



UNIVERSITY OF PRISHTINA
FACULTY OF MEDICINE

SECOND STUDENT CONFERENCE OF THE FACULTY OF MEDICINE



16 JUNE 2026



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ABSTRACT BOOK

English Edition



CONFERENCE DATE
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FACULTY OF MEDICINE
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THE CONFERENCE IS OPEN
TO ALL THREE STUDY LEVELS:
BACHELOR, MASTER AND PHD

ABSTRACT BOOK

Second Student Conference of the Faculty of Medicine
University of Prishtina | 16 June 2026

CONFERENCE DATE
16 June 2026

PLACE
Faculty of Medicine

STUDY LEVELS
Bachelor, Master and PhD

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CONFERENCE OVERVIEW

This abstract book contains the English-language abstracts submitted for the Second Student Conference of the Faculty of Medicine, University of Prishtina, organized on 16 June 2026. The abstracts are arranged according to the official conference program: oral presentations by room and session, followed by poster presentations.

Science Education Service	Students Today, Professionals Tomorrow	Together for better health
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MESSAGE FROM THE MANAGEMENT

It is with particular pleasure that we present the Book of Abstracts of the Second Student Conference of the Faculty of Medicine, a publication that reflects the dedication of our students and their mentors to scientific research, innovation, and academic development.

This conference has become an important platform for promoting a culture of scientific research, bringing together students from bachelor, master, and doctoral programmes in a shared space for presenting ideas, exchanging experiences, and engaging in academic dialogue. The participation of students and researchers from both local and international institutions gives this event a special dimension, strengthening the collaboration and internationalisation of our Faculty. The extraordinary interest shown by our students, both as active presenters and as attendees, demonstrates that scientific research is occupying an increasingly important place in their academic and professional formation, making this conference one of the Faculty's most significant student activities.

The abstracts included in this publication address a wide range of topics from the fields of medicine, dentistry, pharmacy, physiotherapy, nursing, and public health, reflecting our students' engagement with the contemporary challenges of the health sciences and their readiness to contribute to the advancement of knowledge. We are especially pleased by the inclusion of sessions dedicated to the research of first-year students, which testify to the importance of cultivating critical thinking and scientific inquiry from the very beginning of professional training.

The Management of the Faculty of Medicine expresses its sincere gratitude to all students, mentors, members of the Scientific Committee and the Organising Committee, the Rectorate of the University of Prishtina, and the professional chambers that supported the organisation of this conference. The contribution of each has made possible an event that promotes academic quality, collaboration, and excellence in scientific research.

We hope that this Book of Abstracts will serve not only as documentation of the valuable research work of our students, but also as a source of inspiration for future generations, encouraging them to continue their journey towards knowledge, innovation, and professional development.

Confident that this conference will continue to grow and strengthen its academic tradition, we thank you for your contribution and participation, and

See you at the Third Student Conference of the Faculty of Medicine!

**The Management of the Faculty of Medicine
University of Prishtina**

PROGRAM OVERVIEW

TIME	AMPHITHEATRE	ROOM D-2	ROOM D-3
07:30-08:30	Registration	Registration	Registration
08:30-09:00	Opening Ceremony	Opening Ceremony	Opening Ceremony
09:00-10:30	Session I: Contemporary Perspectives in Medical Research	Session I: Dentistry and the Head and Neck Region	Session I: Learning from Clinical Cases
11:00-12:30	Session II: Current Topics in Medicine and Healthcare	Session II: Multidisciplinary Approaches in Healthcare	Session II: First Steps in Science 1
12:30-13:00	Poster Discussion	Poster Discussion	Poster Discussion
12:30-14:00	Lunch	Lunch	Lunch
14:00-15:30/15:40	Session III: Cardiovascular, Infectious and Metabolic Diseases	Session III: Clinical Challenges and Medical Research	Session III: First Steps in Science 2
15:40-17:30	Session IV: Oncology, Diagnostics and Innovation in Medicine	-	-
17:30	Closing of the Conference and Group Photo		

ORAL PRESENTATIONS

AMPHITHEATRE

Contemporary Perspectives in Medical Research

ORAL PRESENTATION | AMPHITHEATRE | Contemporary Perspectives in Medical Research | 09:00–09:10

Clinical Symptom Score as a Predictor of Tympanometric Abnormalities in Children with Suspected Adenoid Hypertrophy: A Pilot Study

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Background: Adenoid hypertrophy represents one of the most common pediatric otorhinolaryngologic conditions and is frequently associated with Eustachian tube dysfunction and middle ear pathology. Early identification of children at increased risk for middle ear dysfunction remains clinically important, particularly in settings where advanced diagnostic tools may not always be readily available.

Aim: To evaluate the association between a simplified clinical symptom score and tympanometric abnormalities in children with suspected adenoid hypertrophy.

Methods: This pilot observational study included pediatric patients aged 3-12 years presenting with clinical suspicion of adenoid hypertrophy. A symptom-based clinical score ranging from 0 to 4 was developed based on the presence of the following symptoms: mouth breathing, snoring, recurrent upper respiratory infections, and subjective hearing impairment. According to symptom severity, patients were categorized into two groups: mild symptoms (score 0-1) and severe symptoms (score 2-4). All participants underwent tympanometric evaluation, with findings classified according to the Jerger classification system (Type A, B, and C tympanograms).

Results: Preliminary analysis demonstrated a higher frequency of pathological tympanometric findings (Type B and/or Type C) among children presenting with higher clinical symptom scores compared with those exhibiting milder symptomatology. A positive correlation trend was observed between symptom severity and the prevalence of middle ear dysfunction. Final statistical analysis and quantitative data will be completed following full data collection and verification.

Conclusion: The proposed clinical symptom score may represent a practical and accessible screening tool for identifying children at increased risk of middle ear dysfunction associated with adenoid hypertrophy. Tympanometry remains a valuable, non-invasive diagnostic modality that complements clinical assessment and may support early detection of otologic complications in pediatric patients.

Keywords: adenoid hypertrophy; tympanometry; pediatric otolaryngology; Eustachian tube dysfunction; middle ear pathology; clinical symptom score; hearing impairment.

ORAL PRESENTATION | AMPHITHEATRE | Contemporary Perspectives in Medical Research | 09:10–09:20

Metabolic Complications in Pediatric Obesity: A Case Series from the Pediatric Endocrinology Clinic at the University Clinical Center of Kosovo

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Introduction: Pediatric obesity represents a major public health challenge associated with metabolic, cardiovascular, and endocrine complications. This study represents one of the first comprehensive analyses in Kosovo evaluating the metabolic complications of pediatric obesity in hospitalized patients, demonstrating a strong association between pediatric obesity and early metabolic complications, including insulin resistance, prediabetes, type 2 diabetes mellitus, non-alcoholic fatty liver disease, arterial hypertension, and dyslipidemia. Early identification, systematic monitoring, and multidisciplinary management are essential for reducing long-term morbidity and preventing progression toward chronic metabolic diseases.

Materials and Methods: A retrospective case series was conducted including 21 obese pediatric patients hospitalized during 2024-2026 at the Pediatric Endocrinology Clinic at University Clinical Center of Kosovo. Variables (BMI, HbA1c, fasting glucose, insulin resistance, lipid profile, thyroid function, and metabolic complications) obtained from medical records were statistically analyzed using Microsoft Excel.

Results: All patients were obese, of whom 23.8% had severe obesity (BMI ≥ 40 kg/m²). Insulin resistance was identified in 81.0% of cases, type 2 diabetes mellitus in 33.3%, prediabetes in 19.0%, metabolic syndrome in 28.6%, non-alcoholic fatty liver disease in 23.8%, arterial hypertension and dyslipidemia in 19.0%, while thyroid disorders were identified in 14.3% of cases. Renal and cardiovascular abnormalities were observed in 9.5% each. Patients with higher BMI presented increased HbA1c levels and more pronounced metabolic complications.

Conclusion: Pediatric obesity is associated with early metabolic complications and significant multisystem involvement. Early identification, systematic monitoring, and multidisciplinary management are essential for reducing long-term morbidity and preventing progression toward chronic metabolic diseases.

ORAL PRESENTATION | AMPHITHEATRE | Contemporary Perspectives in Medical Research | 09:20–09:30

Influence of Preoperative Corneal and Optical Parameters on Visual and Refractive Outcomes After Transepithelial Photorefractive Keratectomy: A Retrospective Study

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INTRODUCTION

Transepithelial photorefractive keratectomy (TranPRK) is one of the modern methods of laser refractive surgery. It is used to correct myopia, hyperopia and astigmatism. It is minimally invasive in nature and in most cases gives good postoperative results.

AIM

To assess the impact of preoperative corneal and optical parameters on early visual outcomes. To assess the impact of these parameters on refractive outcomes after TransPRK. To analyze the refractive effectiveness and the incidence of corneal haze one month after surgery.

MATERIALS AND METHODS

This retrospective study included patients who underwent TransPRK at the "Kubati" Eye Clinic, Prishtina, during the period January 1, 2025 - June 30, 2025. The study included demographic data, preoperative and postoperative refractive parameters, corneal parameters, and optical parameters. Descriptive statistical tests, tests for comparing preoperative and postoperative variables, and correlational analyses were used. Values of $p < 0.05$ were considered statistically significant.

RESULTS

There were 100 eyes treated with TransPRK, that were included. The mean age of the patients was 29.4 ± 7.6 years. Visual acuity without correction for distance improved significantly one month after surgery, from 0.22 ± 0.18 preoperatively to 0.87 ± 0.19 postoperatively ($p < 0.001$). The spherical equivalent was reduced from -2.51 ± 1.87 diopters to -0.09 ± 0.39 diopters ($p < 0.001$). The mean corneal keratometry (Kmean) values decreased from 43.01 ± 1.58 diopters to 40.68 ± 1.84 diopters ($p < 0.001$). Corneal haze was evident in 3% of treated eyes.

CONCLUSIONS

TransPRK showed high effectiveness in early improvement of visual and refractive outcomes one month after surgery. There was a statistically significant improvement in uncorrected visual acuity for distance and a significant reduction in postoperative spherical equivalent. Preoperative optical parameters, scotopic pupil size, and higher order aberrations, did not show a statistically significant association with early postoperative visual outcomes.

ORAL PRESENTATION | AMPHITHEATRE | Contemporary Perspectives in Medical Research | 09:30–09:40

What barriers do pregnant women face who want an abortion in Kosovo?

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Faculty of Medicine, University of Prishtina

Introduction: Access to safe and legal abortion is a fundamental component of reproductive healthcare and women's rights. However, legal entitlement does not always ensure effective access, as women may encounter institutional, geographic, and socio-cultural barriers. In Kosovo, abortion is legally permitted up to 10 weeks of pregnancy, yet practical access remains insufficiently explored.

Aim: This study aimed to examine the barriers faced by women seeking abortion services in Kosovo and to assess the relationship between the legal framework and actual access to care.

Materials and Methods: A qualitative research design was employed. Data were collected through semi-structured interviews with a women's rights advocate from Action for Mothers and Children (AMC) and a gynaecologist from the University Clinical Centre of Kosovo (QKUK). Participants were selected using judgement sampling based on their expertise in reproductive health and women's rights. In addition, a document analysis of Kosovo's abortion laws and policy frameworks since 2008 was conducted. Data were analysed thematically to identify key legal, institutional, and socio-cultural barriers.

Results: Although abortion is legally available up to 10 weeks of gestation, participants identified several barriers affecting access in practice. Institutional challenges included shortages of healthcare personnel, limited infrastructure, uneven service provision, and restricted availability of medical abortion. Geographic disparities were reported, particularly affecting women in rural areas. Social stigma, conservative cultural norms, gender-based pressures, and limited public awareness of reproductive rights further constrained access. While healthcare providers generally perceived abortion services as accessible within clinical settings, women's rights advocates emphasized broader concerns related to dignity, privacy, equality, and practical accessibility.

Conclusion: Abortion access in Kosovo is shaped by more than legal provisions alone. Despite a clear legal framework, institutional limitations, geographic inequalities, and socio-cultural factors continue to affect women's access to services. Strengthening healthcare capacity, improving implementation mechanisms, and strengthening healthcare provider training as well as increasing public awareness are essential to ensure effective and equitable access to reproductive healthcare.

ORAL PRESENTATION | AMPHITHEATRE | Contemporary Perspectives in Medical Research | 09:50–10:00

Scan length as a major driver of CT radiation dose: a diagnostic reference level audit from Kosovo

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Introduction: Computed tomography is the largest contributor to population radiation dose from medical imaging, yet no diagnostic reference levels (DRLs) exist in Kosovo or the Western Balkans.

Aim: To establish the first local CT diagnostic reference levels in Kosovo and to evaluate scan length as an independent dose determinant.

Materials and Methods: A retrospective audit of all CT examinations performed on a Philips Incisive CT 128-slice scanner at the University Clinical Centre of Kosovo between January and March 2026 was conducted. Dose parameters were extracted from DICOM headers using pydicom. After exclusions, 1,535 acquisitions from 1,092 patients (596 male, 496 female; median age 60 years) across nine examination categories were analyzed. Local DRLs were defined at the 75th percentile. Per-acquisition CTDIvol and scan length were compared against BfS 2022 German reference values using the Wilcoxon signed-rank test, and P75 values were compared with Kahraman 2024 local DRLs from Türkiye.

Results: Head CT ($n = 590$) demonstrated CTDIvol 4.7% below the BfS DRL (median 52.4 vs 55 mGy, $p = 0.003$) yet scan length 98.5% above the BfS orientation value (median 25.8 vs 13 cm, $p < 0.001$). Abdomen-pelvis CTDIvol matched the BfS reference ($p = 0.95$) while scan length exceeded it by 28% ($p < 0.001$). Coronary CTA showed the highest CTDIvol elevation (+377%, median 95.4 mGy), consistent with routine retrospective ECG gating (pitch 0.15 in 98% of acquisitions). Iterative reconstruction was disabled for head, brain CTA, coronary CTA, and MSK protocols.

Conclusion: Excess scan length, not CTDIvol, is the major driver of elevated patient dose across most examination categories at this institution. The identified dose excesses are correctable through technologist landmarking training, protocol review, and enabling iterative reconstruction, requiring no equipment investment.

The impact of risdiplam treatment on bulbar and motor functions in patients with spinal muscular atrophy at the Pediatric Clinic

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Background: Spinal Muscular Atrophy (SMA) is a progressive neuromuscular disorder with autosomal recessive inheritance, mainly caused by homozygous deletion of the SMN1 gene. It is characterized by progressive loss of motor neurons, leading to muscle weakness and motor, respiratory, and bulbar dysfunction. The number of SMN2 copies influences the phenotype and clinical severity. Risdiplam is an oral disease-modifying therapy that increases the production of functional SMN protein.

Aim: To describe the clinical and genetic characteristics of patients with SMA treated with risdiplam at the Pediatric Clinic, as well as the impact of treatment on motor and bulbar functions.

Methodology: This retrospective study includes 15 patients with genetically confirmed SMA followed at the Pediatric Clinic. Demographic and clinical data, SMA type, number of SMN2 copies, motor functional status, bulbar functions, risdiplam treatment, clinical progression, need for wheelchair use, and cases identified through family screening were analyzed.

Results: The included patients had SMA types 1-3 and a broad clinical spectrum, ranging from presymptomatic cases to advanced loss of motor function. The number of SMN2 copies ranged from 2 to 4. Some patients were non-sitters, while others were sitters or walkers, with cases of progression toward wheelchair use. Some patients were identified through family screening due to a positive family history of SMA. During follow-up, preservation of existing motor functions and a tendency toward clinical stabilization were observed. No significant worsening of bulbar functions was documented.

Conclusion: Risdiplam may contribute to the stabilization of motor and bulbar functions in patients with SMA. Early diagnosis, family screening, and multidisciplinary follow-up remain essential for long-term management.

Keywords: SMA; risdiplam; motor function; bulbar function; SMN1; SMN2.

Current Topics in Medicine and Healthcare

Use of biological therapy in patients with psoriasis: a retrospective study

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Faculty of Medicine, University of Prishtina

Introduction: Psoriasis is a chronic inflammatory skin disease with a multifactorial etiology, characterized by a prolonged course and a significant impact on patients' quality of life. In moderate-to-severe cases, biological therapy has brought substantial advances in disease management, providing effective treatment options for patients who do not respond adequately to conventional therapies.

Objective: To describe the demographic and clinical characteristics of patients with psoriasis treated with biological therapy and to evaluate the patterns of biological therapy use in clinical practice.

Methodology: This retrospective study was conducted at the Dermatology Clinic. Data were collected from the medical records of patients diagnosed with psoriasis who received biological therapy. Demographic data (age, sex), clinical characteristics of the disease (type of psoriasis, lesion localization, family history), the type of biological therapy used, previous treatments, as well as cases of biological therapy switching and the corresponding reasons, were analyzed. Data will be presented using descriptive statistics.

Results: The study includes patients with psoriasis treated with biological therapy. The distribution according to age and sex, clinical forms of psoriasis, localization of cutaneous manifestations, and the presence of a family history of the disease were analyzed. In addition, the most commonly used biological therapies, previous non-biological treatments, and cases requiring a change in biological therapy during patient follow-up were evaluated.

Conclusion: This study aims to provide an overview of the characteristics of patients with psoriasis receiving biological therapy and to highlight patterns of biological therapy use in clinical practice. The findings are expected to contribute to a better understanding of psoriasis management and the utilization of biological therapies in the local healthcare setting.

How diabetes mellitus affects ovarian disruption during puberty

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Introduction: .

Type 1 diabetes mellitus (T1DM) is a common chronic childhood disease with a steadily increasing incidence. Adolescents with T1DM often experience delayed menarche, menstrual disorders, and infertility. Estrogen receptor alpha (ERα) plays an important role in follicular maturation, while ERα and ERβ regulate glucose homeostasis through SP1-mediated GLUT4 expression.

AIM

To determine how diabetes mellitus affects the histology-ultrastructure of the ovaries rats and the expression of ERα during puberty.

MATERIALS AND METHODS

The study used 10 2-month-old female albino laboratory rats, which were equally divided into 2 groups: 1 - control animals and 2 - rats with simulated streptozotocin-induced diabetes mellitus (SIDM). The material was taken on the 28th day from the beginning of the experiment. Histological, immunohistochemical, electron microscopy, biochemical and statistical methods were used.

Results: .

Under conditions of SIDM, against the background of hyperglycemia and elevated HbA1c levels, a restructuring of the histoarchitecture of the ovarian cortex was observed. The number of primordial and primary follicles decreased by 2.3 and 1.6 times, along with an increase in the

number of atretic and cystic follicles. The overall histological pattern in diabetic rats resembled the ovarian morphology observed in rats with polycystic ovary syndrome (PCOS).

ER α redistribution was observed, with reduced expression in primordial and primary follicles and increased expression in granulosa cells of atretic, cystic, and Graafian follicles.

Ultrastructural analysis revealed apoptosis and occasional colliquative necrosis of oocytes in primary and secondary follicles. Granulosa cells showed dilation of endoplasmic reticulum cisternae, mitochondrial cristae lysis, lipid accumulation, and partial desquamation into the antral cavity.

Conclusion:

According to our study, SIDM induced cystic and atretic follicle formation with impaired follicular morphogenesis, indicating PCOS-like ovarian changes. Altered ER α expression may contribute to ovarian hyperandrogenemia by changing the estrogen sensitivity of theca cells.

ORAL PRESENTATION | AMPHITHEATRE | Current Topics in Medicine and Healthcare | 11:20–11:30

Profile of allergen sensitization in patients with allergic diseases in Kosovo: a retrospective study with data from 2023

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² “Ylli” Polyclinic

Introduction: Allergic diseases represent one of the most important public health problems at a global level, with a continuous increase in prevalence over the last decades. They include a heterogeneous group of immunological pathologies characterized by exaggerated responses of the immune system to usually harmless substances in the environment, known as allergens

Purpose: The purpose of the study was to analyze the distribution of allergic sensitization in patients examined during 2023 at the “Ylli” Polyclinic, identifying the dominant allergens and the main clinical and demographic characteristics.

Material and methodology: This retrospective descriptive study includes the analysis of data from 497 patients examined during 2023 at the “Ylli” Polyclinic. The data were obtained from the allergological database and included the results of tests for aero allergens, food allergens and insect venom. The allergens with the highest presence, clinical diagnoses and mono-sensitization versus poly-sensitization were analyzed.

Results: Aeroallergens represented the most frequent sensitizations, especially *D. pteronyssinus* (41.4%), *D. farinae* (31.8%) and Cypress pollen (31.4%). Among the food allergens, banana (27.2%), pork (23.3%) and beef (22.1%) dominated, while sensitization to insect venom was rare (<2%). Allergic rhinoconjunctivitis was the most frequent diagnosis (11.3%), while polysensitization predominated in 66% of patients.

Conclusion: The results of this study confirm the trends reported in the international and regional literature, indicating that aeroallergens represent the dominant sensitizations in patients with allergic diseases in Kosovo. The higher sensitization to *Dermatophagoides pteronyssinus* and *Dermatophagoides farinae* is consistent with European and Balkan studies identifying house dust mites as the main respiratory allergens. Also, the predominance of poly-sensitization and allergic rhinoconjunctivitis reflects the clinical complexity of allergic diseases and the similarity with global epidemiological patterns. These data emphasize the need for earlier diagnosis and the development of local strategies for the effective management of allergic diseases in Kosovo.

