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Short Oral Presentations

SOP-1

Determination of Relationship Between Vitamin B12, Homocysteine, and Natriuretic Peptide Levels and Cardiovascular Diseases in Patients with Parkinson's Disease

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Introduction: Parkinson's disease (PD) is a progressive neurodegenerative disease characterized by motor and non-motor symptoms. Recent evidence suggests a possible association between PD and an increased risk of cardiovascular disease (CVD). However, the biochemical mechanisms underlying this association have not been adequately investigated. This study aimed to evaluate the levels of vitamin B12, homocysteine, and B-type natriuretic peptide (BNP) in PD patients compared with controls. Thus, it aims to elucidate the potential role of these parameters as biomarkers for cardiovascular risk in PD.

Method: This controlled clinical study included 72 participants, aged 40 years and above, comprising 36 PD patients and 36 age-matched healthy controls. Venous blood samples were collected, processed for serum isolation, and stored at -80° C until analysis day. Homocysteine, BNP, and vitamin B12 levels were measured by enzyme-linked immunosorbent assay. The normality of the data was tested with the Kolmogorov-Smirnov test. The data with normal distribution were analysed by a paired t test, and the data without normal distribution were analysed by the Mann-Whitney U test.

Results: Serum BNP levels were significantly lower in PD patients than in controls ($p<0.01$). Although homocysteine levels were also lower in PD patients than in controls, the difference was statistically insignificant. On the other hand, there was no difference in vitamin B12 levels between the two groups of participants ($p>0.05$).

Conclusion: Our study evaluates PD patients for CVD parameters. Previous studies have suggested that plasma BNP and homocysteine levels increase in a manner consistent with the risk of CVD. However, in our study, both parameters were found to be lower in PD patients than in control participants. Based on our data, we suggest that there is no direct relationship between PD and CVD. However, more large-scale studies are needed to investigate the underlying pathophysiological mechanisms that link PD to CVDs.

Key words: Parkinson's disease, cardiovascular risk, biomarkers, vitamin B12, homocysteine, brain natriuretic peptide

SOP-2

Accuracy of Intraoperative Sentinel Lymph Node Biopsy in Our Patients with Breast Cancer

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Introduction: Sentinel lymph node biopsy (SLNB) is widely used for axillary staging in early-stage breast cancer. However, false-negative or false-positive intraoperative frozen section results may lead to unnecessary second surgeries or axillary dissection (AD), impacting patient morbidity. This study aims to evaluate the accuracy of SLNB by comparing intraoperative frozen section, and final pathology results in patients who underwent SLNB and AD, thereby identifying parameters to improve diagnostic precision and reduce unnecessary surgical intervention procedures.

Method: Ninety breast cancer patients who presented at the outpatient clinics of Bezmialem Vakıf University Faculty of Medicine General Surgery between October 2010 and March 2024, were retrospectively analyzed for undergoing SLNB followed by AD. Patients who received neoadjuvant therapy were excluded. Demographic and clinical parameters including age, sex, menopausal status, family history, hormone therapy, tumor type, receptor status (ER, PR, HER2), tumor size, preoperative axillary status, preoperative tumor-nodes-metastasis stage, and presence of distant metastasis were recorded. Intraoperative SLNB frozen section results and final pathology reports were compared.

Results: The mean age of the patients was 56.88 years, with the number of SLNs being 2.3, respectively. In 24 patients (26.6), SLNB results were positive (mean 0.345). AD was performed in 13 patients, yielding a total of 43 excised lymph nodes. The mean number of positive nodes was 3.31 (range: 1-15). In three patients, SLNB results were negative, but final pathology results revealed one positive node, for each. In 63 patients (70%), both the SLNB and final results were negative.

Conclusion: Our preliminary results suggest that the accuracy of intraoperative frozen section in SLNB may influence subsequent axillary management. Identifying parameters that minimize false results may help reduce the necessity for second surgeries or avoid unnecessary AD, thus improving patient outcomes.

Key words: Breast cancer, sentinel lymph node biopsy, frozen section

SOP-3

Examination of the Response to Autologous Stem Cell Transplantation in Multiple Myeloma Cases with Laboratory Findings

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Introduction: Multiple myeloma (MM) is a type of cancer originating from plasma cells in the bone marrow. Myeloma frequently affects areas such as the spine, skull, pelvis, rib cage, shoulders, and hips. This study evaluates the clinical, biochemical, and radiological outcomes of patients who underwent autologous stem cell transplantation (ASCT).

Method: MM patients who underwent ASCT and were admitted to the Hematology Department Clinic between January 2012 and March 2024 were retrospectively analyzed. Data obtained from archived records included age, gender, areas affected by the disease, laboratory values at diagnosis (calcium, GFR, beta-2 microglobulin, creatinine), ASCT success rates and numbers, relapse status, disease stage, and the frequency distribution of disease subtypes.

Results: Among 94 patients (56 females, 38 males; mean age 60.4), 86 underwent single ASCT and 8 underwent tandem ASCT. The mean survival time was 127 months. Post-transplant laboratory improvements included statistically significant reductions in beta-2 microglobulin levels ($p<0.001$) and creatinine levels ($p<0.001$). Notably, there was a statistically significant increase in the glomerular filtration rate ($p<0.001$). However, the increase in calcium levels after transplantation was not statistically significant ($p=0.22$). Skeletal involvement was observed in 82.4% of patients. Relapse occurred in 50% of cases, with no statistically significant survival difference between single and tandem transplants ($p=0.644$). At diagnosis, 95.7% ($n=88$) of patients presented with at least one positive CRAB criterion. According to the Durie-Salmon staging system, 71.1% of patients were classified as stage 3A or 3B.

Conclusion: ASCT significantly improves laboratory parameters in multiple myeloma patients. The lack of a survival advantage of tandem ASCT over single ASCT warrants further investigation. Future studies with larger patient cohorts are recommended to validate these findings.

Key words: Multiple myeloma, autologous stem cell transplantation, laboratory findings, relapse rates

SOP-4

The Effect of Electromagnetic Field Exposure on Health Parameters and Occupational Performance: A Scale Study

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Introduction: Electromagnetic fields (EMFs) are generated by electrically charged particles and vary in frequency and intensity. These fields, which can arise from common household and workplace devices, are associated with potential health concerns. Prolonged exposure to EMFs has been implicated in stress, cancer, Alzheimer's, and Parkinson's disease due to its potential to disrupt cellular metabolism, and cause DNA damage. Additionally, EMFs may affect mental well-being and productivity, posing significant risks for individuals exposed in occupational settings. This study aims to investigate the impact of occupational EMF exposure on various health parameters, including mental and physical well-being, and work productivity. Furthermore, the study seeks to emphasize the importance of developing preventive measures to mitigate the risks associated with long-term EMF exposure.

Method: This cross-sectional study was conducted at Bezmialem Vakıf University Health Practice and Research Hospital and involved 98 participants from various departments. Participants were classified into three groups based on their exposure levels: low, medium, and high EMF exposure. EMF measurements were performed using a WAVECONTROL SMP2 device, and data on health parameters were collected. Pain levels were assessed using the VAS, while depression and anxiety levels were evaluated with Beck Depression II and Beck Anxiety scales, respectively. Quality of life was measured using the SF-36 scale, and work productivity and activity impairments were assessed using the WPAI questionnaire. The collected data were statistically analyzed to determine differences and associations among the exposure groups.

Results: The study population had a homogeneous distribution in terms of age and gender, with no significant differences observed ($p=0.760$ and $p=0.352$, respectively). Significant differences were found in Beck Anxiety scores ($p=0.004$), WPAI Work Score-1 ($p<0.001$), Work Score-3 ($p=0.022$), and SF-36 Physical Function scores ($p=0.037$) among the exposure groups. Participants with moderate EMF exposure exhibited significantly higher levels of anxiety and impairments in work productivity compared to those with low and high exposures. Additionally, physical function scores were markedly lower in the moderate exposure group. These findings suggest a complex relationship between EMF exposure levels and health outcomes, with moderate exposure posing the greatest risk.

Conclusion: Occupational exposure to moderate levels of EMFs is associated with adverse health outcomes, including increased anxiety, decreased physical function, and impaired work productivity. These results underscore the necessity of implementing preventive strategies and workplace policies to mitigate the risks associated with EMF exposure. Raising awareness and conducting further research in this area are essential to protect the health and well-being of individuals in occupational environments.

Key words: Electromagnetic fields, occupational health, productivity, anxiety, SF-36

SOP-5

Investigation of the Clinical Importance of Blood Gas Monitoring During Resuscitation in Cardiac Arrest Patients

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Introduction: We aimed to investigate the changes in blood gas parameters during resuscitation in patients with cardiac arrest and to assess whether we can predict the time until spontaneous circulation resumes by examining the trends in these values.

Method: This retrospective study is designed to include all patients aged 18 years and older who suffered a cardiopulmonary arrest and received intervention in the emergency department of our hospital. Those with missing data, terminal-stage cancer patients, and cases of witnessed cardiac arrest will be excluded from the study.

Results: Out of a total of 78 patients, 56 (71.8%) were male and 22 (28.2%) were female (p=0.833). The mean age of the women was 66.11±2.90, while the mean age of the men was 64.95±2.50 (p=0.775). Statistical analysis of the arterial blood gas results revealed significant differences between the surviving group and the deceased group in the initial blood gas values. Specifically, pH (p=0.002), sodium (p=0.025), and potassium (p=0.005) levels showed statistically significant differences. In the second set of blood gas measurements, significant differences were observed between the groups in pH (p<0.001), base excess (BE) (p<0.001), potassium (p<0.001), pCO2 (p=0.011), and lactate (p=0.014) levels.

