



# BEZMÎÂLEM science

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**SHORT ORAL PRESENTATIONS**

**Guest Editor**

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## SOP-1

# Association Between Systemic Immune-Inflammation Index and Gluten-free Diet in Pediatric Celiac Patients

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**Introduction:** Celiac disease (CD) is an autoimmune condition characterized by elevated anti-tissue transglutaminase immunoglobulin A (anti-tTGA) and duodenal villous atrophy triggered by gluten ingestion. The systemic immune inflammation index (SII), is associated with various diseases such as numerous cancer and psoriatic arthritis, is calculated by the formula: platelet x neutrophil/lymphocyte. The significance of the SII in pediatric patients with CD is unclear, although there are few studies. Our study aimed to examine SII, neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), and mean platelet volume-to-platelet ratio (MPR) values before diagnosis and under a gluten-free diet in children with celiac disease and to investigate the correlation between the anti-tTG and anti-endomysium antibody (EMA) and SII, NLR, PLR before and under diet.

**Method:** In this study, 68 patients who applied to the Pediatric Gastroenterology of Bezmialem Vakıf University Medical Faculty Hospital between March 2020 and February 2022 and were diagnosed with celiac disease were included in our study. The laboratory records of the patients were reviewed retrospectively. Current inflammation parameters (NLR, PLR, MPR, SII), anti-tTGA, EMA, and hemoglobin (Hb) were evaluated comparatively at initial diagnosis and after the 6 months of the gluten-free diet.

**Results:** The mean  $\pm$  standard deviation values of Hb (11.94 $\pm$ 1.33, 12.53 $\pm$ 1.3), MPR (0.02 $\pm$ 0.01, 0.16 $\pm$ 1.04), anti-tTGA (225.18 $\pm$ 95.35, 33.67 $\pm$ 68.17), EMA (3.38 $\pm$ 1.14, 0.71 $\pm$ 1.34) were significantly different between newly diagnosed CD patients and after gluten-free diet ( $p < 0.01$ ). The correlation between anti-tTGA and SII, NLR was found significant ( $p < 0.05$ ;  $p < 0.01$ ). The correlation between SII and NLR and PLR was also observed as statistically significant ( $p < 0.01$ ).

**Conclusion:** In conclusion, we confirmed that Celiac antibodies and SII have a significant correlation. Thus, SII may be a follow-up marker for pediatric CD. However, further studies are needed to elucidate SII variation.

**Key words:** Celiac disease, systemic immune-inflammation index, gluten-free diet

SOP-2

## Evaluation of Satisfaction in Career Choices of Medical Students and Occupational Satisfaction of Physicians

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**Introduction:** Occupational satisfaction is a kind of sense of satisfaction that arises because of the overlap of the expectations of the individual regarding her/his profession and what she/he has achieved while performing that profession. The aim of this study was to determine the factors that lead to the loss of occupational satisfaction in medical students and physicians.

**Method:** A two-part web-based questionnaire is applied to the participants, consisting of the Maslach Burnout Scale (MBI-HSS) and the questions obtained from the literature. The differences between burnout scores, social support, and personal coping structures between various roles were examined. The relationship between age, gender, and role of the individual and MBI-HSS, social support, and personal coping scores were analyzed by linear regression models.

**Results:** This study was performed on 126 physicians and 87 medical students of Bezmialem Vakıf University. 93.4% of the participants chose the medical faculty voluntarily, and 73.2% were emotionally satisfied with the medicine. However, 82.2% of the participants were not satisfied financially, and 40.4% stated that they would choose medical school again if they had the opportunity. 82.6% of the participants think that they cannot spare enough time for themselves or their families. The mean Personal Accomplishment, professional support, and workload of physicians were higher than medical students ( $p < 0.01$ ,  $p = 0.02$  and  $p < 0.01$ , respectively). Emotional burnout was not statistically significant between physicians and medical students ( $p = 0.051$ ).

**Conclusion:** Dissatisfaction arises in doctors and medical school students due to many factors, such as being unable to spare enough time for themselves and their families, financial inadequacy, verbal/physical violence, and abnormal working hours. Burnout caused by dissatisfaction in the longer term is more common among physicians than medical students.

**Key words:** Maslach burnout inventory, professional burnout, occupational dissatisfaction

## SOP-3

# Investigation of the Relationship Between Rosuvastatin and Atorvastatin with the NLRP3 Inflammasome Complex in LPS-induced Neuroinflammation

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**Introduction:** Statins are a class of cholesterol-lowering drugs that are very frequently used for treating dyslipidemia. Recent studies have shown that statins also have important biological effects in the brain, and they can change the synaptic transmission by modulating neurotransmitter receptors. However, although the studies conducted so far suggest that statins has important neuropharmacological effects, additional studies are important to determine its pharmacological effects on the nervous system. Our aim is to understand the effects of rosuvastatin and atorvastatin on the neuroinflammation process to explain whether this process is related to the NLRP3 inflammasome complex.

**Method:** In this study, an SHSY-5Y (human neuroblastoma) cell line was cultured in standard conditions. Cells were treated with retinoic acid and BDNF for differentiation to a neuronal phenotype for 10 days in the dark. Before the atorvastatin and rosuvastatin treatment, 20 µg/mL lipopolysaccharide (LPS) was applied to cells for 2 h. Then cells were treated with atorvastatin and rosuvastatin separately in increasing concentrations for 24 h. The viability of cells was tested using the MTT assay. NLRP3 and PYCARD levels of neuron-like cells were analyzed with the ELISA assay. The cytokine expression with atorvastatin and rosuvastatin treatment was evaluated via western blot.

**Results:** A significant recovery was observed both atorvastatin and rosuvastatin treatment separately on LPS-induced neuroinflammation. Although, this recovery of cells was observed on 50 µM with atorvastatin treatment, in the rosuvastatin treatment group, it needs a higher concentration (100 µM). Besides, it's observed that both atorvastatin and rosuvastatin treatment reduced increased expression of NLRP3 and PYCARD by LPS to control levels.