ORAL PRESENTATION | AMPHITHEATRE | Current Topics in Medicine and Healthcare | 11:30–11:40

Predictors of sodium-glucose cotransporter 2 inhibitors prescription in patients with heart failure

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INTRODUCTION

Sodium-glucose cotransporter 2 (SGLT2) inhibitors have transformed heart failure management, with landmark trials demonstrating approximately 25% reductions in cardiovascular death or heart failure hospitalization. Despite guideline recommendations, prescription rates remain below 50%. This evidence-practice gap represents a critical missed opportunity to improve patient outcomes. Multiple factors may influence SGLT2 inhibitor prescribing patterns in patients with heart failure. Patient-level characteristics such as age, sex, comorbidities (particularly type 2 diabetes), renal function, blood pressure, and body weight have been identified as potential determinants of SGLT2 inhibitor use. Understanding these predictors is essential to address the evidence-practice gap and optimize guideline-directed medical therapy for heart failure patients.

OBJECTIVES

This study aimed to identify predictors of SGLT2 inhibitor use in heart failure patients.

METHODS

In this study we analysed demographic factors (age, sex), body mass index (BMI), and comorbidities (diabetes, hypertension, hypercholesterolemia) in 40 heart failure patients. Statistical analyses included t-tests, Fisher's exact tests, and logistic regression.

RESULTS

SGLT2i therapy was utilized by 22 patients. Age was a significant predictor, with younger patients more likely to receive SGLT2 inhibitors (median age 62.0 vs. 74.5 years; $p=0.011$). No statistically significant associations were found for gender ($p=1.000$), BMI ($p=0.682$), hypertension ($p=0.427$), diabetes ($p=1.000$), or hypercholesterolemia ($p=0.293$). Regression modelling indicated that these clinical factors only partially explained prescription patterns.

CONCLUSION

In this study, younger age was the primary independent predictor of SGLT2 inhibitor use. Other analysed demographic and clinical factors did not significantly influence prescription decisions, suggesting further research is needed to understand the barriers to optimal guideline-directed medical therapy.

ORAL PRESENTATION | AMPHITHEATRE | Current Topics in Medicine and Healthcare | 11:40–11:50

The role of biochemical characteristics of saliva in sialolithiasis

Ferhad Gül, Bojana Georgievska, Sanela Idoska, Martina Anastasovska

Objective: The aim of our study was to assess the biochemical composition of saliva by evaluating the salivary concentrations of calcium (Ca), phosphates (PO_4^{3-}), and total proteins (TP) in patients with sialolithiasis. An additional objective was to evaluate the pH value and salivary flow rate as functional parameters associated with sialolithiasis.

Materials and Methods: The study included 44 participants of both sexes, divided into two groups: 22 participants with a history of sialolithiasis and 22 healthy individuals as a control group. Unstimulated saliva was collected from all participants. Following collection, the salivary flow rate and pH were determined; after processing, the concentrations of Ca, PO_4^{3-} , and TP were measured spectrophotometrically.

Results: The salivary flow rate was reduced in patients with sialolithiasis compared to the control group. The pH value showed no significant differences between the groups. The concentrations of Ca, PO_4^{3-} and TP were increased in patients with sialolithiasis relative to the control group.

Conclusion: Our results indicate that there are changes in the salivary composition of patients with sialolithiasis, particularly in the concentrations of Ca, PO_4^{3-} and TP. These findings suggest that disturbances in the biochemical composition of saliva may play a role in the pathogenesis and potential recurrence of sialolithiasis.

Keywords: sialolithiasis, calcium, phosphates, total proteins, salivary pH.

ORAL PRESENTATION | AMPHITHEATRE | Current Topics in Medicine and Healthcare | 11:50–12:00

Self-management of arterial hypertension: self-care behaviors and therapeutic adherence in a tertiary ambulatory population

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Introduction: Arterial hypertension (AH) is among the leading modifiable risk factors for cardiovascular diseases and premature mortality. Its management requires good adherence to therapy and continuous implementation of self-care practices.

Objective: To assess the level of self-care and adherence to antihypertensive therapy among patients with AH, as well as their association with clinical and demographic factors.

Methodology: A prospective observational study (August-October 2025) was conducted in the specialist outpatient clinic of the University Clinical Center of Kosovo (QKUK), including 150 patients with AH. Self-care was assessed using a 15-item Likert-scale questionnaire, while therapeutic adherence was evaluated using an 8-item instrument assessing compliance with antihypertensive treatment. Data were expressed in percentages and analyzed in relation to clinical and demographic parameters.

Results: The mean age of patients was 64.5 ± 10.6 years, 52.7% were male, and the mean duration of AH was 10.6 ± 9.2 years. Mean blood pressure was $140.7/85.7$ mmHg, and 88.7% of patients were on combination antihypertensive therapy. Mean self-care score was $60.5\% \pm 11.9$, while therapeutic adherence was $79.4\% \pm 21.1$. The main deficiencies were observed in physical activity, diet, and regular medication intake. Better self-care was associated with higher educational level ($r = 0.163$, $p = 0.04$), use of ARBs ($r = 0.18$, $p = 0.03$), and spironolactone ($r = 0.4$, $p < 0.0001$), while higher doses of loop diuretics were negatively associated with self-care ($r = -0.17$, $p = 0.04$). Better adherence was associated with higher educational level ($r = 0.18$, $p = 0.03$), male gender ($r = 0.19$, $p = 0.02$), ACE inhibitors ($r = 0.17$, $p = 0.04$), and spironolactone ($r = 0.20$, $p = 0.01$).

Conclusion: Patients with AH demonstrated moderate self-care and therapeutic adherence, highlighting the need for educational and practical interventions to improve hypertension self-management.

ORAL PRESENTATION | AMPHITHEATRE | Current Topics in Medicine and Healthcare | 12:00–12:10

The role of PET/CT in the staging of lymphomas in Kosovo: a retrospective analysis

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Introduction: Lymphomas are heterogeneous hematologic malignancies in which accurate staging is essential for treatment planning and prognostic assessment. FDG PET/CT combines metabolic and anatomical information, providing more accurate evaluation than conventional computed tomography (CT). In Kosovo, this modality was implemented only recently and local data on its clinical impact remain limited.

Objective: To evaluate the role of PET/CT in the staging of lymphomas in Kosovo and its impact on detecting disease dissemination and guiding clinical decision-making.

Materials and Methods: A retrospective analytical study including 25 patients with lymphoma examined with FDG PET/CT at the Nuclear Medicine Department of the University Clinical Center of Kosovo (UCCCK), between December 2024 and December 2025. Demographic and clinical data, CT and PET/CT findings, nodal and extranodal involvement, and staging changes were analyzed. Statistical comparison was performed using McNemar's test and weighted Cohen's Kappa, with SPSS software.

Results: The mean age was 55 years; 16 patients (64%) were male and 9 (36%) female. PET/CT changed staging in 9 cases (36%), predominantly toward upstaging, while no downstaging was observed. Extranodal involvement was identified in 12 patients (48%), most frequently in the bone marrow/skeleton, lungs, and abdominal organs. Among comparable cases ($n=15$), PET/CT showed a higher stage in 60% ($\chi^2=7.11$; $p=0.007$), with moderate agreement with CT ($\kappa=0.49$). Complete metabolic remission was observed in the majority of post-treatment patients.

Conclusion: PET/CT demonstrated significant value in the staging of lymphomas in Kosovo, particularly in identifying extranodal involvement and changing staging, with direct implications for treatment planning. These findings support the integration of PET/CT as a central component in the contemporary management of lymphomas.

Keywords: lymphoma, FDG PET/CT, staging, extranodal involvement, Kosovo.

Comparison of CT and PET/CT staging analyses

Stage | CT | PET/CT

I | 3 | 2

II | 4 | 3

III | 8 | 4

IV | 0 | 6

Quality of life in patients with atrial fibrillation in Kosovo: assessment using the AFEQT questionnaire**Emira Lleshi, Aurora Bakalli***Faculty of Medicine, University of Prishtina.**University Clinical Center of Kosovo.*

Introduction: Atrial fibrillation (AF) is the most common cardiac arrhythmia, with a significant impact on the physical, functional, and psychological well-being of patients. In addition to the risk of cardiovascular complications, AF is often associated with limitations in daily activities due to fatigue, dyspnea, palpitations, and dizziness, highlighting its impact on quality of life. The aim of this study was to assess the quality of life of patients with AF in Kosovo through the AFEQT questionnaire.

Methodology: The study included 105 patients with AF who were evaluated at the Cardiology Clinic of the University Clinical Center of Kosovo. Quality of life was assessed using the validated AFEQT questionnaire, which includes 20 questions divided into 4 domains: symptoms, daily activities, treatment concern, and treatment satisfaction. Statistical analyses were performed using SPSS, applying means $\pm$ SD and percentages.

Results: The mean age of our 105 patients was 70.95 ± 8 years, while 54.3% were male. The mean CHA₂DS₂-VA score was 3.3 ± 1.5 , indicating a moderate to high thromboembolic risk. On the transformed AFEQT scale of 0-100, where higher values indicate better quality of life, the symptoms domain (50.6 ± 19.4) and the daily activities domain (53.8 ± 19.9) were classified in the category of "poor to moderate quality of life" (<60), indicating a significant symptomatic burden and functional limitation. The treatment concern domain scored 64.1 ± 13.2 , corresponding to the category of "moderate to good quality of life" (60-80). The highest score was observed in the treatment satisfaction domain (92.5 ± 11.4), classified as "good to excellent quality of life" (80-100). These results suggest that, although atrial fibrillation significantly affects quality of life, patients perceive treatment as effective and beneficial in improving their overall condition.

Conclusion: Atrial fibrillation represents a clinical condition with a significant impact not only on the risk of cardiovascular complications, but also on patients' quality of life. The AFEQT results emphasize that AF management should be individualized and should include, alongside clinical parameters, the patient's subjective experience of the disease.

Cardiovascular, Infectious and Metabolic Diseases**Premature acute myocardial infarction: analysis of risk factors and angiographic findings****Djellza Veseli, Aurora Bakalli***Faculty of Medicine, University of Prishtina*

Introduction: Acute myocardial infarction (AMI) at a young age represents an increasingly growing problem with particular clinical and socio-economic importance. The aim of this study was to analyze the clinical, laboratory, and angiographic characteristics of patients with premature AMI, as well as to identify factors associated with the presentation of AMI at a younger age.

Methodology: The study included patients hospitalized with STEMI and NSTEMI at the Clinic of Cardiology, UCCK, during the period January 1 - May 20, 2026. Premature AMI was identified in 133 patients (15.6%) out of a total of 855 hospitalized patients. Demographic data, cardiovascular risk factors, laboratory parameters, time to intervention, and angiographic findings were analyzed. Statistical analyses included comparative tests, Spearman correlation, and multivariate linear regression.

Results: The mean age of the patients was 51.2 ± 6.8 years, while males constituted the majority of cases (70.7%, $p < 0.001$). STEMI was presented in 57.1% of patients. The most frequent risk factors were active smoking (67.7%), positive family history (57.1%), and arterial hypertension (51.9%). The majority of patients (75.9%) underwent intervention within 24 hours from symptom onset. On angiography, LAD was the most frequently affected artery (69.2%), while single-vessel coronary artery disease was the most common form (50.4%). A positive correlation was found between age and the number of affected arteries (Spearman $\rho = 0.218$, $p = 0.02$). Multivariate linear regression showed that male gender and higher triglyceride levels were associated with AMI presentation at a younger age, whereas hypertension and female gender were associated with presentation at an older age. Other variables did not show statistically significant associations.

Conclusion: Premature AMI was more frequent among males and active smokers. LAD and single-vessel disease predominated in the angiographic findings. Male gender and elevated triglycerides may represent important factors associated with the early presentation of AMI.

Clinical and epidemiological characteristics of imported malaria and leishmaniasis in Kosovo: a five-year retrospective analysis**Mjellma Etemi, Elda Kavaja, Rina Krasniqi, Ilir Q. Tolaj, Gramoz Bunjaku***1Student, Medical Faculty, University of Prishtina, Prishtina, Kosovo**2Infectious Diseases Clinic, University Clinical Center of Kosovo, Prishtina, Kosovo**3Department of Infectious Diseases, Medical Faculty, Prishtina, Kosovo*

Background: Imported vector-borne tropical diseases are increasingly encountered in non-endemic European settings. We describe the epidemiology, clinical features, laboratory findings and outcomes of imported malaria and leishmaniasis admitted to the Infectious Diseases Clinic, University Clinical Center of Kosovo (UCCK), 2020-2025.

Methods: Retrospective descriptive analysis of archived medical records. Data extracted included demographics, travel history, clinical presentation, laboratory and imaging findings, treatment and outcomes. Descriptive statistics were used; chi-square and binomial tests reported where applicable.

Results: Twenty-one patients were included: 9 malaria, 12 leishmaniasis. Malaria patients were older (mean age 47.2 years) than leishmaniasis patients (mean 18.4 years; median 6.5). Fever, lethargy and hepatosplenomegaly were common. Malaria cases frequently exhibited thrombocytopenia (mean platelet count $126,500/\mu\text{L}$) and variable leukocytosis; leishmaniasis cases demonstrated higher transaminases in available data (mean AST 622 U/L , ALT 480 U/L). Mean hospital stays for malaria was 7.6 days, while for leishmaniasis 36.8 days. All malaria infections were acquired in Africa; prophylactic antimalarial use was rare (1 of 9; 11.1%); binomial test $p = 0.039$.

Conclusions: Imported malaria and leishmaniasis in Kosovo show distinct clinical and epidemiological features. Low prophylaxis uptake and diagnostic delays are important challenges. Strengthening travel medicine services, clinician awareness and laboratory diagnostics in non-endemic Southeastern Europe is recommended.

KEYWORDS

- Imported malaria; visceral leishmaniasis; tropical diseases; Kosovo; travel medicine; hepatosplenomegaly

ORAL PRESENTATION | AMPHITHEATRE | Cardiovascular, Infectious and Metabolic Diseases | 14:30–14:40

Vitamin D deficiency and chronic diabetic complications in type 2 diabetes mellitus: a single-center retrospective study

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Introduction: Vitamin D deficiency is common among patients with type 2 diabetes mellitus (T2DM) and has been suggested as a potential factor in the development of chronic diabetic complications. However, evidence regarding the relationship between vitamin D status and diabetic complications remains inconsistent.

Aim: To analyze vitamin D deficiency and its association with chronic microvascular and macrovascular complications in patients with T2DM.

Materials and Methods: This retrospective study was conducted at the Clinic of Endocrinology of the University Clinical Center of Kosovo during 2021-2025. The analysis included 189 patients with T2DM who met the research criteria, selected from a total of 3,910 patients.

Results: Vitamin D deficiency was identified in 68.7% of patients. The most frequent complications were cardiovascular disease (17.9%), diabetic neuropathy (17.4%), diabetic retinopathy (16.8%), and diabetic nephropathy (6.3%). Univariate analysis showed a significant association between vitamin D status and microvascular complications ($p=0.031$), whereas no association was found with macrovascular complications ($p=0.865$). In multivariate analysis, vitamin D deficiency was not an independent factor for microvascular complications (OR=0.51; 95% CI: 0.26-1.03; $p=0.059$) or macrovascular complications ($p=0.80$).

Conclusion: Vitamin D deficiency was highly prevalent in patients with T2DM. An association was observed between microvascular complications and vitamin D deficiency. Our findings support the importance of screening for and correcting hypovitaminosis D in patients with T2DM and highlight the need for prospective studies with larger samples.

ORAL PRESENTATION | AMPHITHEATRE | Cardiovascular, Infectious and Metabolic Diseases | 14:40–14:50

Awareness of arterial hypertension: experience from a tertiary outpatient population

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Introduction: Arterial hypertension (AH) is one of the leading modifiable risk factors for cardiovascular diseases and premature mortality. Patients' knowledge of AH is essential for early diagnosis, treatment adherence, and long-term disease control.

Objective: To assess the level of knowledge among patients with AH and its association with clinical and demographic factors.

Methodology: A prospective observational study (August-October 2025) was conducted in the specialist outpatient clinic at the University Clinical Center of Kosovo (QKUK), including patients with AH. Knowledge was assessed using a 12-item "Yes/No/Don't know" questionnaire, where correct answers were scored with 1 point. Results were classified according to a modified Bloom's taxonomy: >75% good knowledge, 50-74% moderate, <50% poor.

Results: A total of 150 patients were included (52.7% male), with a mean age of 64.45 ± 10.6 years. Mean blood pressure was $140.7 \pm 6.1 / 85.7 \pm 9.4$ mmHg, while the mean disease duration was 10.6 ± 9.2 years. The mean knowledge score was $82.3\% \pm 13.9\%$, indicating an overall good level of knowledge. However, important gaps were identified: approximately 50% were unaware that AH can be asymptomatic, 25% did not know the importance of continuing therapy in the absence of symptoms, and ~33% were unaware of the negative effects of alcohol and smoking. Better knowledge was associated with higher educational level ($r = 0.23$, $p = 0.005$) and the use of more intensive antihypertensive therapy, including ACE inhibitors, calcium channel blockers, and spironolactone.

Conclusion: Patients in a tertiary care center demonstrated generally good knowledge regarding AH, but with significant gaps in key aspects of the disease. These findings highlight the need for more structured educational programs to improve awareness and long-term management of arterial hypertension.

ORAL PRESENTATION | AMPHITHEATRE | Cardiovascular, Infectious and Metabolic Diseases | 14:50–15:00

Delayed diagnosis of people living with HIV/AIDS in Kosovo

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Introduction: Late presentation (LP) at diagnosis of HIV worldwide remains a persistent and critical barrier, with substantial implications for patient prognosis and ongoing transmission dynamics. This challenge is also observed in Kosovo, where a proportion of individuals are still diagnosed at advanced stages of HIV infection, reflecting ongoing gaps in early testing, delayed health-seeking behavior, and the impact of stigma as well as limited awareness regarding HIV risk and testing opportunities.

Aim: To investigate the epidemiological, immunological and virological characteristics associated with late HIV presentation in Kosovo during the 2023-2025 period and to compare findings with a previously established cohort from 2009-2022.

Materials and Methods: This observational cohort study included 72 newly diagnosed HIV-positive individuals managed at the Department of Infectious Diseases, University Clinical Center of Prishtina, between 2023 and 2025. LP was defined as CD4 count <350 cells/ μ L, while very late presentation (VLP) was defined as CD4 count <200 cells/ μ L at diagnosis. Statistical analyses included descriptive statistics, Fisher's exact testing, Mann-Whitney U testing and multivariable logistic regression analysis (AOR).

Results: LP was identified in 52.77% of individuals, while 26.38% met criteria for VLP. The cohort demonstrated marked male predominance (90.28%), with men who have sex with men (MSM) representing the most common transmission category (47.22%). The highest burden of infection was observed in the 31-55-year age group (54.16%). Interestingly, 52.77% of patients presented with viral load levels $\leq 4.0 \log_{10}$

copies/mL at diagnosis. Individuals aged 19-30 years demonstrated significantly lower odds of LP in univariate analysis (OR 0.22; 95% CI 0.08-0.63; $p=0.005$). Comparative analysis with the 2009-2022 cohort demonstrated relatively stable LP rates over time but significant differences in transmission patterns and viral load distribution.

Conclusion: Late HIV diagnosis remains highly prevalent in Kosovo, affecting more than half of newly diagnosed individuals. The persistently elevated burden of LP and VLP highlights the need for strengthened HIV testing strategies, earlier linkage to care, and targeted public health interventions focused on high-risk populations and vulnerable age groups.

ORAL PRESENTATION | AMPHITHEATRE | Cardiovascular, Infectious and Metabolic Diseases | 15:00–15:10

Prevalence and severity of anxiety among patients with heart failure assessed by the GAD-7 questionnaire and its association with NYHA functional classification

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Introduction: Heart failure (HF) is a serious chronic disease that negatively affects the quality of patients life. In addition to physical symptoms, patients with HF often experience anxiety, which can worsen the cardiac condition. Its early identification and treatment is very important for improving the quality of life and clinical outcomes of patients with HF.

Purpose: To assess the prevalence and level of anxiety in patients with heart failure and to analyze the relationship between the psychological state of patients and the NYHA scale.

Materials and Methods: This cross-sectional observational study included 103 hospitalized and ambulatory patients at the Cardiology Clinic and Specialist Outpatient Clinic of QKUK. Anxiety levels were assessed with the GAD-7 questionnaire. Statistical analysis included descriptive analysis, Chi-Square test, Spearman's correlation coefficient and Cramer's V to assess the relationship between NYHA classification and anxiety levels.

Results: Of the 103 patients, 49 or 47.6% were female and 54 or 52.4% male. The mean age was 65.8 ± 7.67 years. NYHA 1 patients had a mean anxiety score of only 2.50 ± 1.34 points (minimal anxiety), those with NYHA 2 had 6.84 ± 2.23 points (mild anxiety), with NYHA 3 12.90 ± 3.24 points (moderate anxiety) and those with NYHA 4 had 15.28 ± 3.75 points. The results show that there is a significant correlation (Pearson Chi-Square = 146.704; $df = 9$; $p < 0.001$). The results show strong (Cramer's V = 0.689) and positive correlation (Spearman Correlation: $\rho = 0.831$ and $p < 0.001$).

Conclusion: There is a strong correlation between NYHA class and anxiety levels measured with the GAD-7 questionnaire in patients with heart failure. Thus, with the progression or worsening of heart failure, a progressive increase in anxiety levels is observed.