Conclusion: The results of the study indicate that serial blood gas analysis is a crucial guide in predicting the success of cardiopulmonary resuscitation and the patient's prognosis. PH change is an indicator of prognosis, with values above 7 indicating a good prognosis. While the initial BE may be meaningless, it can be used as a prognostic indicator in patients who have received intervention. Rather than the absolute value of lactate, the direction of lactate change has been considered a prognostic indicator.

Key words: Cardiopulmonary resuscitation, blood gas, survival

SOP-6

Case Series: Follow-up Data of Patients with Autozomal Dominant Polycytic Kidney Disease Under Tolvaptan Treatment in Bezmialem Vakıf University Hospital

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Introduction: Autosomal dominant polycystic kidney disease (ADPKD) is a genetic disorder characterized by progressive kidney enlargement. The only FDA-approved drug is tolvaptan. There are a limited number of studies examining the response to this treatment, in our country. Therefore, our study aims to evaluate changes in kidney size among ADPKD patients receiving tolvaptan therapy.

Method: This study included patients with ADPKD who were receiving tolvaptan treatment. Demographic data (age, gender, comorbidities, treatment duration, and dosage) were recorded. Baseline measurements of blood pressure, urea, creatinine, estimated GFR, and kidney volumes were collected prior to treatment. Routine laboratory and imaging tests were evaluated, and clinical findings were compared pre- and post-treatment.

Results: This study included 18 patients (13 males, 5 females) with a mean age of 46.50±7.19 years. After one year of treatment, mean eGFR decreased from 56.38±19.77 to 48.08±20.53 mL/min, creatinine increased from 1.55±0.55 to 1.87±0.83 mg/dL, right kidney volume decreased from 1898.75±1294 to 1453.60±792 mL, and left kidney volume decreased from 2224.35±1601 to 1511.80±844 mL. The changes in systolic and diastolic blood pressure values and kidney sizes were found to be statistically insignificant ($p=0.739$ for systolic, $p=0.967$ for diastolic, $p=0.877$ for the right kidney, $p=0.427$ for the left kidney). A strong negative correlation was observed between baseline and 3-month diastolic blood pressure ($r=-0.73$).

Conclusion: The treatment did not show statistically significant changes in kidney volumes or systolic or diastolic blood pressures. However, a strong negative correlation between baseline and 3-month diastolic blood pressure suggests greater reductions in individuals with higher baseline values. Further studies are needed to explore these individual variations and their clinical implications.

Key words: Autosomal dominant polycyctic kidney disease, tolvaptan, progression

SOP-7

Impact of Ramadan Fasting on Renal Function in Patients with Diabetic and Non-diabetic Chronic Kidney Disease

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Introduction: Chronic kidney disease (CKD) affects 10% of the global population, reducing quality of life and increasing mortality. Patients with CKD stage 3a are particularly sensitive to dietary and lifestyle modifications. Ramadan fasting, a key Islamic practice, involves abstinence from food and drink from dawn to sunset. Despite exemptions for individuals with health conditions, many CKD patients fast due to cultural and religious reasons. The effects of fasting on renal function in CKD patients remain controversial, with studies showing conflicting results. This study evaluates the impact of Ramadan fasting on renal function in CKD stages 2-4.

Method: The study was conducted at a tertiary care center, with data collected retrospectively for three months preceding Ramadan 2024 and prospectively for three months afterward. A total of 129 patients were included: fasting (n=65) and non-fasting (n=64) groups. Inclusion criteria were eGFR between 15 and 90 mL/min/1.73 m2 and stable CKD stages 2-4. Exclusion criteria included acute kidney injury and advanced CKD. The primary outcome was the change in eGFR (ΔeGFR) using the CKD-EPI 2021 formula.

Results: Baseline eGFR was 52.11±13.34 mL/min/1.73 m2. ΔeGFR was not significantly different between fasting (2.33±7.21) and non-fasting (3.93±7.86) groups (p=0.232). CRP levels increased in both groups, with a more pronounced rise in the non-fasting group. Fasting was well tolerated, including among diabetic patients with controlled glucose levels and those using antidiabetic or antihypertensive medications.

Conclusion: Ramadan fasting does not significantly affect renal function in stable CKD patients. The findings suggest that patients with CKD stages 2-4 can safely fast under medical supervision. Further multicenter studies are recommended to validate these findings.

Key words: Chronic kidney disease, ramadan fasting, renal function, eGFR, inflammatory markers

SOP-8

The Investigation of the Anti-inflammatory and Immunomodulatory Effects of Black Grape Seed (Vitis labrusca l) And Yellow Grape (Vitis vinifera l) Seed Extract

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Introduction: Vitis labrusca L. (VLL), commonly known as Erzincan Cimin Grape, and Vitis vinifera L. (VVL), (green-yellow grapes), are extensively distributed in Anatolia. Their seeds possess anti-inflammatory, immunomodulatory, and antioxidant properties, but comparative analyses remain limited. This study aims to evaluate the effects of VLL and VVL extracts in LPS-stimulated RAW264.7 macrophages.

Method: Fresh VVL and VLL were dried at 40° C and extracted using ultrasound-assisted extraction with 80% ethanol. Total flavonoid and phenolic contents were determined using quercetin and gallic acid standards. Cell viability was analyzed with the MTT assay. An inflammation model was induced using LPS, confirmed by measuring nitric oxide levels with the Griess reagent. Pro-inflammatory cytokines were analyzed via ELISA. Additionally, VLL effects on COX-2 protein will be investigated using western blot and immunofluorescence.

Results: The extract of VLL/VVL seed was found to contain 120/96 mg/g gallic acid equivalents of total phenols, and 24/18 mg/g quercetin equivalents of total flavonoids. Since the contents of VLL seeds were found to be higher than those of VVL extract, subsequent experiments were conducted using VLL. It exhibited cytotoxic effects on macrophage cells at doses above 100 µg/mL, while demonstrating significant proliferative effects at doses below this threshold. In the LPS-induced inflammation model, the extract significantly reduced IFN-γ levels up to 60 µg/mL doses, TNF-α levels up to 30 µg/mL doses, and suppressed the pro-inflammatory cytokine IL-1β starting from a dose of 10 µg/mL. Black grape seed extract dose-dependently decreased the COX-2 protein expression level in LPS-induced macrophage cells. This reveals the potential of black grape seeds as anti-inflammatory agents.

Conclusion: VLL, notable for its rich phenolic and flavonoid composition, has emerged as a potential candidate for inflammation suppression. This highlights its potential as a natural anti-inflammatory agent for treating inflammation-related diseases.

Key words: Inflammation, immunomodulatory, *in vitro*, Vitis vinifera L, Vitis labrusca L

SOP-9

Microbiological Etiology, Clinical Features, and Prognosis in Prosthetic Heart Valve and Intracardiac Device-associated Endocarditis: 10-year Data

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Introduction: Modified Duke Criteria (MDC) used in the diagnosis of infective endocarditis (IE) may be inadequate in some cases. Our aim in this study is to investigate the adequacy of MDC in the diagnosis of prosthetic valve endocarditis (PVE) and intracardiac device endocarditis (ICDE). It also aims to investigate the etiology, clinical features, prognosis, and risk factors of PVE and ICDE.

Method: The files of patients diagnosed with PVE and ICDE between 2013-2023 were retrospectively scanned and evaluated according to MDC. In addition, the files of patients who had a prosthetic valve or intracardiac device and did not have IE between the same years were retrospectively scanned also. Differences between patients with prosthetic valves or intracardiac devices, with and without IE, were investigated.

Results: Twenty-two patients with PVE and 7 patients with ICDE were reached. Blood culture was positive in only 19 of 29 patients. The most common microorganisms are S. aureus (31.57%) and S. epidermidis (15.78%). The echo findings of 21 patients were compatible with IE. According to the MDC, only 18 of 29 IE patients were diagnosed with definite IE. Twenty-five percent of patients with IE died during the treatment. When the risk factors for developing IE in patients with prosthetic valves and intracardiac devices are compared, there was no difference observed between surgical or transcatheter replacement of the prosthetic valve (p=0.780), and the risk of developing IE was higher in the first year of the prosthetic valve or intracardiac device (51.7% p=0.015).

Conclusion: MDC is not sufficient to diagnose PVE and ICDE in some cases. No superiority between surgical and transcatheter interventions has been found in valve replacement, and the risk of developing IE was found to be higher in the first year.

Key words: Infective endocarditis, prosthetic valve endocarditis, intracardiac device endocarditis

SOP-10

Evaluation of Telemedicine Awareness Levels of Bezmialem Vakıf University Faculty of Medicine Physicians' and Students'

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Introduction: Telemedicine has appeared as a vital component of healthcare delivery, particularly during the coronavirus disease-2019 pandemic. It facilitates remote diagnosis, treatment, and continuous education. Despite its widespread use, the awareness, knowledge, attitudes, and skills (AKAS) regarding telemedicine among medical professionals remain inconsistent. This study evaluates these dimensions among physicians and medical students at Bezmialem Vakıf University Faculty of Medicine.

Method: A survey was applied to 160 participants, including 80 men and 80 women, medical students and physicians from Bezmialem Vakıf University. The Telemedicine AKAS questionnaire was distributed through Google Forms, and the survey gathered information on participants' demographics and telemedicine competencies. Gender-based performance was analyzed using descriptive statistics.

Results: The study has shown that women scored higher than men in almost all metrics: knowledge ($p<0.001$), awareness ($p=0.005$), attitude ($p=0.041$), and skills ($p=0.001$). Strong correlations were observed between awareness and skills ($r=0.933$, $p<0.001$). Women exhibited greater familiarity with telemedicine knowledge and demonstrated more positive attitudes. Despite these differences, both genders identified similar benefits and challenges associated with telemedicine, including improved accessibility and concerns about empathy during virtual interactions.

