITH ECHOLASER ABLATION: FIRST CASE IN ROMANIA**

Tudor-Călin Dorin [1], Andrei Vleoangă [1], Sorana-Maria Dobrea [1], Bogdan Novac, MD, PhD [2]
[1] "Grigore T. Popa" University of Medicine and Pharmacy,
[2] "Elytis Hospital Hope", Iași

BACKGROUND: Small renal masses (SRMs) are defined as enhancing tumors <4 cm, with imaging features consistent with stage Tla renal cell carcinoma (RCC). Around 20-25% of SRMs are benign, while most malignant lesions display slow growth. Balancing oncologic control with renal function preservation is essential; therefore, thermal ablative therapies such as laser ablation have gained increasing importance as minimally invasive alternatives to surgery. **CASE PRESENTATION**: A 77-year-old male presented for a routine abdominal ultrasound, during which a right renal mass measuring 26 mm was incidentally detected and later confirmed by contrast-enhanced CT. The patient, known with diabetes mellitus and multiple co-morbidities, was placed under active surveillance as an older patient at high risk of competing-cause mortality. Over the following eight years, serial imaging showed a slow but progressive increase in tumor size, reaching 3.92 x 3.95 cm. This case is unique, being performed in the only center in Romania currently applying laser ablation for renal tumors. Percutaneous biopsy confirmed clear cell RCC. A multidisciplinary team decided on focal ablation, considering the tumor's small peripheral location and the patient's overall condition. Ultrasound-guided laser ablation was performed percutaneously using the Echolaser system. Laser ablation uses 1064 nm wavelength light to induce localized thermal necrosis with high precision and limited injury to surrounding tissues. Under continuous ultrasound guidance, the procedure enables controlled energy delivery and real-time visualization of the ablation zone. Four laser fibers were deployed around the tumor margins, maintaining an appropriate safety margin for oncologic control, and a total of 18,000 J was delivered during a 30-minute session. The procedure achieved complete tumor ablation without intra- or postoperative complications. It was curative in intent, and the patient was discharged the following day in stable condition. Follow-up CT at two months showed no contrast enhancement in the treated area, consistent with complete coagulative necrosis and absence of recurrence. **CONCLUSION**: Ultrasound-guided laser ablation is a safe, effective, and curative minimally invasive therapy for small renal masses (<4 cm), providing excellent local tumor control, low morbidity, and renal function preservation. This case emphasizes the clinical relevance and feasibility of Echo Laser technology in a multidisciplinary, nephron-sparing setting.

Keywords: small renal mass, laser ablation, echo laser, ultrasound guidance, focal therapy

20. **RETROPERITONEAL ROBOTIC ASSISTED PARTIAL NEPHRECTOMY TO A PRIOR PROSTATE CANCER SURGERY PATIENT**

Ioannis Vakalidis [1], Georgia Leventopoulou [1], Konstantinos Vakalidis, MD, PhD [2]
[1] Carol Davila University of Medicine and Pharmacy,
[2] St. Luke's Hospital Thessaloniki

BACKGROUND: Secondary cancer following prostate cancer is extraordinarily rare with less than 50 cases reported worldwide. Typically most secondary regions include the bones, lungs and liver. Furthermore, operating on a cancerous kidney retroperitoneally is not as common either. Statistically, most renal tumors are operated transperitoneally due to advantages like easier robotic surgical instruments placement and manipulation and a larger working space. However, specifically for a posteriortumorthe retroperitoneal RAPN is more beneficial as well as in cases of prior significant abdominal surgery due to the direct access to the postero-lateral surface of the kidney and avoids the involvement of abdominal organs. **CASE PRESENTATION**: The patient, 75-year-old male, with COPD was ordered from the pulmonologist during regular checkups to undergo a retroperitoneal- abdomino-pelvic CT scan and MRI. In these scans a malignant mass was identified in the posterior surface of the left kidney and 4 cystic lesions framed by Bosniak Ill score in the inferior 2/3 of the right kidney. Subsequently, the patient was referred to a urologist. The specialist after taking into consideration his medical history including liver steatosis and primary hypertension additionally to prior surgeries such as radical prostatectomy, L4-L5 herniated discs surgery and total thyroidectomy decided that the best option of treatment was the retroperitoneal robotic-assisted partial nephrectomy. The surgery was performed in 270 minutes, with ischemic time of 12 minutes, no complications and no blood transfusion. A catheter was inserted which was removed 2 days postsurgerywhen the patient exited the hospital. The lesions found in the right kidney were decided to be removed in a following surgery. **CONCLUSION**: Although the literature highly suggests that kidney cancer cannot be related to prior prostate cancer, the few similar reported cases like this implicate that this scenario is not negligible anymore. Regarding the retroperitoneal approach for posterior tumors, despite being a relatively new and more demanding technique, based on recent studies, it presents significant benefits for the patient over the traditional transperitoneal method and preservation of oncologic surgical outcomes. This is why the competency for performing R-RAPN is considered paramount for future urologists.

