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Abstracts Book

30 November - 01 December, 2023
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**UNION OF THRACE UNIVERSITIES
VI. INTERNATIONAL HEALTH SCIENCES CONGRESS
30 November - 01 December 2023, Edirne / Türkiye**



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VI. INTERNATIONAL HEALTH SCIENCES
CONGRESS**

ABSTRACTS BOOK

**Edited By
Prof. Dr. Necdet SÜT
Assoc. Prof. Dr. Gülben SAYILAN ÖZGÜN**

30 November- 01 December 2023, Edirne / TÜRKİYE



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It includes the abstracts of the papers presented at the Union of Thrace Universities VI. International Health Sciences Congress hosted by Trakya University Institute of Health Sciences on 30 November - 01 December 2023. Papers that were not attended or presented at the congress were removed from the congress program and abstracts book.

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INVITED SPEAKERS



IS1 – PHARMACOLOGICAL EFFECTS OF PSYCHOACTIVE SUBSTANCES

Çağatay Oltulu

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Psychoactive drugs, also known as psychotropic drugs, are a diverse group of substances that alter brain function and produce changes in perception, mood, consciousness, cognition, or behavior. These drugs can be used for therapeutic purposes, such as treating mental disorders, or for recreational purposes, such as achieving a desired mood state or enhancing performance. However, psychoactive drugs can also produce adverse effects, including addiction, overdose, and death.

The pharmacological effects of psychoactive drugs are produced by their interaction with specific neurotransmitter systems in the central nervous system. Neurotransmitters are chemical messengers that transmit signals between neurons, which are the basic cells of the nervous system. Different psychoactive drugs target different neurotransmitter systems, resulting in a wide range of pharmacological effects. For example, opioids, such as morphine and heroin, bind to opioid receptors in the central nervous system, which are involved in pain perception and reward. This binding produces analgesia, euphoria, and a sense of relaxation. However, opioids can also produce respiratory depression, constipation, and addiction.

Stimulants, such as amphetamines and cocaine, increase the activity of dopamine, a neurotransmitter involved in reward, motivation, and movement. This increase in dopamine activity produces feelings of euphoria, increased energy, and alertness. However, stimulants can also produce anxiety, agitation, and psychosis. Depressants, such as alcohol and barbiturates, slow down the activity of the central nervous system, producing relaxation, sedation, and sleepiness. However, depressants can also impair coordination, judgment, and memory. In high doses, depressants can cause respiratory depression and death. Hallucinogens, such as LSD and psilocybin, distort perception, producing hallucinations. Hallucinogens can also produce changes in mood, consciousness, and thought processes. The toxicological effects of psychoactive drugs are the adverse effects that these drugs can produce on the body. These effects can be acute or chronic. Acute toxicological effects of psychoactive drugs can include overdose, respiratory depression, seizures, and coma. Chronic toxicological effects can include addiction, organ damage, and mental health problems. The risk of adverse effects from psychoactive drugs is influenced by a number of factors, including the type of drug, the dose of the drug, the frequency of use, the individual's tolerance to the drug, and the individual's overall health. It is important to use psychoactive drugs only as directed by a healthcare provider and to be aware of the potential risks and benefits of these drugs.



IS2 – CLINICAL APPEARANCE OF SUBSTANCE USE DISORDERS

Mehmet Bülent Sönmez

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Substance use disorder (SUD) is a condition that evolves gradually through repetitive substance use. Over time, individuals lose control over their substance use and struggle to discontinue it, despite experiencing harm. Addictive substances are chemical compounds that, when used, impact the functioning of the brain, leading to alterations in emotions, thoughts, and behaviors. These substances have varying chemical structures that influence distinct regions of the brain, resulting in impairments in both the structure and functions of the brain. Substances activate the reward system in the brain, initially producing appealing effects. These effects reinforce subsequent substance use. However, repetitive use impacts various brain regions, leading to impairments in mental processes like thinking, judgment, decision-making, and behavior control, along with the development of a strong craving for substances. As individuals engage in repeated use, the substance loses its initial allure, prompting an increase in quantity and frequency to achieve the desired effect. After a period of abstinence or reduced use, withdrawal symptoms develop due to changes caused by addictive substances. These symptoms recede upon resuming substance use, perpetuating a detrimental cycle. Over time, substance use becomes the focal point of life, disrupting daily functioning. Despite negative consequences such as strained relationships, health issues, and an inability to fulfill obligations, individuals struggle to cease use. Even attempts to quit or regulate use often prove elusive. A clinical picture emerges where discretionary use transforms into compulsory use, continuing despite negative consequences and an inability to exert control.

Substance use disorder is a progressive disease, posing significant treatment challenges once established. However, with appropriate treatment and psychosocial support, SUD can be managed. Achieving improvement, however, requires time and effort. An individual can lead a healthy, functional life when not using substances. Yet, if substance use resumes after a period of abstinence, individuals quickly revert to previous levels due to disruptions caused by addictive substances in different brain regions, impairments that do not fully recover. The pivotal stage in treatment is the individual's willingness and readiness to undergo treatment. As a chronic and recurrent brain disease, abstaining from substance use for a specific period is insufficient for recovery. The treatment and recovery goal is the individual's ability to maintain sobriety, reconstruct their life without addictive substances, and regain professional and social functionality over an extended period.



IS3 – LABORATORY ANALYSIS OF DRUGS OF ABUSE

Yağmur Uçar Yağcı

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Drugs of abuse tests are used to detect whether prescription or illegal drugs are present in biological samples of humans. Drugs of abuse analysis may be for medical, judicial, or social purposes.

In Türkiye, the standard test panel includes analysis of amphetamines, cocaine, marijuana, opiates, and benzodiazepines. The substance panel can be expanded according to regional needs. The detection period is generally 2-4 days for hydrophilic substances (such as amphetamines, opiates, and cocaine) and 3-7 days for lipophilic substances (such as marijuana) for a single use. But with continuous use of marijuana, the detection period extends up to 1 month.

Urine is the most preferred type of biological sample for drugs of abuse tests. Public toilets are not appropriate for drugs of abuse testing and necessary precautions must be taken in the toilet against cheat. A surveillance officer of the same gender accompanies the person during the sample collection. The "Chain of Custody Form" must be filled out completely. Temperature and quantity should be checked and recorded within the first 4 minutes. The temperature of the urine must be 33-37 °C, and its amount must be at least 30 ml. Sample transfer must be provided with locked carrying bags. The sample must be analyzed in an authorized laboratory. Whether the urine sample is suitable for study should be checked by evaluating creatinine, density, pH, and nitrite parameters.

The immunochemical analysis methods are based on antigen-antibody interactions. Immunoassay methods are susceptible to interference due to cross-reactions against substances with similar chemical structures. For these reasons, immunochemical analysis methods are used only for screening purposes. Samples should be stored in the deep freezer for 6 months for quantitative confirmation if needed. Confirmation tests are based on chromatographic methods.



IS4 – BIOMEDICAL INNOVATION AND ENGINEERING APPROACHES IN HEALTH

Sezer Ulukaya

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At the beginning of the speech, we will focus on innovation, innovative perspective, invention and its impact on the health field. In the continuation of the three-part content, we will examine the example of biomedical invention in health. We will touch upon the steps of the invention in solving a defined problem in the field of healthcare, imagining the problem, drawing, designing and creating a prototype. In the second part, we will talk about the studies in the literature on wireless and remote health data measurement. We will examine examples such as breathing and pulse counting through image sequences obtained with the camera. We will talk about our pre-study on imaging the arm vein with a wireless and remote camera and improving the image contrast. We will discuss the impact of these innovations on the concept of innovation in nursing and what benefits this technology can offer to nurses and healthcare personnel in the future. In the last section, we will talk about the impact of digital acquisition and computerized analysis of respiratory sounds on innovation in healthcare, including pandemic periods such as Covid-19. We will examine what opportunities medical decision support systems that continue to be developed can offer in the field of nursing and health. We will evaluate the speech in terms of the need in the clinic, well-defined problem, interdisciplinary teamwork, determination to work and infrastructure, which are the necessary steps to create innovative designs in the field of healthcare and exchange ideas.