Conclusion: The study reveals notable gender differences in telemedicine competencies and highlights the need for targeted educational initiatives to close these gaps. Integrating telemedicine training into medical curricula is essential for improving the effectiveness of healthcare delivery and preparing future professionals with the skills and confidence to adapt to evolving medical technologies.

Key words: Telemedicine, awareness, knowledge, attitude, skills

SOP-11

The Use of Artificial Intelligence Applications Among Medical Students

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Introduction: Artificial intelligence (AI) is rapidly transforming medical education and practice. AI applications provide innovative tools that can enhance learning, patient care, and clinical decision-making. This study aims to explore medical students' perceptions of AI, its potential integration into the curriculum, and its impact on learning and patient care quality.

Method: A survey was conducted among 81 medical students at Bezmialem Vakıf University. The participants were categorized based on gender (57 females, 24 males), and their experiences with AI tools. Statistical analyses, including chi-square tests, were used to evaluate perceptions of AIs integration into medical education.

Results: A total of 81 students participated in the study. Among 55 participants with no prior AI education, 20 believed AI should be integrated into the curriculum ($p=0.087$). Out of 24 frequent ChatGPT users, 11 reported accelerated learning ($p=0.180$). Of 48 students who believed AI enhances patient care quality, 40 positively evaluated AIs impact on medical practice ($p=0.002$).

Conclusion: This study highlights the varied perceptions of medical students regarding AI in education and practice. While most participants recognized the potential of AI in improving patient care and learning efficiency, the results underscore the need for further integration of AI into the medical curriculum and the addressing of knowledge gaps.

Key words: Artificial intelligence, medical education, AI tools, patient care, learning efficiency

SOP-12

Evaluation of Bezmialem Vakıf University Faculty of Medicine Students' Knowledge, Attitudes and Behaviors Regarding Tuberculosis Patients

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Introduction: Tuberculosis is a contagious lung disease that exists in active (contagious) and latent (non-symptomatic) forms. This study aimed to compare the knowledge, attitudes, and behaviors of Bezmialem Vakıf University Faculty of Medicine students toward tuberculosis patients by focusing on those who did and did not take a theoretical course, to raise awareness.

Method: This descriptive study collected data using a 25-question questionnaire to assess students' behavior and attitudes toward tuberculosis based on sociodemographic characteristics and TB knowledge. A total of 129 students participated, divided into two groups: those who had not taken theoretical courses (1st and 2nd grade) and those who had (3rd, 4th, 5th, 6th grade).

Results: A total of 129 participants took part in this study, with 44 males and 85 females. The first group (1st and 2nd grades) had 32 students, and the second group (3rd to 6th grades) had 97 students. The second group scored higher on questions about tuberculosis transmission (p=0.002), diagnosis (p=0.001), and treatment duration (p=0.018). More participants in the second group were concerned about catching tuberculosis (36.1% vs. 18.8%, p=0.068) and preferred visiting untreated patients while wearing masks and having ventilation (70.1% vs. 40.6%, p=0.060). There was no significant difference between groups in attitudes toward a discriminated tuberculosis patient at work (p=0.143). Regarding participation in social activities, 56.3% of the first group and 43.4% of the second group believed the patient should not participate (p=0.005).

Conclusion: As a result of the analysis between the two groups, significant differences were found in students' knowledge, but no significant difference was found in behavior and attitude.

Key words: Tuberculosis, medical students, knowledge level, behavior

SOP-13

Survival Outcomes of Autologous Stem Cell Transplantation in Lymphoma Patients

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Introduction: High-dose chemotherapy followed by autologous stem cell transplantation (ASCT) has been frequently used to treat patients with relapsed or refractory lymphoma. This study aims to compare survival outcomes after ASCT across six different lymphoma subtypes.

Method: Eighty-one patients who underwent ASCT between January 2012 and December 2023 were included. Overall survival (OS) and progression-free survival (PFS) were calculated using the Kaplan-Meier method and compared with the log-rank test. Comorbidities were evaluated with the Charlson Comorbidity Index (CCI). The impact of age, sex, comorbidities, and lymphoma subtype on survival was evaluated using Cox regression and logistic regression analyses.

Results: Twenty patients with Hodgkin lymphoma (HL), 22 with diffuse large B-cell lymphoma (DLBCL), 17 with follicular lymphoma (FL), 6 with marginal zone lymphoma (MZL), 10 with mantle cell lymphoma (MCL), and 6 with T-cell lymphoma (TCL) were included. The mean age was 45 (range 18 - 79) years. Comorbidities were present in 53 patients (65.4%), and crosstab analysis of CCI revealed a significant difference (p=0.024). Two year PFS was 72.4%, and OS was 77.6%. The mean PFS was 72.45 months, and the mean OS was 114.03 months. Two year PFS for HL, DLBCL, FL, MZL, MCL, and TCL was 69.9%, 80.9%, 75.5%, 80%, 70%, and 50%, and 2-year OS was 79.3%, 57.7%, 100%, 62.5%, 88.9%, and 53.3%, respectively. DLBCL had the longest PFS (70.2 months), while FL had the longest OS (113 months). TCL had the shortest PFS and OS (14.66 and 33.33 months). Cox regression analysis showed a significant difference in PFS between HL and TCL (p=0.020).

Conclusion: Survival outcomes after ASCT vary significantly by lymphoma subtype. Identifying factors contributing to shorter survival may improve treatment strategies for high-risk groups.

Key words: Autologous stem cell transplantation, lymphoma, survival analysis

SOP-14

The Effect of SGLT2 Inhibitor Use on Weight in Obese and Non-obese Individuals with Type 2 Diabetes Mellitus: A 3-6 Month Follow-up Study

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Introduction: Diabetes is a chronic disease characterized by high levels of glucose in the bloodstream. Diabetes medications aim to control blood sugar levels. SGLT2 inhibitors are one of the drug groups used in diabetes treatment. The main effect of SGLT2 inhibitors, also known as gliflozins, is to prevent glucose reabsorption in the kidney and thus lower blood sugar. In addition to blood sugar control, these drugs improve metabolic parameters by reducing weight, lowering blood pressure, and reducing the progression of kidney failure. It has also been shown to benefit cardiovascular health in diabetic patients. The aim of this study is to evaluate the difference in the weight loss effect of SGLT2 inhibitors in obese and non-obese patients.

Method: A total of 100 patients using SGLT2 inhibitors were identified. These patients were divided into two groups: those with a body mass index (BMI) below 30 and those with a BMI above 30. In addition to monitoring weight over a 3-6 month period, the levels of glucose, HbA1c, TSH, GFR, creatinine, AST, ALT, HDL, LDL, and triglycerides were tracked. The medications actively used by the patients were also evaluated.

Results: At the end of this process, a statistically significant result was observed in the group with a BMI above 30 ($p=0.01$), while no significant result was observed in the group with a BMI below 30 ($p=0.924$). No significant results were observed in either group for the other parameters monitored, except for weight.

Conclusion: The results of the current study are statistically significant in terms of weight loss between the two groups; however, our findings need to be validated through further clinical studies.

Key words: Diabetes, SGLT2 inhibitors, obesity

SOP-15

Stage Change Rates of a Group of Patients Operated for Endometrial Cancer According to the New (FIGO 2023) Staging System Compared to the Previous (FIGO 2009) Staging System

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Introduction: The International Federation of Gynecology and Obstetrics (FIGO) 2009 staging system, used for determining the stage of endometrial cancer, was updated in 2023 with the inclusion of new prognostic factors such as lymphovascular space invasion, peritoneal metastasis, and molecular findings. In our study, we aimed to determine the rate of patients down-staged and up-staged according to the new staging system in our cohort, and to evaluate the effects of new criteria on stage change.

Method: Molecular and histopathological features of 207 patients who were operated on for endometrial cancer between 2015 and 2024 were determined. Cancers were staged according to the new and old staging systems, and stage shifts were analyzed.

Results: Of the 207 retrospectively analyzed patients, 80.6% retained their stage, 17.4% were upstaged, and 2% were downstaged. Among the upstaged patients, 47.2% had stage change associated with lymphovascular space invasion (p=0.005), 47.3% with p53 abnormalities (p=0.002), and 5.5% with aggressive histological features (p=0.013). Endometrial tumors confined to the ovary were found to be associated with downstaging, transitioning from stage IIIA to stage IA3 (p=0.001). Peritoneal metastasis was not significantly correlated with stage change (p=0.144). The mean body mass index (BMI) was 33.2 BMI >30 kg/m^2 was associated with the development of stage 1 cancer (p=0.027).

Conclusion: The inclusion of molecular profiling and lymphovascular space invasion in the FIGO 2023 staging system led to significant changes in staging for approximately one-fifth of the patients. P53 abnormalities and lymphovascular space invasion emerged as the most effective factors contributing to upstaging, while ovarian-limited metastasis was an important criterion for downstaging.

Key words: Endometrial cancer, staging, International Federation of Gynecology and Obstetrics

SOP-16

Investigation of the Frequency of Attention Deficit and Hyperactivity Disorder and Related Factors in Adult Patients with Epilepsy

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Introduction: This study investigates the relationship between epilepsy and attention deficit hyperactivity disorder (ADHD) in adults, evaluates medication adherence, and examines electroencephalography and radiological findings.

Method: The study included 46 adult patients aged 18-65, who had at least 1 year of epilepsy diagnosis, and 108 controls. Patient data were collected cross-sectionally. Adult ADHD Self-Report Scale-V1.1 (ASRS-v1.1), Morisky 8-item Medication Adherence Scale, Beck Depression Inventory, and Beck Anxiety Inventory were used. The effects of antiseizure drugs (ASDs), also used as mood stabilizers (MS), on depression, anxiety, and ADHD were also examined.