Keywords: prostate cancer, RAPN, nephrectomy, kidney cancer, robotic surgery, retroperitoneal approach

21. UNIPORTAL VATS SLEEVE LOBECTOMY FOR CENTRAL TYPICAL CARCINOID TUMOR

Beatriz de Lima Coelho [1], Rihards Mikilps-Mikgelbs, MD [2]
[1] Riga Stradins University,
[2] Department of Thoracic Surgery, Centre of TB and Lung Diseases, Riga East University Hospital, Riga, Latvia

BACKGROUND: Typical carcinoid tumors are low-grade neuroendocrine neoplasms that often develop in the central airways, where they can cause obstruction and require complex surgical intervention. While sleeve lobectomy represents a lung-sparing alternative to pneumonectomy, it's traditionally considered a technically demanding procedure reserved for open thoracotomy. Reports of performing this complex bronchoplastic resection via a uniportal video-assisted thoracoscopic surgery (uVATS) approach remain scarce worldwide. Presented here is a case of a successfully treated patient with uVATS sleeve lobectomy, underlining the role of minimally invasive techniques in advanced airway surgery. **CASE PRESENTATION**: A 33-year-old healthy male, diagnosed with a centrally located 4x3.5×4.2 cm left upper lobe mass on CT and PET/CT, consistent with a typical carcinoid tumor (grade 1, Ki-67 ≤1%, no necrosis). Further staging with brain MRI and abdominal CT excluded nodal or distant disease. The patient underwent a UVATS sleeve left upper lobectomy. Vascular branches were divided using staplers, the bronchus resected with intraoperatively confirmed negative margins, and bronchial reconstruction achieved with interrupted 3-0 polypropylene sutures. A systematic lymphadenectomy was performed. Postoperative course was uneventful except for two brief episodes of atrial fibrillation, controlled medically. Chest drain was removed on day two. Final histopathology confirmed typical carcinoid with RO resection and no lymph node involvement. Follow-up imaging showed full lung re-expansion without recurrence. **CONCLUSION**: This case shows how using uVATS can be successfully applied to technically complex bronchoplastic procedures such as sleeve lobectomy for centrally located typical carcinoid tumors. Compared with traditional open thoracotomy, the uniportal approach may achieve similar oncological control with reduced postoperative pain, faster recovery and fewer complications overall. These findings support the feasibility and potential advantages of expanding the use of minimally invasive thoracic surgery approaches in complex bronchoplastic resections, at least in carefully chosen cases.