**Conclusion:** Based on these results, the molecular mechanism of atorvastatin and rosuvastatin on neuroinflammation and relation of NLRP3 inflammasome complex.

**Key words:** Atorvastatin, rosuvastatin, neuroinflammation, NLRP3 inflammasome complex

SOP-4

# The Prevalance of Hepatitis B and Hepatitis C Infection and Hepatitis B Vaccination Rate of Patients with Inflammatory Bowel Disease

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**Introduction:** Hepatitis B virus (HBV) and hepatitis C virus (HCV) infections can reactivate in cases of immunosuppression. Inflammatory bowel disease (IBD) is a chronic inflammatory bowel disease. Biological agents and immune modulators that suppress the immune system are usually used in the treatment of IBD. Therefore, IBD treatment is a risk factor for HCV and HBV reactivation. Consequently, it is vital to screen for HBV and HCV before starting treatment. In this study, we investigated the prevalence of HBV and HCV in patients with IBD, and the effectiveness of the vaccination during immune suppressive therapy.

**Method:** Two hundred fifty five patients with IBD were chosen randomly from the Bezmialem University database. Their laboratory findings HbsAg, antiHbs, anti-Hbc-igg (IgG), and anti-HCV were evaluated retrospectively. Also, patients' demographic information was considered. Patients who anti-Hbs (+) are immune to HB; if anti-HbcIgG (+), it is by past infection, otherwise by vaccine. It is considered an active infection if HbsAg (+).

**Results:** Of the 255 patients, 98.4% (251 pts) were screened for HBV and 2% (5 pts) had an active infection, while 94.9% (242 pts) were screened for HCV and none of them had HCV. 9.1% (20 pts) were immune to HBV by past infection. The HBV vaccination rate was 42.7% (109 pts) and only 29.2% (64 pts) developed immunity. 40% (54 pts) not developed immunity after the vaccine were using azathioprine 44.4% (24 pts) and biologic agent 77.8% (42 pts). patients using biological agents have not developed immunity after vaccine ( $p < 0.01$ ). No difference for developing immunity by using azathioprine ( $p = 0.292$ ).

**Conclusion:** According to these results, most of the patients with IBD have screened for HBV and HCV, but a small group was vaccinated before immunosuppressive therapy.

**Key words:** HBV, HCV, inflammatory bowel disease, vaccination

## SOP-5

## Chronic Effect of Oral Anticoagulant Therapy on Kidney Functions

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**Introduction:** We investigated whether the use of chronic oral anticoagulants has a negative long-term effect on renal function.

**Method:** The minimum duration of oral anticoagulant use as 3 months for patients was determined to be included in this study. The study was planned as a retrospective study to be conducted with patients who have been indicated for oral anticoagulant drug use. Two patient groups were generated. One that receiving anticoagulants as group 1 (n=102). Group 2 as those not receiving anticoagulants (n=53). The parameters related to these 155 patients were collected during the patients' follow-up periods.

**Results:** When the groups receiving anticoagulants (group 1) (n=102) and those not receiving (group 2) (n=53) were compared, the mean age in the group receiving the drug was  $74.23 \pm 10.24$  years, while in the group not receiving the drug was  $62.13 \pm 17.05$  years, ( $p < 0.001$ ). There was no significant difference between the two groups in terms of gender (34.3% male in group 1, 24.5% male in group 2) ( $p = 0.211$ ). There was no difference between the two groups in terms of follow-up periods ( $p = 0.843$ ), the follow-up period =  $4.3 \pm 2.4$  years in group 1 and  $4.28 \pm 2.57$  years in group 2). There was no significant difference in terms of first estimated glomerular filtration rate (eGFR) in both groups ( $p = 0.075$ ) [interquartile range for first eGFR in group 1 = 79.34 (69.70-88.17) and 89.11 (62.26-98.89) in group 2]. However, delta eGFR (first eGFR-last eGFR) was significantly higher in group 1 [delta eGFR = 16.89 (8.44-29.37) for group 1 and 3.83 (1.89-7.74) for group 2] ( $p < 0.001$ ).

**Conclusion:** According to the results and significance of delta eGFR, it can be said that chronic anticoagulant use may have a negative effect on kidney function. More detailed research with many more patients is needed to clarify this situation.

**Key words:** Oral anticoagulant, kidney, eGFR, INR, creatinine

## SOP-6

# Investigation of the Immunomodulatory Effect of Pistachio Green Hull Extract

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**Introduction:** Antioxidant, anti-microbial, anti-mutagenic, and anti-inflammatory effects of pistachio green hull demonstrated by studies. However, there are not enough studies on the immunomodulatory effect. In our study, the immunomodulatory effect of the pistachio green hull will be investigated.

**Method:** A lymphocyte pool was created from waste whole blood of healthy individuals, and lymphocytes were cultured. The total phenolic content of pistachio extract obtained by appropriate methods were determined spectrophotometrically using Folin-Ciocalteu reagent. The erel method was used for total antioxidant capacity measurement. The appropriate extract dose range was determined using the wedge-splitting test method for viability analysis. After the cell suspensions were seeded in a 6-well culture plate with  $2 \times 10^5$  cells in each well, two different non-cytotoxic doses of extracts were added to the wells in five replicates and incubated for 24 h in an incubator at 37 °C, 5% CO<sub>2</sub>. After incubation, the supernatant and cell parts were separated and flow cytometric analysis (CD3+CD16/56+ NK, CD3+CD8+ T-lymphocyte) and cytokine measurement [interleukin (IL)-10, interferon- $\gamma$ , tumor necrosis factor- $\alpha$ , IL-2 and IL-12] were performed. SPSS 28 (Statistical Package for the Social Science) package program was used in the calculations.