Results: Twenty-eight patients (60.8%) were female, with a mean age of 26.7±7 years. Among the patients, 27 (58.6%) experienced one or fewer seizures per year, and 30 (65.2%) had generalized seizures. The mean ASRS score was 20.28±12 in patients and 23.56±10.8 in controls (p=0.1). Scores for ADHD symptoms exceeded the cutoff in 28 patients (60.8%), with no significant difference from controls (p=0.1). ADHD possible in 16 patients and likely in 12; among controls, 26 were possible and 55 highly likely. The control group showed a significantly higher likelihood of ADHD (p=0.01). Anxiety was present in 21 patients and 101 controls (p=0.01), and depression was present in 15 patients and 102 controls (p=0.04). Medication non-adherence was found in 82.6% of patients, but no significant correlation with ADHD was found (p=0.57). Twenty-four patients were using a drug termed ASD, also known as MS, and the usage had no significant relationship with depression (p=0.73), anxiety (p=0.11), and ADHD (p=0.12).

Conclusion: No significant difference was found between ADHD and medication adherence in patients. Anxiety, depression, and the likelihood of high ADHD were significantly higher in the control group compared to the patients.

Key words: Epilepsy, attention deficit hyperactivity disorder, antiepileptic drugs, anxiety, depression

SOP-17

Performance comparison of ChatGPT 4.0 vs Gemini 1.5 pro and Turkish Medical Faculty Graduates in Medical Specialization Exams: A Comparison study

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Introduction: This study examines the performance of two advanced artificial intelligence (AI) models, ChatGPT-4.0 and Gemini 1.5 Pro, in comparison with recent Turkish medical faculty graduates on the Turkish Medical Specialization Exams (TUS). The objective is to evaluate the capabilities of artificial intelligence in medical education and its potential as a supplementary tool for medical professionals. Participants included the AI models and the results of the top human performers in the exams.

Method: This study conducted a comparative analysis of the performance of advanced AI models (ChatGPT-4.0 and Gemini 1.5 Pro) in the March and September 2024 TUS exams. Each exam consisted of 200 questions, divided equally between basic and clinical medical sciences. The statistical significance of the performance comparison among basic medical sciences, clinical medical sciences, both AI models was evaluated using the chi-square test for independence.

Results: The top human graduate performed better than both AI models in the September Tus exam. However, in the March 2024 TUS exam, ChatGPT 4.0 outperformed the top human graduate, scoring 84.371 in basic and 85.000 in clinical sciences, while the top graduate scored 83.300 in both. There were no significant differences in the performance of both AI models, nor between clinical and basic sciences. However, in the clinical sciences section of the March 2024 TUS, ChatGPT achieved a statistically significantly better result compared to basic sciences ($p=0.010$).

Conclusion: AI models, particularly ChatGPT 4.0, demonstrated competitive performance relative to top human graduates in the TUS exams, showcasing strengths in clinical sciences. Both AI models and human graduates tended to score higher in clinical medical sciences compared to basic medical sciences.

Key words: ChatGPT, Gemini 1.5 Pro, artificial intelligence, medical education

SOP-18

The Impact of Asymptomatic Kidney Stones on Disease Progression in Autosomal Dominant Polycystic Kidney Disease

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Introduction: Autosomal dominant polycystic kidney disease (ADPKD) is a common hereditary disorder that leads to end-stage renal disease due to the progressive formation of renal cysts. Nephrolithiasis, or kidney stone disease, is a frequent complication of ADPKD, occurring in 20-36% of patients, but its role in disease progression remains underexplored. This study investigates the potential impact of asymptomatic nephrolithiasis on the progression of renal dysfunction in ADPKD patients.

Method: A retrospective cohort of 195 patients diagnosed with ADPKD was followed at our nephrology clinic. Of the cohort, 85 patients had nephrolithiasis (N+) and 110 did not (N-). Data were collected on demographic characteristics, biochemical parameters, and kidney function, with ΔeGFR (the change in eGFR over time) serving as the primary outcome. Multiple linear regression was performed to assess independent predictors of ΔeGFR.

Results: The N+ group exhibited a significantly greater decline in kidney function compared to the N- group (ΔeGFR: 16.53 vs. 12.82 mL/min/1.73m^2, p=0.008). No significant differences were observed between groups regarding parathyroid hormone, magnesium, phosphorus, or potassium levels. Nephrolithiasis was found to be an independent predictor of kidney function decline (B=3.159, p=0.038). The follow-up duration was also strongly associated with greater ΔeGFR. Age showed a trend toward significance, but did not reach statistical significance (p=0.094).

Conclusion: Asymptomatic nephrolithiasis is associated with accelerated kidney function decline in ADPKD patients. These findings highlight the importance of monitoring for kidney stones, even in the absence of symptoms, to potentially mitigate the progression of renal dysfunction in this patient population. Future prospective studies are needed to further elucidate the mechanisms driving this association.

Key words: Autosomal dominant polycystic kidney disease, nephrolithiasis, kidney stones, eGFR, renal function decline

SOP-19

Investigation of Metabolic Network Analysis in Patients with Acute Lymphoblastic Leukemia

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Introduction: Acute lymphoblastic leukemia (ALL) is the most common childhood cancer, characterized by uncontrolled lymphoid cell proliferation. Advances in molecular biology and immunotherapy have enhanced understanding and treatment strategies. Metabolomics, a critical tool for studying small molecules, identifies biomarkers and metabolic pathways. This study aims to identify metabolic changes associated with ALL, by analyzing plasma metabolomic profiles, providing insights into its pathophysiology and potential therapeutic targets for improved outcomes.

Method: This study analyzed metabolomic differences between ALL patients and healthy individuals, including 36 participants (18 per group). Blood samples were collected after 8-10 hours of fasting, and they were centrifuged and stored at -86° C. After protein precipitation, the samples were analyzed using high-resolution mass spectrometry. Data were processed using ProteoWizard, MZmine 3.0, and TidyMass, with metabolites identified through METLIN, HMDB, and MoNA. Data analysis was conducted using MetaboAnalyst, and significant metabolomic differences between groups were identified through the t-tests, PCA, and the random forests.

Results: Metabolomic analysis identified significant differences in metabolite expression between the control and ALL patient groups. Notably, O-Hydroxyhippuric acid (log_2(FC) = 0.31, adj. p=0.0038), Pyruvatoxime (log_2(FC) = 0.37, adj. p=0.0023), and 3,4-Dihydroxy-L-Phenylalanine (log_2(FC) = 0.31, adj. p=0.0038) showed significant downregulation, while Diacetyl (log_2(FC) = 1.74, adj. p=0.047) showed significant upregulation. Nicotinamide-N-Oxide (log_2(FC) = 0.51, adj. p=2.41E-05) emerged as the most significant metabolite.

Conclusion: This study identifies key metabolic pathways in ALL such as alanine, aspartate, and glutamate metabolism, tyrosine metabolism, and selenocompound metabolism. The findings suggest that leukemic cells exploit these metabolic networks to sustain their proliferation and adapt to microenvironmental stresses. Future studies should explore these pathways further to refine therapeutic strategies and improve clinical outcomes.

Key words: Acute lymphoblastic leukemia, metabolomics, pathways

SOP-20

Bleeding Presentation in Gastric Cancer Patients on Oral Anticoagulants and Antiplatelet Agents: A Retrospective Cohort Study

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Introduction: Gastric cancer is the fourth most common cancer and a leading cause of cancer-related mortality, with many patients experiencing gastrointestinal bleeding (GIB). The use of oral anticoagulants (OACs) and antiplatelet agents (APAs) to prevent thromboembolic events in these patients can exacerbate bleeding risk due to the fragile gastric mucosa in malignancies. Despite the widespread use of these medications, the impact on bleeding outcomes in gastric cancer patients remains under-researched. This study aims to assess the incidence, presentation, and outcomes of bleeding in gastric cancer patients on OACs or APAs.

Method: This retrospective cohort study reviewed the medical records of gastric cancer patients at Bezmialem Vakıf University from 01.01.2014 to 01.01.2024. Patients on OACs or APAs were compared with a control group of patients not on these therapies. The primary outcome was the incidence of GIB, identified through clinical records. Statistical analysis was conducted using chi-square tests, with a significance level of $p<0.05$.

Results: A total of 60 gastric cancer patients were included, with 30 in the experimental group (OACs/APAs) and 30 in the control group. GIB was observed in both groups, with 70% of patients in the experimental group experiencing GIB compared to 26.7% in the control group. This difference was statistically significant ($p=0.040$), indicating that the use of OACs/APAs is associated with a higher risk of bleeding.

Conclusion: This study shows that gastric cancer patients taking OACs or APAs are at a higher risk of GIB. These findings suggest the need for further research to better understand the impact of these medications on bleeding risk in this patient group.

Key words: Gastric cancer, gastrointestinal bleeding, oral anticoagulants

SOP-21

The Evaluation of The Living Kidney Donor Applicants in Bezmialem Vakıf University Kidney Transplantation Unit

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Introduction: Kidney transplantation is a highly effective treatment for chronic kidney disease, offering substantial benefits to patients. This study aims to evaluate potential kidney donors who applied to the Kidney Transplantation Unit at Bezmialem Vakıf University Hospital.

Method: This retrospective study analyzed data from 296 individuals who applied as potential donors between June 2014 and January 2025. Data collected included demographic, clinical, and laboratory parameters. Accepted and rejected donors were compared to determine factors influencing eligibility.