Keywords: uniportal VATS, sleeve lobectomy, typical carcinoid tumor, minimally invasive thoracic surgery, bronchoplasty

22. RARE CERVICOTHORACIC ANEURYSMAL BONE CYST IN AN ADOLESCENT: DIAGNOSTIC AND SURGICAL INSIGHTS

Andreea-Sorina Gînju [1], Bogdan Costăchescu, MD, PhD [1, 2]
[1] Grigore T. Popa University of Medicine and Pharmacy Iași,
[2] Consultant Neurosurgeon Department of Neurosurgery, Division of Spine Surgery, University Emergency Hospital "Prof. Dr. N. Oblu" Iași

BACKGROUND: Aneurysmal bone cysts (ABCs) are benign yet locally aggressive osteolytic lesions, accounting for approximately 1.4% of primary bone tumors. They predominantly affect children and adolescents, typically arising in the metaphyseal regions of long bones adjacent to growth plates. Spinal involvement is uncommon, and cervical localization is exceedingly rare, posing significant challenges for both radiological evaluation and accurate differential diagnosis. Surgical management carries considerable risk due to proximity to the spinal cord. Clinically, ABCs most often present with localized pain, progressive neurological deficits, or skeletal deformity, underscoring the need for timely recognition and meticulously planned intervention. **CASE PRESENTATION**: A 16-year-old female with no significant medical history presented with a 7 - day episode of mild tetraparesis, which resolved spontaneously before admission. Neurological examination demonstrated right cervical radiculopathy with hypoesthesia in the C6-C7 dermatomes, absence of the triceps (C7/8) and abdominal reflexes, and a positive Babinski sign. Spine CT and MRI revealed an expansile osteolytic mass extending from C6 to T2, characterized by multiple fibrous septa and fluid-fluid levels, while angio-CT demonstrated pronounced vascularity indicative of locally aggressive behavior. Imaging and biopsy raised a differential diagnosis of chondroblastoma, fibrous dysplasia, giant cell tumor, and unicameral bone cyst. The patient underwent microsurgical tumor resection involving the paraspinal muscles and partial excision of the posterior arches of C6 and T2, complete resection of the C7 and T1 posterior arches due to infiltration, removal of the intraspinal component, and cervicothoracic instrumentation extending from C5-C6 to T3-T4. Postoperatively, the patient exhibited gradual and progressive neurological recovery. **CONCLUSION**: Spinal aneurysmal bone cysts are rare, with cervicothoracic involvement being particularly infrequent. This case underscores the importance of recognizing atypical features, such as transient neurological symptoms that may precede more significant deficits. Despite uncertain pathogenesis, ABCs can present suddenly in healthy adolescents, highlighting their unpredictable clinical course. Their extensive involvement and pronounced vascularity require advanced imaging and meticulous preoperative planning. Microsurgical excision is the preferred treatment, as it allows complete lesion removal while optimizing neurological recovery. Given the reported recurrence rates of up to 20-30%, long-term follow-up is essential to ensure early detection and management of potential recurrences.

Keywords: aneurysmal bone cysts, spinal cord compression, transient neurological symptoms, cervicothoracic spine

23. **A RARE ASSOCIATION BETWEEN COGAN'S SYNDROME AND COGAN'S EPITHELIAL BASEMENT MEMBRANE DYSTROPHY**

Ruxandra-Maria Galan [1], Anghel Damaschin [1], Sona-Maria Diaconescu [1], Snr. Lect. Anisia-Iuliana Alexa, MD, PhD [1]
[1] Grigore T. Popa University of Medicine and Pharmacy, Iasi

BACKGROUND: Cogan's epithelial basement membrane dystrophy (map-dot-fingerprint dystrophy) is a common corneal disorder characterized by recurrent erosions and fluctuating visual acuity. Cogan's syndrome, in contrast, is a rare autoimmune condition denned by non-syphilitic interstitial keratitis and progressive audiovestibular involvement, including tinnitus and sensorineural hearing loss. The coexistence of these two eponymous entities-one corneal and one systemic-is extremely rare. Understanding such associations may provide insights into potential autoimmune mechanisms triggered by surgical or environmental factors. **CASE PRESENTATION**: A 30-year-old woman with a history of recurrent corneal erosions underwent phototherapeutic keratectomy (PTK) with an excimer laser for Cogan's epithelial basement membrane dystrophy. Postoperative recovery was initially favorable, with complete re-epithelialization at six days. Two weeks later, the patient presented with decreased visual acuity, photophobia, and ocular redness. Slit-lamp examination revealed large epithelial defects and bilateral peripheral stromal opacities. Shortly thereafter, she developed tinnitus and bilateral hearing loss, confirmed audiometrically as sensorineural hypoacusis. Based on these findings, a diagnosis of Cogan's syndrome was established. Systemic corticosteroid therapy was promptly initiated, leading to gradual improvement of ocular inflammation, although hearing loss persisted. **CONCLUSION**: This case highlights an exceptionally rare overlap between Cogan's epithelial basement membrane dystrophy and Cogan's syndrome, suggesting that the excimer laser procedure may have acted as an autoimmune trigger. The report underscores the importance of systemic evaluation and multidisciplinary management in patients with atypical or relapsing ocular disease. Clinicians should remain vigilant for systemic manifestations following ocular surgery in individuals with underlying epithelial dystrophies.