ORAL PRESENTATION | AMPHITHEATRE | Cardiovascular, Infectious and Metabolic Diseases | 15:10–15:20

Contemporary management of chronic and complex wounds using negative pressure therapy: a multicenter retrospective study

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Background: Negative pressure wound therapy (NPWT/VAC) is an advanced wound management intervention supported by EWMA and WUWHS guidelines. Despite the high prevalence of diabetes, vascular disease, and traumatic wounds, documented experience from Kosovo remains limited in the international literature, leaving this clinical context insufficiently characterized scientifically.

Objectives: To document and characterize multicenter experience with NPWT/VAC at the University Clinical Center of Kosovo in Prishtina through a retrospective analysis of demographic, etiological, anatomical, and microbiological data.

Methodology: This retrospective observational study was conducted from January 2022 to April 2026 in three departments of the University Clinical Center of Kosovo: Plastic Surgery, Orthopedic Surgery, and the ICU. The study included 81 patients with chronic or complex wounds ≥ 4 cm², resistant to conventional treatment for ≥ 2 weeks or with a primary indication for NPWT.

Results: The cohort included 53 males (65.4%) and 28 females (34.6%), with a mean age of 50.2 ± 20.7 years. The dominant pathology was necrotizing fasciitis/necrosis (35.6%), followed by post-traumatic defects (28.9%). The most frequently affected anatomical regions were the cruris (26.7%) and femoral region (22.2%). Microbiological analysis ($n=16$ positive cultures) identified *Enterococcus faecium* (37.5%), *Klebsiella pneumoniae* (18.8%), *Staphylococcus* spp. (18.8%), and *Acinetobacter baumannii* (12.5%). The mean number of VAC dressing changes was 2.8 per month; 43.2% of patients were treated entirely in an outpatient setting.

Conclusions: NPWT/VAC therapy is clinically and organizationally feasible within the Kosovo healthcare system, documented through both inpatient treatment (56.8%) and outpatient care (43.2%). The cohort shows a demographic and microbiological profile distinct from Western series, with predominance of necrotizing fasciitis and concerning prevalence of resistant *Acinetobacter baumannii*. The findings support the need for NPWT protocolization, reimbursement by the Kosovo Health Insurance Fund, and review of antibiotic policies in Kosovo hospitals.

Keywords: NPWT; VAC therapy; necrotizing fasciitis; complex wounds; plastic surgery; Kosovo; microbiology; *Acinetobacter baumannii*.

Oncology, Diagnostics and Innovation in Medicine

ORAL PRESENTATION | AMPHITHEATRE | Oncology, Diagnostics and Innovation in Medicine | 15:40–15:50

Breast tumors: a one-year retrospective analysis of the diagnostic approach and surgical treatment at the University Clinical Center of Kosovo

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Introduction: Breast tumors represent one of the main health challenges in contemporary medicine, where breast cancer remains the most frequent malignant pathology and the main cause of mortality in women worldwide. The accurate distinction between benign and malignant lesions is vital for determining the therapeutic strategy.

Purpose: This paper aims to analyze cases of breast tumors treated surgically at the tertiary level in Kosovo (UCCCK) during the one-year period of 2025, comparing our clinical approach with international guidelines.

Materials and Methods: The study has a retrospective, descriptive and analytical character. Data from 399 patients operated on for breast tumors at the Thoracic Surgery Clinic during 2025 were analyzed. The classification was based on histopathology, while the data were statistically processed and presented with tables and percentages.

Results: The disease affected almost exclusively the female gender (98.7%), with a mean age of 55 years (17 to 90 years). According to histopathological type, malignant carcinoma dominated with 297 cases (74.4%), followed by benign tumors with 86 cases (21.6%) and suspicious neoplasms with 16 cases (4%). Localization in the left breast was most frequent (52.13%). Regarding surgical treatment, mastectomy was the most frequent intervention with 247 cases (61.9%), where modified radical mastectomy dominated (194 cases). Hospital diagnostic biopsies were performed in 99 cases (24.8%)-where excisional biopsy constituted 97% of them-while conservative surgery was applied in 43 cases (10.8%).

Conclusion: The research demonstrates a high predominance of malignant cases and radical surgical approaches (mastectomy) in our country. Early diagnosis through diagnostic triad, together with accurate molecular assessment and TNM staging, remain the main prerequisites to increase the application of conservative surgery and improve patient survival rates in Kosovo.

ORAL PRESENTATION | AMPHITHEATRE | Oncology, Diagnostics and Innovation in Medicine | 15:50–16:00

BRAF status in cutaneous malignant melanoma and its correlation with clinicopathological characteristics, including therapeutic approach at the University Clinical Center of Kosovo

Artiona Bokshi, Ejona Rexhepi, Fjolla Dragusha, Eda Januzi, Ilir Kurtishi, Rina Limani

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INTRODUCTION

Malignant melanoma is an aggressive skin neoplasm characterized by molecular and biological heterogeneity. Mutations of the BRAF gene [(proto-oncogene B-Raf (serine/threonine kinase), with substitution of valine with glutamic acid in codon 600 (BRAF V600E)], have particular prognostic and therapeutic importance, especially in cases with advanced disease.

AIM

The aim of this study was to evaluate the relationship between BRAF status and clinicopathological parameters of melanoma, including therapeutic approach, at the University Clinical Center of Kosovo (UCCCK).

MATERIALS AND METHODS

A retrospective study of 14 cases of cutaneous melanoma treated at the Institute of Oncology at UCCCK during the years 2023-2025 was conducted. Age, histological type, Breslow thickness, TNM stage, proliferation index measured with Ki-67, BRAF status determined by Idylla PCR and therapeutic treatment modality of the patients were analyzed.

RESULTS

Of the 14 cases included, 10 (71.4%) were BRAF-positive. BRAF-positive cases correlated with higher Breslow depth, higher proliferation index and more advanced clinicopathological stages. Nodular melanomas were associated with higher proliferative activity and more aggressive biological behavior. Nine patients with advanced disease with clinical stages III and IV were treated with immunotherapy according to the protocol at the Institute of Oncology at UCCCK. One patient did not continue treatment at UCCCK.

CONCLUSION

Malignant cutaneous melanomas that are BRAF positive are associated with more aggressive tumor parameters, including higher proliferation index and more advanced disease stage. Molecular testing of malignant melanoma is of great importance in prognostic stratification and therapeutic approach. UCCCK institutions provide molecular testing and treatment according to international protocols, providing patients diagnosed with malignant melanoma in Kosovo with adequate diagnosis and treatment.

KEYWORDS

Melanoma; BRAF; Ki-67; Breslow; molecular pathology; immunotherapy

ORAL PRESENTATION | AMPHITHEATRE | Oncology, Diagnostics and Innovation in Medicine | 16:00–16:10

Dosimetric evaluation and clinical outcomes of CT-based 3D brachytherapy for cervical cancer in Kosovo

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Faculty of Medicine, University of Prishtina

Background: CT-based image-guided brachytherapy is widely used for locally advanced cervical cancer in settings where MRI-guided brachytherapy is not routinely available. This study evaluated clinical outcomes, treatment parameters, dosimetric quality, and toxicity in patients treated with definitive chemoradiotherapy and CT-based brachytherapy.

Methods: This retrospective single-center cohort included 72 patients with cervical cancer treated between 2021 and 2025. All patients received external beam radiotherapy with concurrent chemotherapy, and 71 patients received brachytherapy. Clinical variables, FIGO stage, histology, HPV status, overall treatment time, brachytherapy fractionation, dose-volume parameters, treatment response, progression-free survival, local control, and toxicity were analyzed.

Results: Mean patient age was 55.4 ± 10.8 years. Squamous cell carcinoma was the predominant histology, observed in 87.5% of patients. Stage III-IV disease was present in 45.8%. Complete response was achieved in 50.0% of patients, while local relapse occurred in 22.2% and disease progression in 16.7%. Three-fraction brachytherapy showed numerically higher complete response and local control compared with two-fraction treatment. HPV-positive patients had better outcomes, with a complete response rate of 71.4% and lower mortality compared with HPV-negative patients. Prolonged overall treatment time was associated with a trend toward worse progression-free outcomes. Dosimetric analysis demonstrated acceptable target coverage, although rectal and sigmoid dose-constraint compliance remained suboptimal. Severe late toxicity was observed in a clinically relevant proportion of patients.

Conclusion: CT-based brachytherapy is a feasible treatment approach for locally advanced cervical cancer in resource-limited settings. Outcomes may be improved through routine HPV testing, optimization of brachytherapy fractionation, reduction of overall treatment time, and stricter organ-at-risk dose control.

Keywords: Cervical cancer; Brachytherapy; CT-based planning; Chemoradiotherapy; HPV;

ORAL PRESENTATION | AMPHITHEATRE | Oncology, Diagnostics and Innovation in Medicine | 16:10–16:20

Assessment of the impact of artificial intelligence on reducing diagnostic errors in cerebral radiology: focus on brain tumors

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Background: The increasing volume of radiological examinations has substantially increased the workload of radiologists, potentially contributing to diagnostic errors. In neuroradiology, accurate interpretation of magnetic resonance imaging (MRI) is essential for the detection and characterization of brain tumors. Artificial intelligence (AI) has emerged as a promising supportive tool that may assist radiologists in image analysis and diagnostic decision-making.

Objective: To evaluate the potential role of artificial intelligence in reducing diagnostic errors in cerebral radiology by assessing the level of agreement between specialist radiologists and

AI-based diagnostic evaluations in patients with brain tumors.

Methods: A retrospective observational descriptive-comparative study was conducted using 15 radiological cases with cerebral neoplastic lesions selected from a radiological archive covering the period 2018-2025. Diagnoses established by specialist radiologists were compared with those generated by an AI-based system. Demographic characteristics and diagnostic concordance were analyzed.

Results: The study included 15 patients, comprising 8 males (53.3%) and 7 females (46.7%), with a mean age of 52.4 years (range: 28-76 years). Complete agreement between radiologists and AI was observed in 12 cases (80%), while partial agreement was identified in 3 cases (20%). No false-negative findings were detected among the analyzed cases. Evaluation of specificity and false-positive rates was limited by the absence of a control group without pathological findings.

Conclusion: Artificial intelligence demonstrated a high level of agreement with specialist radiological assessments and shows considerable potential as a supportive tool in the diagnosis of brain tumors. AI may contribute to improved lesion detection and reduction of diagnostic errors; however, it should be regarded as an adjunct to, rather than a replacement for, expert radiological interpretation.

Keywords: Artificial intelligence, magnetic resonance imaging, brain tumors, neuroradiology, diagnostic accuracy.

ORAL PRESENTATION | AMPHITHEATRE | Oncology, Diagnostics and Innovation in Medicine | 16:20–16:40

Awareness of ionizing radiation risks and radiation protection principles among medical students: a cross-sectional study

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Background: Ionizing radiation is widely used in diagnostic imaging and carries potential biological risks, including stochastic and deterministic effects. Adequate knowledge of radiation safety principles among future physicians is essential to minimize unnecessary exposure and ensure patient safety.

Objective: To assess the level of knowledge and awareness regarding ionizing radiation, its biological effects, and radiation protection principles among medical students.

Methods: A cross-sectional study was conducted using a structured, self-administered online questionnaire distributed to medical students (years 1-6). The questionnaire included sections on demographic data, basic and advanced knowledge of ionizing radiation, radiation doses, protection principles, and clinical decision-making. A knowledge score was calculated based on correct responses, with higher scores indicating better knowledge. Comparative analyses were performed based on year of study and prior exposure to radiology training.

Results: A total of 108 students participated in the study. Students in clinical years demonstrated significantly higher knowledge scores compared to preclinical students ($p < 0.05$). Participants who had received formal training in radiation protection also scored higher. Despite this, notable gaps were identified, particularly in areas related to radiation dose estimation and clinical decision-making.

Conclusion: Although medical students demonstrate a basic understanding of ionizing radiation, significant knowledge gaps remain, especially in advanced and clinical aspects. These findings highlight the need for improved integration of radiation safety education.

Keywords: Ionizing radiation; Radiation protection; Medical students; Radiology education; Patient safety

ORAL PRESENTATION | AMPHITHEATRE | Oncology, Diagnostics and Innovation in Medicine | 16:50–17:00

Type 2 diabetes and metabolic syndrome: prevalence and microvascular complications

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INTRODUCTION

Type 2 diabetes (T2DM) is a chronic, multisystem disease that has now reached epidemic proportions. Hyperglycemia as a result of diabetes is a condition that affects the development of changes in the microvasculature and eventually causes diabetic nephropathy, retinopathy and neuropathy [1].

PURPOSE

The purpose of this paper is to present the prevalence of microvascular disorders in T2DM patients at the Endocrinology Clinic at the University Clinical Center of Kosovo (UCCCK), where biochemical, anthropometric and anamnestic analyses were assessed.

MATERIALS AND METHODS

This study is a prospective cohort study. Patients included in the study were hospitalized during February and April 2026. The study is protocol-based, based on patient history and biochemical analysis. A 128Hz acoustic fork was used to assess peripheral nerve sensitivity. The patient's anthropometric data were obtained during the hospitalization period, including Body Mass Index (BMI), waist and hip circumference.

RESULTS

A total of 136 patients with T2DM were included, the mean age was 63 years with a predominance of women (54.5%) over 60 years of age (44.9%). The mean BMI for women was $27.5 \pm 5.76 \text{ kg/m}^2$, with 47 (34.5%) categorized as obese. In the group of 74 patients with data on glycemic status, 81.1% of them with poor glycemic control were associated with microvascular complications ($n = 60$).

The prevalence of neuropathy was 75.0% (95% CI: 66.9-82.0%), while diabetic retinopathy was present in 22 of 63 patients with available data (34.9%, 95% CI: 23.9-47.7%). The level of physical activity (moderate activity) showed a statistically significant association with metabolic syndrome ($p=0.047$).

CONCLUSION

The high presence of microvascular complications in patients with DM2 emphasizes the importance of glycemic control, management of metabolic syndrome and promotion of physical activity.

ORAL PRESENTATION | AMPHITHEATRE | Oncology, Diagnostics and Innovation in Medicine | 17:00–17:10

Association of demographic and therapeutic factors with anxiety levels in patients with heart failure

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Introduction: Heart failure (HF) is a chronic disease that significantly affects the quality of life of patients. In addition to physical symptoms, patients often experience anxiety that negatively affects their health status, therefore demographic and therapeutic factors may play an important role in anxiety levels.

Purpose: To assess the relationship between demographic and therapeutic factors with anxiety levels in patients with HF.

Materials and Methods: This cross-sectional study included 103 hospitalized and outpatient patients at the Cardiology Clinic and the Specialist Outpatient Clinic of UCKK. The level of anxiety was assessed with the GAD-7 questionnaire. Statistical analysis included Spearman correlation, Mann-Whitney U test AND Kruskal-Wallis test.

Results: Of the 103 patients, 49 (47.6%) were female and 54 (52.4%) were male. The mean age was 65.8 ± 7.67 years. A moderate positive correlation was found between age and GAD-7 score ($p = 0.42$, $p < 0.001$). A statistically significant difference was also observed between genders ($U = 500.50$, $p < 0.001$), with females showing higher anxiety levels than males. Educational level was associated with GAD-7 scores, with progressively lower anxiety levels observed as the level of education increased ($H = 24.28$, $p < 0.001$). Hospitalized patients showed higher levels of anxiety compared to outpatients ($U = 370.00$, $p < 0.001$). The duration since patients became aware of their heart failure diagnosis and the duration of therapy use showed a moderate positive correlation with GAD-7 scores, respectively ($p = 0.44$, $p < 0.001$) and ($p = 0.39$, $p < 0.001$).

Conclusion: There is a close relationship between the level of anxiety in patients with demographic and therapeutic factors. Older age, lower level of education, female gender, hospitalization, and longer duration of treatment and illness were associated with higher levels of anxiety.

ORAL PRESENTATION | AMPHITHEATRE | Oncology, Diagnostics and Innovation in Medicine | 17:10–17:20

Perception and use of artificial intelligence by medical students in the learning process

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Introduction: Artificial intelligence is becoming increasingly present in medical education, helping students search for, process, and understand scientific information more quickly. In addition to its benefits for learning, its use requires caution due to the possibility of inaccurate information and its potential impact on critical thinking.

Objective: The objective of this study was to analyze the perception and use of artificial intelligence by students of the Faculty of Medicine in the learning process.

Materials and Methods: This was a quantitative, descriptive, cross-sectional study conducted through a structured online questionnaire, with voluntary and anonymous participation. A total of 297 students responded to the questionnaire, while 226 of them correctly completed the control question for data quality and were included in the final analysis. The questionnaire included demographic data, the use of AI, purposes of use, perceived benefits, and perceived risks. The data were analyzed using descriptive statistics, including frequencies, percentages, and means for questions based on a Likert scale.

Results: Of the 297 participating students, 226, or (76.1%), were included in the final results. Among them, 222 students, or (98.2%), stated that they use AI for learning purposes, while 218, or (96.5%), reported using ChatGPT. The main uses were concept explanation, reported by 180 students, or (79.6%); spontaneous questions, reported by 118, or (52.2%); lesson summarization, reported by 110, or (48.7%); and scientific literature search, reported by 108, or (47.8%). In addition, 186 students, or (82.3%), agreed that AI helps them better understand learning topics, while 173, or (76.6%), stated that it saves time. Meanwhile, 178 students, or (78.8%), agreed that AI may provide inaccurate information.

Conclusion: AI is perceived as a useful tool and is widely used by medical students in the learning process. Its integration into medical education should be accompanied by clear academic guidelines, the development of digital skills, and critical verification of information.

Dentistry and the Head and Neck Region

ORAL PRESENTATION | ROOM D-2 | Dentistry and the Head and Neck Region | 09:00–09:10

Bite marks: identifying or documenting evidence? A case report

Tringa Blakaj, Elsa Meqa, Flamur Blakaj

Faculty of Medicine, University of Prishtina

Introduction: Human teeth can leave characteristic marks on the skin and other surfaces. Due to the individual characteristics of dentition, each person has a unique dental arch configuration and tooth arrangement, which may result in distinctive bite mark patterns. This enables dental professionals to analyze injuries and compare them with the dental arches of a suspected individual. Bite mark analysis has been used in criminal investigations involving physical assaults, homicides, sexual violence, child abuse, and other forensic cases.

Case Presentation: A 27-year-old female patient (E.L.) was examined following a physical assault associated with sexual violence and injuries caused by a sharp object (knife). Clinical examination revealed multiple lesions consistent with human bite marks, most prominently located on the thigh region. The lesions were documented using standard forensic photography and clinical measurements to ensure objective records and further forensic evaluation. As part of the investigation, biological samples were collected from the victim for DNA analysis and comparison with the genetic profile of the suspected individual. The bite marks were interpreted as injuries caused by human biting and served as evidence of the violence inflicted on the victim. However, due to post-traumatic changes and the lack of sufficient morphological details, the lesions did not allow identification or comparison with the dentition of any suspected individual. In this case, DNA analysis provided the most significant forensic evidence and proved decisive in the investigative process.

Conclusion: Bite marks play an important role in documenting injuries in cases of sexual assault; however, their value for individual identification is limited, particularly when examination is delayed. The combination of clinical bite mark assessment and DNA analysis remains the most reliable approach in modern forensic investigations.

ORAL PRESENTATION | ROOM D-2 | Dentistry and the Head and Neck Region | 09:10–09:20

Dental status of patients following radiotherapy and chemotherapy for malignant diseases

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1 Faculty of Medicine, Department of Dentistry, University of Prishtina

INTRODUCTION

Chemotherapy and radiotherapy are the main treatments for malignant diseases, but they are often associated with oral complications that negatively affect dental health and the patient's quality of life.

Purpose: /Aim:

To evaluate dental status, oral symptoms, and oral hygiene in patients with malignant diseases treated with chemotherapy, radiotherapy, or combined therapy.

Materials and Methodology:

A comparative cross-sectional study was conducted at the Medical Oncology Clinic at QKUK and at the University Clinical Dental Center of Kosovo. The study included 55 patients, of whom 45 formed the study group and 10 the control group. Data were collected through a structured questionnaire and clinical examination using the DMFT index (Decayed, Missing, and Filled Teeth).

RESULTS

The average age of the patients was 58 years, while 55.6% were female. Among the patients in the study group, 62.2% were receiving chemotherapy, 20% radiotherapy, and 17.8% combined therapy. The most frequent oral symptoms were taste alterations (75.5%), oral mucosal pain (48.8%), and oral ulcerations (24.4%). The mean DMFT index was 22.7, with dominance of the missing teeth component and higher prevalence among males. Compared to the control group, oncology patients presented a more impaired dental status.

CONCLUSIONS

Patients with malignant diseases present a high prevalence of oral complications and high DMFT index values. These findings emphasize the importance of dental evaluation before oncological treatment, oral hygiene education, and continuous monitoring to reduce complications and improve quality of life.

ORAL PRESENTATION | ROOM D-2 | Dentistry and the Head and Neck Region | 09:20–09:30

Presence of four canals in the permanent mandibular first molar in the Kosovo population

Bajram Mehmeti, Arlind Gashi, Miranda Stavileci

Faculty of Medicine, University of Prishtina

Introduction: Anatomical variations of the root canal system represent an important challenge in endodontic treatment, as failure to identify them may negatively affect the long-term success of treatment.

Aim: The aim of this retrospective observational study was to evaluate the presence of a second distal canal in the distal root of the mandibular first molar, based on the analysis of periapical radiographs.

Materials and Methods: This study analyzed 500 periapical radiographs of patients treated at the University Dentistry Clinical Center of Kosovo during the last five years. Only permanent mandibular first molars with complete root formation were included. Radiographic evaluation was performed independently by the candidate and the mentor.