**Results:** We observed that the phenol and flavonoid content increased in correlation with the increase in concentration. Because of the appropriate methods, we found 0.49 mg Que Eq/mL flavonoid and 0.60 mg GAE/mL phenol compound in 1 mg/mL extract concentration. When we observed the effects of extracts at appropriate doses on lymphocyte cells in flow cytometry, a decrease in CD16/56 lymphocytes with an increase in dose ( $p < 0.05$ ), an increase in CD3 lymphocytes ( $p < 0.05$ ), and no significant difference in CD3/8 lymphocyte results were observed.

**Conclusion:** Immunity-related diseases will continue as long as humanity exist. As scientists, our main goal should be to keep the immune system in balance rather than to strengthen or weaken the immune system.

**Key words:** Pistachio green hull, phenolic content, immunomodulation

## SOP-7

## Measuring Anxiety Levels of Girls with Precocious Puberty and Their Parents

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**Introduction:** Central precocious puberty (CPP) raises concerns that affected girls can not reach their adult height potential and it might cause psychiatric disorders. The use of gonadotropin-releasing hormone agonist (GnRHa) in children with CPP is highly effective in maintaining adult height potential, but its effects on resolving psychological distress havenot been discovered. The aim of this study was to measure the anxiety levels of girls and their families to examine the psychosocial necessity of treatment.

**Method:** Female patients who applied to the pediatric endocrinology outpatient clinic with a complaint of breast development before the age of 8 or menstruation before the age of 10 were included in the study. The control group consisted of those in the same age group who didnot have any chronic diseases. Parents filled the Revised Child Anxiety and Depression Scale-Parent Version for their children and the state-trait anxiety inventory scale for themselves.

**Results:** This study included 36 patients and 36 controls. The mean age of the patient group was 8.06 ( $\pm 1.5$ ). The patient's mean body mass index z-score was 0.84 and the range was (-1.80) - (+2.45). Fourteen of thirty-six patients diagnosed with CPP were true CPP. The mean age of the control group was 7.83 ( $\pm 1.10$ ). The parenteral state anxiety and Trait anxiety between the patients and the control group were statistically insignificant. Social phobia, panic disorder, separation anxiety, generalized anxiety, obsessive compulsive disorder, and major depression levels were statistically insignificant among children. There was no significant difference between the total anxiety scores.

**Conclusion:** It's known that after the age of 8 GnRha has minimal effect on the final height. This study showed that psychological distress levels are also similar to that of the control group. Children may not need to start on medication for psychological reasons.

**Key words:** Precocious puberty, anxiety, depression



SOP-8

# Investigation of Possible Cross Neutralization Between Hazara Virus and Crimean-Congo Hemorrhagic Fever Virus

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**Introduction:** Crimean-Congo hemorrhagic fever virus (CCHFV) is an *Orthonairovirus* causing lethal infection in humans. The studies of CCHFV should be performed in BSL-4 conditions, which makes it unfeasible, and a model organism is needed. Hazara virus (HAZV) is a candidate for this, given the phylogenetical similarities between HAZV and CCHFV. Our aim is to investigate whether a cross-neutralization occurs, which indicates the structural similarity between the two viruses.

**Methods:** Titers of HAZV stocks were measured by performing TCID<sub>50</sub> assays. Five Balb/c mice were immunized against purified HAZV. To confirm the immunization of mice against HAZV, ELISA tests were performed. Microvirus neutralization tests (mVNT) were performed in duplications and the highest serum titer was 1/8. The SW13 cell line was used in TCID<sub>50</sub> and mVNT. HAZV stocks were produced using the BHK-21 cell line.

**Results:** ELISA using anti-HAZV mouse sera and purified HAZV as a coating agent, yielded positive results indicating successful immunization of the mice. Afterwards, mVNT studies using HAZV and anti-HAZV mouse sera were conducted. However, immune mouse serum was not able to neutralize HAZV infection in the infected cell culture studies.

**Conclusion:** Results of our studies demonstrate that HAZV could be propagated in vitro cell culture settings, purified as antigen, and used as an immunogen in experimental animals. Viral neutralization studies demonstrated that HAZV infection in cultures werenot neutralized by the serum samples obtained from immune mice. Our results indicate the challenging nature of HAZV while trying to produce neutralizing antiserum against itself. This would be a limitation for the studies investigating HAZV as a surrogate model for CCHFV. Thus, we conclude that more sensitive methods such as qPCR should be used in such experiments and then the hypothesis readdressed.

**Key words:** Crimean-Congo hemorrhagic fever, Hazara virus, neutralization

## SOP-9

# Investigation of the Anti-Inflammatory and Immunomodulatory Effects of Mullein Species Extracts on Rheumatoid Arthritis

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**Introduction:** Rheumatoid arthritis (RA) is a chronic autoimmune disease characterized by erosion of joints. With an estimated prevalence of 0 and 46%, it is widely seen in developed countries. A strong correlation between defective immune response and RA has been proven and tumor necrosis factor- $\alpha$ , interleukin (IL)-1, and IL-6 are dominant cytokines in RA pathology. In this study, we find anti-inflammatory and anti-rheumatoid effects of *Verbascum* spp.

**Method:** Two types of *Verbascum* spp. were collected and dried in the sun for 10 days. Plants were extracted using the Slatnars method. *Verbascum* spp. were further analyzed for its total phenolic, flavonoid content and antioxidant capacity. To used as a RA *in vitro* model, fibroblast-like synovocytes are targeted, as this specific cell line has a significant role in the pathogenesis of RA. Two synovium samples were collected from patients diagnosed with RA. Primer cells were cultured in high-glucose Dulbecco's Modified Eagle Medium, and MTT analyze was used to determine the therapeutic range of verbascum extracts. To assess the anti-inflammatory effect of *Verbascum* extracts, NF- $\kappa$ B protein levels were analyzed via western blotting. Cells were incubated with LPS to induce inflammation for 4 h then incubated with 50 and 100  $\mu$ g/mL concentrations of *Verbascum* extracts.