IS5 – APPROACH TO KNEE LIGAMENT INJURIES

Bülent KARSLIOĞLU

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1. Anterior Cruciate Ligament (ACL) Injuries

A. Anterior Cruciate Ligament Anatomy

Measuring 10-12 mm in width and 31 mm intra-articularly, the ligament is primarily composed of Type I collagen (90%). It exists as an extra synovial anatomical structure and comprises two bundles based on its tibial attachment site:

- Anteromedial: Isometric, taut during flexion, causing anterior translation.
- Posterolateral: Taut during extension, contributing to rotational stability.

The injury mechanism often involves a non-contact pivot and is frequently seen in female athletes, particularly female soccer players and male basketball players. Associated injuries include trabecular micro fractures (>50%) (Lateral femoral condyle, posterolateral tibia), MCL, and meniscal tears (75%) (54% lateral in acute cases, medial in chronic cases). Intra-articular injuries are less frequent in females. If left untreated, meniscal and chondral injuries and acute Ramp lesions (39.5%) may occur.

B. Diagnosis

Physical examination: Lachman test (most sensitive), Pivot Shift

Imaging: X-rays, MRI

Classic x-rays show a Segond fracture (75%).

C. Treatment

Primary repair or ligament reconstruction is performed. Ligament reconstruction can be done using hamstring tendons or a patellar tendon-bone graft. When using hamstring tendons, three questions may arise:

- What happens to the reconstructed ligament?
- What occurs in the donor area from which the hamstring tendons are taken?
- How does knee range of motion change after harvesting hamstring tendons?

1. What happens to the reconstructed ligament?

- The ligament undergoes three phases of ligamentization.

Early phase: Central necrosis, hypocellularity (1-4 weeks), collagen fibrils begin to break down and organize.

Proliferation (Remodeling): (4-12 weeks) Maximum cellular activity, growth factor release, revascularization.

Maturation (Ligamentization): >12 weeks - Normal vascularity.

2. What occurs in the donor area from which the hamstring tendons are taken?

Regeneration leads to the formation of new tendons near the strength of the old ligament.

3. How are knee movements affected by harvesting hamstring tendons?

- Due to restricted knee flexion and internal rotation, especially professional athletes should avoid using hamstring grafts.

D. Rehabilitation

Early Phase: Aimed at restoring full knee extension, managing swelling and pain, restoring patellar movement, gaining quadriceps control, increasing gradual knee flexion, and enhancing proprioception.

Intermediate Phase: Focuses on increasing muscle strength (quadriceps), improving endurance, restoring neuromuscular control, re-establishing movement patterns, and includes closed and open kinetic chain exercises.

Late Phase: Aims to normalize lower limb strength and increase muscle strength and endurance.

2. Posterior Cruciate Ligament (PCL) Injuries

Isolated cases are rare and are often accompanied by ACL and PLC injuries (95%). The mechanism involves falling on the knee in flexion or the foot in plantar flexion, or a dashboard injury. Conservative results for isolated injuries are good for eight years, but 11% develop osteoarthritis after 14 years.

A. Anatomy

PCL originates from the Posterior Tibial Sulcus and attaches to the Anterolateral Medial Femoral Condyle. PCL is a 30% wider ligament than ACL. Similar to ACL, it consists of two bundles: AL is taut during flexion, PM during extension. PCL is situated between the meniscomfemoral ligaments.

B. Diagnosis

Diagnosed through the Posterior Sag Sign, Posterior Drawer Test, or Dial Test - in conjunction with PLC injuries.

Imaging: Lateral Stress Test and MRI.

C. Treatment

Arthroscopic ligament reconstruction is performed with hamstring autografts.

3. Medial Collateral Ligament (MCL) Injuries

The most common knee injury (40%). MCL has superficial and deep components. The mechanism involves Valgus Stress. It has a high healing potential due to high Adipogenesis, Chondrogenesis, and Osteogenesis potentials. It is often torn from its femoral attachment site, frequently accompanied by ACL and medial meniscus injuries.

Treatment

Stage 1-2 Conservative treatment with an average Return to Play (RTP) of 23 days. Hydrocortisone and local anesthesia at the periosteal attachment site enable a 66% return to pre-injury levels for athletes.

Conservative for Stage 1-2 (Stage 1 RTP 5-7 days), Stage 2 RTP 2-4 weeks, whereas Stage 3 involves surgery - with multiple ligament injuries, Stener-type injuries.

4. Lateral Collateral Ligament (LCL) Injuries

Result from sudden varus stress. Isolated cases are quite rare (gymnastics, tennis). It often tears from the fibular attachment site, accompanied by peroneal nerve injuries. It is an avulsed ligament from its anatomical attachment site (e.g., fibula).

Treatment

Isolated Acute (<2 Weeks) Stage III LCL Injuries

Isolated cases show excellent results with Semitendinosus Reconstruction within 2.7 years. Posterolateral corner injuries are more complex. LCL, popliteus, and popliteofibular ligament repair results in 95% rotational stability and a 71% IKDC score close to normal.

5. Rehabilitation in Ligament Injuries

Objective: Early return to sports, preventing secondary injuries – focusing on proprioception. The incidence of secondary injuries post-ACL reconstruction is 20%, reaching 80% post-traumatic osteoarthritis within 10 years.

Athlete's goals and expectations, current functional performance, recovery biology, family, and team expectations are critical in rehabilitation.

Objective Criteria for RTP are:

- Minimum 6 months of rehabilitation
- Absence of knee effusion
- Full range of motion (ROM)
- Single-leg Hop symmetry >90%
- Quadriceps strength at least 85% of the opposite side

Patients meeting these criteria have better symmetrical knee movements and a lower incidence of secondary injuries (5%).



**UNION OF THRACE UNIVERSITIES
VI. INTERNATIONAL HEALTH SCIENCES CONGRESS
30 November - 01 December 2023, Edirne / Türkiye**



ORAL PRESENTATIONS



OP1 – MOLECULAR ALTERATIONS AND CHARACTERIZATION OF THE TARGETED GENES IN PANCREATIC CANCER CASES

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Aim: Pancreatic cancer is a deadly disease that is increasing in incidence throughout, and it is the 12th most common cancer worldwide. There are no clear causal factors associated with the incidence of pancreatic cancer. A few studies have linked the human microbiome, eating habits, and genetic inheritance with pancreas cancer. In our study, we aimed to investigate the contribution of molecular genetic analysis results to the diagnosis, treatment, and prognostic follow-up of patients with pancreatic cancer.

Methods: Using targeted Next-generation sequencing (NGS) platforms we analyzed ninety-three cancer predisposes genes. We included the patients that were examined at our Trakya University Health Research and Application Center, Genetic Diseases Evaluation Center, between the years of 2016 January- 2023 September. We isolated the DNA samples from peripheral venous blood and targeted cancer genes were analyzed using the NextSeq-550-Illumina system with Qiaseq Targeted (Qiagen) DNA panel in twenty-eight cases.

Results: As a result of our investigation we detected seventeen pathogenic/ likely pathogenic variants in twelve cancer cases (42.85%) and ten uncertain significance VUS variants in ten pancreatic cancer cases (35.7%). From likely pathogenic variants, two of them are novel.