Results: Of the 500 radiographs examined, 418 cases without previous endodontic treatment were included in the main analysis, while 72 cases with obturated canals were excluded. The presence of a second distal canal was identified in 17.22% of the examined cases. No statistically significant difference was found between genders ($p > 0.05$).

Conclusion: Periapical radiographs represent a valuable diagnostic method for identifying anatomical variations of the root canal system. Careful radiographic interpretation remains essential for accurate diagnosis and appropriate planning of endodontic treatment.

Guided bone regeneration using synthetic granular graft during periodontal surgery: a case report with 12-month radiographic evaluation

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Introduction: Guided bone regeneration is a documented periodontal surgical technique, that aims to reconstruct lost alveolar bone through osteoconductive materials and collagen protective membranes. Materials such as hydroxyapatite and beta tricalcium phosphate provide an osteoconductive matrix that favors new bone formation. The purpose of this case report is to demonstrate the application of the guided bone regeneration technique.

Presentation: Male patient, 44 years old, without systemic disease, non-smoker, presented with bleeding and tooth mobility 37-47. Clinical examination revealed pockets with a depth of 7 mm and bleeding on provocation. Cone tomography confirmed vertical intraosseous defect with three bony walls, with 5 mm bone resorption of teeth 36, 35, 34 and with 6 mm bone resorption in the mesio-distal aspect of teeth 46, 45, 44.

After basic therapy and non-surgical work-up, re-evaluation after 6 weeks found periodontal pocket depth of 6-7 mm. Periodontal surgical intervention with regenerative therapy was planned. After opening the mucoperiosteal flap modified according to Widman, complete processing of the granulation tissue is performed. The processed defects were filled with synthetic bone graft in the form of granules (Cerasorb® M, Curasan AG, Germany), with a granule size of 0.5-1.0 mm. Filling with granules was carried out up to the level of the alveolar ridge and collagen resorbable membrane was placed.

Follow-ups were performed at months 1, 3, 6, and 12. Periapical radiographs at month six showed the beginning of bone growth in the area where the bone graft was added. At the final 12-month evaluation, CBCT confirmed linear bone gain of one mm to two mm in the areas where the bone defect was.

Conclusion: This case report documents the clinical and radiographic success of the regenerative technique in the treatment of intraosseous periodontal defect, with radiographically confirmed bone augmentation of one mm to two mm, after 12 months.

Preparation of liposomal nanoformulations containing essential oils for the control of oral biofilm in dentistry

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Introduction: Dental plaque is one of the most important causes of dental caries, gingivitis, and peri-implant infections. Essential oils have a natural anti-microbial effect, but cannot be used directly in dentistry due to their poor aqueous solubility, instability, volatility, and even local irritation. Liposomal nanoformulations can overcome such problems.

Aim: This study intended to create and test liposomes loaded with essential oils as an antimicrobial agent.

Materials and Methods: Liposomes were produced through the ethanol injection method by using phospholipids and certain selected essential oils which have significant antimicrobial action. Their characteristics in terms of size, polydispersity index, zeta potential, and physico-chemical stability were tested. The evaluation of in vitro antimicrobial activity was carried out against some microorganisms linked to oral infections, like bacteria causing dental caries.

Results: All formulations possessed nanoparticles with satisfactory physical stability. Nanotechnology enhanced the dispersibility of essential oils in the aqueous phase and displayed a certain inhibitory effect towards the oral bacteria, which indicates the possible use of essential oil loaded liposomes locally in dentistry.

Conclusion: The study demonstrates that essential oils encapsulated in liposomes may become a new method using nanotechnology in dentistry, especially for the suppression of the oral biofilms. More studies need to be done regarding toxicity and release properties of these preparations.

Fistula ekstraorale – prezetim rasti

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INTRODUCTION

Odontogenic extraoral fistulae are pathological formations that develop due to pulp necrosis. Whether the fistula opens into the intraoral or extraoral region depends on the position of the tooth and the localization of the cortical bone perforation caused by the inflammation.

In this report, we present a clinical case of an extraoral fistula and chronic periapical periodontitis in tooth 42, which was managed using endodontic treatment and extraoral fistuloplasty.

CASE PRESENTATION

A 54-year-old female patient presented for a check-up at the Clinic of Tooth Diseases and Endodontics. A radiographic examination confirmed a periapical lesion in tooth 42, resulting in a diagnosis of chronic periapical periodontitis. Following the completion of endodontic treatment, the patient was referred to the Clinic of Oral Surgery. Upon admission to the Clinic of Oral Surgery, the patient was prepared for the operating room. The surgical procedure was conducted as follows:

A trapezoidal flap was raised, bone trepanation, apicoectomy of tooth 42, and thorough curettage of the infection were performed, the fistulous tract was excised, the flap was repositioned and sutured, followed by the suturing of the extraoral fistulous lesion. Postoperatively, the patient was prescribed Amoxiclav 1 g and Ibuprofen 600 mg. One week later, wound debridement and suture removal were performed. At the two-week follow-up visit, the extraoral fistula had completely healed, leaving only a faint scar.

CONCLUSION

Skin lesions observed in the facial and neck regions should always be considered as potentially odontogenic. Following a careful clinical and radiographic examination, the specific teeth associated with the lesion can be successfully identified.

Comparison of the incidence of endodontic treatments in anterior and posterior teeth

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Introduction: Endodontic treatment represents one of the most important procedures in contemporary dentistry and plays a key role in preserving teeth and improving patients' oral health.

Aim: The aim of this study was to analyze and compare the incidence of endodontic treatments in anterior and posterior teeth based on patients' radiographic data, as well as to evaluate the influence of demographic factors, specifically age and gender.

Materials and Methods: The study included 500 panoramic radiographs, of which 250 belonged to male patients and 250 to female patients. Only radiographs showing at least one endodontically treated tooth were analyzed. The collected data included gender, age group, number of endodontic treatments, their localization according to anterior or posterior region, and the type of treated tooth.

Results: Statistical analysis was performed using descriptive statistics and the Chi-square test, with a significance level set at $p < 0.05$. The results showed a higher frequency of endodontic treatments in females compared to males (54% versus 46%). The 31-40-year age group demonstrated the highest frequency of endodontic treatments (31%), whereas the 15-20-year age group showed the lowest frequency. Endodontic treatments were reported significantly more often in the posterior region compared to the anterior region. The mandibular first molar was identified as the tooth most frequently treated endodontically.

Conclusion: Endodontic treatments were found to be more frequent in posterior teeth, while female patients demonstrated a higher treatment frequency compared to males. The 31-40-year age group exhibited the highest prevalence of endodontic treatments, emphasizing the importance of early diagnosis and adequate treatment planning in endodontic care.

Head CT utilization in the emergency department: a retrospective review of indications and diagnostic yield

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Introduction: Computed tomography (CT) of the head represents one of the most frequently used imaging examinations in emergency departments for the assessment of acute neurological pathologies and cranial trauma. Its high frequency of use requires continuous evaluation of clinical indications and diagnostic value, with the aim of ensuring the rational and efficient use of diagnostic imaging.

Aim: The aim of this study is to analyze the demographic data of patients, clinical indications, radiological findings, the use of intravenous contrast, and the timing of head CT examinations at the Emergency Clinic and the Radiology Clinic of the University Clinical Center of Kosovo (UCCK) during the period from April 10 to May 10, 2026.

Methodology: This is a retrospective study including patients who underwent emergency head CT during the specified period, with a total of 977 patients. Data were collected from the radiology information system and electronic medical records. The analyzed variables included age, gender, clinical indication, use of intravenous contrast, examination timing, and radiological findings. Data analysis was performed using descriptive statistical methods.

Results: The study identifies the most common indications for performing emergency head CT, the distribution of pathological findings, and the relatively infrequent use of intravenous contrast. It also provides data on the temporal distribution of requests for examination. The results show a high number of head CT examinations compared with other radiological examinations, highlighting the need for rationalization of their use and more rigorous application of clinical criteria.

Conclusion: The results of this study may contribute to the evaluation of head CT utilization in emergency settings and to the optimization of clinical and radiological practices, aiming to improve the rational use of diagnostic imaging.

Keywords: Head CT; Emergency Department; Radiology; Clinical Indications; Diagnostic Value

Multidisciplinary Approaches in Healthcare

Management and treatment of alopecia with low-level light therapy (LLLT): clinical case series at Este Medical Group Kosova

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Background: Alopecia is a common disorder that affects individuals of different ages and has a significant impact on quality of life and psychological well-being. Low-Level Light Therapy (LLLT) has emerged as a non-invasive therapeutic modality that stimulates cellular activity, promotes microcirculation, and supports hair follicle regeneration. Previous studies have demonstrated its potential effectiveness in various forms of hair loss.

Objective: This clinical case series aimed to evaluate the effectiveness of a six-month Low-Level Light Therapy (LLLT) protocol in the management and treatment of different types of alopecia and hair loss at Este Medical Group Kosova.

Materials and Methods: Four patients presenting with different forms of alopecia were included in this clinical case series: androgenetic alopecia, alopecia areata, alopecia totalis, and post-chemotherapy hair loss. All patients underwent an initial clinical and trichoscopic assessment followed by a standardized six-month hair restoration protocol. The treatment program consisted of 48 LLLT sessions administered at 72-hour intervals, six mesotherapy sessions distributed throughout the treatment period, and twice-daily application of a topical hair serum. Clinical progress was documented through serial photographic evaluations and follow-up assessments.

Results: Clinical improvement was observed in all four cases during the treatment period. Patients demonstrated visible increases in hair density, improved scalp coverage, reduced hair shedding, and signs of follicular regeneration. Early hair regrowth was noted as early as six weeks in the case of alopecia totalis, while substantial improvement was observed within four months in the post-chemotherapy hair loss case. Favorable outcomes were also documented in patients with androgenetic alopecia and alopecia areata, despite the presence of associated medical conditions in some cases.

CASE ALOPECIA TOTALIS Fig.5.2 Before & After treatment of alopecia totalis with LLLT 0 - 5 Months

A 19-year-old female patient presented to the clinic with alopecia totalis. The patient had experienced complete scalp hair loss approximately 18 months prior to presentation. Despite the total scalp alopecia, the patient retained her eyebrows, eyelashes, and sparse fine hair in certain body areas. The patient had a previous history of thyroid gland dysfunction and was undergoing medical treatment prescribed by an endocrinologist; however, she had not received any specific topical therapy for hair restoration. Prior to presentation at the clinic, the patient had undergone intralesional corticosteroid injections on two occasions, which were later associated with menstrual cycle irregularities. Laboratory investigations demonstrated vitamin D deficiency and low ferritin levels, and the patient was subsequently referred for further management by the appropriate medical specialists. Following the clinical and trichoscopic evaluation, the patient initiated a six-month Low-Level Laser Therapy (LLLT) treatment protocol as part of the clinic's hair restoration program. Initial clinical signs of hair regrowth were observed after the sixth week of treatment. The patient is currently continuing the treatment protocol under ongoing clinical follow-up.

Conclusion: The findings of this clinical case series suggest that Low-Level Light Therapy, when incorporated into a structured multidisciplinary hair restoration program, may represent an effective and safe non-invasive treatment option for various forms of alopecia. Improvements in hair density, scalp coverage, and follicular activity were observed across all cases. Further large-scale controlled studies are required to establish standardized treatment protocols and evaluate long-term clinical outcomes.

Keywords: alopecia, low-level light therapy, LLLT, hair loss, hair regeneration.

ORAL PRESENTATION | ROOM D-2 | Multidisciplinary Approaches in Healthcare | 11:10–11:20

Identification of foot posture and gait characteristics in children with Down syndrome

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BACKGROUND

Children with Down syndrome are characterized by muscle hypotonia and ligamentous laxity, which affect foot posture, balance, and gait characteristics. These changes often lead to functional variability and limitations in daily activities.

AIM

The aim of this study was to identify the most common foot postures, analyze gait characteristics, and evaluate the relationship between these parameters in children with Down syndrome.

MATERIALS AND METHODS

This cross-sectional study included 61 children with Down syndrome, with a mean age of approximately 10 years. Foot posture was assessed using the Foot Posture Index (FPI) and Navicular Drop Test (NDT), while gait was analyzed using the DIERS 4D Motion Lab system. Additional assessments included the Beighton Score, Pediatric Balance Scale (PBS), and Oxford Ankle Foot Questionnaire for Children (OAFQ-C).

RESULTS

The results showed a high prevalence of pes planus and pronounced foot pronation. Gait parameters revealed shorter step length, longer step time, and reduced gait speed, with considerable inter-individual variability. Plantar analysis showed a relatively symmetrical load distribution, with slight posterior predominance. OAFQ-C results indicated that a proportion of children experience difficulties in daily activities, particularly in wearing shoes. Correlation analysis showed strong associations between foot posture parameters, while the relationship with gait parameters was limited.

CONCLUSION

Children with Down syndrome present significant alterations in foot posture and specific gait characteristics, which affect their daily functional performance.

KEYWORDS

Down syndrome, foot posture, gait, DIERS, Foot Posture Index, Navicular Drop Test.

ORAL PRESENTATION | ROOM D-2 | Multidisciplinary Approaches in Healthcare | 11:20–11:30

Clinical and postural characteristics of patients with chronic non-specific neck pain: a cross-sectional study

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INTRODUCTION

Chronic non-specific neck pain is one of the most common musculoskeletal disorders and is associated with functional limitations, postural alterations, and reduced quality of life. Biomechanical and postural factors are considered among the main contributors to the development and worsening of symptoms.

AIM

The aim of this study was to assess the clinical and postural characteristics of patients with chronic non-specific neck pain.

MATERIALS AND METHODS

This cross-sectional study was conducted at the Ce.Fi.R.R. Center for Physiotherapy, Rehabilitation and Re-Education in Chieti-Pescara, Italy, during the period March-June 2025. The study included 30 patients over 18 years of age with chronic non-specific neck pain lasting more than 12 weeks. Pain intensity was assessed using the Numeric Pain Rating Scale (NPRS), functional disability using the Neck Disability Index (NDI), and postural parameters using the Postural Biometric Index (PBI) and the Bio-Postural Questionnaire (BPQ).

RESULTS

Females predominated in the study, accounting for 66.7% of the sample. The mean pain intensity according to the NPRS was 7.0 ± 1.5 , while the mean NDI score was 42.5 ± 10.6 , indicating moderate to severe functional limitation. Postural parameters according to the PBI averaged 15.3 ± 3.7 . Pearson correlation analysis revealed strong positive associations between clinical and postural parameters. The highest correlation was observed between NPRS and PBI ($r = 0.92$, $p < 0.001$), as well as between NDI and NPRS ($r = 0.91$, $p < 0.001$). Furthermore, a very strong positive correlation was identified between NDI and BPQ ($r = 0.89$, $p < 0.001$).

CONCLUSION

Chronic non-specific neck pain significantly affects physical functioning and postural stability. The findings demonstrate important relationships among pain intensity, functional disability, and postural alterations, highlighting the importance of a multidimensional approach in the physiotherapeutic assessment of these patients.

The impact of multiple sclerosis on physical function and quality of life

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Introduction: Multiple sclerosis (MS) is a chronic autoimmune disease that affects the central nervous system (CNS), characterized by inflammation, demyelination, gliosis, and neuronal loss - all of which are hallmark features of MS.

Purpose: The aim of this study is to evaluate the impact of MS on physical function and quality of life, and to identify whether there are gender-based differences among patients with MS regarding functionality and quality of life.

Materials and Methods: This is a cross-sectional study conducted with patients diagnosed with MS who were either members of, or received services and assistive devices from, the organization HANDIKOS during the period January to June 2025. Sociodemographic data and information regarding health status were collected through structured questionnaires. Physical and psychological functioning were assessed using the MSIS-29 questionnaire, walking ability with the MSWS-12 questionnaire, and quality of life with the EQ-5D-5L questionnaire

Results: In this study, 30 patients with MS were included. Their average age ranged from 20 to 64 years, with a mean of 46.6 years and a standard deviation of 12.1 years. The correlation analysis showed a significant negative relationship between the current health status and MSIS-29, MSWS-12, and the physical component of MSIS-29, while a strong positive correlation was found between health status and quality of life. Additionally, a reliable correlation was observed between MSIS-29 and MSWS-12. Furthermore, quality of life had a significant negative correlation with physical MSIS-29, and there was also a correlation between physical and psychological MSIS-29 components.

Conclusion: MS affects patients' physical function as well as their quality of life, most notably in aspects such as walking, balance, and the use of assistive devices. The deterioration of health status in these patients is linked to a decline in their current health condition and a reduction in quality of life.

Prevalence and predictors of self-medication for food-related gastrointestinal symptoms among medical sciences students in Kosovo

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Aim: To assess the prevalence of gastrointestinal symptoms related to food consumption, identify commonly reported dietary triggers, and evaluate self-medication practices and associated factors among medical sciences students at the Faculty of Medicine, University of Prishtina, Kosovo.

Methods: A cross-sectional study was conducted between December 2025 and January 2026 among undergraduate students enrolled in medicine, pharmacy, dentistry, physiotherapy, and nursing programs. Data were collected using a structured self-administered questionnaire covering sociodemographic characteristics, gastrointestinal symptoms related to food consumption, perceived dietary triggers, and self-medication practices during the previous 12 months. Descriptive statistics and multivariable logistic regression analysis were used to examine factors associated with self-medication.

Results: A total of 480 students participated in the study. Gastrointestinal symptoms related to food consumption were commonly reported, with bloating, heartburn, and abdominal pain being the most frequent complaints. High-fat foods, bakery products, spicy foods, and carbonated beverages were the triggers most often reported. Overall, 76.9% of participants reported self-medication for gastrointestinal symptoms, and proton pump inhibitors were the medications used most frequently. Self-medication was more common among female students and those in higher academic years. Students who reported more frequent symptoms or a greater impact on daily activities were also more likely to use medications. In addition, many students reported relying on advice from family members, friends, or previous personal experiences when selecting medications.

Conclusion: Gastrointestinal symptoms related to food consumption and self-medication practices are common among medical sciences students at the University of Prishtina. Many students appear to manage these symptoms independently, highlighting the importance of promoting responsible medication use and greater awareness of factors that may contribute to gastrointestinal complaints. Educational interventions focused on rational medication use and healthy dietary habits may help improve gastrointestinal health among students.

Keywords: self-medication, gastrointestinal symptoms, medical students, proton pump inhibitors, dietary triggers.

Hair loss among medical students: frequency, characteristics, and its association with perceived stress

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INTRODUCTION

Hair loss is a common dermatological concern that may affect self-confidence and psychological well-being. Medical students represent a group exposed to high academic stress, which may influence the hair cycle and contribute to increased hair loss.

AIM

The aim of this study was to evaluate the frequency and characteristics of hair loss among medical students, as well as to analyze the association between hair loss and the level of perceived stress.

MATERIALS AND METHODS

A cross-sectional study was conducted using an anonymous self-administered questionnaire involving 449 medical students. The questionnaire included demographic data, questions regarding hair loss during the previous 6 months, and the Perceived Stress Scale-10 (PSS-10) for the assessment of perceived stress.

RESULTS

Of the 449 participants included in the analysis, 349 were female (77.7%) and 100 were male (22.3%). The mean age was 20.84 ± 2.05 years, while the mean PSS-10 score was 19.29 ± 6.84 .

Increased hair loss was reported by 49.2% of students, who had significantly higher PSS-10 scores compared to students without hair loss (21.45 ± 6.32 vs. 16.38 ± 6.57 ; $p < 0.001$). A gradual association was also observed between stress levels and the frequency of hair loss. More than half of the students reported experiencing intense periods of stress before the onset of hair loss.

CONCLUSION

Increased hair loss was common among medical students and was reported by nearly half of the participants. Students with hair loss had significantly higher levels of perceived stress compared to those without hair loss. Furthermore, a gradual association was observed between increasing stress levels and the frequency of hair loss.

ORAL PRESENTATION | ROOM D-2 | Multidisciplinary Approaches in Healthcare | 12:00–12:10

The impact of health education on breastfeeding and the health of infants and mothers

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Introduction: "Nothing can replace a mother's heart and breast milk." (Budin, 1907). Breastfeeding is one of the most important factors influencing the health of both the infant and the mother. The World Health Organization recommends exclusive breastfeeding for the first 6 months of life and continuation up to 2 years or beyond, combined with complementary foods.

Aim: The aim of this study is to identify the level of mothers' knowledge in the Gjilan Region regarding health education related to breastfeeding.

Methodology: This is a quantitative cross-sectional study aimed at assessing mothers' knowledge, attitudes, and practices regarding the impact of health education on breastfeeding and the health of both infants and mothers. The research was conducted at the Regional Hospital of Gjilan, in the Gynecology Department, where 56 mothers were surveyed for this study.

Results: The results of this study indicate that the main benefits of breastfeeding for both mothers and infants are well recognized by mothers. About 36% of the surveyed women believe that breastfeeding positively affects infant health; therefore, ($p = 0.013$) suggests that the health of both infants and mothers largely depends on health education related to breastfeeding. Furthermore, 39% of women emphasized that mutual cooperation between healthcare professionals and mothers has yielded positive results in improving infant growth through breastfeeding ($p = 0.006$). This supports the idea that health education has a significant and positive impact on maternal and infant health.

Conclusion: The study demonstrated that breastfeeding positively affects the health of both infants and mothers. Women have a highly satisfactory level of knowledge and positive attitudes toward breastfeeding, often favoring it over infant formula feeding. However, some gaps were identified in practices concerning mothers' involvement in health education to prevent problems that may arise over time.

Keywords: Breastfeeding, mother, infant, health.