**Results:** It has been determined that *V. siniatum* and *Verbascum* st. extract yield 74.14 and 59.77 mg GallicAcidEq/g phenoli, 34.96 and 25.26 mgQueEq/g flavonoid content and have 822.23 and 403.33  $\mu$ M ascorbic acid Eq/g antioxidant capacity, respectively. By MTT essay, it has been determined that concentrations below 125  $\mu$ g/mL are safe to use and NF- $\kappa$ B was reduced at 100  $\mu$ g/mL in both species.

**Conclusion:** These findings suggest that verbascum spp. may provide a new alternative treatment option for developing RA therapies in the future, as *V. Siniatum* has more potential than *Verbascum* st.

**Key words:** Anti-inflammatory, rheumatoid arthritis, *Verbascum*

SOP-10

## Long-term Effects of Aspartame on Global DNA Methylation in Various Tissues

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**Introduction:** We investigated the possible effects of widely used sweetener aspartame on global DNA methylation in various tissues.

**Method:** The study was performed on 15 Sprague-Dawley<sup>®</sup> rats. The rats were divided into 3 groups: the low-dose group was given 50-mg aspartame daily, the high-dose group was given 250-mg aspartame daily, and the third group was control. After being on this diet for 10 weeks, the rats were euthanized and their cerebral cortices, livers, kidneys, testicles, and pancreas were harvested. DNA from all the tissues were isolated using a Zymo Research Quick-DNA<sup>™</sup> Microprep Plus Kit and was kept in -20 °C until all of the DNA samples were ready. Global DNA methylation levels were determined with a Zymo Research 5-mC DNA ELISA Kit. The distribution of methylation values were assessed with Shapiro-Wilk test and comparisons were performed with Tukey's multiple comparison test.

**Results:** Compared with the control, it was observed that global DNA methylation was significantly increased in the pancreas ( $p=0.0057$ ) and liver ( $p=0.0005$ ) of the high-dose group and in the cerebral cortex ( $p=0.022$ ) of the low-dose group. When the low-dose group was compared with the high-dose group, a significant increase in the kidney ( $p=0.0178$ ) and liver ( $p=0.0001$ ) and a significant decrease in the cerebral cortex ( $p=0.0241$ ) were observed.

**Conclusion:** The results of the study show that dietary consumption of aspartame causes global DNA hypermethylation in the pancreas and liver. Since both global hypermethylation and hypomethylation have been recognized as a cause of oncogenesis, further research is needed on the possible risks of aspartame consumption.

**Key words:** Aspartame, global DNA methylation, environmental epigenetics

## SOP-11

## Lifestyle and Dietary Habits in Urolithiasis Patients

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**Introduction:** Urolithiasis is a disease that is common among the human population. It is known that metabolic disorders play a role in the development of urolithiasis, and risk factors such as diet and lifestyle should not be ignored. Our aim in this study is to question the patients under the headings of lifestyle and dietary habits to better recognize these patients with the data obtained and to compare the data with the control group.

**Method:** In our study, 25 patients with urolithiasis and 25 healthy controls were examined from various aspects under the headings of lifestyle and dietary habits using a self-administered questionnaire. Demographic and clinical data were compared between the groups.

**Results:** The mean age of the patient was 46.1 ( $\pm 11.6$ ), and the mean body mass index (BMI) of the patients was 26.6 ( $\pm 4.3$ ). 72% of patients had relatives diagnosed with kidney stones. Comparing the groups, the rate of having a positive family history of urolithiasis in the patient group was significantly higher than that in the control group ( $p < 0.001$ ). Daily water consumption was below 1.5 L for 36% of the patients, and 72% of the patients were not using extra salt in their meals. There were no significant differences between the groups comparing daily water intake and additional salt usage ( $p = 0.799$ ,  $p = 0.758$ , respectively). While 40% of the patients were overweight and 20% of the patient were obese, there were no significant differences comparing BMIs between the groups ( $p = 0.808$ ).

**Conclusion:** This study could not find a significant difference between the patient and control groups in terms of eating habits and lifestyle. However, a positive family history was a significant risk factor.

**Key words:** Urinary stones, lifestyle, diet

SOP-12

## The Relation of Polypharmacy and Loss of Appetite in Geriatric Patients

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**Introduction:** The aim of our study was to examine the effects of polypharmacy (>5 or more drugs) and inappropriate drug use on appetite.

**Method:** Demographic information, medications, chronic diseases, and appetite test results were scanned. While the use of 5 or more drugs was accepted as polypharmacy, the drug burden index was used to calculate the anticholinergic load. Loss of appetite was assessed with the CNAQ test. Twenty-eight or less out of 40 points on the CNAQ test was defined as loss of appetite.

**Results:** Individuals with dementia and a mini mental test score <23 were excluded from the study. Seven hundred thirty eight outpatients admitted to the geriatrics outpatient clinic were included in the study. The mean age of the participants was 77.7. 71.3% of the participants were women. 18.2% of the patients had hyperpolypharmacy (10 or more drugs), and 66.2% had polypharmacy. While 48.9% had a loss of appetite, 51.1% had normal appetite. Polypharmacy was associated with loss of appetite ( $p<0.05$ ). In our study, the risk of loss of appetite in individuals with polypharmacy was 1.6 times higher than those without polypharmacy. This rate was 1.9 for hyperpolypharmacy. Significance remained even after age, gender, and educational status were eliminated and remained when the loss of appetite was assessed independently of malnutrition.

**Conclusion:** Loss of appetite is more common in elderly patients with polypharmacy. Therefore, to eliminate the loss of appetite, the drug treatments of the patients should be reviewed regularly and the number of drugs should be attempted to be reduced.