Conclusions: NGS of multiple gene panels in pancreatic cancers can help diagnostic processes. However, in patients whose pathogenic/likely pathogenic variants are not detected by NGS in the targeted panel more comprehensive investigations must be performed. Whole genome or whole exome sequencing platforms can be recommended. Herein in our study, the diagnostic rate of pancreatic cancer was confirmed as 42.85%. In this era, the NGS platforms are becoming more effective and important in the diagnostic process of rare cancer types.

Keywords: Pancreatic cancer, targeted genes, next-generation sequencing



OP2 – NAVIGATING HUNTINGTON'S CHALLENGES: THE CRUCIAL ROLE OF GENETIC EVALUATION IN DIAGNOSIS WITHIN THE THRACE REGION

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Aim: Huntington's disease is caused by a heterozygous expanded trinucleotide repeat (CAG)_n, encoding glutamine, in the gene encoding huntingtin (HTT) on chromosome 4p16. Huntington's Disease is a progressive type of neurodegenerative disease with genetically autosomal dominant inheritance that can occur with different phenotypes such as dystonia, coordination disorder, impairments in cognitive performance, and behavioral problems. Although neuropsychiatric symptoms are common, the prevalence of psychiatric disorders is approximately 33-76%.

Methods: In this study, genetic analysis results of 47 patients who applied to the Trakya University Health Research and Application Center, Genetic Diseases and Evaluation Center, outpatient clinic with Huntington's disease between October 2016- September 2023 were included. Polymerase Chain Reaction (PCR) was performed with specific primers on the DNA material obtained from peripheral blood samples taken from the patient. The received PCR product was loaded with the fragment analysis module in the ABI 3500 DNA Sequencer, and the data was evaluated with the Gene Mapper 5 platform.

Results: As a result of the fragment analysis, the repeat ranges were found to be in the full mutant repeat range of 16 patients (34.04%) and the gray zone repeat range of 7 patients (14.89%).

Conclusions: Neuropsychiatric symptoms constitute one of the most important reasons for the burden on families and individuals. Recognizing the neuropsychiatric symptoms of Huntington's disease and intervening in these symptoms is very important for the patient and their relatives. Therefore, individuals at risk must be evaluated, and genetic counseling and a safe protocol must be established during these evaluations.

Keywords: Huntington's disease, sanger sequencing, fragment analysis



OP3 – RESULTS OF DMD GENE DELETION/DUPLICATION ANALYSIS IN DUCHENNE MUSCULAR DYSTROPHY PATIENTS: SINGLE-CENTER EXPERIENCE

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Aim: Dystrophinopathies encompass a spectrum of muscular diseases showing X-linked recessive (XLR) inheritance, including Duchenne muscular dystrophy (DMD), Becker muscular dystrophy (BMD), and dilated cardiomyopathy associated with DMD (DCM), ranging from mild to severe. DMD typically manifests in early childhood with delayed motor functions, including delays in independent walking and transitioning from a supine to standing position. BMD is characterized by later onset skeletal muscle weakness. DMD, the most common of all muscular diseases, predominantly affects male children (1 in 3500), but is rarely observed in female children. Due to mutations in the dystrophin gene, which the disease is caused by, the production of dystrophin protein is either absent or partially produced, leading to the inability of muscles to maintain their integrity and strength. The aim of our study is to investigate the relationship between the results of the DMD gene Deletion/Duplication analysis and the phenotype in patients who applied to the Genetic Diseases Assessment Center clinic with a clinical pre-diagnosis of elevated serum creatine kinase and/or hypotonia.

Methods: A total of 227 patients who presented to the Genetic Diseases Assessment Center Clinic at Trakya University Hospital between January 2012 and September 2023 with a clinical pre-diagnosis of elevated serum creatine kinase and/or hypotonia were included in the study. Genomic DNA samples obtained from the peripheral venous blood of the patients were analyzed for DMD gene Deletion/Duplication using the Multiplex Ligation-Dependent Probe Amplification (MLPA) method.

Results: Deletions in the DMD gene were detected in 23.34% of the patients (53 patients), and duplications in the DMD gene were found in 5.2% of the patients (12 patients) included in the study.

Conclusions: The literature reports that the clinical contribution of DMD gene-targeted deletion/duplication analysis is 65-80%, while DMD gene sequence analysis is reported to be 20-35%. In our study, we determined the clinical contribution of DMD gene-targeted deletion/duplication analysis as 28.5%. For patients with normal MLPA results, DMD gene sequence analysis was planned.

Keywords: Duchenne muscular dystrophy, creatine kinase, deletion, duplication, MLPA



OP4 – WHOLE EXOME SEQUENCING ANALYSIS RESULTS IN PATIENTS WITH EPILEPSY OF UNKNOWN CAUSE: SINGLE CENTER EXPERIENCE

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Aim: Epilepsy is a group of neurological diseases characterized by recurrent epileptic seizures. While epilepsy can develop due to many factors, approximately 1/3 of cases are caused by acquired diseases, and genetic factors play an important role in the remaining cases. However, in the latest International League of Against Epilepsy classification in 2017, the diseases that were called idiopathic epilepsies in the previous guide were regulated as genetic epilepsies. Among all epilepsies, genetic epilepsies are observed in approximately 20-30%. The emergence of Next Generation Sequencing has led to the redefinition of the genetic structure of epilepsies. More than 900 genes are associated with epilepsy, and new ones are added every year.

Methods: A total of 40 patients referred to our institution between January 2021 and April 2023 were included in the study. Karyotype analysis, microarray analysis results for copy number changes, and NGS-targeted panel analysis results covering a total of 202 epilepsy-related/candidate genes were found to be normal in all of these patients. The clinical diagnosis/preliminary diagnosis of the patients was idiopathic epilepsy, a history of unexplained seizures, and epilepsy with other clinical findings.. In the study, molecular genetic analysis of these patients was performed by whole exome sequencing method. 21 of the patients were male and 19 were female. The patients were pediatric and young adult patients with an age range of 1 to 20 years. 16 of the patients were referred directly and only with a diagnosis of epilepsy. 24 patients had more than one different comorbidity.

Results: Pathogenic or likely pathogenic variation was detected in 15 of the patients. Benign or likely benign variations were detected in 6 of the patients. Uncertain significance variations has detected in 19 patients. 6 out of these 19 variations were observed as de novo according to the segregation analysis results.

Conclusions: We identified pathogenic/likely pathogenic variations in 53% (21/40) of our patients with a history of epilepsy whom we included in the whole exome sequencing study. According to the results of a 40 patients with epilepsy of unknown significance and a history of epilepsy comorbidity with the clinical picture, we found 38% (15/40) of clinically supportive and descriptive analysis data. We think that whole exome sequencing tests are a necessary and important argument for a broader understanding of gene-specific phenotypic differences and similarities, along with the identification of possible candidate genes in epilepsy.

Keywords: Epilepsy, genetic epilepsy, next generation sequencing, whole exome sequencing



OP5 – INVESTIGATION OF OSTEOPROTEGERIN (OPG) T245G GENE POLYMORPHISM IN ISCHEMIC STROKE PATIENTS

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Aim: The purpose of this study; To investigate the possible role of Osteoprotegerin (OPG) T245G gene polymorphisms in the development of ischemic stroke disease in a selected patient group among patients diagnosed with ischemic stroke. Knowing the genes that are effective in the development of ischemic stroke will contribute to the development of new drugs related to this disease will provide. By determining the individual genetic predisposition to the disease, effective and protective measures can be taken in a timely manner.

Methods: The study was conducted with a total of 120 people, including a patient group of 60 people and a control group of 60 people. T245G gene polymorphisms were determined by polymerase chain reaction followed by restriction fragment length polymorphism.