ORAL PRESENTATION | ROOM D-2 | Multidisciplinary Approaches in Healthcare | 12:10–12:20

Assessment of the role of metabolic and inflammatory biomarkers in healthy aging

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INTRODUCTION

Aging is a natural process accompanied by progressive changes in the metabolic, cellular, and physiological functions of the organism. The concept of healthy aging refers to maintaining functional capacity and reducing the risk of chronic diseases as individuals grow older. In this context, metabolic and inflammatory biomarkers represent important indicators for assessing an individual's biological status. The aim of this study was to evaluate the role of metabolic and inflammatory biomarkers in the process of healthy aging.

METHODS

This study involved a retrospective analysis of data from 80 individuals who underwent routine health check-up examinations. Participants were divided into four age groups: 18-29 years, 30-44 years, 45-59 years, and over 60 years. Biochemical and inflammatory parameters were analyzed, including glucose, HbA1c, total cholesterol, HDL cholesterol, LDL cholesterol, triglycerides, and C-reactive protein (CRP). Data were compared across age groups to identify metabolic and inflammatory changes associated with aging. Statistical analysis was performed using one-way ANOVA (single-factor). In addition, scientific literature from PubMed and Scopus was used to support the interpretation of the findings.

RESULTS

The results demonstrated that advancing age was associated with increased levels of glucose, HbA1c, total cholesterol, LDL cholesterol, triglycerides, and C-reactive protein (CRP), whereas HDL cholesterol levels tended to decrease. The most pronounced metabolic and inflammatory changes were observed in individuals older than 60 years. Statistical analysis revealed significant differences between age groups for glucose, HbA1c, and triglyceride levels ($p < 0.05$). No statistically significant differences were identified for total cholesterol, CRP, HDL cholesterol, or LDL cholesterol ($p > 0.05$), although a trend toward deterioration of the lipid profile and increased CRP levels with advancing age was observed.

CONCLUSION

In conclusion, metabolic and inflammatory biomarkers are important indicators of age-related physiological changes and may contribute to preventive strategies aimed at promoting healthy aging.

Keywords: healthy aging, metabolic biomarkers, inflammation, HbA1c, CRP, biological aging.

Clinical Challenges and Medical Research

ORAL PRESENTATION | ROOM D-2 | Clinical Challenges and Medical Research | 14:00–14:10

Anomalous origin of a coronary artery: challenges during percutaneous coronary intervention in acute coronary syndrome

Artea Buçaj, Tringa Begu, Kaltrina Raci, Aurora Bakalli, Basri Sejdiu, Fisnik Velu, Vigan Mahmutaj, Jetmir Sejdiu, Taulant Sadriu, Hamza Selmani, Xhevdet Krasniqi

Case Presentation: A 70-year-old man with hypertension and type 2 diabetes mellitus presented to the emergency department with chest pain and dyspnea. Electrocardiography showed ST-segment depression and T-wave inversion in leads I, II, III, aVL, and aVF. Troponin T was markedly elevated (1056 ng/L), while CK-MB was 95 U/L. Transthoracic echocardiography demonstrated preserved left ventricular systolic function (ejection fraction 52%) and inferior wall hypokinesia. Coronary angiography revealed 60% stenosis of the left anterior descending artery (LAD), critical 85-90% stenosis of the left circumflex artery (LCx) involving the first obtuse marginal branch (OM1) [Video 1-2], and a 98% subocclusive lesion of the right coronary artery (RCA). An anomalous coronary anatomy was identified, with the RCA and the second LAD branch originating from a common trunk [Video 3-4]. Primary PCI of the RCA was successfully performed following administration of intravenous unfractionated heparin (70 IU/kg). The common trunk was engaged using an Amplatz Right 2 guiding catheter, and the lesion was crossed with a 0.014" × 180 cm Asahi Sion Blue guidewire. A drug-eluting stent (Biomatrix 3.0 × 24 mm) was successfully implanted at 16 atm [Video 5-7], achieving TIMI grade 3 flow on final angiography. Dual antiplatelet therapy was continued, and staged PCI of the LCx was planned after 3 months.

Conclusion: Early recognition of coronary artery anomalies and careful procedural planning are crucial for successful PCI and optimal management of acute coronary syndrome. This case highlights the importance of individualized interventional strategies in patients with anomalous coronary anatomy.

ORAL PRESENTATION | ROOM D-2 | Clinical Challenges and Medical Research | 14:10–14:20

Predictive value of postoperative C-reactive protein/lactate kinetics for postoperative atrial fibrillation after coronary artery bypass grafting

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BACKGROUND

Postoperative atrial fibrillation (POAF) is a frequent complication after coronary artery bypass grafting (CABG) and is associated with increased morbidity and prolonged hospitalization. Inflammatory activation and impaired tissue perfusion are key mechanisms in its pathogenesis. C-reactive protein (CRP) and lactate may reflect postoperative inflammatory and metabolic stress and could have prognostic relevance for POAF.

OBJECTIVE

To evaluate postoperative CRP and lactate kinetics in patients undergoing CABG and their potential role in early risk stratification for POAF.

METHODS

A retrospective observational study was conducted at QKUK including 20 patients undergoing isolated CABG. The cohort consisted of 15 males (75%) and 5 females (25%), with a mean age of 58 years. Postoperative CRP and lactate levels were analyzed over the first three postoperative days when available.

CRP measurements were available in 14, 8, and 9 patients on postoperative days 1-3, with mean values of 155.1, 183.63, and 175.78 mg/L, respectively. Lactate values were available in 14, 7, and 8 patients, with corresponding means of 3.58, 3.11, and 2.45 mmol/L.

RESULTS

CRP levels showed an early postoperative increase followed by a mild decline, indicating sustained inflammatory activity. In contrast, lactate demonstrated a progressive decrease, reflecting gradual improvement in tissue perfusion and metabolic recovery. These kinetic patterns suggest potential clinical utility in postoperative monitoring.

CONCLUSION

CRP and lactate kinetics reflect distinct inflammatory and metabolic postoperative trajectories following CABG. Their monitoring may contribute to early clinical risk assessment for POAF; however, larger prospective studies are required to confirm their predictive value.

ORAL PRESENTATION | ROOM D-2 | Clinical Challenges and Medical Research | 14:20–14:30

Postoperative complications: prevention, early detection and management according to current protocols

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Introduction: Post-operative complications constitute an important clinical problem in modern surgery, because they are associated with increased morbidity, prolonged hospital stay and higher treatment costs. Prevention, early detection and management according to contemporary protocols are essential for improving outcomes in surgical patients.

Purpose: The purpose of this paper is to analyze patients with post-operative complications treated at the University Clinical Center of Kosovo, in the Abdominal Surgery Clinic as elective or emergent cases, during the period 2020-2025, with a focus on the distribution according to age, gender, place of residence, type of complication and surgical treatment.

Materials and Methods: The study is retrospective and is based on the data obtained from the operating block protocols of the Abdominal Surgery Clinic and those of the emergency operating room at KKUK. The data were processed and analyzed with the Microsoft Excel program, while the results were presented through tables and graphs.

Results: The research identified a total of 649 patients with post-operative complications from 13,107 patients operated on during these 6 years, with an increasing trend from 81 cases in 2020 to 147 cases in 2025, or 81.4% increase. Females accounted for 53% of cases, while males accounted for 47%. In the elective list, 342 patients with complications were identified, or about 6% of cases, where the most frequent complication was incisional hernia with 227 cases or 66%. In the emergency room, 307 patients were identified, representing about 4.1% of operated cases, where dehiscences of anastomoses dominated with 70 cases or 22.8%.

Conclusions: Post-operative complications are more frequent in women, except for emergency cases where men dominate. The average age of all patients was 58.8 years, with 65% of elective patients over the age of 65 and 41% of emergency patients over the same age. The largest number of patients is from Prishtina.

Keywords: post-operative complications, abdominal surgery, hernia, anastomosis.

Severe bullous cellulitis of the right upper limb with soft tissue involvement mimicking necrotizing fasciitis: a case report

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Background: Cellulitis is a common bacterial infection of the skin and subcutaneous tissues, typically caused by *Streptococcus pyogenes* or *Staphylococcus aureus*. Severe presentations with extensive edema, bullae formation, and systemic inflammatory response may mimic necrotizing soft tissue infections, posing significant diagnostic and therapeutic challenges. Early differentiation is essential to avoid unnecessary surgical interventions while ensuring timely treatment.

Case Presentation: We report the case of a 49-year-old male who presented with persistent high-grade fever (up to 39.4°C), progressive swelling of the right upper extremity, severe arm pain, erythema, local warmth, and generalized weakness. Symptoms developed following a hiking activity, with a possible insect bite and a pre-existing superficial wound at the elbow serving as a potential portal of entry. Physical examination revealed massive edema of the entire right upper limb, diffuse hyperemia, marked tenderness, tissue induration, and restricted limb movement. Laboratory investigations demonstrated leukocytosis ($11.9 \times 10^9/\mu\text{L}$), neutrophilia, elevated C-reactive protein (8.43 mg/dL), fibrinogen (769 mg/dL), and D-dimer (3.0 $\mu\text{g/mL}$), consistent with a severe systemic inflammatory response. Computed tomography and ultrasonography showed extensive subcutaneous and intramuscular edema without abscess formation, soft tissue gas, or necrosis. Due to the rapid progression, severe pain, and bullous lesions, necrotizing fasciitis was initially considered; however, imaging findings and clinical stability argued against this diagnosis. The patient received intravenous cefazolin, ciprofloxacin, and flagyl, along with supportive care and local wound management. Surgical intervention was not indicated. Progressive clinical improvement was observed, with resolution of fever, reduction of edema, and recovery of limb function. Blood cultures remained sterile throughout hospitalization.

Discussion: This case highlights an uncommon presentation of severe bullous cellulitis with deep soft tissue involvement, closely resembling necrotizing fasciitis. Comprehensive clinical assessment combined with imaging studies was crucial for accurate diagnosis and appropriate conservative management.

Conclusion: Severe cellulitis may present with extensive edema, bullae, and systemic manifestations that mimic necrotizing soft tissue infections. Early recognition and prompt intravenous antimicrobial therapy can lead to favorable outcomes while preventing unnecessary surgical procedures.

Picture: Patient evolution

Postpartum seizures following spinal anesthesia: diagnostic challenges in suspected meningoencephalitis – literature review and case report

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Introduction: Neurological deterioration in the early postpartum period after neuraxial anesthesia is rare but clinically important. While post-spinal meningitis is usually considered in patients with headache, fever, and neck stiffness, the occurrence of postpartum seizures raises a broader differential diagnosis, including encephalitis/meningoencephalitis, cerebrovascular events, and hypertensive encephalopathy.

Case Presentation: We present the case of a young postpartum woman who developed generalized seizures and altered mental status 48 hours after spinal anesthesia for cesarean delivery. Early computed tomography (CT) and CT angiography showed no pathological findings. Cerebrospinal fluid (CSF) analysis showed minimal pleocytosis with mildly elevated protein and normal glucose; microbiological tests and multiplex PCR were negative. Brain magnetic resonance imaging (MRI) demonstrated bilateral cortical and subcortical signal changes in the parieto-occipital regions, reported as most consistent with viral encephalitis. The patient improved with supportive therapy and empirical treatment and was discharged without focal neurological deficits.

Conclusion: This case highlights the diagnostic challenge of neurological symptoms occurring after spinal anesthesia, where temporal association may be misleading. Immediate neuroimaging, CSF analysis, and early empirical management, together with exclusion of bacterial causes, remain essential.

Precocious puberty and its impact on growth: a case report

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Introduction: Precocious puberty is defined as the onset of puberty before the age of 8 years in girls and before the age of 9 years in boys. Pubertal disorders affect children's physical and psychosocial well-being. Precocious puberty occurs as a result of early activation of the hypothalamic-pituitary-gonadal axis and may influence the child's physical and emotional development.

Case Presentation: A typical example of precocious puberty is breast development and rapid growth in a 7-year-old girl, or testicular enlargement in an 8-year-old boy. These children present with early pubertal physical changes that do not correspond to their chronological age. Clinical evaluation requires a careful history and physical examination, followed by hormonal testing, including FSH, LH, testosterone in boys, and estradiol in girls. Thyroid function assessment and radiography for bone age are also performed. Brain magnetic resonance imaging is recommended in girls younger than 6 years and in all boys to exclude organic pathology.

Conclusion: Precocious puberty requires early diagnosis and clinical evaluation. Hormonal and radiological assessment is essential for identifying the cause and determining appropriate treatment. Proper monitoring helps prevent physical and psychological complications in children. Distinguishing between benign and pathological forms is also very important for correct patient management.

Underlying diseases in hemodialysis patients in Kosovo during a five-year period

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Introduction: Hemodialysis is a life-sustaining renal replacement therapy used for patients with end-stage kidney disease. Identifying the underlying diseases that lead to chronic kidney disease (CKD) is essential for developing preventive strategies and reducing the burden of kidney failure.

Objective: To identify the most common underlying diseases leading to chronic kidney disease requiring hemodialysis treatment in Kosovo.

Methodology: This retrospective cohort study was conducted using data obtained from the European Renal Association (ERA) renal registry. Patients who initiated hemodialysis treatment at the Hemodialysis Department of the University Clinical Center of Kosovo between 2018 and 2022 were included. Microsoft Excel was used to analyze the data and calculate frequencies and percentages according to sex, age group, and underlying disease.

Results: During the five-year study period, a total of 1,122 patients started hemodialysis treatment. By the 91st day, 838 patients remained on treatment and were classified as having chronic kidney disease. Diabetes Mellitus was the most common underlying disease throughout the study period, accounting for 38.0% of cases in 2018, 40.8% in 2019, 31.8% in 2020, 34.1% in 2021, and 38.2% in 2022. Pyelonephritis was the second most common cause. Male patients predominated during all study years, with 161 cases in 2018, 72 in 2019, 129 in 2020, 117 in 2021, and 150 in 2022. The age group most frequently affected was 45-64 years, representing 44.2% of patients in 2018, 44.4% in 2019, 34.8% in 2020, 44.0% in 2021, and 37.4% in 2022.

Conclusion: Diabetes Mellitus was the leading cause of chronic kidney disease requiring hemodialysis in Kosovo during the study period, followed by Pyelonephritis. Male patients and individuals aged 45-64 years were the most affected groups. These findings highlight the increasing impact of diabetic kidney disease in Kosovo and underscore the importance of early diagnosis, effective diabetes management, and targeted preventive measures to reduce the progression of chronic kidney disease and the need for renal replacement therapy.

Keywords: chronic kidney disease, hemodialysis, Diabetes Mellitus, Pyelonephritis, Kosovo, renal registry.

ORAL PRESENTATION | ROOM D-2 | Clinical Challenges and Medical Research | 15:10–15:20

Assessment of mineral and bone metabolism parameters in patients undergoing chronic hemodialysis

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Abstract: - Assessment of bone mineral metabolism parameters in chronic hemodialysis patients

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Introduction: Bone mineral metabolism disorders are frequent complications in patients with chronic kidney disease, which associate with increased cardiovascular morbidity and mortality. Alterations in calcium, phosphorus, and parathyroid hormone (PTH) homeostasis contribute to the development of renal osteodystrophy and vascular calcifications.

Purpose: The purpose of this study is to evaluate the biochemical parameters of bone mineral metabolism and analyze their relationship with uremic and inflammatory parameters in patients on chronic hemodialysis at the University Clinical Center of Kosovo.

Materials and Methods: The study is a retrospective descriptive observational research and included 194 patients on chronic hemodialysis, of whom 115 (59.3%) were male and 79 (40.7%) were female. The following laboratory parameters were analyzed: urea, creatinine, C-reactive protein (CRP), calcium (Ca), phosphorus (P) and parathyroid hormone (PTH). The calcium-phosphorus product ($\text{Ca} \times \text{P}$) was calculated for each patient, while statistical correlations were analyzed with the Pearson test. The results are presented as mean $\pm$ standard deviation.

Results: The mean values of urea were 28.17 ± 19.31 mmol/L, creatinine 956.7 ± 702.2 $\mu\text{mol/L}$ and CRP 19.51 ± 47.91 mg/L. The mean calcium level was 2.12 ± 0.17 mmol/L, phosphorus 1.72 ± 0.45 mmol/L. The mean PTH value was 248.8 ± 120.5 pg/mL, suggesting secondary hyperparathyroidism in a significant proportion of patients. The $\text{Ca} \times \text{P}$ product resulted in 3.72 ± 1.05 mmol²/L. A strong positive correlation was evidenced between the $\text{Ca} \times \text{P}$ product and phosphorus ($r=0.882$; $p<0.001$), and a positive correlation with urea and creatinine.

Conclusion: Patients on chronic hemodialysis present significant disturbances of bone mineral metabolism and chronic inflammation. Hyperphosphatemia and increased $\text{Ca} \times \text{P}$ product may contribute to an increased risk of vascular calcifications, highlighting the importance of regular laboratory monitoring in these patients.

Keywords: chronic hemodialysis, bone mineral metabolism, calcium, phosphorus, PTH, vascular calcifications.

ORAL PRESENTATION | ROOM D-2 | Clinical Challenges and Medical Research | 15:20–15:30

Prevalence of Vitamin D Deficiency and Bone Mineral Density Disorders in Type 2 Diabetes Mellitus: A Retrospective Single-Center Study

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Introduction: Vitamin D deficiency is common in patients with type 2 diabetes mellitus (T2DM) and may affect glucose metabolism, insulin sensitivity, and bone health. Data on its prevalence in Kosovo are limited.

Aim: To assess the prevalence of vitamin D deficiency and describe the clinical, metabolic, and skeletal characteristics of patients with T2DM.

Materials and Methods: A retrospective study was conducted at the Clinic of Endocrinology of the University Clinical Center of Kosovo during 2021-2025. Of 3,910 patients, 189 patients with T2DM who met the research criteria were included in the analysis. Vitamin D status was classified according to Endocrine Society recommendations. Demographic data, glycemic control parameters, treatment modalities, and bone mineral density (DEXA) results were analyzed.

Results: The mean age of patients was 59.2 ± 12.9 years and 81% were female. The mean duration of diabetes was 13.3 ± 12.8 years. Mean HbA1c was $9.99 \pm 2.73\%$, reflecting suboptimal glycemic control. Vitamin D deficiency was identified in 68.7% of patients, insufficiency in 21.0%, while only 6.7% had normal levels. Among 81 patients assessed with DEXA, 36.1% had osteopenia and 24.4% had osteoporosis. Multivariate analysis showed a trend toward increased osteoporosis risk among patients with vitamin D deficiency and T2DM (OR=2.78; 95% CI 0.96-8.11; $p=0.061$).

Conclusions: Vitamin D deficiency was highly prevalent among patients with T2DM and was associated with a high prevalence of bone mineral density disorders. These findings support the importance of systematic screening and early correction of hypovitaminosis D in this high-risk population.

Learning from Clinical Cases

ORAL PRESENTATION | ROOM D-3 | Learning from Clinical Cases | 09:00–09:10

Glioblastoma Multiforme: A Case Report, Treatment and Prognosis

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INTRODUCTION

Glioblastoma multiforme (GBM) is the most aggressive glial neoplasm of the central nervous system, with poor prognosis and median survival of less than one year, despite existing treatments.

CASE PRESENTATION

A case of a 66-year-old female patient presenting with diplopia, vertigo and paresthesia is presented. MRI revealed a 52x43 mm lesion in the left occipital lobe.

A qualitative study was conducted at the Oncology Clinic of the University Clinical Center of Prishtina during the period 2018-2023, analyzing MRI data and treatment results.

The patient underwent 3D conformal radiotherapy and treatment with temozolomid for 6 months, with significant extension of survival.

CONCLUSION

This case suggests that the use of modern radiotherapy techniques such as IMRT, SSRT and SRS, together with standard chemotherapy, can contribute to improving outcomes and extending survival in patients with glioblastoma multiforme.

ORAL PRESENTATION | ROOM D-3 | Learning from Clinical Cases | 09:10–09:20

Spontaneous Coronary Artery Dissection (SCAD): Clinical Outcomes and Patient Management

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Background: Spontaneous coronary dissection (SCAD) is a non-atherosclerotic, non-traumatic cause of acute coronary syndrome. Based on coronary angiography there's a classification in 4 types. Clinical presentation of SCAD is indistinguishable from atherosclerotic ACS therefore it is often misdiagnosed as such. The Gold standard for diagnosing SCAD is coronary angiography. The treatment includes rest and stress reduction for mild cases, conservative management and intervention.

Case Presentation: A 33-year-old woman with a history of treated hypertension presented to the emergency department with chest pain and palpitations. Electrocardiography demonstrated sinus tachycardia, prolonged QT interval, lateral ST-segment elevation, and inferior ST-T abnormalities suggestive of myocardial ischemia. Her condition rapidly deteriorated into ventricular fibrillation, requiring immediate defibrillation. On admission, blood pressure was 170/110 mmHg and heart rate 114 beats/min. The patient was intubated and admitted to the coronary unit.

Laboratory investigations revealed severe metabolic acidosis (pH 7.20), sodium 138.9 mmol/L, potassium 3.60 mmol/L, markedly elevated troponin T levels (4103 ng/L), and elevated CK-MB. Transthoracic echocardiography demonstrated left ventricular ejection fraction of 45%, and apical hypokinesia.