Keywords: Cogan's syndrome, epithelial basement membrane dystrophy, phototherapeutic keratectomy, interstitial keratitis, autoimmune disease

24. **REBUILDING EXPRESSION: FUNCTIONAL LOWER LIP RECONSTRUCTION WITH A GRACILIS FREE FLAP A CASE REPORT**

Alexandra Curic [1], Elizabeth-Ilinca Danalache [1], Alex Victor Oradan [4], Asst. Lect. Maximilian George Dindelegan, MD, PhD [1, 2, 3]
[1] Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
[2] Department of Surgery - Practical Abilities, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania,
[3] Department of ENT Surgery - The Oncology Institute,
[4] Department of Plastic Surgery - The Oncology Institute "Prof.Dr. Ion Chiricuta" Cluj-Napoca

BACKGROUND: The lips are essential for oral competence and facial expression. Reconstruction of large, full-thickness lip defects remains one of the most challenging procedures in reconstructive surgery. Full-thickness lower lip defects involving more than two-thirds of the lip often require either staged reconstruction or distant tissue transfer. Based on its anatomical and functional characteristics, the gracilis free flap offers an excellent option for lip reconstruction. As a functioning muscle flap, it fulfills all reconstructive requirements, enabling coordinated and natural lip movement. **CASE PRESENTATION**: A 69-year-old patient with grade II arterial hypertension, hypertensive cardiomyopathy, moderate mitral insufficiency, mild aortic and tricuspid insufficiency, ventricular and supraventricular extrasystolic arrhythmia, and hiatal hernia was initially admitted to the ENT Department, IOCN, for evaluation of a lower lip tumor. Histopathological examination confirmed a keratinizing squamous cell carcinoma of the lower lip. Surgery was performed by a multidisciplinary team comprising ENT and plastic surgeons. The ablative team carried out total lower lip excision with oncological safety margins, bilateral selective neck dissection (levels I-III), preparation of recipient vessels for microvascular anastomosis, and dissection of the marginal mandibular nerve. The reconstructive team harvested an innervated free gracilis muscle flap, while the inset and microvascular anastomosis were performed collaboratively. The flap was covered with a split-thickness skin graft. The surgical intervention was performed as a one-stage procedure. On postoperative day 6, wound cultures revealed Enterococcus faecalis, Pseudomonas aruginosa, and Klebsiella aerogenes, successfully managed with targeted antibiotics and surgical debridement on day 7. The postoperative course was favorable, with progressive wound healing and restoration of oral competence. The patient was discharged in good general condition, hemodynamically and respiratorily stable. **CONCLUSION**: The gracilis free flap represents a versatile and effective option for total lower lip reconstruction, providing both dynamic restoration and aesthetic reconstruction in extensive defects. Its ability to recreate coordinated commissure movement through facial nerve innervation offers superior functional recovery compared to static methods, while achieving facial symmetry and reliable long-term results. Although postoperative infection occurred in this case, prompt intervention ensured successful healing and flap survival.