Results: Of the 296 applicants, 23.3% (n=69) were suitable to be a kidney donor, while 76.4% (n=226) were not suitable to be a kidney donor. The accepted group had a mean age of 45.88±9.87 years, with 47.8% males (n=33) and 52.2% females (n=36). The rejected group had a mean age of 48.1±13.56 years, with 53.5% males (n=121) and 46.5% females (n=105). The documented reasons for rejection of 45 applicants, couldn't be found due to a change in the hospital patient system. Documented rejection reasons included low GFR or creatinine clearance with 13.7% (n=25), diabetes with 12% (n=22), hypertension/heart failure with 10.9% (n=20), urological abnormality with 8.2% (n=15), obesity with 7.1% (n=13), proteinuria with 6.6% (n=12), blood type incompatibility with 6% (n=11), and voluntary withdrawal with 4.4% (n=8). Laboratory results showed a mean creatinine level of 0.82±0.14 mg/dL in the rejected group. Creatinine clearance value averaged 109.76±33.25 mL/min in the rejected group. 24-hour proteinuria and microalbuminuria levels were 186.21±155.83 mg and 20.29±64.98 mg on average.

Conclusion: Addressing modifiable risk factors such as diabetes and proteinuria may improve donor acceptance rates, contributing to better outcomes for kidney transplantation programs.

Key words: Chronic kidney disease, donor, kidney transplantation

SOP-22

Comparison of Tumour Infiltrating Lymphocyte Status with Prognostic Markers in Curettage and Resection Materials of Patients with Endometrial Carcinoma

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Introduction: Endometrial carcinoma, with worsening prognosis in advanced stages, is among the most common gynecological cancers. Recent studies have shown that the presence of tumor-infiltrating lymphocytes (TILs) may be linked to carcinoma prognosis. This study aimed to investigate the role of TILs as a predictive marker.

Method: Slides of 51 patients who underwent resection after diagnosis of endometrioid cancer by curettage biopsy were collected. The sample size was determined according to the Spearman correlation coefficient ($r=0.74$, $p<0.001$). Tissues were counterstained with hematoxylin and bluing reagent. TILs positive for CD103 were evaluated using semiquantitative and quantitative methods.

Results: The analysis examined the relationship between CD103 + TILs counts and clinicopathological variables, including depth of tumor invasion, tumor grade, cervical invasion and lymphovascular invasion of the tumor, lymph node metastasis, distant metastasis, and follow-up periods of patients. Pearson correlation tests revealed no significant association between CD103 + counts and these variables ($p=0.187$). The ROC curve analysis (AUC=0.6211) also failed to identify a meaningful cut-off value to distinguish between groups, suggesting that CD103 + TILs in this sample do not exhibit a linear relationship with the examined variables.

Conclusion: CD103 + TILs counts may not serve as a reliable biomarker for predicting clinical parameters. Future research could explore alternative immunological markers (e.g., PD-1, CD8+ T cells, or CD4+ T cells) or focus on tumor microenvironmental factors, such as hypoxia or cytokine profiles, that may influence TIL presence and activity. Additionally, examining clinical variables such as therapy response, tumor grade, and genetic subtypes could help identify potential confounding factors.

Key words: Endometrial carcinoma, tumor-infiltrating lymphocytes, immunohistochemical markers

SOP-23

Evaluation of CD9 Blood Levels in Pediatric Patients with Familial Mediterrian Fever (FMF)

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Introduction: Familial Mediterranean fever (FMF) is a clinically diagnosed autoinflammatory disease. CD9, a tetraspanin protein, is implicated in inflammation and explored as a biomarker. This study aims to measure CD9 blood levels to enhance FMF diagnosis.

Method: Clinical, genetic and laboratory data (SAA, WBC, fibrinogen, CRP, ESR, 24-hour urine) of the patients (with attack and remision subgroups) diagnosed as FMF were evaluated. Blood CD9 levels were investigated using the ELISA method in both groups. The investigation of CD9 was repeated after 15 days in the attack group. All parameters were compared with blood CD9 in patient groups, and the CD9 levels of the patients were correlated with those of the control group. Statistical analyses were performed using Mann-Whitney U and chi-square; correlation tests via SPSS.

Results: Our study included 40 FMF patients (23 girls, 17 boys), categorized into six in the attack phase and 34 in remission. The mean age of the patient group was 11.31±3.76 years (range: 2-17). The control group consisted of 28 children (20 girls, 8 boys) with a mean age of 9.11±4.81 years (range: 1-17). CD9 levels significantly differed between the attack and remission groups ($p=0.003$), with lower levels observed during the attack phase. However, no significant difference was found between remission patients and the control group ($p>0.05$). Additionally, CD9 showed no statistically significant correlation with inflammatory markers such as CRP, ESR, or SAA ($p>0.05$), and no significant differences were observed in genetic mutations or gender distribution between groups ($p>0.05$).

Conclusion: CD9 levels vary with disease phases but lack a strong link to inflammatory markers. Further studies with larger sample sizes are needed to evaluate the potential role of CD9 as a biomarker in FMF.

Key words: FMF, autoinflammation, CD9

SOP-24

A 5-Year Retrospective Analysis of Diabetic Foot Ulcers: Risk Factors Affecting Amputation Level

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Introduction: Diabetic foot ulcers (DFUs) are the leading cause of non-traumatic foot amputations, reducing quality of life and causing financial, psychological, and higher mortality risks. This 5-year retrospective study analyzes DFUs and amputation risk factors.

Method: Between 2018 and 2023 years, 91patients with DFUs who underwent amputation were retrospectively reviewed. Patients were examined in two groups; major (Ma) and minor (Mi) amputations groups. Patients who neither completed the 12-month follow-up nor underwent amputation were excluded. This study was conducted in accordance with the principles of the Declaration of Helsinki and approved by the local ethics committee (approval number=2024/84). Patients' records were reviewed retrospectively for demographics, comorbidities, laboratory, and radiological data, ulcer characteristics, treatments, surgeries, and complications.

Results: Of the 91 patients (mean age 62.7±10.8 years), 66 were male and 25 female. Sixty-seven had minor amputations, and 24 had major amputations. Forty-five (67.2%) patients were male, and twenty-two (32.8%) were female in the Ma group. The mean age was 61.2±10.4 years. 21 (87.5%) patients were male, and 3 (12.5%) were female (mean age = 66.8±11.1 years) in the Mi group. The male sex had the highest proportion in the major amputation group. There was a statistically significant difference between the mean age of the two groups (p=0.015171). The Mi and Ma groups showed significant differences in mean ASA scores (2.6±0.55 vs. 3±0.5, p=0.001193), CRP levels (100.6±83.4 vs. 175.1±97.3, p=0.000268), white blood cell (WBC) (12.2±4.9 vs. 17.8±7.5, p=0.00032), Hb levels (11.1±1.8 vs. 10.2±1.6, p=0.021604), and sedimentation rates (59±32.2 vs. 77.6±29.2, p=0.007345). No significant differences were found in the mean number of surgeries (3±1.6 vs. 2.7±0.8, p=0.13085) or HbA1c levels (8.67±1.81 vs. 8.97±2.34, p=0.264898).

Conclusion: Amputation remains a key treatment for DFUs. Male gender, older age, high ASA, CRP, WBC, sedim, and low Hb levels are major amputation risk factors, significantly impacting physical activity and quality of life.

Key words: Amputation, diabetes mellitus, diabetic foot ulcers, multidisciplinary management

SOP-25

Frequency and Clinical Significance of Incidental Prostate Cancer Detected During Radical Cystoprostatectomy

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Introduction: Prostate adenocarcinomas incidentally detected in radical cystoprostatectomy (RSP) samples. Most are localized and well-differentiated clinically insignificant cancers. In this study, there were no incidental findings in patients undergoing RSP. We aimed to determine the rate of prostate adenocarcinoma being detected.

Method: Patients who underwent RSP at Bezmialem Vakıf University Medical Faculty Hospital between January 2014 and December 2023 were included in the study. Clinicopathological features of prostate adenocarcinomas detected in cystoprostatectomy materials will be retrospectively examined. In the statistical analysis, when the ratio was taken as 0.17 for 80% power at a 95% confidence level, using previous studies as a reference. Descriptive statistics will be given as mean ± standard deviation, frequency and percentage. Analyses will be made with chi-square tests and t-tests. SPSS version 28V will be used. Significance level will be set at p=0.05.

Results: Incidental prostate adenocarcinoma was detected in 16 (20.6%) of 78 patients who underwent RSP. Ten of the detected prostate cancers were in the pT2a (61.5%) stage, 5 in the pT2c (30.7%) stage, and 1 in the T3b (7.6%) stage. The Gleason score of 11 patients was 6 or less; 4 of them were 7 (4+3); and 1 patient had a score of 9 (5+4).

Conclusion: In patients who underwent RSP due to bladder cancer, all prostate tissue is removed without leaving any prostate tissue behind, should be removed. It should be kept in mind that the coexistence of bladder and prostate cancer is high; careful and detailed pathological examination should be performed.

Key words: Bladder tumor, prostate adenocarcinoma, radical cystoprostatectomy

SOP-26

Evaluation of Postpartum Quality of Life, Quality of Sexual Function, and Quality of Sleep in Patients Who Had Vaginal, Cesarean and Vaginal Delivery After Cesarean

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Introduction: The first six months postpartum involve physiological,psychological changes. Vaginal birth is natural, while cesarean birth is preferred for high-risk cases but may cause complications. Vaginal birth after cesarean (VBAC) challenges the belief that "once a cesarean, always cesarean", reducing labor and postpartum difficulties. This study examines the effects of delivery mode (vaginal, cesarean, VBAC) on postpartum quality of life, sexual function, sleep quality, and urinary incontinence.