Initial coronary angiography showed no evidence of SCAD or atherosclerotic artery disease [Video 1 and 2]. Following correction of metabolic acidosis and treatment with antiplatelets, statins, and beta-blockers, the patient's clinical condition stabilized. Repeat coronary angiography performed in the following days demonstrated type 2 SCAD involving the mid-distal left anterior descending artery, with preserved TIMI 3 flow [Video 3 and 4]. Given the confirmed diagnosis, conservative management was continued, resulting in significant clinical improvement. The patient was discharged on dual antiplatelet therapy, beta-blocker, and statin therapy.

Conclusion: SCAD is an uncommon but potentially life-threatening cause of acute coronary syndrome that requires prompt recognition, diagnosis with coronary angiography and appropriate management to optimize outcomes. It predominantly affects middle-aged women. Management includes conservative therapy or invasive revascularization, selected according to clinical and angiographic risk. However, no standardized SCAD-specific treatment algorithm has been established.

ORAL PRESENTATION | ROOM D-3 | Learning from Clinical Cases | 09:20–09:30

Successful Management of Leriche Syndrome in a 48-Year-Old Female Patient: A Rare Case Report

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INTRODUCTION

Leriche syndrome is an aortoiliac occlusive disease typically associated with risk factors such as arterial hypertension, diabetes, dyslipidemia, and smoking. The following case is of particular clinical interest due to the absence of these predisposing factors in the patient.

CASE PRESENTATION

The patient, a 48-year-old Albanian female, was admitted to the Vascular Surgery Clinic due to progressive pain in her lower extremities with a duration of one month, more pronounced in the left leg and foot. She reported exercise intolerance, an inability to climb stairs, and severe claudication, being unable to walk more than 100 meters without developing a cramping pain in the crural and femoral regions radiating to the

gluteal region. Approximately one week following the exacerbation of symptoms, the patient noted cyanosis and a cold sensation in the great toe of her left foot.

Upon local physical examination, both lower extremities were cold to palpation, and femoral and distal pulses were bilaterally absent. Doppler Ultrasonography detected a reduction in arterial blood flow, particularly in the left femoral artery. CT Angiography examination revealed that the right common iliac artery was completely occluded along its entire length. The patient underwent an aortobifemoral bypass with a favorable postoperative course and improvement of ischemic symptoms.

CONCLUSION

This case emphasizes the importance of considering Leriche syndrome even in patients lacking classic risk factors such as arterial hypertension, diabetes, dyslipidemia, and smoking. Early diagnosis and adequate management contribute to improving the patient's prognosis and quality of life, as well as preventing long-term complications.

ORAL PRESENTATION | ROOM D-3 | Learning from Clinical Cases | 09:30–09:40

Pulmonary Extramedullary Hematopoiesis Mimicking Lung Cancer: A Case Report

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Introduction: Extramedullary hematopoiesis is characterized by the proliferation of hematopoietic tissue outside the bone marrow and is usually associated with chronic myeloproliferative disorders. Pulmonary involvement is rare and may present as a suspicious lung lesion, mimicking malignancy and creating diagnostic challenges.

Case Presentation: We report the case of a 76-year-old female patient with a left lung lesion and clinical suspicion of pulmonary neoplasm. Lung biopsy revealed bronchial mucosa with metaplastic bone tissue, including chondroid and trabecular bone components, as well as hematopoietic tissue containing myeloid cells and dysplastic megakaryocytes. Immunohistochemical analysis confirmed the presence of extramedullary hematopoiesis. The morphological and immunophenotypic findings were consistent with primary myelofibrosis with pulmonary extramedullary hematopoiesis.

Conclusion: Pulmonary extramedullary hematopoiesis is a rare manifestation of primary myelofibrosis that may present as a suspicious lung lesion mimicking malignancy. Awareness of this entity and the use of histopathological and immunohistochemical analysis are essential for accurate diagnosis and appropriate management.

ORAL PRESENTATION | ROOM D-3 | Learning from Clinical Cases | 09:40–09:50

Secondary Autoimmune Hemolytic Anemia Following Epstein–Barr Virus Infection in a 25-Year-Old Woman: A Case Report

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INTRODUCTION

Autoimmune hemolytic anemia (AIHA) is a rare hematological complication of Epstein-Barr virus infection, characterized by immunological destruction of erythrocytes. Although EBV infection is usually benign and self-limiting, in rare cases it can be associated with potentially serious hematological complications, including autoimmune hemolysis.

CASE PRESENTATION

We present the case of a 25-year-old female patient who was admitted to the Infectious Diseases Clinic with the main complaints of jaundice, severe fatigue, and anorexia. Initial laboratory evaluation excluded viral hepatitis, with negative serological markers. EBV serology was positive, supporting acute EBV infection. Magnetic resonance imaging (MRI) revealed hepatosplenomegaly. During further hematological evaluation, a positive direct antiglobulin test (DAT) with intensity 4+ was found, raising the suspicion of autoimmune hemolytic anemia secondary to EBV infection.

CONCLUSION

EBV infection should be considered in the differential diagnosis of patients presenting with hemolytic anemia and systemic manifestations. Early recognition of hematological complications and a systematic diagnostic approach may contribute to more rapid diagnosis and management of these cases.

ORAL PRESENTATION | ROOM D-3 | Learning from Clinical Cases | 09:50–10:00

Transverse Myelitis in Lyme Neuroborreliosis: A Report of a Rare Case

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Introduction: Lyme neuroborreliosis is a recognized neurological manifestation of *Borrelia burgdorferi* infection; however, spinal cord involvement remains extremely rare and diagnostically challenging. Lyme-associated myelitis may mimic inflammatory, demyelinating, and infectious central nervous system disorders, particularly in cases with atypical cerebrospinal fluid (CSF) findings. We report a rare case of multifocal inflammatory myelitis associated with neuroborreliosis characterized by non-contiguous cervical and thoracic spinal cord lesions and near-normal CSF inflammatory parameters.

Case Presentation: A previously healthy 40-year-old woman presented with an acute-subacute myelopathic syndrome characterized by rapidly progressive paraparesis, ascending sensory impairment to the umbilical level, and sphincter dysfunction. Spinal MRI revealed multifocal non-contiguous T2-hyperintense lesions involving the cervical and thoracic spinal cord, consistent with inflammatory multifocal transverse myelitis. Extensive microbiological investigations excluded alternative infectious etiologies. Serological testing demonstrated *Borrelia burgdorferi* IgM positivity in both serum and CSF, confirmed by Western blot, whereas IgG antibodies remained negative. CSF analysis showed neither pleocytosis nor elevated protein concentration, representing an atypical neuroborreliosis profile. Lumbar puncture was performed approximately four weeks after initiation of corticosteroid therapy, potentially contributing to normalization of inflammatory CSF abnormalities through partial

restoration of blood-brain barrier integrity. Treatment with intravenous ceftriaxone combined with high-dose of corticosteroids resulted in marked neurological improvement, followed by continued recovery during oral maintenance therapy and rehabilitation.

Conclusion: This case highlights an uncommon presentation of Lyme neuroborreliosis manifesting as transverse myelitis with non-contiguous spinal cord lesions and atypical CSF findings. It emphasizes the heterogeneity of neuroborreliosis and the importance of considering *Borrelia burgdorferi* infection in the differential diagnosis of unexplained inflammatory myelopathies, even in the absence of classical epidemiological exposure history or characteristic CSF inflammatory abnormalities. Early recognition and prompt targeted antimicrobial therapy remain essential for favorable neurological outcomes and prevention of irreversible sequelae.

ORAL PRESENTATION | ROOM D-3 | Learning from Clinical Cases | 10:00–10:10

Acute Coronary Syndrome in Hemophilia B: Management Challenges and Fatal Outcome Following Percutaneous Coronary Intervention

Kaltrina Raci, Artea Buçaj, Tringa Begu, Aurora Bakalli, Fisnik Basholli, Hajdin Çitaku, Luan Perçuku, Daut Gorani, Luljeta Durmish, Xhevdet Krasniqi

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Background: Hemophilia B is a rare inherited X-linked recessive bleeding disorder caused by deficiency of coagulation factor IX. The management of NSTEMI in patients with hemophilia represents a significant clinical challenge due to the need to balance thrombotic and hemorrhagic risk during antithrombotic therapy and PCI.

Case Presentation: A 72-year-old man with Hemophilia B, hypertension, type 2 diabetes mellitus, and hypertensive cardiomyopathy presented with chest pain and exertional dyspnea. On admission, he was tachycardic (130 bpm), hypertensive (160/80 mmHg), and hypoxemic (SpO₂ 87%). Electrocardiography demonstrated T-wave inversions in leads I, aVL, V2-V6. Cardiac biomarkers were elevated (troponin T 522.5 ng/L, CK-MB 35 U/L), consistent with NSTEMI. Echocardiography revealed preserved left ventricular systolic function (EF 51%) with mild septal hypokinesia and diastolic dysfunction. Coronary angiography demonstrated multivessel coronary artery disease, including critical bifurcation stenosis (95–99%) of a large intermediate branch. PCI of the culprit lesion was performed via right radial access following intravenous unfractionated heparin administration (70 U/kg). After balloon predilatation, two drug-eluting stents were successfully implanted with restoration of TIMI 3 flow [Video 1–5]. Dual antiplatelet therapy (aspirin+clopidogrel) for 6 months was recommended. The results of the coagulation factor assays became available immediately after PCI and revealed a factor IX activity level of 4%, consistent with moderate hemophilia. Replacement therapy was initiated promptly to achieve a target factor level of >50% within 24 hours. However, the patient deteriorated abruptly one day after PCI, developing gastrointestinal hemorrhage followed by cardiorespiratory arrest. Endotracheal intubation and advanced resuscitative measures were performed; however, despite maximal supportive efforts, the patient died.

Conclusion: Hemophilia patients with acute coronary syndrome require individualized multidisciplinary care to balance bleeding and thrombotic risks. In high-risk cases, early radial-access PCI can be safely performed under factor replacement therapy, provided that factor IX activity levels are available before the procedure.

ORAL PRESENTATION | ROOM D-3 | Learning from Clinical Cases | 10:10–10:20

Progressive Multifocal Leukoencephalopathy and Cytomegalovirus Co-Infection in a Patient with Acquired Immunodeficiency Syndrome Presenting with Suspected *Pneumocystis jirovecii* Pneumonia

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Introduction: Late presentation of human immunodeficiency virus (HIV) infection remains associated with severe opportunistic infections, particularly in patients with profound cellular immunosuppression. Although antiretroviral therapy (ART) has reduced AIDS-related morbidity, simultaneous respiratory and central nervous system opportunistic infections remain diagnostically challenging. The coexistence of Progressive Multifocal Leukoencephalopathy (PML) and central nervous system Cytomegalovirus (CMV) infection in patients with advanced HIV/AIDS remains clinically challenging.

Case Presentation: We report the case of a 42-year-old man who initially presented with fever, nonproductive cough, progressive dyspnea, weight loss, and severe hypoxemia. Laboratory evaluation demonstrated elevated inflammatory markers, increased lactate dehydrogenase, and newly diagnosed HIV infection with a CD4+ T-cell count of 11 cells/μL and high plasma viral load with 337000 copies/ml. Chest radiography demonstrated diffuse bilateral reticulointerstitial infiltrates, while extensive microbiological investigations excluded alternative respiratory pathogens, supporting a diagnosis of probable *Pneumocystis Pneumonia*, and empiric Trimethoprim-Sulfamethoxazole therapy was initiated. Despite partial respiratory and inflammatory improvement, the patient subsequently developed altered mental status and progressive neuropsychiatric manifestations. Cerebrospinal fluid analysis demonstrated mild inflammatory changes with detection of CMV DNA, prompting initiation of Ganciclovir therapy. Brain magnetic resonance imaging revealed multifocal asymmetric supratentorial and infratentorial white matter lesions highly suggestive of PML. Subsequent cerebrospinal fluid real-time PCR confirmed John Cunningham virus DNA, establishing the diagnosis of PML, while follow-up CMV PCR became negative after antiviral treatment.

Conclusion: This case highlights the diagnostic and therapeutic complexity of advanced HIV/AIDS presenting initially with suspected PCP followed by the emergence of concurrent PML and CMV central nervous system infection. It underscores the importance of maintaining a broad differential diagnosis and repeated multidisciplinary reassessment in severely immunocompromised patients who develop new neurological manifestations during clinical evolution.

First Steps in Science 1

ORAL PRESENTATION | ROOM D-3 | First Steps in Science 1 | 11:00–11:10

Knowledge, Attitudes, and Practices of Students at the Medical High School in Peja Regarding the Rational Use of Antibiotics

Orgesta Kelmendi, Rina Hoxha

Affiliations:¹Faculty of Medicine, University of Prishtina, General Medicine, Kosovo²Faculty of Medicine, University of Prishtina, Kosovo

Introduction: Irrational use of antibiotics and antimicrobial resistance are among the major global public health challenges, directly contributing to increased mortality and making the treatment of infections more difficult. In Europe, this phenomenon places a considerable burden on healthcare systems, while in Kosovo a high level of antibiotic use and insufficient public knowledge have been reported.

Aim: The aim of this study was to assess the knowledge, attitudes, and practices of students at the Medical High School in Peja regarding the rational use of antibiotics, highlighting the importance of early education on this issue.

Material and methodology: This was a descriptive cross-sectional study conducted through an online questionnaire. A total of 98 students from grades 10-12 of the Medical High School in Peja were randomly selected to participate. The questionnaire consisted of 15 questions assessing students' knowledge, attitudes, and practices regarding the rational use of antibiotics. Data were processed and analyzed using Microsoft Excel.

Results: The results showed that 90.8% of students were aware that antibiotics are used to treat bacterial infections, with the highest level of knowledge observed among 12th-grade students (95.0%). Regarding the effectiveness of antibiotics against influenza and the common cold, only 48.0% correctly answered that antibiotics are not effective, while 46.9% incorrectly believed that they are effective. Concerning antibiotic use, 29.6% reported having used antibiotics without a prescription, with the highest prevalence observed among students aged 16-17 years (43.5%).

Conclusion: Students of the Medical High School in Peja demonstrated a good overall level of knowledge regarding antibiotics; however, misconceptions and inappropriate practices related to their use still exist. These findings highlight the need for more advanced education and continuous awareness-raising regarding the rational use of antibiotics.

Keywords: Antibiotics, rational use, Peja, use, knowledge, practice, secondary school students, resistance

ORAL PRESENTATION | ROOM D-3 | First Steps in Science 1 | 11:10–11:20

Analysis of the Frequency of Tuberculosis Cases in Kosovo During the Period 2019–2023

Shumhi Morina, Rina Hoxha, Fatime Ukaj

National Institute of Public Health of Kosovo
Faculty of Medicine, University of Prishtina

Introduction: Tuberculosis (TB) is an infectious disease caused by *Mycobacterium tuberculosis*, which mainly affects the lungs and is transmitted through the air when infected people cough, sneeze or speak. Despite advances in medicine and public health, it still remains a significant global problem.

Purpose: The purpose of this study was to analyze the distribution of tuberculosis cases in Kosovo during the period 2019-2023, by gender, age, and area of residence, as well as to assess the trend of epidemiological changes over the years at the national level.

Materials and Methods: The study is retrospective and descriptive, based on official data provided by the Kosovo Agency of Statistics. The data were processed and analyzed with the MS Excel program, through which tables and graphs were created to facilitate the interpretation of the distribution and dynamics of cases.

Results: The results showed that during 2019-2023 the highest number of tuberculosis cases was registered in Prishtina (19.78%), followed by Podujeva (7.78%) and Lipjan (6.77%). The most affected age group was 65+ years, with about 25% of cases, both in men and women. In our study, men (53.32%) were more affected than women (46.68%), a finding similar to other studies, including a study in Vietnam, where men were about 5% more affected.

Conclusion: The study analysis shows that tuberculosis continues to be present in the population, especially in urban areas, where Prishtina records the highest percentage of cases (19.78%). The most affected group was people over 65 years old, while men were more affected than women. The highest number of cases was recorded in 2022 (22.88%), while in other years a general downward trend was observed.

Keywords: tuberculosis, incidence, prevalence, bacterial infection.

ORAL PRESENTATION | ROOM D-3 | First Steps in Science 1 | 11:20–11:30

Analysis of Uroculture Results at the National Institute of Public Health of Kosovo During the Period January–February 2026

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Introduction: Urinary tract infections constitute a major health problem. Accurate diagnosis through uroculture is essential for identifying uropathogens and their antimicrobial treatment.

Objective: This study aims to analyze the results of urocultures performed at NIPHK during the period January-February 2026, evaluating the microbiological profile and demographic distribution of patients.

Material and Methodology: The conducted study is a retrospective, descriptive, and analytical study of 1,721 results processed at NIPHK. The data were statistically analyzed according to gender, age, residence, and pathogen type.

Results: Out of 1,721 results, 395 were positive (positivity rate 22.95%). Females dominated with 88.10% or 348 cases, while the most affected age group was 50+ years old with 257 cases or 65.06%. 78.73% of the pathogens belong to the Gram-negative bacteria group, where *Escherichia coli* dominated with 70.63% of cases (279 cases). The positivity rate was uniform between urban (23.34%) and rural (21.82%) areas.

Conclusion: Urinary tract infections have a high prevalence in the population, especially among females and individuals over 50 years old, where *Escherichia coli* is the leading uropathogen, while uroculture remains the gold standard for diagnosis.

Association Between Smoking and the Severity of Coronary Artery Disease in Patients with Acute Myocardial Infarction

Lira Ahmeti, Rina Hoxha

Faculty of Medicine, University of Prishtina

Introduction: Coronary artery disease is one of the leading causes of morbidity and mortality worldwide. Smoking is considered one of the most important modifiable risk factors for the development and progression of this disease. Although the association between smoking and coronary artery disease has been extensively documented, data evaluating its impact on the severity of coronary involvement in patients with acute myocardial infarction in Kosovo remain limited.

Objective: To evaluate the association between smoking and the severity of coronary artery disease in patients hospitalized with acute myocardial infarction.

Methods: This analytical, comparative, and cross-sectional study was conducted at the Cardiology Clinic of the University Clinical Center of Kosovo. The study included 77 patients with acute myocardial infarction. Patients were divided into smokers and non-smokers. Disease severity was assessed through angiographic findings, including the number of affected coronary arteries and the maximum degree of stenosis. Demographic data, other cardiovascular risk factors, and clinical parameters were also collected.

Results: The patients were predominantly male (74.0%), with a mean age of 63.9 ± 10.3 years. Arterial hypertension, diabetes mellitus, and dyslipidemia were present in 66.2%, 41.6%, and 37.7% of cases, respectively. Smoking was identified as the most common risk factor, present in 70.1% of patients, with a mean exposure of 42.7 ± 29.4 pack-years. Comparison between groups showed that men were significantly more represented among smokers (87.0% vs. 43.5%; $p < 0.001$), while total cholesterol levels were higher among smokers ($p = 0.031$). No statistically significant association was found between pack-years and the number of affected arteries. The number of affected coronary arteries was significantly associated only with total cholesterol ($p = 0.041$) and triglycerides ($p = 0.042$).

Conclusion: Smoking was highly prevalent among patients with acute myocardial infarction, but it was not associated with greater severity of coronary artery disease according to angiographic parameters. In this sample, total cholesterol and triglycerides were the factors most strongly associated with coronary involvement.

The Role of Laboratory Analyses in Determining Toxicity During Oncological Treatments (January–September 2025)

Morea Muhaxhiri, Merita Berisha, Florie Miftari Basholli

University of Prishtina, Faculty of Medicine

This study aimed to evaluate the incidence and profile of laboratory toxicity in oncology patients undergoing chemotherapy and/or radiotherapy, as well as to emphasize the importance of laboratory monitoring in the early detection of treatment-related complications. This retrospective study included 50 patients with malignant diseases treated during the period January–September 2025. Data were collected from medical records and included laboratory parameters before, during, and after treatment.

The results demonstrated a high incidence of laboratory toxicity, with 78% of patients developing at least one form of toxicity during therapy. Neutropenia was identified as the most frequent toxicity (64%), reflecting the high sensitivity of hematopoietic precursor cells to cytotoxic agents. Additional toxicities included hepatic toxicity, hypoproteinemia, thrombocytopenia, electrolyte disorders, and renal toxicity. Hepatic toxicity was observed more frequently than renal toxicity, highlighting the central role of the liver in the metabolism of chemotherapeutic agents.

In conclusion, the study demonstrates that laboratory toxicity is a frequent and clinically significant issue among oncology patients. Continuous laboratory monitoring is essential for the early identification of complications, timely therapeutic intervention, and improvement of the safety and effectiveness of oncological treatment.

The Effect of Large Language Model-Generated Information Visualization on the Comprehension of Learning Material Among Medical Students

Lum Hoti, Rina Hoxha, Mejreme Bajcinovci

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Introduction: Medical education requires the processing of large amounts of complex and interconnected information. Research suggests that structured and visualized learning materials can improve comprehension and information processing while reducing cognitive load. The development of Large Language Models (LLMs) has enabled the generation of educational visualizations that may support learning in medical education.

Aim: To evaluate the effect of LLM-generated information visualization on the comprehension and processing of learning materials among medical students by comparing linear text with structured and visualized text.

Materials and Methods: This comparative quantitative study with paired samples included 39 students from the Faculty of Medicine, University of Prishtina. Participants evaluated two forms of presenting the same information: linear text and structured/visualized text. After each format, students completed a six-item Likert-scale questionnaire (1-5). Data were analyzed using descriptive statistics and a paired t-test.

Results: The mean score for linear text was $M = 3.11$, while the mean score for visualized text was $M = 4.38$. Students rated the structured/visualized format higher across all learning dimensions, including information comprehension, ease of processing, speed of understanding, and confidence in applying knowledge. The difference between the two formats was statistically highly significant ($t(38) = -6.30$, $p < 0.001$).