**Key words:** Polypharmacy, loss of appetite, geriatric assessment

## SOP-13

## Comparison of Hydrochlorothiazide and Indapamide Use in Patients with Chronic Kidney Injury in Terms of Treatment Efficacy and Adverse Effects

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**Introduction:** The aim of our study aimed to retrospectively compare indapamide and thiazide diuretics in terms of treatment efficacy and adverse effects in patients with chronic kidney injury.

**Method:** Patients with chronic kidney damage using one of the thiazide or indapamide diuretics will be included in the study. The sample size was  $n_1=n_2=60$ , and a total of 120 patients were found. Group 1 was recruited as patients using thiazide diuretics and group 2 were recruited as patients using indapamid. Patients were evaluated according to treatment efficacy and adverse effects.

**Results:** The last creatinine mean of drug group 1 was found to be significantly lower than the group 2 ( $p<0.001$ ). The final mean glomerular filtration rate (EGFR) of the group 2 was significantly lower than the group 1 ( $p<0.001$ ). The mean urea of group 1 was found to be significantly lower than the group 2 ( $p=0.02$ ). The mean creatinine of group 1 was found to be significantly lower than that of the group 2 ( $p<0.001$ ). The mean EGFR of the group 2 was found to be significantly lower than the group 1 ( $p<0.001$ ). The mean uric acid level of the group 1 was found to be significantly lower than the group 2 ( $p=0.027$ ).

**Conclusion:** It has been observed that the use of hydrochlorothiazide or indapamide causes different metabolic side effects in patients with chronic kidney injury. Considering these metabolic side effects, patients should be offered the most appropriate treatment.

**Key words:** Hydrochlorothiazide, indapamide, chronic kidney injury

SOP-14

## Evaluation of Prenatal Diagnosis Methods, Indications, and Results of Rare Diseases: Bezmialem Vakıf University Experience

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**Introduction:** Rare diseases (RD) are mostly progressive and chronic diseases with serious morbidity and mortality, seen in 1 in 2,000 people or less. Today, a great majority of RD can be detected prenatally with next-generation sequencing techniques. The main purpose of this study was to determine the frequency, distribution, and population profile of prenatal invasive diagnostic tests (PIDT) for RD.

**Method:** In this study, a retrospective analysis of PIDT performed at Bezmialem Vakıf University, Faculty of Medicine, Department of Obstetrics and Gynecology between the years of 2017-2022 was evaluated.

**Results:** In our clinic, 198 PIDTs were performed. While 15.7% of the procedures were performed for investigating RD, 84.3% were for other indications. There was no significant difference in age, gestational age, or type of pregnancy between the groups. The rate of consanguineous marriage among the groups was statistically significant (32.3%, 4.1%,  $p < 0.01$ ). In the group who underwent PIDT for RD, the results were positive in 11 (39.3%) cases and other chromosomal anomalies were seen in 5 (17.9%); while 31 patients (19.3%) were diagnosed with chromosomal/other diseases, and 4 (2.4%) with RD in the other group. The probability of a positive result in the RD group is significantly higher (57.1%, 21.7%,  $p < 0.001$ ). The line plot depicting the temporal change of indication for prenatal test shows a steep increase in the rate of RD-related invasive tests.

**Conclusion:** Our data indicate that PIDT with the indication of RD is gradually increasing. This information leads us to believe that soon invasive tests might be primarily used for RD and/or single-gene mutations. More effective screening programs should be implemented by health authorities to ensure these improvements in rare diseases.

**Key words:** Rare diseases, prenatal invasive diagnostic tests, amniocentesis

## SOP-15

# Relationship Between Stroke Risk Factors Knowledge and Lifestyle Behavior Compatibility in Medical School Students

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**Introduction:** It was aimed to examine the relationship between stroke knowledge of Bezmi Alem Vakıf University Medical Faculty students and their lifestyle behaviors toward stroke risk factors.

**Method:** We conducted two online questionnaires that prepared by us, the researchers, in accordance with the references. In the “Stroke General Knowledge Questionnaire, there are 16 closed-ended questions, each worth 1 point, about stroke term, general information, warning signs and symptoms, risk factors, and treatment. In the “Lifestyle Behavior Compatibility by Stroke Risk Factors Questionnaire”, the relationship between the participants’ behaviors and risk factors will be determined by physical activity, diet, smoking status, salt consumption and sugar consumption with a total of 12 points. A total of 274 students participated in this study voluntarily.

**Results:** The study participated by 174 female (63.5%) and 100 male (36.5%). One hundred fifty six students (56.9%) had previously received information about stroke. The median general knowledge score of those who received information [14.0 (6.0-16.0)] was significantly higher than those who did not receive information [12 (0.0-16.0)] ( $p < 0.001$ ). When the median score of general knowledge level (GKL) was compared between grades: the GKL of fourth [14.0 (7.0-15.0)], fifth [14.0 (7.0-16.0)], and sixth [15.0 (13.0-16.0)] grades was found to be superior to the first [11.0 (0.0-15.0)] and second [12.0 (0.0-14.0)] grades. The GKL of 5<sup>th</sup> and 6<sup>th</sup> grades was higher than the third [12.0 (2.0-16.0)] graders. The GKL of 6<sup>th</sup> graders was higher than 4<sup>th</sup> graders ( $p \leq 0.001$ ). No significant difference was observed when lifestyle behavior compliance was compared between grades.

**Conclusion:** According to the results of the study, no positive correlation was observed between high levels of stroke knowledge and lifestyle behavior compliance according to risk factors.