Keywords: lower lip reconstruction, gracilis free flap, squamous cell carcinoma, functional restoration

25. **INDUCTION CHEMOTHERAPY ENABLING RECONSTRUCTION IN ADVANCED ORAL CAVITY CANCER: CASE REPORT**

Michal Grucki [1], Renārs Deksnis, MD [2]
[1] Riga Stradins University,
[2] Riga East University Clinical Hospital

BACKGROUND: Squamous cell carcinoma (SCC) accounts for approximately 95% of head and neck malignancies, frequently arising in the oral cavity. It is often associated with local invasion, nodal spread, and late diagnosis, which limits surgical management. Moreover, extensive resection, requiring ftap reconstruction can result in significant long-term impairment in oral function. The selective use of neoadjuvant chemotherapy can be considered in selective cases. In particular docetaxel, cisplatin, and 5-ftuorouracil (TPF) regimen has been successfully used for downstaging and creating clear operating margins. This case highlights TPF response pattern and its impact on achieving functional outcomes through radical resection and reconstruction. **CASE PRESENTATION**: A 62-year-old female with type-2 diabetes mellitus and hypertension presented with a painful non healing ulcer. Physical examination revealed firm irregular mass measuring roughly 4 x 5 x 2 cm and submandibular lymphadenopathy. Imaging revealed mandibular and perineural invasion, biopsy confirmed moderately differentiated keratinizing SCC, and the tumor was classified as cT 4aN2MO, stage IV. Patient received four cycles of induction chemotherapy with the TPF regimen, resulting in significant tumor regression to 1.2 x 1.4 x 1.1 cm. and reduction in lymph node size. This approach enabled radical en bloc resection with bilateral neck dissection achieving RO resection. Reconstruction was performed with fibula free ftap and mandibular implant placement in order to restore contour, occlusion and mastication. Subsequently, adjuvant volumetric modulated arc therapy (VMAT) was administered. Due to postoperative scarring and deformity, the patient underwent scar excision and local ftap reconstruction of lower lip. A subsequent episode of ftap necrosis was successfully managed with debridement and radial forearm free ftap reconstruction. At five-year follow-up, the patient remains disease-free with preserved speech, oral competence and swallowing, demonstrating oncologic and functional success. **CONCLUSION**: Selective use of neoadjuvant TPF chemotherapy reshaped this patient's management by downstaging the tumor and facilitating clear operating margins. This case illustrates that adequate preoperative planning with oncologic, reconstructive and rehabilitation care achieves RO resection, preservation of oral function and 5-year remission.

Keywords: TPF regimen, induction chemotherapy, oral squamous cell carcinoma, functional reconstruction, free flap, downstaging, quality of life

26. **MYOCUTANEOUS PEDICLED TRAPEZIUS FLAP FOR SCALP RECURRENT TUMOR TREATMENT - CASE PRESENTATION**

Ruxandra Ivan [1], Petronela Peptu [1], Snr. Lect. Camelia Tamas, MD, PhD [1, 2, 3]
[1] University of Medicine and Pharmacy "Grigore T. Popa" Iași,
[2] Emergency Clinical Hospital "Prof. Dr. Nicole Oblu" Iași,
[3] Emergency County Hospital "St. Spiridon"

BACKGROUND: The myocutaneous pedicled trapezius ftap is a regional ftap based on the transverse cervical artery and its branches. The ftap provides well-vascularized, reliable tissue with a wide arc of rotation, making it suitable for reconstruction of defects in the occipital, cervical and upper thoracic regions, mainly in case of poor vascular nutrition of the receptor zone. Owing to its adequate tissue bulk, the ftap can protect the exposed dura, fill dead space and promote wound healing in complex occipital reconstruction, for modified vascular network after radiotherapy as well. **CASE PRESENTATION**: We present a 64-year-old woman with a recurrent occipital tumor. The patient initially was diagnosed with cutaneous squamous cell carcinoma, described as an ulcerative fiat tu moral lesion with suprainfection, neglected by the patient for two years. The first two surgical stages -only tumor excision and scalp suture- were performed in another medical center, by neurosurgeons and accompanied by histopathology examination and radiotherapy. The second excision left a large scalp defect neglected for 50 days. Currently, the patient addresses to our Plastic Surgery Clinic for consultation and treatment with a large scalp defect localized in the left occipital area. The local examination revealed an extended scalp defect with a border covered with hemorrhagic crusts and central bone exposure. Multiple linear, parallel, tiered scars were noted around the defect, consistent with previous sutures placed under tension. In the cranial extremity, hypertrophic granulation tissue was observed, indicating a possibility of tu moral recurrence confirmed by a new histopathology examination. A mixed surgical team was needed - neurosurgeon and plastic surgeon in this stage. Under general anesthesia, tumor excision including bone and scalp reconstruction with myocutaneous pedicled trapezius flap were performed for dura protection. The donor site was closed primary, demonstrating minimal donor-site morbidity and satisfactory aesthetic outcome. **CONCLUSION**: The myocutaneous trapezius pedicled flap is a reliable and versatile technique of reconstruction for complex scalp defects, particularly in previously irradiated and surgically treated areas. Due to its advantages, the trapezius tap offers a safe and technically straightforward solution without needing a microvascular reconstruction.