Conclusion: LLM-generated information visualization significantly improves the comprehension and processing of learning materials among medical students. These findings support the use of artificial intelligence-based tools and visualized educational materials in modern medical education and highlight their potential to enhance learning effectiveness and interactivity.

Keywords: Large Language Models, information visualization, medical education, artificial intelligence, cognitive load.

Analysis of Visual Habits and the Need for Optical Correction Among General Medicine Students at the Faculty of Medicine, University of Prishtina

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2. National Institute of Public Health of Kosovo

Introduction: Refractive errors and visual fatigue (asthenopic) symptoms are common problems among medical students, influenced by a high academic workload and prolonged exposure to near-vision activities.

Objective: To assess the prevalence of refractive errors, the use of optical corrective devices such as eyeglasses and contact lenses, asthenopic symptoms, and visual health-related behaviors among General Medicine students at the Faculty of Medicine.

Materials and Methods: This was a descriptive cross-sectional study conducted through an online questionnaire consisting of 13 questions, distributed to 120 General Medicine students from the first to the fifth year of study. For analytical purposes, participants were divided into two groups: preclinical students (Years I-III) and clinical students (Years IV-V). Data were processed and analyzed using Microsoft Excel.

Results: The prevalence of optical corrective device use was 50.8%, with higher use observed among clinical-year students, particularly among females, suggesting a high prevalence of refractive errors within the studied population. Regarding visual difficulties, 44.1% of students reported experiencing them occasionally, while 15.3% reported persistent visual difficulties. Furthermore, 46% of students stated that they visit an ophthalmologist only when a vision problem occurs. The most frequently reported asthenopic symptoms following prolonged studying were headache (38%), eye burning/dryness (25.8%), and blurred vision (24.5%).

Conclusions: The study revealed a high prevalence of refractive errors and visual symptoms among General Medicine students. More than half of the students (50.8%) used optical corrective devices, while a considerable proportion reported visual difficulties and asthenopic symptoms. Additionally, many students reported a lack of routine ophthalmologic examinations. These findings highlight the need to promote visual hygiene, encourage regular ophthalmologic check-ups, and ensure the appropriate use of optical correction among medical students.

Keywords: Faculty of Medicine, University of Prishtina, refractive errors, optical corrective devices, visual habits, optical correction.

Use of Analgesic Medications for Self-Medication Among Students of the “Eqrem Çabej” High School in Vushtrri

Anduena Beqiri, Merita Berisha, Florie Miftari Basholli

Faculty of Medicine, University of Prishtina

Introduction: Self-medication is a widespread practice worldwide and is considered an important part of individual health care. It involves the use of medicines without direct consultation with healthcare professionals for the treatment of symptoms or various health conditions. Increased availability of medicines, easy access to information, and the desire for fast and economical treatment have contributed to the growing practice of self-medication, especially among young people.

Purpose: The purpose of this study is to evaluate the use of pain-relief medications in self-medication among high school students by analyzing their knowledge, attitudes, and practices, as well as the factors influencing their decision-making.

Materials and Methods: This research is a quantitative cross-sectional study. Data were collected through an online questionnaire using Google Forms. A total of 160 students from grades 10, 11, and 12 of “Eqrem Çabej” High School in Vushtrri participated in the study. The collected data were processed using Microsoft Excel and presented through tables and graphs.

Results: The results show that self-medication with analgesics is common among students. Knowledge regarding the term “analgesics” was limited, while their use mainly occurred occasionally for common conditions such as headaches and other everyday pain. The main sources of information were family members and the internet. Perceptions regarding the safety and side effects of analgesics were moderate and often uncertain.

Conclusion: The study indicates that self-medication with analgesics is a frequent practice among high school students and is associated with insufficient knowledge and unclear perceptions regarding their safe use. These findings highlight the need for better health education and the promotion of rational use of medications among young people.

Keywords: Self-medication, analgesics, students, high school, medications, health education.

First Steps in Science 2

Efficiency and Methodological Quality of Artificial Intelligence Models in Radiology: A Review of the Current Literature

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Introduction: Artificial intelligence (AI) is increasingly used in radiology for detection, classification, triage, segmentation and diagnostic decision support. However, interpretation of its reported efficacy remains challenging because studies differ in imaging modality, study design, dataset size, validation strategy and reporting quality.

Objective: This paper aims to review current literature on recent AI models in radiology, summarize their reported diagnostic performance and assess the methodological quality and transparency of included studies.

Methodology: This work was designed as a systematic literature review with descriptive and exploratory analysis. Data were extracted from a structured Excel database and grouped according to imaging modality, clinical task, reported performance metrics and methodological reporting elements.

Results: The database includes 15 recent studies on AI in radiology. Ultrasound, mammography/DBT and CT were the most represented modalities. Specificity, sensitivity and AUC were the most frequently reported metrics. Most studies included external validation and multicenter design, while calibration, fairness analysis, code availability and data availability were less frequently reported.

Discussion: The findings suggest that AI in radiology has clear diagnostic potential, especially for screening, triage and detection, but the strength of the evidence depends on validation quality, methodological transparency and reproducibility.

Conclusions: AI should be considered as a supportive tool for radiologists rather than a replacement, with potential to improve consistency, prioritization and diagnostic analysis when evaluated through rigorous and transparent methodology.

Keywords: artificial intelligence, radiology, diagnostic performance, external validation, methodological quality, CLAIM, STARD-AI.

ORAL PRESENTATION | ROOM D-3 | First Steps in Science 2 | 14:10–14:20

Self-Medication with Antibiotics Among University Students at the Faculty of Medicine

Harisa Krasniqi, Merita Berisha, Florie Miftari Basholli

Faculty of Medicine, University of Prishtina

Introduction: Self-medication with antibiotics represents a significant public health problem and contributes to the increasing prevalence of antimicrobial resistance (AMR). The use of antibiotics without a prescription is common even among medical students, despite their professional knowledge of the effects and risks associated with the inappropriate use of medications.

Aim: The aim of this study was to assess the prevalence of self-medication with antibiotics among medical students, identify the factors influencing this practice, and evaluate their level of knowledge regarding antimicrobial resistance.

Materials and Methodology: This study was conducted using a quantitative cross-sectional design. Data were collected through an online questionnaire created using Google Forms, with the participation of 110 students from the Faculty of Medicine at the University of Prishtina. The questionnaire consisted of 15 questions organized into demographic characteristics, self-medication practices, and knowledge regarding antibiotics and AMR. Data were analyzed using descriptive statistics.

Results: The findings showed that 50% of the students had used antibiotics without a prescription during the previous 12 months. Self-medication was more prevalent among male students (66.7%) compared to female students (40.9%). The most common symptoms prompting antibiotic use were sore throat (55.4%), cough (45.8%), and fever (38.6%). The main sources of antibiotics were leftover medications stored at home (47%) and pharmacies dispensing antibiotics without a prescription (37.3%). Most students reported that their decision to use antibiotics was based on personal experience.

Discussion: The findings reveal a contradiction between theoretical knowledge and actual practices of medical students. Although most participants demonstrated awareness of AMR, the use of antibiotics for symptoms commonly associated with viral infections and their acquisition without a prescription remained frequent. This suggests the influence of overconfidence and inadequate adherence to the principles of rational drug use.

Conclusion: Self-medication with antibiotics remains a concerning practice among medical students. Strengthening education on the rational use of antibiotics and stricter enforcement of regulations prohibiting the sale of antibiotics without a prescription are necessary.

Keywords: self-medication, antibiotics, medical students, antimicrobial resistance, medical education.

ORAL PRESENTATION | ROOM D-3 | First Steps in Science 2 | 14:20–14:30

Fast Food Consumption and Gastrointestinal Problems Among Faculty of Medicine Students

Rajanë Sopi, Sanije Hoxha-Gashi, Mejreme Bajqinovci

Faculty of Medicine, University of Prishtina

Introduction: Changes in lifestyle and a high academic workload have led to the widespread consumption of fast food among medical students. Despite their advanced knowledge of health, factors such as lack of time and stress often result in unhealthy dietary choices, which directly affect gastrointestinal well-being.

Objective: This study aims to assess the prevalence of fast food consumption among students of the Faculty of Medicine at the University of Prishtina and to analyze the relationship between this dietary pattern and the occurrence of gastrointestinal symptoms.

Materials and Methods: This is a cross-sectional study conducted during the period March-May 2026. Data were collected through an online questionnaire (Google Forms) distributed to medical students. The questionnaire included 15 questions divided into demographic sections, dietary habits, and assessment of gastrointestinal symptoms. Data analysis was performed using descriptive statistics in Microsoft Excel.

Results: A total of 110 students participated in the study (71.82% female, 70.00% from urban areas), with first-year students being the most represented group (43.64%). Lack of time was identified as the main factor for fast food consumption (60.91%), followed by taste preference (34.55%). Most students consumed fast food 1-2 times per week (36.36%), mainly via delivery services (43.64%), with sandwiches (32.00%) and hamburgers (26.10%) being the most common choices. In addition, 68.18% of students regularly consumed carbonated beverages with these meals. An alarming 90.00% of participants reported experiencing gastrointestinal problems, the most common being bloating (49.09%, n=54) and abdominal pain (43.63%, n=48). The majority (65.45%) believed that these symptoms were directly related to fast food consumption.

Conclusion: Academic workload and lack of time push medical students toward fast food consumption. This dietary pattern is associated with a very high prevalence of gastrointestinal problems. This situation calls for institutional intervention through the provision of healthier food options within university facilities.

Abstract: for presentation

Introduction: Lifestyle and a demanding academic workload are increasingly pushing medical students toward fast food consumption. This creates a major paradox: although these students possess advanced knowledge about health and its consequences, factors such as lack of time and daily stress force them into unhealthy dietary choices, directly affecting the digestive system. This cross-sectional study, conducted between March and May 2026, examines this concerning relationship at the University of Prishtina.

Case Presentation: To better understand the real situation, an online questionnaire (Google Forms) was distributed, with 110 participating students, mostly female (71.82%) and predominantly first-year students (43.64%). Our findings reveal a rather serious situation. Lack of time emerged as the main reason for unhealthy eating habits (60.91%), with sandwiches (32.00%) and hamburgers (26.10%), often accompanied by carbonated drinks (68.18%), being regularly consumed 1-2 times per week. Most notably, 90.00% of students reported experiencing gastrointestinal problems, the most common being bloating (49.09%) and abdominal pain (43.63%). Furthermore, 65.45% of participants were fully aware that these symptoms are directly linked to their dietary habits.

Conclusion: This study confirms that heavy academic workload and time pressure override students' theoretical knowledge, leaving them with an alarmingly high prevalence of gastrointestinal issues. Awareness alone is not sufficient to change behavior in the absence of healthier alternatives. Therefore, this paper calls for urgent institutional intervention by providing healthier food options within university premises.

Comparison of Free Time and Its Utilization Among Faculty of Medicine Students

Blend Hajzeraj, Merita Berisha, Florie Miftari Basholli

1 University of Prishtina, Faculty of Medicine

Leisure time is not merely the absence of work but a space that individuals use for relaxation, entertainment, and self-improvement according to their personal inclinations. Leisure time management plays a critical role in maintaining the physical and psychological health of students, particularly in high-demand academic fields such as medicine.

This study aims to analyze the amount of leisure time and the ways it is utilized among students at the Faculty of Medicine at the University of Prishtina, as well as to evaluate the impact of recreational factors on their performance.

This is a cross-sectional study conducted during April 2026 with a sample of 60 randomly selected students from the Faculty of Medicine. Data were collected via a structured online questionnaire (Google Forms).

The results showed that 51.7% of students have 2-4 hours of leisure time per day, while 28.3% have only 1-2 hours. The primary leisure activity remains socialization (going out with friends, 45%), while the use of technology occupies a central role (58.3% spend 1-3 hours per day). A concerning finding is that 48.3% of students never engage in physical activity. In the event of having extra time, 50% of respondents would use it for sleep and rest.

The research demonstrates chronic fatigue among medical students, where the need for biological recovery (sleep) often dominates over productive recreational activities. The lack of physical activity and dependence on passive technology suggest a need for more effective time management strategies within university curricula.

Assessment of the Prevalence of Stress Among First-Year Students of the Faculty of Medicine, University of Prishtina

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2. National Institute of Public Health of Kosovo

Introduction: Stress is one of the most common psychological problems among university students, particularly among medical students, who face a high academic workload, numerous responsibilities, and constant pressure. The transition from high school to university, adaptation to a new learning environment, and time management are some of the factors contributing to increased stress levels among first-year students.

Objective: The aim of this study is to assess the prevalence of stress among first-year students of the Faculty of Medicine, as well as to identify the factors that may contribute to its occurrence.

Materials and Methods: This study was conducted as a cross-sectional study aimed at assessing the prevalence of stress among first-year students of the Faculty of Medicine. Data were collected through an online questionnaire designed using the Google Forms platform. The questionnaire gathered both qualitative and quantitative data, which were presented and analyzed using tables and graphs showing frequencies and percentages, processed in Microsoft Excel. A total of 114 first-year students participated in the study by completing the questionnaire voluntarily and anonymously. The questionnaire included questions regarding stress levels and factors that may contribute to its occurrence.

Results: Out of the 114 students included in the study, 45 (39.5%) reported examinations as their primary source of stress. Furthermore, 33 students (28.9%) identified lack of time as the main stress factor, while 30 students (26.3%) reported academic workload as their primary source of stress. Personal problems were reported by 1 student (0.9%), relocation by 4 students (3.5%), and inadequate teaching practices or professors by 1 student (0.9%). Regarding the impact of stress on academic performance, 76 students (66.7%) stated that stress negatively affects their academic performance, 24 students (21.1%) reported that it has no effect, while 14 students (12.3%) believed that stress improves their ability to perform academically.

Conclusion: The findings of this study indicate that stress is a common and significant phenomenon among first-year medical students. The main contributing factors to stress are examinations, academic workload, and lack of time. Stress negatively affects sleep quality, overall health, and the balance between academic and personal life, highlighting the need for effective stress-management strategies and psychological support services for students.

Keywords: mental health, prevalence of stress, medical students

Balancing Academic and Personal Life Among Students of the Faculty of Medicine, University of Prishtina

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2. National Institute of Public Health of Kosovo

Introduction: Balancing academic and personal life represents a significant challenge for medical students due to the high academic workload, continuous study demands, and numerous responsibilities associated with the educational process. Difficulties in maintaining this balance may negatively affect students' psychological well-being, mental health, motivation, and academic performance. Therefore, it is important to assess students' perceptions regarding the balance between academic obligations and personal life, as well as the factors that contribute to maintaining or disrupting this balance.

Material and Methodology: This study is a cross-sectional descriptive study. The research was conducted using a structured questionnaire consisting of 15 questions, distributed electronically to 142 students of the Faculty of Medicine. Participation in the study was voluntary and anonymous. The collected data were processed and analyzed using descriptive statistical methods through Microsoft Excel.

Results: Of the total 142 surveyed students, 76.1% were female and 83.8% belonged to the 18-20 age group. The majority of students reported high levels of stress and overload related to academic obligations. Furthermore, 95.1% of participants considered the balance between academic and personal life to be very important. The main factors negatively affecting this balance were poor time management (57.7%), academic workload (47.9%), and pressure from the faculty (46.5%). A considerable proportion of students reported that the lack of balance negatively affects mental health, stress levels, and academic achievement.

Conclusions: Medical students consider the balance between academic and personal life to be a highly important aspect of their lives. However, most students face difficulties in maintaining this balance due to academic workload, ineffective time management, and high stress levels. The

findings highlight the need for supportive interventions and strategies that would help students better manage their time, reduce stress, and improve their overall well-being.

Keywords: Medical students, academic balance, personal life, stress, well-being.

ORAL PRESENTATION | ROOM D-3 | First Steps in Science 2 | 15:00–15:10

Level of Awareness Among First-Year Students Regarding Attention Deficit Hyperactivity Disorder (ADHD)

Enisa Gashi, Merita Berisha, Florie Miftari Basholli

Faculty of Medicine, University of Prishtina

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common neurodevelopmental disorders, with a significant impact on an individual's academic, social, emotional, and professional functioning. It is characterized by symptoms of inattention, hyperactivity, and impulsivity, which may emerge in childhood and persist into adolescence and adulthood. Due to its high prevalence and impact on quality of life, ADHD represents an important issue for healthcare, educational, and social systems.

The aim of this study was to assess the level of knowledge among first-year medical students regarding ADHD and to identify potential gaps in their understanding of the disorder.

The study was conducted using a quantitative cross-sectional design and included 83 respondents. Data were collected through an online questionnaire consisting of 13 questions distributed via Google Forms. The data were analyzed using descriptive statistical methods.

The results showed that 94.0% of respondents had previously heard of ADHD and correctly identified it as a disorder affecting attention and behavior. Most participants demonstrated good knowledge of its main symptoms, including difficulty concentrating, hyperactivity, and impulsivity. Furthermore, the majority stated that ADHD negatively affects school achievement, while 79.5% believed that individuals with ADHD require treatment or professional support.

However, the findings also revealed gaps in more specific clinical knowledge. Only 67.5% of respondents knew that ADHD diagnosis is based on clinical assessment and standardized diagnostic criteria. Most students rated their level of knowledge as moderate. The primary sources of information were the internet and social media, while 78.3% expressed a desire to learn more about ADHD.

In conclusion, first-year medical students possess a good basic understanding of ADHD; however, there is a clear need for more comprehensive academic content on neurodevelopmental disorders and mental health.

Keywords: ADHD, neurodevelopmental disorders, medical students, knowledge, university education, mental health.

ORAL PRESENTATION | ROOM D-3 | First Steps in Science 2 | 15:10–15:20

Eating Habits of General Medicine Students During Examination Periods

Anila Cakolli, Florie Miftari-Basholli

Faculty of Medicine, University of Prishtina

Introduction: Eating habits represent an important factor that affects the physical health and academic performance of students, especially during examination periods when the level of stress and academic workload are higher. Medical students have often a busy schedule, lack of time, and changes in lifestyle, which may negatively affect their eating habits and well-being.

Purpose: The purpose of this research was the assessment of eating habits among General Medicine students during examination periods.

Work material and methodology: This cross-sectional study was conducted at the Faculty of Medicine of University of Prishtina and included 110 students from the first to the sixth year of studies. Data were collected during April 2026 through an online questionnaire created using Google Forms. Participation was voluntary and anonymous, while the selection of participants was carried out using the convenience sampling method by distributing the questionnaire through social networks and student groups. Data analysis was performed using descriptive statistical methods, and the results were presented in the form of frequencies, percentages, tables, and graphs.

Results: The results of the study showed that the majority of students consumed 1-2 meals per day during the examination period (72.73%). Breakfast consumption was regular only in a portion of students, while a considerable number skipped it. Regarding coffee intake, the most frequently reported consumption was 2-3 cups per day, whereas water intake was mainly 1-2 liters per day. Overall, noticeable changes in eating habits were observed during the examination period.

Conclusion: The study demonstrated that examination periods negatively affect the eating habits of medical students. Academic workload, stress, and lack of time lead to irregular meals and increased coffee consumption. These findings highlight the importance of promoting healthy nutrition and adequate hydration in order to improve students' well-being and academic performance. **Keywords:** Nutrition, students, examinations, stress, caffeine.

ORAL PRESENTATION | ROOM D-3 | First Steps in Science 2 | 15:20–15:30

Parents' Knowledge About Vaccination in the Prevention of Communicable Diseases

Vesa Ibishi, Merita Berisha, Florie Miftari Basholli

Faculty of Medicine, University of Prishtina

Introduction: Vaccination represents one of the most effective methods for preventing infectious diseases and protecting public health. Parents' knowledge and attitudes toward vaccination play an important role in children's participation in immunization programs.

Aim: The aim of this study is to assess the level of parents' knowledge, attitudes, and beliefs regarding childhood vaccination, as well as to identify the factors that influence their decision-making about vaccinating their children.

Methodology: This qualitative study was conducted through direct interviews with parents of children hospitalized in the Pediatric Department of the Hospital of Mitrovica. The research instrument consisted of 16 questions related to demographic data, parents' knowledge, and their attitudes toward vaccination. The collected data were analyzed and presented in tables and graphs using Microsoft Excel.

Results: The results showed that the majority of interviewed parents have adequate knowledge and positive attitudes toward vaccination. Most participants considered vaccination an important protection against infectious diseases and believed that vaccines help prevent them. Furthermore, the majority of parents believed that failure to vaccinate has a negative impact on the community. However, some parents expressed uncertainty regarding vaccine side effects and the information provided about the vaccination schedule.

Conclusion: The study indicates that the interviewed parents have a relatively good level of knowledge and positive attitudes toward childhood vaccination. Nevertheless, there remains a need to strengthen health education and public awareness in order to improve understanding and trust in vaccines.

Keywords: Vaccination, parents, immunization, contagious diseases, disease prevention.

POSTER PRESENTATIONS

POSTER | POSTER AREA | Poster Session | Poster 1

Investigation of the Interaction Between Sodium Cyclamate and Gentamicin Against Multidrug-Resistant and Non-Multidrug-Resistant *Klebsiella pneumoniae* Strains Using Checkerboard Microdilution Assay

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INTRODUCTION

Multidrug-resistant *Klebsiella pneumoniae* represents a major therapeutic challenge because of limited treatment options and heterogeneous antimicrobial susceptibility. Artificial sweeteners are widely consumed compounds, but their potential influence on bacterial growth and antibiotic activity remains insufficiently investigated.