Results: In terms of the clinical characteristics of the patients and group controls, planning the marriage of the OPG T245G gene polymorphism with the TT and TG alleles suggested that a significant difference was observed only for smoking and heart diseases, and that the significant difference would increase further when the magnitude of the magnitudes was expanded further.

Conclusions: Studies in the literature suggest that OPG T245G gene polymorphism is associated with ischemic although it has been found to be associated with stroke, in our study we found that OPG T245G gene polymorphism is not associated with ischemic stroke. The reason for these different characteristics of the results is; This may be due to the fact that the selection criteria of the control and patient groups are not the same, the person lives in different environmental conditions, differences in ethnicity, and the number of participants is unequal and small. If genes that are effective in the formation of ischemic stroke, which is an important health problem, are found, people at risk of having ischemic stroke will be identified and new treatment methods and systems for ischemic stroke will be developed.

Keywords: Ischemic stroke, OPG T245G gene polymorphism, osteoprotegerin T245G gene polymorphism

Acknowledgement: The study was supported by Trakya University Scientific Research Projects Unit with project number (2018/229).



OP6 – MATRIX METALLOPROTEINASE 9 RS3918242 GENE POLYMORPHISM IN TURKISH PATIENTS WITH PAPILLARY THYROID CANCER

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Aim: Papillary thyroid gland cancers constitute approximately 75% of all thyroid gland cancers. These types of cancers are mostly observed in the age range of 20 to 50, especially in women, individuals living in areas with high iodine levels, and those exposed to radiation in the neck region. Papillary thyroid cancers can be varied in types, such as follicular, macrofollicular, diffuse sclerosing, tall cell, oncocytic, columnar cell, solid, and cribriform types. Matrix metalloproteinases (MMPs) are calcium-dependent, zinc-containing proteolytic endopeptidases with a broad spectrum of activity. They are involved in the breakdown of protein molecules by hydrolyzing amino acid bonds and in the degradation of the extracellular matrix. MMP-2 and MMP-9 are found in the gelatinases group. Gelatinases have the ability to degrade the basal membrane, denatured collagen, and gelatin. MMPs have been targeted in cancer research due to their involvement in metastasis, invasion, angiogenesis, inhibition of apoptosis, and anti-tumor defense mechanisms. The MMP-9 gene, located on chromosome 20q11-q13, encodes 92-kDa collagenase IV. The functional polymorphism rs3918242 (C-1562T) is associated with increased MMP-9 levels in the promoter of MMP-9. The MMP-9 C-1562T gene polymorphism arises from the change of cytosine to thymine at the 1562nd nucleotide in the gene promoter. This study aimed to determine the frequency of MMP-9 C-1562T gene polymorphisms in patients with papillary thyroid cancer and healthy individuals in Trakya region of Türkiye, and to investigate its association with papillary thyroid cancer.

Methods: The study was conducted with a total of 290 individuals, consisting of 145 patients and 145 control subjects. DNA was isolated from blood samples obtained from individuals in the patient and control groups using the “Invitrogen™ PureLink™ Genomic DNA Mini Kit” DNA purification kit. Region containing MMP-9 C-1562T gene polymorphism with the primers we determined was amplified by Polymerase Chain Reaction technique. Genotypes were determined by restriction fragment length polymorphism analysis.

Results: As a result of this study, a statistically significant difference was observed between MMP-9 C-1562T gene polymorphism genotype distributions and allele frequency distributions with subtypes of the disease in Turkish individuals ($p < 0,05$).

Conclusions: The significant difference between MMP-9 C-1562T gene polymorphism and papillary thyroid cancer variants shows that it can provide useful information in determining the subtypes of the disease.

Key words: Papillary thyroid cancer, C-1562T, gene polymorphism, MMP-9, RS3918242

Acknowledgement: Thanks to Trakya University Scientific Research Projects Unit (TÜBAP) for supporting our study with project number TÜBAP-2021/123.



OP7 – INVESTIGATION OF MATRIX Gla PROTEIN G-7A AND T-138C GENE POLYMORPHISMS IN ISCHEMIC STROKE PATIENTS

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Aim: Cerebrovascular diseases have a heterogeneous structure. They typically manifest clinically as an acute neurological deficit, also known as a stroke. A stroke occurs when the blood flow to the brain is interrupted or damaged due to the blockage or rupture of blood vessels. Ischemic strokes make up 85% of all strokes. The accumulation of calcium salts in the arterial walls is an important event in the development of ischemic strokes. Among the factors involved in vascular calcification, Matrix Gla Protein (MGP), a representative of the protein group that is a natural inhibitor of soft tissue mineralization and is dependent on vitamin K, is significant. The aim of this study is to investigate the relationship between the polymorphisms G-7A and T-138C in the MGP gene and the ischemic stroke disease.

Methods: According to the statistical analysis determined in our study there were 52 ischemic stroke patients as the patient group and 60 people without neurological diseases as the control group. MGP G-7A and T-138C gene polymorphisms were determined by polymerase chain reaction followed by restriction fragment length polymorphism.

Results: As a result of our study, no statistically or clinically significant difference was found for the MGP gene polymorphism G-7A. However, for T-138C, while there was no statistical significance, clinically meaningful results were found.

Conclusions: As a result, the values obtained in the study indicate that the MGP G-7A gene polymorphism has no effect on ischemic stroke. For the MGP T-138C gene polymorphism, the p-value being close to 0.05 suggests that in more comprehensive studies, a statistically significant value could be found, demonstrating a potential association between this gene polymorphism and ischemic stroke disease.

Keywords: Ischemic stroke, MGP G-7A gene polymorphism, MGP T-138C gene polymorphism

Acknowledgement: The study was supported by Trakya University Scientific Research Projects Unit with project number (2019/65).



OP8 – INVESTIGATION OF CYP2C19 GENE POLYMORPHISM IN ISCHEMIC STROKE PATIENTS

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Aim: Stroke, which has emerged as a major health problem, is an important cause of morbidity and mortality. A high proportion of strokes have an ischemic nature for which well-known risk factors as hypertension, hyperlipidemia, diabetes mellitus, ischemic heart disease, atrial fibrillation and smoking. Ischemic strokes occur as a result of an obstruction within a blood vessel supplying blood to brain. Strong evidence from epidemiological studies have implicated genetic influences in the pathogenesis of ischemic stroke. The aim of our study is to investigate the possibility of genetic risk factor of the CYP2C19 gene polymorphism in ischemic stroke disease.

Methods: Our study include 60 patients with ischemic stroke for patient group and 60 subjects without neurological disease for control group. The CYP2C19 gene polymorphism was identified using polymerase chain reaction and subsequent to restriction fragment length polymorphism methods.

Results: Statistically, no significant difference was found between the patient and control groups in terms of CYP2C19 gene polymorphism genotypes ($p>0.05$). There was no observed significant difference in the comparison of CYP2C19 gene polymorphism genotype distributions of patient subgroups in women and men ($p>0.05$). there was no found significant difference in the comparison of clinical findings and CYP2C19 gene polymorphisms for patient and control groups ($p>0.05$).

Conclusions: Consequence of our study, we found that CYP2C19 gene polymorphism isn't a genetic risk factor in ischemic disease.

Keywords: CYP2C19, cytochrome p450, ischemic stroke, polymorphism, rs4244285

Acknowledgement: The project was funded by Trakya University, TUBAP No: 2019/21



OP9 – ASSOCIATION OF VITAMIN D RECEPTOR GENE POLYMORPHISM (rs1544410) AND CHRONIC PERIODONTITIS

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Aim: Chronic Periodontitis is a disease triggered by accumulation of bacterial plaque on the tooth and surrounding gingival surfaces, leading to a chronic inflammatory response of the periodontium. It has been reported that the bacterial content rather than the number of bacteria is causative factor and that changes in the host response affect severity of the disease. Any gene alteration in the receptor responsible for vitamin D leads to decreased calcium production and thus increased osteoclast activity, bone loss and periodontal disease. This study aims to provide an opportunity to elucidate the pathogenesis of periodontitis, which is very common in our society, and to pave the way for cause-oriented treatments and to provide literature information.