Keywords: myocutaneous trapezius flap, pedicled, squamos cell carcinoma, recurrent tumor, exposed dura, modified vascular network, scalp defect

27. **UNVEILING AN ECTOPIC SOURCE OF HYPERPARATHYROIDISM IN THE MEDIASTINUM**

Anastasia-Parascheva Sandu [1], Ana Isabela Dobrin [1], Sever Stefan Ungureanu [1], Cristian Sandu, MD [2]

[1] Faculty of Medicine, "Grigore T. Popa" University of Medicine and Pharmacy Iasi,

[2] Regional Institute of Oncology, Iași, România

BACKGROUND: Mediastinal parathyroid adenomas represent an uncommon but important cause of persistent hyperparathyroidism and often pose significant diagnostic and surgical challenges. When ectopic parathyroid tissue cannot be identified during cervical exploration, diagnosis and treatment may be delayed, increasing the risk of complications. Accurate preoperative localization using complementary imaging modalities is therefore essential to ensure optimal surgical outcomes. **CASE PRESENTATION**: A 57-year-old female with a history of papillary thyroid carcinoma treated by total thyroidectomy and chronic kidney disease on hemodialysis presented with persistently elevated parathyroid hormone (PTH) levels despite surgery. Although her serum calcium remained within normal limits, PTH was markedly elevated, raising suspicion of ectopic parathyroid tissue. Thoracic computed tomography and parathyroid scintigraphy identified a well-circumscribed nodular lesion in the anterior superior mediastinum. Cardiac evaluation revealed mild mitral regurgitation and mitral annular calcification. Surgical exploration through a manubriotomy allowed complete excision of the mediastinal mass. Histopathological analysis confirmed the diagnosis of parathyroid adenoma. Postoperatively, PTH levels dropped below the normal range, indicating complete removal of the hyperfunctioning tissue, while the biochemical profile stabilized without complications. The patient recovered uneventfully, and due to her oncologic history, adjuvant radioactive iodine therapy was recommended to ensure long-term control. **CONCLUSION**: In this patient, persistent PTH elevation following total thyroidectomy was explained by an ectopic mediastinal parathyroid adenoma that remained hormonally active. Chronic kidney disease contributed to the development of tertiary hyperparathyroidism, characterized by autonomous PTH secretion independent of calcium feedback. The maintenance of normal calcium levels reflected a delicate balance achieved through dialysis and decreased intestinal calcium absorption caused by reduced vitamin D activation. Ultimately, accurate localization and complete surgical excision are essential for biochemical remission and prevention of recurrence.