AIM

This study evaluated the interaction between sodium cyclamate and gentamicin against multidrug-resistant and non-multidrug-resistant *Klebsiella pneumoniae* strains using checkerboard microdilution analysis.

MATERIALS AND METHODS

Twenty *Klebsiella pneumoniae* strains were investigated, including 10 multidrug-resistant and 10 non-multidrug-resistant isolates. The interaction between sodium cyclamate and gentamicin was assessed in 96-well microplates using a checkerboard assay in Mueller-Hinton II broth. Gentamicin concentrations ranged from 0.25 to 128 µg/mL, while sodium cyclamate concentrations ranged from 664.06 to 40250 µg/mL. After incubation, optical density was measured at 600 nm. Plate-specific background correction was performed using edge sterility controls, followed by normalization to the corrected growth control. Relative inhibition was calculated, and wells showing at least 75% inhibition were classified as sensitive. Fractional inhibitory concentration index values were calculated for all sensitive combination wells.

RESULTS

The investigated strains showed heterogeneous growth and gentamicin susceptibility patterns. In several strains, sodium cyclamate was associated with a reduction in the effective gentamicin concentration required to achieve inhibition. This effect appeared strain-dependent, with selected multidrug-resistant isolates showing lower fractional inhibitory concentration index values compatible with potential synergistic or additive interactions.

CONCLUSION

Sodium cyclamate may modulate gentamicin activity against *Klebsiella pneumoniae* in a strain-dependent manner. These preliminary findings suggest that artificial sweetener-antibiotic interactions may have microbiological relevance and require further investigation using larger strain collections and complementary viability-based methods.

POSTER | POSTER AREA | Poster Session | Poster 3

The Role of Inflammatory Biomarkers in Cardiometabolic Diseases

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INTRODUCTION

Cardiometabolic diseases, including cardiovascular diseases and type 2 diabetes, represent one of the major global public health challenges. In recent years, numerous studies have demonstrated that chronic low-grade inflammation plays a significant role in the development and progression of these diseases by influencing metabolic and vascular processes.

AIM

The aim of this review is to summarize and analyze the existing scientific evidence regarding the association between inflammatory biomarkers and the risk of cardiometabolic diseases.

RESULTS

The literature indicates that inflammatory biomarkers such as interleukin-6 (IL-6), interleukin-1β (IL-1β), and high-sensitivity C-reactive protein (hs-CRP) are elevated in individuals at increased risk of cardiometabolic diseases. These markers are associated with inflammatory processes that contribute to endothelial dysfunction, the development of atherosclerosis, and metabolic disorders such as insulin resistance and type 2 diabetes.

CONCLUSION

Inflammatory biomarkers play an important role in the pathogenesis of cardiometabolic diseases and may serve as early indicators for risk assessment and prevention. Current evidence supports their integration into clinical risk assessment strategies and future research efforts.

POSTER | POSTER AREA | Poster Session | Poster 4

Artificial Intelligence in Pulmonary Nodule Detection: A Systematic Review of Diagnostic Performance

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Background: Pulmonary nodules are common findings on thoracic imaging, particularly on computed tomography (CT) scans used in lung cancer screening. Early detection is critical for timely diagnosis and improved patient outcomes. Conventional radiological interpretation faces significant challenges, including high image volume, inter-observer variability, and reader fatigue. Artificial intelligence (AI) has demonstrated considerable potential to enhance diagnostic accuracy and efficiency.

Objective: To evaluate the diagnostic performance of AI-based systems for pulmonary nodule detection on CT and compare them with traditional radiological assessment.

Methods: This study was conducted as a systematic review in accordance with PRISMA guidelines. Searches were performed in PubMed, Web of Science, Scopus, and IEEE Xplore for studies published between 2015 and 2025. Original studies applying deep learning algorithms, primarily

convolutional neural networks (CNNs), and reporting diagnostic performance metrics such as sensitivity, specificity, and area under the curve (AUC) were included. Study selection was independently performed by two reviewers according to predefined inclusion and exclusion criteria.

Results: Included studies reported high sensitivity of AI systems, often comparable or superior to radiologists, particularly for small nodules and complex anatomical locations. Use of AI as a "second reader" improved diagnostic accuracy and reduced missed lesions. Main limitations included false-positive results and heterogeneity among datasets.

Conclusions: AI represents a powerful adjunct in radiology for pulmonary nodule detection, with substantial potential for clinical integration. Prospective validation, algorithm standardization, and careful clinical evaluation are required to ensure safe and effective implementation.

Keywords: artificial intelligence; pulmonary nodules; computed tomography; deep learning; systematic review; radiology

POSTER | POSTER AREA | Poster Session | Poster 5

Assessment of Histopathological Findings in Patients Undergoing Pap Smear Screening at Family Medicine Centers in Pristina During 2025.

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INTRODUCTION

The Pap test is one of the most important screening methods for the early detection of precancerous changes and cervical cancer. The evaluation of the histopathological findings of the Pap test plays a key role in the timely diagnosis and treatment of cervical lesions, contributing to the reduction of morbidity and mortality from cervical cancer.

Aim: of the Study The aim of this study is to evaluate the histopathological findings of Pap tests in patients who attended Family Medicine Centers in Prishtina during the period January - December 2025, as well as to analyze the distribution of cervical changes according to age groups and diagnostic categories.

MATERIALS AND METHODS

This study was conducted as a retrospective, descriptive, and analytical study. Data were collected from the cytological and histopathological reports of patients who underwent Pap testing at Family Medicine Centers in Prishtina during the period January - December 2025. Variables analyzed included patient age, Pap test results, and their correlation with histopathological findings. The data were processed using statistical methods to determine the frequency and distribution of cervical lesions.

Results The results indicate a predominance of benign and inflammatory lesions, while a smaller percentage of cases presented precancerous changes such as ASC-US, LSIL, and HSIL. The findings also highlight the importance of regular Pap test screening in the early identification of cervical pathologies and in ensuring appropriate referral for further histopathological examinations.

Conclusion The Pap test remains an effective and essential method for the early detection of cervical changes. Histopathological evaluation of the results contributes to accurate diagnosis and appropriate patient management, helping to prevent the development of cervical cancer. Promoting screening programs and increasing awareness of regular gynecological examinations remain important factors in protecting women's health.

POSTER | POSTER AREA | Poster Session | Poster 6

Epstein-Barr Virus in Multiple Sclerosis: Causative Agent or Necessary Cofactor?

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Introduction: Multiple sclerosis (MS) is an autoimmune demyelinating disease of the central nervous system with a multifactorial etiology. In recent years, the Epstein-Barr virus (EBV) has been identified as the environmental factor most strongly associated with the development of MS, but it remains unclear whether it acts as a causative agent or as a cofactor.

AIM

This literature review aims to analyze the current evidence on the relationship between EBV and MS, critically evaluating the virus's role as a potential causative agent or as an essential cofactor.

Materials and Methods: A systematic literature review was conducted using PubMed, Google Scholar, ScienceDirect, and Nature Reviews. Original articles, meta-analyses, and reviews published mainly between 2022 and 2025 were included. The keywords used included Epstein-Barr, multiple sclerosis, molecular mimicry, and EBV cofactor. The articles were analyzed from epidemiological, immunological, and pathophysiological perspectives.

Results: Epidemiological studies have shown that almost all patients with MS are seropositive for EBV, and infection typically precedes the clinical onset of the disease. The prospective study by Bjornevik and colleagues demonstrated a significant increase in the risk of MS following EBV seroconversion, supporting the hypothesis of a causal role of the virus. Immunological evidence suggests that mechanisms such as molecular mimicry, activation of autoreactive B and T cells, and chronic inflammation may contribute to demyelinating damage in the central nervous system. However, the high prevalence of EBV in the general population and the low incidence of MS indicate that the presence of the virus alone is not sufficient for disease development. Other factors, including genetic predisposition, vitamin D deficiency, smoking, and environmental influences, play an important role in pathogenesis.

Conclusion: Based on current evidence, EBV is considered the strongest environmental factor associated with MS and may represent a necessary factor in its development. However, the data suggest that the virus acts more as an essential cofactor in interaction with genetic and immunological factors.

Study/Source | Study design | Main findings | Interpretation of EBV's role in MS

Bjornevik et al., Science | Prospective study in >10 million individuals | EBV seroconversion preceded the onset of MS and was associated with an approximately 32-fold increased risk | Strongly supports a potential causal role of EBV

Ascherio & Munger | Long-term cohort studies | EBV infection is almost universal among patients with MS | Supports a strong epidemiological association between EBV and MS

Nature Reviews Neurology (2023) | Systematic review | Evidence of activation of EBV-specific B and T cells in the central nervous system. | Supports immunological mechanisms with a causal character

Nature Reviews Microbiology (2022) | Review | Molecular mimicry and EBV latency in B cells | Suggests mediated biological mechanisms
Pender (EBV-MS immunology) | Mechanistic studies | EBV-infected B cells may promote autoimmunity | Supports the role of EBV as a trigger of autoimmunity
Population-based epidemiological studies | Population analysis | More than 90-95% of the population is infected with EBV, but only a small proportion develop MS | A strong argument for EBV as a cofactor rather than a sole causative agent.
Studies on genetic factors (HLA-DRB1) | Genetic studies | Increased risk of MS only in combination of EBV infection and genetic predisposition. | Supports the multifactorial model of the disease
Studies on vitamin D and smoking | Epidemiological studies | Environmental factors independently and synergistically increase the risk of MS. | Indicates that EBV alone is not sufficient for disease development

POSTER | POSTER AREA | Poster Session | Poster 7

Blue Light Exposure and Digital Screens: A Real Ophthalmological Threat or a Commercial Myth?

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INTRODUCTION

The daily use of smartphones, computers, and other digital devices has raised concerns about the impact of blue light on ocular health. In recent years, the market for blue-light filtering lenses has expanded significantly, although the scientific community remains divided on whether blue light emitted by digital screens poses a genuine risk to the eye or whether these concerns are partly driven by commercial marketing (Lawrenson et al., 2023).

AIM

The aim of this literature review is to analyze the current evidence regarding the ophthalmological effects of exposure to blue light emitted by digital screens and to evaluate the actual effectiveness of protective products designed to reduce its impact.

MATERIALS AND METHODS

A literature review was conducted, including systematic reviews, meta-analyses, and clinical studies published in PubMed and the Cochrane Library. Studies examining the relationship between blue light exposure from digital devices and digital eye strain, dry eye syndrome, sleep disturbances, retinal damage, as well as the effects of blue-light filtering lenses, were analyzed.

RESULTS

Most studies indicate that prolonged screen use is primarily associated with digital eye strain, dry eye symptoms, and a reduced blink rate, rather than retinal damage (Rosenfield, 2016). Experimental studies have shown that high-intensity blue light can induce retinal oxidative stress; however, the levels emitted by digital screens are substantially lower than those produced by natural sunlight (Behar-Cohen et al., 2011). The Cochrane review found no strong evidence that blue-light filtering lenses significantly reduce eye strain or provide retinal protection (Lawrenson et al., 2023).

CONCLUSION

Based on current evidence, blue light emitted by digital screens appears to cause mainly visual discomfort and circadian rhythm disturbances, but not clinically proven retinal damage. Commercial claims regarding the benefits of blue-light filtering lenses often exceed the existing scientific evidence supporting their use.

POSTER | POSTER AREA | Poster Session | Poster 8

Frequency and Characteristics of Biologic Therapy Switching in Patients with Inflammatory Bowel Disease

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Background: Biologic therapies have revolutionized the contemporary management of Inflammatory Bowel Disease (IBD), significantly enhancing inflammatory control and patients quality of life. Nevertheless, a subset of patients subsequently develops a secondary loss of response or treatment intolerance, necessitating a switch to an alternative biologic agent. The elucidation of factors associated with this transition remains imperative for optimizing therapeutic efficacy and tailoring individualized treatment paradigms.

Objective: To evaluate the frequency of biologic therapy switching among IBD patients and to analyze the demographic and anthropometric characteristics potentially correlated with this phenomenon.

Materials and Methods: A retrospective observational cohort study was conducted on patients diagnosed with Crohn's Disease and Ulcerative Colitis undergoing biologic therapy. Data were systematically extracted from medical records, encompassing demographic parameters, anthropometric indices, and biologic treatment history. Patterns of biologic switching and the clinical profiles of patients requiring transition to alternative therapies were subsequently analyzed.

Results: A substantial proportion of IBD patients required biologic therapy switching during the clinical follow-up period. Analytical data indicated that male patients who transitioned to an alternative biologic agent exhibited a propensity to be younger in age and possess a higher body weight compared to those maintained on their index therapy. This demographic and anthropometric trend was not observed to a comparable extent within the female cohort.

Conclusion: The findings suggest that specific anthropometric and demographic factors, notably younger age and elevated body weight in males, may play a contributory role in the necessity for biologic therapy switching. These observations underscore the clinical imperative of individualized patient monitoring and warrant further validation through prospective studies with larger sample sizes.

POSTER | POSTER AREA | Poster Session | Poster 9

Emergency versus Elective Caesarean Section: A Systematic Review of Maternal and Neonatal Outcomes

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Introduction: Caesarean section ranks among the fastest-growing obstetric surgical procedures worldwide, with rates exceeding 21% of all births globally. While the clinical distinction between elective and emergency caesarean section is well recognised, consolidated comparative evidence between these two entities remains limited in current literature.

Aim: To compare maternal and neonatal outcomes between elective and emergency caesarean section, with a focus on surgical site infection (SSI), postpartum haemorrhage (PPH), neonatal intensive care unit (NICU) admission, and fifth-minute Apgar score below 7.

Materials and Methods: A systematic literature review was conducted in accordance with PRISMA 2020 guidelines, searching PubMed/MEDLINE, Cochrane Library, and Scopus, up to April 2026. Observational and experimental studies comparing emergency with elective caesarean section and reporting maternal or neonatal outcomes were included. Methodological quality was appraised using the Newcastle-Ottawa Scale (NOS). A qualitative synthesis of evidence was performed across the included studies.

Results: Of 846 identified studies, 40 met the overall inclusion criteria and were analysed. The reviewed evidence suggests that emergency caesarean section is associated with higher rates of adverse maternal and neonatal outcomes compared to planned elective procedures. Specifically, the incidence of surgical site infection (SSI) and postpartum haemorrhage (PPH) was notably elevated in the emergency group. From a neonatal perspective, infants delivered via emergency procedures demonstrated higher rates of fifth-minute Apgar < 7 and increased frequency of NICU admission. These associations remained consistent across the included studies.

Conclusion: The reviewed evidence suggests that emergency caesarean section is associated with a higher perioperative risk for both maternal and neonatal complications compared to elective delivery. Clinical interpretation warrants caution, as the two groups differ systematically with respect to the underlying medical indication (confounding by indication). Structured antenatal care, early identification of obstetric risk factors, and timely birth planning represent the primary clinical strategies for reducing the burden of emergency caesarean interventions.

Keywords: caesarean section; elective; emergency; maternal outcomes; neonatal outcomes; systematic review.

POSTER | POSTER AREA | Poster Session | Poster 10

The Impact of COVID-19 on the Mental Health of School-Aged Children Aged 12–15 in the Municipality of Gjakova

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Keywords: COVID-19, disorder, emotional, children, schools

POSTER | POSTER AREA | Poster Session | Poster 11

Comparison of Root Canal Instrumentation Time According to Different Instrumentation Techniques

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Introduction: Root canal instrumentation is an essential phase of endodontic treatment. In addition to the quality of canal preparation, the duration of the procedure is of particular importance for clinical efficiency and patient comfort.

Aim: The aim of this in vivo study was to compare the time required for root canal instrumentation using manual and rotary instrumentation techniques.

Materials and Methods: This in vivo study included 15 patients who underwent endodontic treatment. The patients were divided into three groups according to the instrumentation technique used. Manual instruments were used in one group, while nickel-titanium (NiTi) rotary systems were used in the other two groups. The time required to complete root canal instrumentation was recorded for each case.

Results: Instrumentation with rotary systems required less time compared to manual instrumentation. The differences were particularly evident in systems that utilized a smaller number of instruments, enabling faster completion of the procedure.

Conclusion: The use of rotary instruments reduces the time required for root canal instrumentation compared with the manual technique. This may improve clinical efficiency and enhance patient comfort during endodontic treatment.

POSTER | POSTER AREA | Poster Session | Poster 12

Clinical Case of Endodontic Treatment of a Maxillary Second Premolar with a Long Root Canal

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INTRODUCTION

Successful endodontic treatment depends on knowledge of the internal anatomy of teeth. Studies have shown that the internal anatomy of maxillary premolars is particularly complex due to variations in the number of roots, canal configuration, and canal length. According to studies, the average root canal length of the maxillary second premolar is 21.5 mm, with a range from 15.5-28.4 mm. As the canal length increases, the technical difficulty of endodontic treatment also increases. According to the AAE endodontic case difficulty assessment form, canals with a length >25 mm are classified as cases with high clinical difficulty.

CASE PRESENTATION

In this case report, we present a clinical case of successful endodontic treatment of the maxillary second premolar with a canal length of 25.5 mm, performed at the Clinic of Dental Pathology with Endodontics (QKSUK), during practical training.

A 34-year-old male patient reported to QKSUK with symptoms of acute serous pulpitis in tooth 15. Treatment began in the Triage Unit with mortal extirpation of the pulp, which continued at the Clinic of Dental Pathology with Endodontics. After pulp extirpation, the working length of the canal was measured, reaching a value of 25.5 mm. The canal was instrumented and shaped with manual instruments of 31 mm length using standardized preparation. Irrigation was performed with 2% NaOCl and 0.9% NaCl. Finally, the canal was obturated using lateral compaction of gutta-percha and ZOE-based sealer.

The procedure was completed with composite restoration, and the patient was advised to proceed with crown restoration.

CONCLUSION

Endodontic treatment of the maxillary second premolar with a canal length of 25.5 mm was an unusual clinical case and requires careful management with extended-length endodontic files.

Restoration of a Carious Maxillary First Molar with Bilaterally Pronounced Tuberculum Carabelli: A Clinical Case Report

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Introduction: The Cusp of Carabelli (Tuberculum Carabelli) is an anatomical-morphological dental feature located on the palatal surface of the mesiopalatal cusp, first described in 1842 by Georg Carabelli. Its degree of expression ranges from a faint surface depression to a fully formed cusp with a distinct apex. Although the prevalence of this feature in European populations is relatively high (18.1-27.3%), forms with a pronounced cusp are considerably less common (3.5%). Beyond its anthropological significance, the tubercle carries clinical relevance, because the fissure separating the mesiopalatal cusp from the Cusp of Carabelli creates a retention site for dental plaque, increasing caries susceptibility, influencing occlusal balance, and complicating restorative treatment planning.

Case Presentation: A 19-year-old male patient presented at the Clinic of Dental Pathology and Endodontics (UCDCK), in the course of clinical practice conducted by this department of the Faculty of Medicine. The patient reported no subjective symptoms. Intraoral examination revealed a carious lesion on the mesial surface and within the fissure separating the mesiopalatal cusp from the Cusp of Carabelli on tooth 26. The Cusp of Carabelli was present bilaterally and classified as Grade 7 according to Dahlberg's classification, presenting as a well-developed cusp with a pronounced apex on the palatal surface. The caries was confined to dentin, with no clinical or radiographic signs of pulpal involvement. A Class II cavity preparation according to Black was carried out, extended to include the fissure on the palatal surface. Following acid etching and application of the adhesive system, the cavity was restored with composite resin, reproducing the natural anatomy of the tooth while fully preserving the morphology of the Cusp of Carabelli.

Conclusion: A highly pronounced Cusp of Carabelli is a rare morphological feature that clinically complicates both cavity preparation and restoration. The unilateral localization of caries, despite the bilateral presence of the tubercle, suggests that morphological predisposition operates in conjunction with local factors.

Treatment of Alveolitis with Platelet-Rich Fibrin (PRF): A Case Report

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Introduction: Alveolitis is one of the most common and painful complications following tooth extraction, characterized by the premature loss of the blood clot and exposure of the alveolar bone. Conventional treatment approaches mainly focus on pain management through local irrigation and medicated dressings. Platelet-Rich Fibrin (PRF) has gained considerable attention as an autologous alternative that promotes tissue healing and reduces inflammation. The aim of this paper is to present a clinical case of the successful treatment of alveolitis using PRF.

Case Presentation: A 45-year-old female patient presented to the clinic with severe pain three days after the extraction of the maxillary first molar. Following clinical examination, a diagnosis of alveolitis sicca (dry socket) was established. Treatment was initiated according to a standard aseptic and antiseptic protocol. Local anesthesia with 2% lidocaine was administered, followed by careful debridement and irrigation of the socket with 0.9% sodium chloride (NaCl) physiological solution. Subsequently, a blood sample was obtained from the patient and centrifuged to obtain a PRF membrane according to Dr. Choukroun's protocol. The PRF membrane was placed directly into the empty socket, and the wound was sutured using 4-0 catgut in a figure-eight pattern. The treatment protocol resulted in immediate and complete pain relief within 24 hours, without the need for analgesic medication. Follow-up examination after one week revealed soft tissue epithelialization, complete wound closure, and the absence of any signs of inflammation.

Conclusion: The use of Platelet-Rich Fibrin (PRF) in the treatment of alveolitis offers significant advantages compared with traditional treatment methods. It not only provides rapid pain relief through the action of growth factors but also actively stimulates angiogenesis and the regeneration of both bone and gingival tissues.

Keywords: Alveolitis, Platelet-Rich Fibrin (PRF), Tooth Extraction, Wound Healing

PHOTO GALLERY





