**Key words:** Stroke, knowledge, lifestyle, survey, medical students



SOP-16

## Determination of the Relationship between Thyroid Hormones, Anti-TPO and Anti-Tg and Depression, Anxiety and Quality of Life in Patients with Hashimoto's Thyroiditis

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**Introduction:** Hashimoto's thyroiditis, also known as autoimmune thyroiditis, is the most common endocrine disease-causing hypothyroidism, and is characterized by high anti-thyroid peroxidase (anti-TPO) and anti-thyroglobulin (anti-Tg) levels. In our study, we determined the relationship between antibodies and hormones with depression, anxiety, and quality of life. Unlike other studies, we also investigated the effects of antibody levels on the severity of depression and anxiety.

**Method:** Forty-seven patients who were diagnosed with Hashimoto's thyroiditis according to anti-TPO, anti-Tg, thyroid stimulating hormone (TSH), and T4 were included. We examined anti-TPO levels in 3 groups as normal (0-60 U/mL), high (60-2,000 U/mL), and very high (greater than 2,000 U/mL). To collect data systematically we used Beck Depression Inventory, Beck Anxiety Rating Scale and World Health Organization Quality of Life Scale.

**Results:** We found a statistically significant positive high correlation between depression and anti-TPO, moderate correlation with anti-Tg, and no correlation with TSH and T4. Also, we found a statistically significant positive moderate correlation between anxiety and anti-TPO and anti-Tg, no correlation with TSH and T4. There was a statistically significant positive low correlation between quality of life and anti-TPO; however, no correlation with anti-Tg, TSH, and T4.

**Conclusion:** This study has been shown that anti-TPO and anti-Tg levels are associated with depression, anxiety, and quality of life. Contrary to other studies, we found more severe depression and anxiety in the very high group, but lower quality of life. Thus, a significant increase in the quality of life of the patients can be achieved, and the worsening depression and anxiety can be prevented.

**Key words:** Hashimoto's thyroiditis, anti-TPO, anti-Tg, TSH, T4, depression, anxiety, quality of life

## SOP-17

## Investigation of Indications for Requesting the Serum Immunofixation Electrophoresis (IFE) Test

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**Introduction:** The investigation of monoclonal gammopathies in the investigation of the cause of chronic kidney damage of unknown etiology in the practice of nephrology has almost entered into routine practice. The aim of this study was to determine the optimum immunofixation electrophoresis (IFE) indications by comparing the laboratory findings of those who gave a positive result with those who gave a negative result in patients who were requested for an IFE test.

**Method:** This study was a retrospective study. Patients who applied to Bezmialem Vakıf University Medical Faculty Hospital between January and May 2022, and who were requested IFE test will be included.

**Results:** Out of 51 patients, 64.7% was IFE testes negative and 35.3% was tested positive. Of those who had a negative IFE test, 48.5% were female, 51.5% were male, 60.6% had diabetes, 51.5% had anemia, 3% had congestive heart failure. Of those with a positive IFE test, 44.4% were female, 55.6% were male, 38.9% had diabetes, 77.8% had anemia, 16.7% had congestive heart failure. There were no statistically significant differences between IFE -positive and IFE -negative test results in terms of age, albumin, alkaline phosphatase, cancer antigen, Cl, C-reactive protein, glomerular filtration test, Fe, and glucose averages. Mean hemoglobin, total iron binding capacity, protein in spot urine, and immunoglobulin (Ig)G, and IgA values of those with negative IFE test were significantly higher than those with the positive IFE test.

**Conclusion:** Mean hemoglobin and total iron binding were lower in patients with monoclonal gammopathy, as expected. IgG and protein in spot urine were higher compared with the patients whose IFE test was found to be negative. Based on these results, it may be useful for clinical practice to order an IFE test from kidney patients with iron deficiency anemia and proteinuria.

**Key words:** Serum immunofixation electrophoresis, monoclonal gammopathy, chronic kidney disease

SOP-18

# Relationship Between the CHA2DS2-VASc Score Calculated in Patients who Underwent Elective Electrical Cardioversion and the Preservation of Sinus Rhythm in the Months After the Procedure

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**Introduction:** Atrial fibrillation (AF) is the most common rhythm disorder. Electrical cardioversion (CV) is a common treatment used to convert AF to sinus rhythm; however, recurrence of AF may occur after CV. The CHA2DS2-VASc score has high consistency in quantifying the thromboembolic risk. The aim of our study was to calculate the relationship between the CHA2DS2-VASc score and the preservation of the sinus rhythm after electrical CV in patients with AF.

**Method:** One hundred fifteen patients with AF who underwent elective electrical CV at a tertiary cardiology center were included in this study. Baseline CHA2DS2-VASc scores, and the sinus rhythm preservation rates at the 1<sup>st</sup> and 3<sup>rd</sup> months of the patients were evaluated.

**Results:** The mean age was 66.6±10 years, and 61.7% were females. The mean CHA2DS2-VASc score was 3.7 (range: 0-7). Hypertension was present in 97.4% (n=112), diabetes in 58.3% (n=67), vascular disease in 11.3% (n=13), congestive heart failure, and stroke in 15.7% (n=18). At the end of the procedure, CV was successful in 90.4% (n=104). Significant results were obtained between the CHA2DS2-VASc score and conversion to sinus rhythm at the end of the CV procedure (p=0.011), staying in the sinus rhythm at the 1<sup>st</sup>-month follow-up (p=0.023), and staying in the sinus rhythm at the 3<sup>rd</sup>-month follow-up (p=0.011). According to the logistic regression analysis model, the variables that significantly affect the end-of-procedure result are age and history of stroke (p=0.042; p=0.011)

**Conclusion:** The CHA2DS2-VASc score is a simple, easy, and reliable scoring system that has a relatively high performance for predicting unsuccessful electrical CV and recurrence of AF at follow-ups.

**Key words:** CHA2DS2-VASc, atrial fibrillation, electrical cardioversion

## SOP-19

## Investigation of Inflammatory Serum Parameters in Long-Covid Patients with Neurological Complaints

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**Introduction:** During the acute coronavirus disease (Covid) infection, inflammatory serum parameters are frequently examined. Our aim is to analyze the changes in these parameters in long-Covid patients.