Methods: A case-control study was conducted to investigate the association of Vitamin D Receptor (BsmI) gene polymorphism with periodontal disease. Periodontitis patient (n=60) and control (n=60) were randomly selected from patients attending a dental clinic. Approximately 1.5 ml saliva sample was taken from the volunteers and placed in DNA stabilization and lysis buffer prepared as 2 ml in 15 ml falcon tubes. DNA isolation from saliva followed the kit protocols. Their DNA was analyzed using Polymerase Chain Reaction and *BsmI* restriction endonuclease digestion methods.

Results: There was no significant difference in the genotype distribution or the allele frequency of VDR BsmI, between the two groups. Statistically significant differences were found in education and tooth-brushing habit between control and patient groups (P <0.05).

Conclusions: BsmI polymorphism of VDR gene is no associated with clinical attachment loss due to periodontal disease in Turkish population. How VDR gene polymorphisms influence the susceptibility to severe periodontitis deserves further exploration.

Keywords: Periodontitis, BsmI, VDR, polymorphism, rs1544410

OP10 – INVESTIGATION OF THE EFFECT OF MMP-2 (-1306 C/T) GENE VARIATION IN THE DEVELOPMENT OF PEYRONIE'S DISEASE

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Aim: Peyronie's Disease is a fibrotic disease of the tunica albuginea and is characterized by the localized formation of an inelastic plaque. Excessive extracellular matrix accumulation is an important factor in fibrotic pathological conditions such as Peyronie's Disease. During fibrosis, matrix metalloproteinase-dependent functions not only affect extracellular matrix cycle, but also proliferation, gene expression and inflammation. Therefore, it is thought that genetic variations such as MMP-2 gene variations may be effective in the development of Peyronie's Disease. In this study, it is aimed to investigate the roles of MMP-2 (-1306 C/T) gene variations in the development of Peyronie's Disease.

Methods: This study was performed with 54 patients diagnosed with Peyronie's Disease and 64 healthy controls. Those diagnosed with any malignancy or blood clotting disorders were not included in our study. Polymerase chain reaction and restriction fragment length polymorphism methods were used to determine the genotype distributions of MMP-2 (-1306 C/T) gene variation.

Results: The significant difference was determined between the patients diagnosed with Peyronie's Disease and controls in terms of genotype distribution of MMP-2 (-1306 C/T) gene variation ($p=0.0004$). Between these groups, the odds ratio for the homozygous wild CC genotype was determined as 0.4575 (95% CI: 0.218-0.960; $p=0.019$). The odds ratio for the CT heterozygous genotype was found as 1.1692 (95% CI: 0.562-2.433; $p=0.338$). The odds ratio for the homozygous mutant TT genotype was determined as 7.0455 (95% CI: 1.471-33.749; $p=0.007$).

Conclusions: In this study, while the homozygous mutant TT genotype of the MMP-2 (-1306 C/T) gene variation has been determined as a genetic risk factor for the development of Peyronie's Disease, the homozygous wild CC genotype was determined as a protective factor for the development of Peyronie's Disease.

Keywords: Peyronie's disease, matrix metalloproteinase, MMP-2 (-1306 C/T) gene variation, polymerase chain reaction, restriction fragment length polymorphism



OP11 – INVESTIGATION of ANTIGEN B GENE POLYMORPHISM of *Echinococcus granulosus*

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Aim: The aim of this study was to genotyp human hydatid cyst materials and investigate antigenic polymorphism in different isolates and to correlate them with genotype.

Methods: For the characterization of 101 hydatid cyst materials, the 12S rRNA gene region was amplified by PCR method, and the results of sequence analysis of mitochondrial CO1 and ND1 gene regions of the selected samples were used. EgAgB1, EgAgB2, and EgAgB4 gene regions were analyzed by PCR-SSCP method to detect polymorphism in EgAgB gene.

Results: Our study shows that the common genotype in Edirne is still G1. Additionally, antigen B polymorphism was also investigated in this study; The presence of polymorphism was detected in all three subunits investigated: EgAgB1, EgAgB2 and EgAgB4.

Conclusions: This study is the first study on EgAgB4 polymorphism in our country and also detected the existence of EgAgB4 polymorphism. We think that the current study will contribute to hydatid disease control and eradication programs.

Keywords: *Echinococcus granulosus*, genotype, antigen B, polymorphism, sequence analysis

Acknowledgement: This study was carried out with the support of Trakya University Scientific Research Projects Commission (TUBAP) project number 2021/159.

OP12 – EFFECTS OF *Lucilia sericata* LARVAL SECRETION ON *Echinococcus granulosus*

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Aim: In this study, we aim to determine the anti-parasitic effect and DNA damage of the larval excretions/secretions of *Lucilia sericata* against *Echinococcus granulosus* protoscoleces.

Methods: *Echinococcus granulosus* protoscoleces were obtained from hydatid cysts detected in post-mortem sheep at the slaughterhouse. *Lucilia sericata* larvae were obtained from Istanbul-Cerrahpasa University. Protoscoleces were cultured and various concentrations of *Lucilia sericata* larval excretions/secretions (1/1, 1/2, 1/4) were applied to the protoscoleces and albendazole was used as a positive control in concentration of 20 µg/ml. Viability of protoscoleces was determined via eosin dye test. Comet test was performed to determine DNA damage. Expression of EgATM, EgRad9 and EgTopo2a genes was analyzed via Quantitative Real Time Polymerase Chain Reaction.

Results: The viability of the control group was 94%. Compared to the control group, the viability of larval excretions/secretions-treated protoscoleces was 73% for 1/1 dilution, 80% for 1/2 dilution and 88% for 1/4 dilution, respectively. As a result of the Comet test, larval excretions/secretions significantly ($p < 0.05$) increased DNA damage in *Echinococcus granulosus*. When the Comet test results were evaluated from Grade 0 (no damage) to 4 (very high damage) with a visual scoring diagram, the mean damage level of the larval excretions/secretions 1/1 dilution was 4, while the mean damage level of the control group was 0.

According to Quantitative Real Time Polymerase Chain Reaction results, this approach resulted in significant ($p < 0.05$) upregulation of genes expression, and was significantly higher compared with control groups. Larval excretions/secretions of 1/1 dilution increased ATM and Rad9 gene expression by 3.2-fold and Topo2a gene expression by 2.2-fold compared to the control groups.

Conclusions: These data show that larval excretions/secretions treatment, enhances DNA damage in *Echinococcus granulosus* via upregulation of EgATM, EgRad9 and EgTopo2a genes.

Keywords: *Echinococcus granulosus*, *Lucilia sericata*, DNA damage, comet assay, gene expression

Acknowledgement: This study was carried out with the support of Trakya University Scientific Research Projects Commission (TUBAP) project number 2022/26.



OP13 – SIMPLE DNA ISOLATION METHOD FROM BACTERIAL COLONY DNA FOR SYBR-GREEN AND PROB-HYBRIDIZATION PCR METHODS

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Aim: The present study aims to obtain simple, economical, and useful DNA from gram-negative bacteria to use in Sybr-Green and Probe-hybridization PCR.