Method: Postpartum Quality of Life Questionnaire, Pittsburgh Sleep Quality Index (PSQI), Female Sexual Function Scale (FSFI), and Incontinence Modular Questionnaire were applied to women who had 49 vaginal, 54 cesarean, and 55 VBAC deliveries at Bezmialem Vakıf University Hospital. Total scores and FSFI, PSQI subgroup scores were calculated. Age, gravida, parity, abortion, smoking, chronic diseases, BMI were recorded

Results: Subjective sleep quality was significantly higher in the vaginal birth group than in the VBAC group ($p=0.007$). FSFI total scores were significantly lower in VBAC than following cesarean section ($p<0.001$) and vaginal birth ($p=0.036$). Desire scores were significantly lower for VBAC than for cesarean section ($p<0.001$). Satisfaction was significantly higher for vaginal birth compared to VBAC ($p=0.007$). Pain showed a significant difference, being highest in VBAC ($p<0.001$) and higher in cesarean section compared to vaginal birth ($p=0.007$). No significant difference was found in other parameters.

Conclusion: Vaginal delivery provides advantages with better sleep quality ($p=0.007$) and higher satisfaction ($p=0.007$). VBAC stands out as an advantageous delivery method compared to cesarean section in terms of sexual function ($p<0.001$), quality of life ($p<0.001$), even though despite higher levels of pain during intercourse ($p<0.001$). These findings show that the delivery method has a significant effect on recovery in the postpartum process.

Key words: Vaginal birth after cesarean, sexual function, postpartum quality of life

SOP-27

Comparative Analysis of Health-related Quality of Life Between Menstrual Cup and Pad Users in Türkiye

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Introduction: This study compares the health-related quality of life between women using sanitary pads and menstrual cups in Türkiye. We evaluate the impact of these products by analyzing participants' demographic characteristics, product usage experiences, and related issues.

Method: Women aged 18 to 45 participated in a survey comparing sanitary pad and menstrual cup users. The survey assessed satisfaction, comfort, and health-related concerns. A two-sample independent t-test was conducted to determine whether satisfaction levels significantly differed between the groups.

Results: Among sanitary pad users, 90% expressed satisfaction with leak prevention, while 10% reported mild irritation, and 8% found changing pads inconvenient. Menstrual cup users reported 95% satisfaction and preferred cups due to reduced irritation (8% vs. 10% for pads), and better leak protection. However, menstrual cup users faced difficulties with insertion and removal compared to the simpler handling of pads. Despite these subjective differences, the independent t-test revealed no statistically significant difference in overall satisfaction scores between the two groups ($t=-0.0028$, $p=0.9977$). This suggests that while menstrual cup users report higher satisfaction, this difference is not statistically meaningful.

Conclusion: Both menstrual cups and sanitary pads are viable menstrual hygiene options, each with advantages and drawbacks. While menstrual cups offer benefits in comfort and irritation reduction, adaptation remains a challenge. Statistical findings indicate comparable satisfaction levels, emphasizing the role of personal preference in product choice. Future research with a larger sample and qualitative insights may provide a deeper understanding of user experiences.

Key words: Menstrual hygiene, sanitary pads, menstrual cups, quality of life, health comparison

SOP-28

The Association Between Glucose Levels of Oral Glucose Tolerance Test and Pregnancy Outcomes

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Introduction: Diabetes is a common complication during pregnancy. The International Association of Diabetes and Pregnancy Study Group recommends a 75-gram 2-hour oral glucose tolerance test (OGTT) between 24-28 weeks of gestation, diagnosing gestational diabetes mellitus (GDM) if thresholds are met (fasting ≥92 mg/dL, 1st hour ≥180 mg/dL, 2nd hour ≥153 mg/dL). The aim of this study is to demonstrate significant associations between OGTT glucose level subtypes and pregnancy outcomes.

Method: A retrospective analysis was conducted on singleton pregnancies undergoing OGTT at Bezmialem Vakıf University Hospital between 2019-2024. Pregnancies complicated by multiple gestations, fetal abnormalities, pregestational diabetes, or significant maternal comorbidities were excluded. Glucose levels were categorized as normal glucose tolerance (NGT), isolated fasting hyperglycemia (GDM-IFH), isolated post-load hyperglycemia (GDM-IPH), or combined hyperglycemia (GDM-CH). Maternal characteristics, obstetric complications, and neonatal outcomes were retrieved from the Nucleus database.

Results: Data from 1,100 pregnancies were analyzed. Maternal age was higher in GDM-CH and GDM-IPH, compared to NGT. Gravida was higher in GDM-IFH than in NGT. Gestational age at birth was higher in NGT and lower in GDM-IFH compared to GDM-GH. First-minute Apgar scores were lower in GDM-IPH than in both GDM-IFH and NGT. GDM-CH was associated with higher rates of preterm delivery, preeclampsia, and polyhydramnios ($p<0.008$). Insulin use was more common in GDM-CH ($p<0.017$). There were no significant differences in parity, IVF status, birth weight, 5th-minute Apgar scores, macrosomia, oral antidiabetic use and PPROM rates. Bonferroni corrections were applied among the groups.

Conclusion: Combined hyperglycemia is strongly associated with adverse maternal and neonatal outcomes, particularly preeclampsia, polyhydramnios, and preterm birth. These findings underscore the importance of effective management of GDM to mitigate risks. Further prospective studies are needed to elucidate underlying mechanisms and validate these associations.

Key words: Gestational diabetes mellitus, oral glucose tolerance test, pregnancy outcomes

SOP-29

Epidemiology and Comorbidities of Alopecia Areata

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Introduction: Alopecia areata (AA) is a non-scarring autoimmune disorder causing patchy hair loss in individuals of all ages and genders. Hair loss occurs due to immune cells attacking hair follicles, leading to hair loss, while follicles remain intact. Despite its prevalence, the triggers and mechanisms of AA are not fully understood. This study investigates the epidemiological features, biochemical parameters, and comorbidities associated with AA, aiming to identify potential triggers.

Method: This retrospective study included 61 patients diagnosed with AA. Biochemical parameters, including ferritin, TSH, vitamin B12, vitamin D, biotin, and zinc levels, were analyzed. Comorbidities such as thyroid disorders and hypopituitarism were also recorded. Data were analyzed using t-tests and chi-square tests, with statistical significance set at $p<0.05$.

Results: Ferritin levels were lower in patients (mean: 44.23 ng/mL), although not statistically significant ($p=0.07$). Vitamin D deficiency was significantly associated with AA [mean: 19.8 ng/mL; odds ratio (OR)=2.14; $p=0.03$]. Thyroid disorders significantly increased the risk (OR=2.35; $p=0.01$). No significant associations were observed between TSH, vitamin B12, biotin, or zinc levels and AA. Hypopituitarism also showed no significant impact.

Conclusion: This study identifies vitamin D deficiency as a significant biochemical factor associated with AA. Lower ferritin levels suggest a possible but inconclusive link to an unspecified factor. Thyroid disorders emerged as notable risk factors, while other parameters and comorbidities showed no significant associations. Monitoring the vitamin D and ferritin levels may aid in early diagnosis and management of AA. Larger studies are needed to confirm these findings and better understand the disease's underlying mechanisms.

Key words: Alopecia areata, ferritin, vitamin D, risk factors, triggers

SOP-30

Comparison of Patients with Ischemic and Hemorrhagic Stroke Using Brunnstrom Staging

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Introduction: Cerebrovascular diseases are brain anomalies caused by pathological events in blood vessels. Each year, more than 12.2 million new strokes occur worldwide. The Brunnstrom movement scale is used to evaluate extremity movements and is employed to monitor recovery.

Method: Patients who developed hemiplegia in the subacute phase following a cerebrovascular event and received rehabilitation in the Department of Physical Medicine and Rehabilitation at Bezmialem Vakıf University Faculty of Medicine Hospital between January 2014 and March 2024 will be included in the study. Cases meeting the criteria will be retrospectively reviewed based on patients' demographic data. The patients will be divided into two groups: those with hemorrhagic stroke (group A) and those with ischemic stroke (group B). The response to rehabilitation and motor recovery will be assessed using the Brunnstrom staging system.

Results: A total of 46 stroke patients with hemiplegia were included in this study and categorized into two groups: hemorrhagic stroke and ischemic stroke. Rehabilitation outcomes were assessed using changes in Brunnstrom stages. The results showed that patients in the ischemic stroke group exhibited greater improvement in motor recovery of the lower extremity, with a median (minimum - maximum) of 0.0, compared to the hemorrhagic stroke group. However, motor recovery in the upper extremity median (minimum - maximum =0.0, -1 to 2, p=0.645) and hand median (minimum - maximum =1.0, 0 to 3, p=0.856) did not show statistically significant differences between the groups. Additionally, no significant differences were observed between the groups in terms of gender (p>0.05) and body mass index (p>0.05).

Conclusion: Rehabilitation outcomes in hemiplegia appear to differ significantly between ischemic and hemorrhagic stroke patients. This study emphasizes the importance of individualized rehabilitation strategies, with consideration given to stroke type and specific motor recovery patterns.

Key words: Brunnstrom, hemiplegia, stroke

SOP-31

Attention Deficit and Hyperactivity Disorder Symptoms and Early Maladaptive Schemas in Children Diagnosed with Attention Deficit and Hyperactivity Disorder

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Introduction: Early maladaptive schemas (EMS) have been extensively studied in adults; their relationship with attention deficit hyperactivity disorder (ADHD) in children remains insufficiently understood. This study explored the association between ADHD symptoms and EMS in children diagnosed with ADHD, with a focus on behavioral, emotional, and relational patterns.