**Method:** The inflammatory parameters of 92 patients who met the appropriate criteria with neurological complaints such as headache, myalgia, post-exertional fatigue, anosmia-ageusia, dizziness, insomnia, and forgetfulness were compared with their first and 3 to 6 months of control admissions.

**Results:** The blood results were compared with first and follow-up admissions of 46 women and 45 men; aged from 21 to 77 (median =43) who were admitted to the hospital with headache (21.53%), myalgia (20%), dizziness (6.15%), post-exertional fatigue (36.91%), anosmia- ageusia (6.15%), insomnia (6.92%), and other symptoms (2.34%) with the diagnosis of long-Covid. After the analysis compared with the first application, a significant decrease and approach to normal values were observed during the follow-up in C-reactive protein (CRP), D-dimer, ferritin, creatinine, lactate dehydrogenase (LDH), neutrophile/lymphocyte ratio, leukocyte count, and erythrocyte sedimentation rate (ESR) ( $p<0.001$ ;  $p<0.001$ ;  $p=0.001$ ;  $p=0.017$ ;  $p<0.001$ ;  $p=0.004$ ;  $p<0.001$ ;  $p<0.001$ ). There was no statistically significant decrease in ACE and procalcitonin ( $p=0.113$ ;  $p=0.381$ ).

**Conclusion:** A decrease and normalization to the baseline were found in CRP, D-dimer, ferritin, creatinine, LDH, NEU/LYM ratio, leukocyte count, and ESR compared with the values during the first and follow-up admissions. The absence of a significant decrease in ACE wasnot significant due to the possible flaws in the laboratory analysis. Procalcitonin results were found to be insignificant because the elevation was observed in different patients during the acute and long-Covid periods. In this respect, multicentric studies with larger sample groups are needed to determine the persistently elevated markers in long-Covid patients.

**Key words:** Long-Covid, inflammatory serum parameters, COVID-19

SOP-20

# Knowledge Levels and Community Guidance of Doctors Working in Family Health Centers on HPV Screening and HPV Vaccination

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**Introduction:** Human papillomavirus (HPV) is a sexually transmitted DNA virus that causes genital condyloma and cervix, vulva, vagina, penis, oropharynx, anal canal cancers. HPV vaccines have a protective effect against cancers that may arise from HPV infection. This study aims evaluating the knowledge levels and tendency to inform the target population of family physicians working in Family Health Centers, where the HPV PCR test is performed according to cervical cancer screening program in Turkey.

**Method:** Study questionnaires were filled in between June and September 2022 via online platforms. One hundred thirteen family physicians working in different FHCs in Turkey filled out the study questionnaire. Thirty eight questions that include information about HPV infection, screening and vaccination, and whether they recommend the vaccine to their patients were asked. Participants categorized as female/male, age (<35,35-50,>50), duration of experience (<10,10-20,>20) and the answers were evaluated.

**Results:** When the answers evaluated by the categorized age groups according to knowledge level questions: participants under the age of 35 knows the number of HPV types and HPV infection in men statistically significant ( $p=0.007$ ,  $p=0.032$ ). It was also seen that the group with less than 10 years of experience gave a correct answer to the 2 questions mentioned statistically significant ( $p=0.008$ ,  $p=0.037$ ). In other questions, when age and experience groups were evaluated, no statistically significant difference was found.

**Conclusion:** Our study is the first survey to evaluate the awareness and knowledge levels of family physicians working in FHCs in Turkey about HPV screening and HPV vaccine. We observed that family physicians had similar knowledge levels on the subject in terms of gender, age and experience. However, we think that family physicians should have more information about HPV screening and HPV vaccine and that their tendency to guide the society can be improved.

**Key words:** HPV, HPV vaccine, HPV screening

## SOP-21

## Examination of Loss of Work Force in Patients Suffered from Hand Injuries

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**Introduction:** Hands are a organ we use most in our daily and business life. The most frequent use causes the most frequent injury and these hand injuries cause loss of the workforce.

**Method:** This retrospective and non-invasive study was conducted a telephone questionnaire to the patient who applied to our hospital with the complaint of hand injury.

**Results:** One hundred thirty patients participated in our study. 74.6% of our patients were male patients and the duration of return to work of male patients was significantly longer than female patients. When we look at the education levels, 84.6 of our patients did not have a university education and each decrease in education levels was found to be statistically significant in prolonging the duration at return to work. Thirty one of our patients were admitted to our hospital due to work accident and the duration of being away from work was 77.5% longer than those normal injuries, and loss of productivity when they returned to work was found to be significantly higher than in normal patients. Significant early return to work and higher productivity was found in our patients who received physical therapy (PT) compared to patients who didnot received PT. There was no significant result in terms of return to work and productivity between patients who do sport and those who do not. According to the statements of our patients, there was no significant relationship between smoking and return to work and loss of productivity.

**Conclusion:** Occupational accidents, lack of PT, and low education had a negative impact on return-to-work durations and productivity. There were no significant results on the negative effects of smoking and non-sports life.

**Key words:** Hand injuries, occupational accidents, loss of workforce

SOP-22

# The Relationship Between c-Troponin-I and CK-MB Values Measured After the Procedure and Cardiovascular Events in the Medium and Long-Term in Patients Who Underwent Elective Angiography and Percutaneous Coronary Intervention

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**Introduction:** We questioned the relationship between the incidence, prognosis, and clinical manifestations of periprocedural myocardial injury in patients with stable coronary artery diseases.

**Method:** Two-hundred six patients who underwent percutaneous coronary intervention (PCI) and January 2021-January 2022 were included. The relationship between post-PCI process and cardiovascular events was evaluated by measuring blood c-Troponin-I and creatine kinase-myocardial isoenzyme (CK-MB) obtained after the PCI.