Methods: Bacterial suspensions were obtained by diluting the isolates, which were cultured on broth medium and agars containing blood and Eosin-Methylene Blue (EMB) after 16 hours of incubation at 37°C using *K. pneumoniae* reference strains, in 3ml distilled water at 0.5, 1, 2, and 3 McFarland turbidity levels. Using this suspension, 100 µl of bacterial suspension was transferred to a 1 ml sterile tube. The tubes were placed in a heat block and then incubated at 100°C for 15 minutes. The supernatant was transferred to a new sterile PCR tube after the centrifugation process that was performed at approximately 3500 X g for 3 minutes in a mini centrifuge. Simultaneously, a commercial bacterial isolation kit was also used for the same isolates in accordance with the manufacturer's instructions. Nanodrop DNA measurements and Sybr-Green and Probe-Hybridization PCR were conducted for all samples.

Results: Although DNA purity varies between 1.0 and 1.8, it has been determined that DNA isolation by boiling method is between 2.5 and 10 times more sensitive than the kit, and higher concentrations of DNA are obtained.

Conclusions: In conclusion, the boiling method is a simple, fast, and cost-effective method for Gram-negative bacterial DNA isolation, and it can be safely used for Sybr-Green and Probe Hybridization PCR.

Keywords: DNA isolation, gr (-) bacteria, boiling method



OP14 – IN VITRO ANTIBACTERIAL ACTIVITY OF SOME COMMERCIAL ESSENTIAL OILS AGAINST *Pseudomonas aeruginosa*

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Aim: *Pseudomonas aeruginosa* is an important nosocomial pathogen that can be isolated from environmental sources, primarily freshwater and soil, and rarely from skin microbiota. Resistance to antibiotics and even multidrug (MDR) is increasing worldwide. This species can acquire natural resistance to many classes of drugs and all related treatments. Besides antimicrobial resistance (AMR), biofilm formation is another important factor that increases the virulence of bacteria. AMR particularly complicates the management of pathogenic bacteria. One of the potential options for new antimicrobial agents against increasing AMR is plants. Essential oils (EO) from plants have been used in folk medicine to treat diseases for many years. Therefore, this study investigated the in vitro antibacterial activity of 19 commercial essential oils against *P. aeruginosa*.

Methods: Antibacterial activity was evaluated against *P. aeruginosa* (Schroeter) Migula ATCC 10145 and ATCC 27853 by agar well diffusion method. The analysis was carried out in three parallels. Results are given as mean (M) ± standard deviation (SD).

Results: The antibacterial activity of 11 (*Anemone apennina* EO, Adiyaman mint oil, moss fixed oil, *Citrus sinensis* fixed oil, *Allium sativum* oil, *Lavandula angustifolia* EO, *L. stoechas* EO, *Jasminum* sp. EO and *Viola odorata* EO from 3 different companies) of the 18 oils tested could not be determined. Toros mint oil, *Cinnamomum* sp. and *Mentha piperita* EO were 7.38±0.52, 11.00±0.76, and 13.63±1.60 mm, respectively, against 10145, and it gave inhibition zones of 13.63±1.06, 12.50±1.07, and 16.38±1.30 mm against 27853. While the antibacterial activity of one of the *Jasminum* sp. oils belonging to two companies could not be determined, the *J. officinale* flower oil containing propylene glycol had an antibacterial activity of 15.50±0.93 mm against 14053 and 7.13±0.35 mm against 27853. It was determined that *Citrus limon* seed and *C. limon* EO gave an inhibition zone of 15.56±0.98 and 22.25±1.67 mm, respectively, against 10145 and 15.00±0.76 and 23.88±0.99 mm, against 27853. When the levofloxacin (5µg) antibiotic disk was used as a positive control in the study, it gave 39.89±1.60 and 40.52±0.82 mm inhibition zones against 10145 and 27853, respectively, Thymus sp. EO gave 38.50±2.73 and 44.75±1.67 inhibition zones, respectively.

Conclusions: The effectiveness of *Thymus* sp. EO against *P. aeruginosa* is important and indicates that it can be used for treatment. In addition, it is observed that the antibacterial activity is different due to the same oil being produced by different companies. For this reason, the importance of determining the chemical composition of oils in studies on antimicrobial activity has been emphasised again.

Keywords: *Pseudomonas aeruginosa*, essential oil, fixed oil, antibacterial activity.

Acknowledgement: This study was carried out in the laboratory prepared within the project scope coded TÜBİTAK 122Z256.



OP15 – DISTRIBUTION OF VIROLOGICAL FACTORS IN PATIENTS DIAGNOSED WITH HEPATITIS

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Aim: Non-A-E hepatitis is an acute disease of the liver with one or more viral etiological agents. Many viruses can fall into this group. In addition, Hepatitis B virus is still the most common factor in the diagnosis of hepatitis. This study aims to draw attention to the need to consider the possibility of non-A-E factors in diagnosing hepatitis and routine virological factors.

Methods: In this study, a retrospective file review of patients diagnosed with Hepatitis was conducted by the University's IT subunit between March 2020 and July 2022. This study was approved by the University's Ethics Committee (protocol code: 17/04-29.08.2022)

Results: In the examination of the patients, it was seen that 917 (90%) were HBV positive, 24 (2%) were Anti-HCV positive, and 20 (2%) were the babies of HBV-positive mothers. The rest were positive in low numbers. 43 of them constituted the group that was diagnosed with hepatitis, but no viral agent was found in their etiology.

Conclusion: HBV is still one of the leading causes of hepatitis in society. Nowadays, new viruses can cause hepatitis. Therefore, in patients diagnosed with Hepatitis, a standard serological request followed by a classical routine virological request is essential to rule out the diseases to which the patient is exposed in the first place. It is necessary to investigate other virological agents that will be requested later (CM, EBV, Adenovirus, etc.) and if there is no positivity in these factors, to investigate the possible virological agent with DNA sequence analysis in terms of isolating the underlying agent.

Keywords: Etiology, hepatitis B, hepatitis C, non-A-E hepatitis



OP16 – CONGENITAL ANOMALIES OF THE KIDNEYS

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Introduction: The kidney is a red-brown parenchymatous organ located retroperitoneally in both upper abdomen regions, with urine production, fluid-electrolyte balance maintenance and endocrine functions. Kidneys develop from intermediate mesoderm in fetal life. During development, the kidneys rise upward from the pelvis and different generations of renal arteries develop. The hilum of the kidneys also makes a 90-degree turn and is directed from ventral to medial. Congenital anomalies of the kidneys are embryonic disorders that arise during development and result in a spectrum of defects in the kidneys. Kidney development occurs through a complex arrangement of a network of pathways, signals, and effectors of various lengths. Defect in any of the signaling activities can cause the kidney to fail to form (renal agenesis) or differentiate abnormally (renal dysgenesis). Dysgenesis of the kidney includes aplasia, dysplasia, hypoplasia, and some renal cystic diseases. Congenital anomalies of the kidney cause problems that progress to end-stage renal failure. Worldwide, congenital anomalies of the kidney and urinary tract are responsible for 40%-50% of end-stage renal disease in the pediatric age group and 7% in adults. In addition to laboratory tests, imaging tests are also used in the diagnosis of these diseases. Knowing the etiology of congenital anomalies of the kidney and their differences from the normal morphological kidney structure is important during the diagnosis, treatment and follow-up of these diseases.

Methods: Anatomy, nephrology, pediatric nephrology and pediatric surgery textbooks related to congenital kidney anomalies were reviewed. Articles from the last 5 years were scanned by searching "congenital kidney anomalies" on Pubmed and Google Scholar. The identified articles were examined. Congenital kidney anomalies are defined in the literature as number anomalies (e.g. agenesis, multiple kidneys), size and morphological anomalies (e.g. hypoplasia, dysplasia, multicystic dysplastic kidney), position anomalies (e.g. horseshoe kidney, ectopic kidney, malrotation). It is also classified as. According to this classification, the anatomical and morphological features of congenital kidney anomalies were examined.