Method: The study included 107 children aged 8-14 years: 62 diagnosed with ADHD (DSM-5 criteria) and 45 healthy controls. Assessment tools included Sociodemographic Data Form, Dusseldorf Illustrated Schema Questionnaire for Children, Revised Conners Parent Rating Scale, Revised Conners Teacher Rating Scale-Short Form, Strengths and Difficulties Questionnaire. Data were analyzed using SPSS 28.0 with Mann-Whitney U tests and Spearman's Correlation.

Results: Statistical analyses revealed significant differences between children with ADHD and healthy controls in specific EMSs. The ADHD group exhibited significant differences in schemas related to emotional regulation and relational difficulties, such as Abandonment, Attachment, and Insufficient Self-Control (for all $p<0.001$). In the ADHD group, symptom-specific analyses revealed strong correlations between variables, such as Entitlement and Hyperactivity ($r=0.62$), which were significantly weaker in the control group. These findings highlight distinct emotional and relational challenges in ADHD.

Conclusion: This study identifies significant behavioral, emotional, and relational differences between children with ADHD and healthy controls. Furthermore, it aims to fill the gap in understanding the associations between maladaptive schemas and ADHD symptoms. Such Dusseldorf variables as Approval-seeking, Social isolation, and Abandonment emerged as critical areas of concern, highlighting unmet emotional needs and relational struggles for children with ADHD. Addressing EMS in therapeutic interventions, alongside core ADHD symptoms, may help improve emotional resilience and relational functioning in affected children.

Key words: EMS, ADHD, schema therapy

SOP-32

Adenox: A Machine Learning Model to Predict Molecular Targets in Non-small Cell Lung Cancer

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Introduction: Targeted therapies significantly improve survival in non-small cell lung cancer (NSCLC), one of the deadliest cancers. Identifying molecular targets is crucial for determining patient eligibility for targeted therapies; however, the lengthy process of obtaining results delays treatment initiation. This study aims to develop adenox, a clinically practical machine learning model, to predict molecular targets using clinical features, before the results become available.

Method: This retrospective study included 281 NSCLC patients, comprising 80 (28.5%) with EGFR, 17 (6%) with ALK, 13 (4.6%) with KRAS, 3 (1.1%) with ROS1 mutations, 107 (38.1%) with PD-L1 positivity and 85 (30.2%) without molecular targets. Clinical features were categorized into demographics, radiological features, laboratory findings and pathological findings. Significant features identified via Logistic Regression were used to build the final model using a random forest.

Results: Associated factors with targets included EGFR: gender, smoking, pack-years, alcohol consumption, histology, brain/bone metastases ($p<0.001$), asthma ($p=0.008$), tumor size ($p=0.006$), and spiculation ($p=0.035$); ALK: histology ($p=0.049$), LDH levels ($p=0.043$); PD-L1: smoking, pack-years ($p<0.001$), alcohol consumption ($p=0.002$), brain metastases ($p=0.003$), and histology ($p=0.004$). The most significant independent prognostic factors for EGFR were female sex, not smoking, brain/bone metastases, spiculation, and pneumonic infiltration, for ALK were pleural metastasis, and for PD-L1 were smoking. Receiver operating characteristic (ROC) analysis showed predictive performance for EGFR (AUC=0.887), PD-L1 (AUC=0.679), ALK (AUC=0.798), KRAS (AUC=0.674), and ROS1 (AUC=0.911).

Conclusion: Our model demonstrated clinical effectiveness in predicting molecular targets in NSCLC. It can be predicted which targets may be associated in patients with specific characteristics using this model. This approach can help determine the targets to be analyzed, particularly in patients with insufficient tumor tissue. We aim to integrate it into routine practice, with the hope of improving survival and quality of life.

Key words: Non-small cell lung cancer, prediction, molecular targets, machine learning

SOP-33

Comparison of Psychological Distress Level of Women Diagnosed with and without Cervical Dysplasia

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Introduction: Colposcopic biopsy related anxiety remains inadequately explored. This study aims to examine the long-term health-related quality of life following colposcopic biopsy and to evaluate differences in psychological distress based on biopsy outcomes.

Method: This is a controlled cross-sectional study involving 165 patients who underwent colposcopic biopsy for the first time according to abnormal cotest results between January 2019 and June 2024. The Functional Assessment of Chronic Illness Therapy - Cervical Dysplasia (FACIT-CD) scale was conducted on patients who had biopsy results of chronic cervicitis (group 1/control), CIN1 (group 2), CIN2 and CIN3 (group 3), cervical cancer (group 4) and compared the results.

Results: Among the patients who underwent colposcopic biopsy, 46 patients with chronic cervicitis, 45 patients with CIN1, 46 patients with CIN2/CIN3, and 28 patients with cervical cancer answered the survey questions. When the groups were compared, no statistically significant difference was found in terms of the FACIT-CD total score (p=0.058). When emotional well-being scores were evaluated, a statistically significant difference was observed between the groups (p=0.026). The median of the emotional well-being score was 36.5 (30.2-39.7) in group 4, while the score of group 2 was 29.0 (15.5-35.5), and the score of group 3 was 30.0 (21.0-37.0). The cervical cancer group was in a significantly better emotional state than the cervical dysplasia group. The median score of the control group was 32.0 (23.0-38.0) and did not differ significantly from the other groups.

Conclusion: These findings highlight that the distress caused by the diagnostic and treatment process, particularly in patients with precancerous lesions, should not be underestimated. Patients could be provided with comprehensive information, including guidance that involves tailored emotional support and lifestyle recommendations delivered by physicians.

Key words: Colposcopic biopsy, distress, cervical dysplasia

SOP-34

The Change in the Antibiotic Resistance Profile of Important Pathogens in Intensive Care Units Between 2019 and 2023

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Introduction: Antibiotic resistance can complicate the treatment of diseases, leading to serious health problems and increasing the frequency of hospital infections. Therefore, monitoring and managing antibiotic resistance is crucial. Previous studies have shown a significant increase in antibiotic resistance over the years. In this study, the focus is on analyzing changes over a 5-year period in the most important pathogens of the intensive care unit, with a particular focus on Gram-negative and Gram-positive bacteria, at Bezmialem Vakıf University.

Method: The study was conducted as a single-center, retrospective study at Bezmialem Vakıf University Hospital. Isolated bacteria were identified using the automated system VITEK2 (bioMerieux, France), and their antibiograms were created. The results were interpreted according to CLSI (Clinical and Laboratory Standards Institute) guidelines.

Results: Over a five-year period, 6422 microorganisms were isolated, comprising 1103 Gram-negative and 5319 Gram-positive bacteria. The samples were primarily collected from blood, urine, sputum, and tracheal aspirates. Among the Gram-positive bacteria, *Staphylococcus aureus* and *Enterococcus* spp. exhibited no statistically significant changes in antibiotic resistance trends between 2019 and 2023. In contrast, significant resistance trends were observed among Gram-negative bacteria, including *Acinetobacter* spp., *Pseudomonas* spp., *Klebsiella* spp., and *Escherichia coli*. Resistance to amikacin showed a significant increase across all Gram-negative species. Imipenem resistance increased significantly in *Pseudomonas* spp. and *Klebsiella* spp.. Resistance to colistin rose notably in *Acinetobacter* spp. and *Klebsiella* spp.. A significant increase in meropenem resistance was detected in *Pseudomonas* spp.. Resistance to piperacillin-tazobactam increased significantly in *Pseudomonas* spp. and *Klebsiella* spp.. For ceftazidime, a significant decrease in resistance was observed in *E. coli*, while *Klebsiella* spp. demonstrated a significant increase. Resistance to gentamicin increased across all Gram-negative species.

Conclusion: The analysis of antibiotic resistance data should contribute to the selection of appropriate antibiotics and help prevent the development of antibiotic resistance.

Key words: Intensive care units, antibiotic resistance, nosocomial infections

SOP-35

Evaluation of the Practice of Using Complementary and Alternative Medicine in Children with Asthma

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Introduction: Asthma is a multifactorial respiratory disease as a result of chronic airway inflammation presenting with symptoms such as cough and wheezing. The number of people using complementary and alternative medicine (CAM) in the treatment of asthma is increasing for many reasons. In this study, we aim to determine whether there is a difference in asthma control between children who use CAM and those who do not.

Method: The survey was conducted face-to-face with 60 asthmatic patients between the ages, 6-18. The control group consisted of 30 patients who did not use CAM. In the survey: demographic characteristics, medication use and herbal products/supplements used, if any, were asked. Participants were given Asthma Control Test (ACT). A comparison was made between the groups using CAM and those not using CAM based on ACT scores.

Results: Twenty-six female, 34 male patients participated in the survey. The mean age of the participants were 9.06±2.79 years in the study group and 11.8±3.43 years in the control group The mean ACT score of patients who used CAM and the control group was 20.6 and 16.4 respectively ($p<0.05$). Among the patients who used CAM, 33.3% reported using conifer paste, 13.3% omega, 10% carob molasses, and 10% honey. 43.3% of the patients had bought CAM from the pharmacy, 33.3% from the herbalist and 20% from online. 46.7% of patients had been adjusting the dose of the supplement themselves,30% according to the doctor's recommendation and 23.3% according to the recommendation on the supplement.

Conclusion: The patients who used CAM seem to have better asthma control than the control group. Further studies are needed to understand their mechanism of action and to identify the type of CAM to recommend.

Key words: Asthma, complementary and alternative medicine, Asthma Control Test

SOP-36

Comparison of Sleep Quality of Assistant and Specialist Physicians in Surgical and Non-surgical Fields in Türkiye

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Introduction: Health workers represent the largest group of shift workers globally, facing irregular schedules that disrupt circadian rhythms, increase burnout risk, and pose challenges to patient care. This study aims to examine sleep quality and burnout in surgical and non-surgical physicians, considering demographic differences.