**Results:** This single-center study recruited 206 patients with a mean age of  $66.26 \pm 10.42$  (male/female =154/52). Significant, positive, and low-grade correlations were present between age and c-Troponin-I and CK-MB (respectively,  $r=0.210$ ,  $p=0.004$ ;  $r=0.185$ ,  $p=0.011$ ) We observed higher c-Troponin-I and CK-MB values as patients' recorded age increase. The number of occluded vessels and c-Troponin-I and CK-MB values show a statistically significant, positive, and low-level correlation, respectively, ( $r=0.222$ ,  $p=0.002$ ;  $r=0.197$ ,  $p=0.007$ ). Independent risk factors for c-Troponin-I and CK-MB were diabetes, hypertension, hyperlipidemia, used artery in which attempted (femoral or radial), smoking, events during the follow-up period (exitus, stroke, re-PCI), and cerebrovascular events ( $p>0.05$ ). We found no significant correlation between c-Troponin-I and CK-MB values and pre-procedural laboratory parameters (white blood cell, hemoglobin, platelet, total cholesterol, high-density lipoprotein, low density lipoprotein, HbA1c and body mass index.

**Conclusion:** As the patient age and number of occluded vessels increase, c-Troponin-I and CK-MB values increase as well. Similar to the previous studies, we found no correlation between c-Troponin-I and CK-MB values and exitus, stroke, re-PCI, and cerebrovascular events. More large-scale prospective studies are necessary to confirm the prognostic roles c-Troponin-I and CK-MB blood levels.

**Key words:** Coronary artery disease, percutaneous coronary intervention, myocardial infarction, c-Troponin-I, CK-MB

## SOP-23

## Evaluation of Women's Awareness and Knowledge of Planned Oocyte Cryopreservation at Different Sociocultural Levels

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**Introduction:** Our study aimed to compare the level of knowledge regarding childbearing, female fertility, and oocyte freezing between participants who consider planned oocyte cryopreservation and those who do not among.

**Method:** We conducted a cross-sectional survey from June 2022 to September 2022 in women of reproductive age and diverse sociocultural backgrounds. Fifty-six-item survey collected responses online. The study comprised 915 participants through social media (age range=21-45) and the survey items correspond to their perspective and degree of knowledge on family planning, future fertility expectations/plans, and oocyte freezing, as well as.

**Results:** Out of 915 women, 595 (65%) were in the 21-26, 193 (21.1%) were in the 27-32, 67 (7.3%) were in the 33-38, and 60 (6.6%) were in the 39-45 age ranges. Half of the women (n=464, 50.7%) reported that they intend to undergo oocyte freezing in the future. When women who considered oocyte freezing were compared with women who did not, it was found that the rate of positive attitude toward oocyte freezing in unmarried women (p=0.021) with a high education level (p=0.044) was higher. Age and income level did not affect the intentions for oocyte freezing. The group that is considering oocyte freezing provided significantly more accurate responses to the seven items about the level of knowledge about family planning/postponing fertility and oocyte cryopreservation compared to the group that is not planning oocyte freezing.

**Conclusion:** Our study supports the findings in previous studies conducted in other countries, that single women higher education levels were found to have a higher level of knowledge about oocyte freezing and they were in favor of using this method. We suggest further studies look into effective ways to inform society about oocyte freezing.

**Key words:** Infertility, social oocyte freezing, oocyte cryopreservation



## SOP-24

# The Effects of the Unilateral Uterine Artery Notch Detected at 24<sup>th</sup> Gestational Weeks on Perinatal Outcomes in Low-Risk Pregnancies

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**Introduction:** The persistence of a diastolic notch after 24 weeks of gestation is associated with insufficient trophoblast invasion of the spiral arteries. Previous studies have confirmed the association between increased blood flow resistance in both uterine arteries (UA) (bilateral UA notch) and a higher risk of the consequent development of pre-eclampsia, intrauterine growth restriction, or SGA. However, there is a paucity of data regarding the prognostic value of the unilateral UA notch. In this study, we assessed the effects of unilateral UA notch detected at 24 gestational weeks on perinatal outcomes in low-risk pregnancies.

**Method:** This is a retrospective analysis of the data obtained from singleton low-risk pregnancies with a unilateral UA notch detected at 24 weeks of gestation and pregnancies without a UA notch of the same gestational age. The main outcome measure was adverse pregnancy outcomes, defined as any case of preeclampsia, small for gestational age, stillbirth, or early neonatal death. Our gathered data included demographic data for each group, perinatal data such as birth weight, birth week, preeclampsia, preterm birth and the mode of delivery, Ph, base deficit, APGAR scores, and NICU admission rate. The independent effect of the unilateral UA notch was evaluated with logistic regression analysis. All statistical analyses were analyzed at the 0.05 significance level in the IBM SPSS Statistics 26.0 program.

**Results:** A total of 162 patients enrolled in the study, (n=35) of which were detected with a unilateral UA notch (study) and (n=127) patients with normal UA (control). The mean ages of the study and control groups were 26 (19-34) vs 29 (19-44), respectively (p=0.001). The study and control group's mean BMIs were (25.7±4.15 vs 26.05±3.88, respectively, p=0.646). Patients with unilateral UA notch showed a low prevalence of intrauterine growth restriction (IUGR). The mean z score for birth weight was (0.31±0.85 vs 0.10±0.96, respectively p=0.259), the prevalence of preterm birth was (35.7% vs 1.6% respectively p=0.185) and preeclampsia (2.9% vs 1.6% respectively p=0.259) that was not significant. There were no adverse results regarding neonatal outcomes. In the logistic regression analysis, the unilateral UA notch was not found to be an independent risk factor for any observed postnatal outcome measure.

**Conclusion:** The unilateral uterine notch at 24 weeks in low-risk pregnancies is not associated with abnormal perinatal outcomes.

**Key words:** Uterine artery, notch, preeclampsia