Conclusion: Although some of congenital kidney anomalies are asymptomatic, they have serious consequences that can progress to end-stage renal failure. In this respect, having knowledge about etylogy, anatomy, pathophysiology and consequences of congenital kidney anomalies will contribute to preclinical and clinical studies.

Keywords: Kidney, anomalies, malformations, diseases



OP17 – CORONARY ARTERY ANOMALIES

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Introduction: The right and left coronary arteries arise from the aortic sinuses in the proximal part of the ascending aorta. Coronary artery anomalies can be grouped according to the origin of the coronary artery, its course or intrinsic coronary artery anatomy, and coronary artery termination anomalies.

The origin of the left main coronary artery or left ascending artery (LAD) from the right sinus of valsalva or the right coronary artery (RCA) is called anomalous aortic origin of the coronary artery. Abnormal termination of the coronary artery is essentially known as coronary artery fistula. Abnormal course of coronary arteries can be intramural, intraarterial, prepulmonic, subpulmonic, retro aortic and retrocardiac.

Coronary artery anomalies are generally detected incidentally during coronary angiography, coronary CT angiography and autopsy. It affects 0.3-5.6% of the general population. These variations are usually clinically silent, but may sometimes be associated with sudden cardiac death or myocardial infarction. It also causes difficulties during coronary intervention and cardiac surgery. Coronary artery anomaly has been reported as the second most common cause of sudden cardiac death in young adults. In this study we aimed to compile literature information on coronary artery anomalies.

Methods: Anatomy and embryology textbooks related to coronary artery anomalies were reviewed.

Conclusions: The clinical importance of coronary arteries lies in their critical role in providing oxygen and nutrients to the myocardium. These blood vessels keep the heart functioning properly, and any problems with the coronary arteries can have significant clinical implications. Awareness of these variations is crucial so that healthcare providers can achieve accurate diagnosis, appropriate treatment, and successful outcomes for individuals with these variations.

Keywords: Coronary artery, anomalies, heart disease



OP18 – THE CRANIAL NERVE THAT IS BEFORE FIRST CRANIAL NERVE

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Introduction: Galen was the first to mention cranial nerves in ancient times. 12 cranial pairs have been described in modern medical sources. In 1878, a new one was added to the cranial nerves by Gustav Fritsch. Cranial Nerve zero, whose existence was proven in many vertebrates, human embryos and adult human brains in later years, has been referred to by many terms such as nerve terminalis, new nerve, cranial nerve nulla and cranial nerve 13. The fibers of this nerve begin in the nasal mucosa and pass through the cribriform layer of the ethmoid bone, medial to the phyla olfactory, and reach the cranium. It reaches the trigonum olfactorius of the telencephalon and then reaches the preoptic and precommissural regions. According to previous studies, it facilitates the migration of luteinizing hormone-releasing cells to the hypothalamus, thus participating in the development of the hypothalamic-gonadal axis, playing a role in human reproductive behavior and making its pheromones more easily detectable. It has been associated with Kallman Syndrome, which results in hypogonadism and anosmia due to a disruption in this migration. It was thought that the COVID-19 virus, which recently caused a worldwide pandemic, reached the brain through the olfactory nerve. But it was observed that angiotensin converting enzyme 2 (ACE2), an obligatory virus entry receptor, was not expressed in olfactory receptor neurons. Whereas there have been studies showing that the majority of nerve terminalis neurons express ACE2 and therefore they might be an alternative way for the COVID-19 virus to reach the brain.

Methods: The 'cranial nerve' chapters of anatomy, histology and embryology books used in classical medical education were examined. The keywords 'cranial nerve zero', 'cranial nerve 0', 'terminal nerve' 'cranial nerve 13' were searched in the Pubmed database. In addition to descriptive studies on cranial nerve zero, literature data investigating its clinical significance in humans were reviewed.

Conclusion: Although its existence has been known for a century, cranial nerve zero is not mentioned in widely used medical sources. Knowledge of its anatomical location may reduce the possibility of damage in surgical interventions related to sphenoidotomy, pituitary gland and skull base in this region. More detailed investigation of the structure and function of cranial nerve zero, about which very few studies have been conducted, may also contribute to the understanding of the pathophysiology of infectious diseases such as COVID-19.

Keywords: Cranial nerve zero, terminal nerve, Kallmann syndrome, COVID-19



OP19 – THE PHYSIOLOGY AND ANATOMY OF THE CHAPMAN REFLEX POINTS

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Introduction: Chapman reflex points, an essential component of osteopathic medicine, have been used as diagnostic and therapeutic tools for over a century. First described by Dr. Frank Chapman in the early 1920s, these reflex points are thought to indicate underlying visceral dysfunction. In this presentation, we provide a comprehensive overview of the physiology and anatomy of Chapman's reflex points and highlight their importance in contemporary medical practice.

Methods: We performed a systematic search of PubMed/MEDLINE, EMBASE, Scopus, ScienceDirect, Web of Science, SciELO, Springerlink, WILEY, Google Scholar, and BIREME databases. Thirty-two relevant studies on Chapman points were found. The following search terms were used: (Chapman points) AND [physiology] AND [anatomy]. No conditions were applied regarding the date, language, type of article, and/or availability of text. An additional search for references from the screened studies was then performed.

Conclusion: The Chapman reflex points, which originated in the work of Dr. Frank Chapman, have become an integral part of osteopathic medicine. Understanding their physiology and anatomy is of paramount importance to physicians, providing them with diagnostic and therapeutic tools to treat visceral dysfunction. This comprehensive review highlights Chapman reflex points' historical importance, anatomical basis, and physiological mechanisms and emphasizes their continued relevance in contemporary medicine. Further exploration of these reflex points and their clinical applications may prove promising in improving patient outcomes and expanding the scope of osteopathic treatment.

Keywords: Osteopathic, medicine, neurolymphatic, viscera, dysfunction



OP20 – MORPHOLOGICAL CHANGES IN LIMBIC STRUCTURES IN PARKINSON'S DISEASE

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Aim: Parkinson's disease (PD) is a common neurological disorder diagnosed with motor and non-motor symptoms due to the degeneration of dopaminergic neurons located in the substantia nigra pars compacta. It has been determined that non-motor symptoms appear before the onset of motor symptoms of the disease and stronger markers are needed for definitive diagnosis to apply treatments that can slow or stop neurodegeneration during this period, which is considered as the prodromal phase. In our study, volumetric changes in limbic parts of the brain of control, prodromal and PD individuals will be analyzed to investigate markers that may help the diagnosis.

Methods: In the study, 3 Tesla three-dimensional magnetic resonance images of 269 people with neurological diagnoses (68 control, 86 prodromal and 115 PD) were automatically measured using an online volumetric measurement tool. The data obtained were statistically analyzed and compared between groups.

Results: According to the data obtained, while no significant difference was observed between the groups in females ($p>0.05$), significant differences were observed in the left entorhinal cortex, posterior part of the right and left cingulate gyrus, right and left parahippocampal gyrus, right and left anterior insular cortices and both insular cortices in males ($p<0.05$). Accordingly, a significant difference was observed only in limbic structures in males. This change was generally a significant decrease in prodromal patients compared to control, and a small, non-significant increase after Parkinson's diagnosis compared to control.

Conclusions: Parkinson's disease has significant effects on the motor as well as non-motor (cognitive and behavioral) functions of patients. It is of great importance to reveal the relationship between the non-motor symptoms of the disease and the developmental process of the disease for the design and planning of diagnosis and treatment processes. In this context, in our study, significant parameters related to different stages of Parkinson's disease were found especially in males.