Keywords: mediastinal parathyroid adenoma, PTH, thyroidectomy, manubriotomy

28. **ENDOVASCULAR MANAGEMENT OF PEDIATRIC NON-GALENIC FISTULA: CHALLENGES AND INSIGHTS**

Ana Isabela Dobrin [1], Anastasia-Parascheva Sandu [1], Matei George Ilie [1], Dobrin Nicolaie, MD, PhD [2]

[1] Faculty of Medicine, "Grigore T. Popa" University of Medicine and Pharmacy Iasi,

[2] "Dr. Nicolaie Oblu" Clinic Emergency Hospital Iași

BACKGROUND: Pediatric non-galenic pial arteriovenous fistulas (pAVFs) are rare cerebrovascular malformations characterized by a direct pial arteriovenous connection and variable symptomatology. Early diagnosis and individualized management are crucial due to their typically poor natural history if left untreated, as well as their anatomical vascular peculiarities correlated with clinical manifestations. Endovascular treatment has emerged as a preferred option with promising outcomes. The aim of this case report is to highlight the importance of early diagnosis and adaptive treatment in non-galenic pAVFs. **CASE PRESENTATION**: We report the case of a 3-years-old infant who presented with recurrent focal seizures, vomiting, orthostatic disturbances and progressive cognitive decline. Magnetic resonance angiography (MRA) and digital subtraction angiography (DSA) confirmed the presence of a cerebellar a pAVF. Considering the age, the right femoral approach was performed under echographic guidance, then the 4F guidance system was inserted under biplane angiographycal control. The radiological dosimetry parameters and contrast substance were continuously monitored. The technical difficulty consisted in the fact that the implants (microcoils) did not have stability at the fistula point due to high velocity flow, so it was decided to place a stent in the artery-venous fistulous point just near the venous varix dilation junction area. In this way, the anchoring of the microcoils implants was achieved much easier. Particular endovascular embolization technique achieved complete obliteration of the pAVF without any postprocedural complications. Clinical follow-up demonstrated a favorable neurological outcome. **CONCLUSION**: This case highlights the importance of early diagnosis using appropriate imaging and the need to adapt treatment to the specific vascular anatomy, especially in pediatric patients. Endovascular management represents an effective and safe treatment option for preventing life-threatening complications and achieving positive clinical outcomes in this rare condition.

Keywords: pediatric cerebrovascular, pial arteriovenous fistula, endovascular treatment

29. **TTO AND MPFL RECONSTRUCTION FOLLOWING RECURRENT PATELLAR DISLOCATION IN A YOUNG PATIENT WITH IMPORTANT CHONDROMALACIA: A CASE REPORT**

Ana-Maria-Diana Barbu [1]

[1] Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

BACKGROUND: Recurrent patellar dislocation is a rather frequent pathology encountered in young individuals. Most of the time, it can be managed with conservative treatment but, when pain develops and the patient's quality of life is affected, a surgical approach is the only viable option. **CASE PRESENTATION**: We report the case of a patient presenting with bilateral knee pain and a history of over 20 neglected patellar dislocations. On examination there were clinical signs of MPFL rupture and patella alta, also confirmed with MRI. In addition, the MRI revealed extensive patellofemoral cartilage destruction and the presence of three loose cartilaginous bodies. The standard surgical intervention in this kind of situation is tibial tuberosity osteotomy. Due to the high risk of recurrence, a MPFL reconstruction using a gracilis tendon autograft was also performed. In order to retrieve the loose bodies in the most efficient way, an arthroscopic approach via a posterior-medial portal was chosen. During the arthroscopic step of the intervention ligamentous and meniscal lesions were excluded and the extend of the cartilage destruction assessed. The initial plan was to use a synthetic scaffold (Chondro-Gide ®) for cartilage repair. However, the lesions were far too advanced for this technique and the osteochondral autograft transplantation wasn't even an option. Consequently, microfracture on the femoral trochlea was performed, allowing bone marrow to enter the joint with expectation of achieving some cartilage regeneration by fibrocartilaginous scaring. The postoperative course was uneventful and in 24 hours the patient was discharged. Rehabilitation with physiotherapy was initiated within a few weeks, showing significant functional improvement. **CONCLUSION**: This case highlights the complexity of recurrent patellar dislocation associated with advanced cartilage damage. Surgical management combining tibial tubercle osteotomy, MPFL reconstruction and microfracture can provide a viable solution when conventional cartilage repair are no longer feasible, leading to a favorable functional recovery.

Keywords: recurrent patellar dislocation, tibial tubercle osteotomy, MPFL reconstruction, microfracture, chondromalacia, arthroscopy

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