Method: This cross-sectional, internet-based survey was conducted via Google Forms among 419 physicians, including 230 surgical and 189 non-surgical practitioners, between June and September 2024. Data were collected using validated instruments, including the Pittsburgh Sleep Quality Index (PSQI), Insomnia Severity Index (ISI), Hospital Anxiety and Depression Scale, and the Maslach Burnout Inventory (MBI). The questionnaire was distributed through email addresses listed on the Higher Education Council of Türkiye and on both surgical and non-surgical professional association websites throughout Türkiye.

Results: Surgical physicians reported significantly poorer sleep quality (PSQI) and higher insomnia severity (ISI) than non-surgical physicians ($p<0.05$). Burnout decreased with increasing seniority, with professors showing significantly lower PSQI scores than residents, indicating improved sleep quality among senior physicians ($p<0.001$). Emotional exhaustion was notably higher in female physicians ($p<0.05$), and working over 50 hours per week was linked to elevated PSQI and ISI scores ($p<0.05$), underscoring the impact of extended hours on sleep and insomnia. MBI scores revealed that physicians working in state hospitals and the Marmara region faced significantly higher risks of poor sleep quality and increased burnout levels ($p<0.05$).

Conclusion: Early-career and surgical physicians experience poorer sleep, higher burnout, and greater mental health challenges. Increasing seniority provides a protective effect, highlighting the importance of targeted support for residents and strategies to manage workload in surgical specialties.

Key words: Sleep quality, burnout, practitioners, insomnia, healthcare workers

SOP-37

Antimicrobial Susceptibility of Respiratory Pathogen *Corynebacterium striatum* Isolates

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Introduction: *Corynebacterium spp.* are aerobic, catalase positive, non-sporadic, Gram-positive bacilli. *Corynebacterium striatum* is found in the normal flora of the skin and mucous membranes. It is found as an opportunistic infection, especially in immunocompromised patients and patients hospitalized in intensive care units. In recent studies, *C. striatum* isolates have been observed to cause diseases such as infective endocarditis, osteomyelitis, urinary tract infection, bacteremia, periprosthetic joint infection, thrombophlebitis, and pneumonia. Studies conducted in recent years indicate a significant increase in the incidence of *C. striatum* isolates. The development of resistance due to the increasing use of antibiotics, its frequency in the hospital environment, and the attention of researchers in recent years can be identified as the reasons for the significant increase. This newly discovered pathogen has been reported to cause nosocomial outbreaks worldwide in many articles. Although there are many studies on the susceptibility of *C. striatum* isolates in the literature, it is evident that the isolates used in these studies come from susceptibility studies conducted on different materials. This study aims to provide antibiotic susceptibility data using only strains isolated from endotracheal aspirate cultures.

Method: We retrospectively analyzed endotracheal aspirate samples sent to the Clinical Microbiology Laboratory of Bezmialem Vakıf University Faculty of Medicine Hospital between January 2018 and December 2023. Gram staining of the Endotracheal Aspirate Culture (ETA) samples received by the laboratory will be examined. Then, the samples will be inoculated on 5% defibrinated horse blood agar (Aklab, İstanbul), chocolate agar (Aklab, İstanbul), and eosin methylene blue agar (Aklab, İstanbul). The colonies that will grow after 24-48 hours of incubation at 35 °C, in an oven with 5% CO_2, will be examined for further identification and antibiotic susceptibility tests. As an initial examination by a conventional method, colonies of 10^5 CFU/mL that are pure and dominantly grown will be subjected to Gram staining and catalase procedures. Gram-positive bacilli morphology and catalase-positive colonies will be further identified by Vitek MS MALDI-TOF (bioMérieux, France) at the species-level. Antibiotic susceptibilities will be determined by the Kirby-Bauer disk-diffusion method, based on EUCAST (2018) standards. For antibiotic susceptibilities, bacterial concentration of 0.5 McFarland CFU/mL, will be evaluated using Mueller-Hinton agar (Aklab, İstanbul) medium, placing each antibiotic disc 22 mm apart and incubating at 35 °C in an oven with CO_2 for 18±2 hours. Benzylpenicillin (1 unit) (Bioanalyse, Ankara), ciprofloxacin (5 mg) (Bioanalyse, Ankara), moxifloxacin (5 mg) (Bioanalyse, Ankara), gentamicin (10 mg) (Bioanalyse, Ankara), vancomycin (5 mg) (Bioanalyse, Ankara), clindamycin (2 mg) (Bioanalyse, Ankara), tetracycline (30 mg) (Bioanalyse, Ankara), linezolid (10 mg) (Bioanalyse, Ankara), and

rifampicin (5 mg) (Bioanalyse, Ankara), will be evaluated. The results will be evaluated in accordance with the recommendations of EUCAST, 2018 (The European Committee on Antimicrobial Susceptibility Testing).

Results: In this study, the antibiotic resistance profiles of *Corynebacterium striatum* isolated from 38 patients were evaluated using the Kirby-Bauer disk diffusion method. Resistance rates for benzylpenicillin, ciprofloxacin, moxifloxacin, and tetracycline were found to be 97.37%. The resistance rate for clindamycin was 89.47% while it was 100% for rifampin. On the other hand, no resistance was observed against vancomycin and linezolid, while 3% resistance was detected against gentamicin.

Conclusion: *C. striatum* isolates are becoming increasingly frequently seen pathogens in the clinical microbiology laboratory. *C. striatum* isolates are becoming increasingly frequently seen pathogens in the clinical microbiology laboratory. In this study, we aimed to reveal antibiotic susceptibility data, using strains isolated only from from endotracheal aspirate cultures, which we encountered with increasing frequency in our hospital. We also aimed to draw attention to the inadequacy of studies on endotracheal aspirates in our country.

Key words: *Corynebacterium striatum*, endotracheal, susceptibility, resistance

SOP-38

Immunohistochemical Analysis of Connexin 43 as a Prognostic Factor in Gliomas

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Introduction: Gliomas are tumors that account for 81% of primary intracranial tumors and are associated with high morbidity and mortality. To date, numerous molecules have been studied both for prognosis and grading in glial tumors. Connexins (Cx) are transmembrane channel proteins with multifunctional roles, which are found in tissues. Neuron-specific connexin subtypes exist, and Connexin 43 is predominantly found in astrocytes and glial cells in the central nervous system.

Method: The study will include glial tumors diagnosed as grade 2, 3, and 4 that were operated on in our hospital between January 2013 and November 2023. Hematoxylin and eosin-stained slides, and blocks fixed with 10% buffered formaldehyde and embedded in paraffin, will be retrieved from the archives, and cases with sufficient tissue in the blocks will be included in the study. Connexin 43 antibody in appropriate dilutions and cytoplasmic staining will be interpreted as positive if both conditions are met. Demographic data of the patients will be compared with the expression levels of Connexin 43.

Results: This study includes 102 patients (12 grade 2, 11 grade 3, 63 grade 4 and 16 control cases). There is no significant difference between connexin 43 expression and glioma recurrence (p=0.388). However, a significant difference was found between connexin 43 and IDH expression (p=0.036), and a significant difference in the Ki67 rate (p=0.001). There was also a significant difference between mitosis and connexin 43 expression (p=0.024), and a significant difference between tumor grades and (p=0.000).

Conclusion: Cx43 expression is increased as tumor grades decreased. The rates of Ki67 and mitosis also decrease with an increase in Cx43 expression. There is no connection between Cx43 expression and glioma recurrence. In cases where molecular studies cannot be done, Cx43 expression loss can be used in grading of glial tumors.

Key words: Glioma, connexin 43, gap junction

SOP-39

The Association of Vitamin D and Oral Hygiene with Periodontal Diseases During Pregnancy

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Introduction: The dental health of pregnant women can be affected by oral hygiene behavior and vitamin D and calcium levels, which may cause periodontal diseases. This study aims to examine the association between oral hygiene behavior, vitamin D, and calcium levels, and periodontal disease parameters among pregnant women.

Method: In this cohort study, 28 pregnant women at Bezmialem Hospital were assessed using an Oral Hygiene Habits Survey and two periodontal examinations at 11-14 and 28-40 weeks of pregnancy. The examinations measured bleeding on probing (BoP) (30%), probing depth (PD) (≥4 mm), and periodontal index (PI), with values above these thresholds indicating increased risk of periodontal disease. Vitamin D and calcium levels, measured during examinations, were analyzed for changes and compared with periodontal parameters to evaluate their associations with oral hygiene habits.

Results: The mean age of participants was 29.96±4.11. Among the participants, 85.2% brushed their teeth regularly. Mean vitamin D levels increased from 16.31±11.18 to 28.71±12.96 ($p<0.001$), while calcium levels decreased from 9.39±0.35 to 9.12±0.32 ($p<0.001$). PD declined from 1.76±0.48 to 1.39±0.45 ($p<0.002$), and PI decreased from 1.35±0.45 to 0.93±0.66 ($p=0.006$), all showing statistically significant changes. Mean BoP decreased from 44.04±17.71% to 41.22±23.48%, but this change was not statistically significant ($p>0.05$). BoP was significantly higher in participants with toothache (mean rank=18.05) than in those without (mean rank=11.62). PI reduction was significantly greater in non-smokers (mean rank=15.68) than in former smokers (mean rank=6.02) ($p<0.05$). No significant relationship was found between oral hygiene habits, vitamin D and calcium changes, and PD, PI, or BoP changes ($p>0.05$).

Conclusion: The results showed that vitamin D increased with supplementation, while PD, PI, and BoP significantly decreased. However, no significant relationship was found between these changes and oral hygiene habits.

Key words: Vitamin D, calcium, oral hygiene, periodontal disease