Keywords: Parkinson's, prodromal, limbic system, volumetric examination



OP21 – INVESTIGATING VOLUMETRIC CHANGES OF CEREBELLUM IN PATIENTS WITH PARKINSON'S DISEASE

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Aim: Parkinson's disease (PD) is a progressive neurological disorder resulting from the degeneration of dopaminergic neurons in the substantia nigra pars compacta, causing both motor and non-motor symptoms. The period in which non-motor symptoms manifest long before the definitive diagnosis of the disease is known as the prodromal phase. Identifying biomarkers specific to this phase is crucial for potentially slowing down or halting neurodegeneration through interventions. The cerebellum, as the part of the central nervous system with the highest concentration of neurons, plays a significant role in motor movements, balance, and cognitive functions.

Our study aims to investigate various volumetric changes in the cerebellum of individuals classified into control, prodromal, and PD diagnosis groups. The objective is to explore potential markers that can assist in diagnosis.

Methods: We employed online volumetric measurements using 3 Tesla three-dimensional magnetic resonance imaging in 269 individuals with neurological diagnoses (68 controls, 86 prodromal, and 115 PD). Volumes of the total cerebellum, cerebellar hemispheres, vermis, vermal lobules, gray matter, and white matter were measured.

Results: The obtained data were statistically analyzed for group comparisons. The results indicated a significant difference in vermal lobules I-V between the PD and control groups ($p < 0.05$). While no significant differences were observed between the prodromal and control groups, several significant differences were identified between the PD and prodromal groups concerning right-left cerebellar hemispheres, total cerebellar volume, left white matter, and both gray matter volumes.

The correlation analysis revealed that, in the prodromal group, the statistically significant relationship observed in cerebellar hemispheres and total cerebellum volume between the control and PD groups, based on age, was not present. Additionally, a correlation with age in gray matter was observed in the PD group.

Conclusions: Parkinson's disease has been reported to significantly affect not only motor functions but also non-motor (cognitive and behavioral) functions. Understanding the relationship between the non-motor symptoms of the disease and its developmental process is of great importance for designing and planning diagnostic and treatment processes.

Keywords: Parkinson's disease, cerebellum, prodromal, volumetric investigation



OP22 – THE EFFECT OF DIFFERENT EXERCISE TYPES ON SESTRIN1/2/3 LEVELS IN RATS ON CHRONIC SLEEP RESTRICTION

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Aim: Sleep, which regulates key molecular mechanisms, and exercise, which has been shown to improve metabolic fitness, are thought to be interrelated. No previous study investigated the relationship between sleep and sestrin proteins, which play a key role in cellular stress responses and the positive effects of exercise. In this study, it was aimed to investigate the effects of aerobic and resistance exercises, alone or together, on the levels of sestrin1/2/3 protein and gene expression in skeletal muscle in the background of chronic sleep restriction.

Methods: After ethical approval, skeletal muscle and serum tissues obtained from the study titled "Effect of Aerobic and/or Resistance Exercise on Blood-Glucose Homeostasis Disorders Due to Chronic Sleep Restriction" were used. Thirty-four Sprague-Dawley rats were randomly divided into five groups (control, sedentary, aerobic exercise, resistance exercise; combined exercises). The control group maintained regular sleep. Chronic REM sleep restriction was applied to all groups except the control group (8 weeks). Aerobic exercise comprised of swimming (8week/3days/30min) whereas resistance exercise involved climbing a vertical ladder (8weeks/3days/3setsx5repetitions). Combined exercise group performed both aerobic and resistance exercise protocols. Sestrin1/2/3 protein levels in skeletal muscle tissues and serum were determined using commercial ELISA kits; expression levels of the Sestrin1/2/3 gene in skeletal muscle tissue were determined by real-time PCR. One-Way ANOVA and Tukey test were used in statistical analysis and $p < 0.05$ was considered significant.

Results: Skeletal muscle sestrin1 and sestrin3 protein levels were found to be higher in the sedentary group than in the control group ($p < 0.01$, $p < 0.05$ respectively). Sestrin1 and sestrin3 protein levels were lower in the combined exercise group compared to the sedentary group ($p < 0.01$, $p < 0.05$ respectively). Sestrin1/2/3 gene expressions did not differ between groups. While serum sestrin3 protein levels were similar in the control and sedentary groups, they were found to be higher in the combined exercise group compared to the control and sedentary groups ($p < 0.01$, $p < 0.05$ respectively). Similarly, serum sestrin3 levels were higher in the resistance exercise group compared to the control and sedentary groups ($p < 0.01$, $p < 0.05$ respectively). Serum sestrin1 and sestrin2 levels did not differ between groups.

Conclusions: Chronic sleep restriction appears to be a stressor that can increase sestrin1 and sestrin3 levels in skeletal muscle. The elevated levels of sestrin1 and sestrin3 proteins that occur in skeletal muscle with chronic sleep restriction were regulated by combined exercise application and became similar to animals sleeping normally.

Keywords: Aerobic exercise, resistance exercise, sestrins, skeletal muscle, sleep restriction

Acknowledgement: This study was funded by Trakya University Scientific Research Projects Unit (TÜBAP 2023/99).



OP23 – THE ROLE OF NECROPTOSIS IN EXPERIMENTAL MYOGLOBINURIC ACUTE KIDNEY INJURY

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Aim: In our study, we aimed to investigate the effects of necroptosis on biochemical and histopathological parameters in myoglobinuric acute kidney injury and the relationship of these effects with oxidative stress biomarkers.

Methods: A total of 32 rats were used in our study. Rats were divided into 4 groups, 8 in each group. Physiological serum injections were given to the control and NEC groups, and glycerol injections to the other groups. One hour after the intramuscular injections, dimethyl sulfoxide was given to the control and AKI groups, and necrostatin-1 was given intraperitoneally to the NEC and AKI+NEC groups. RIPK1, RIPK3, MLKL, TNF alpha, NLRP3, malondialdehyde, glutathione levels and histopathological changes in kidney tissue; serum urea, creatinine, and sodium levels; The creatinine and sodium levels in the urine were analyzed. One-Way Analysis of Variance (ANOVA) was used for statistical analysis and Tukey test was used for comparisons between groups.

Results: A significant increase was observed in serum creatinine and urea levels in all glycerol administered groups compared to the control group, while a decrease was observed in urine sodium and creatinine levels. Necrostatin-1 administered groups showed a decrease in RIPK1, RIPK3, NLRP3 levels in kidney tissue. When compared to the control group, tubular necrosis of varying severity and cast deposition, cortical peritubular edema and brush border loss were observed in the glycerol-treated groups. It was observed that Nec-1 administration did not change glycerol-induced histopathological damage in the kidney.

Conclusions: Our study data have shown that necrostatin-1 administration in myoglobinuric acute kidney injury has negative effects on kidney functions. It was thought that these effects might have occurred depending on dose selection and/or stimulation of other cell death mechanisms.

Keywords: Myoglobinuric acute kidney injury, rhabdomyolysis, necroptosis, necrostatin-1, oxidative stress

Acknowledgement: This study was financially supported by Trakya University Scientific Research Projects (TÜBAP 2021/60).



OP24 – EFFECT OF GALLIC ACID ON LIPOPOLYSACCHARIDE-INDUCED LIVER DAMAGE

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Aim: Acute liver failure is a rare syndrome characterized by rapid deterioration of normal liver function following an acute event. Our aim was to evaluate the effect of gallic acid against acute liver injury triggered by lipopolysaccharide histopathologically and immunohistochemically.

Methods: Thirty two Sprague Dawley, 2.5-3 month old male rats were divided into four groups. Control group (n = 8); physiological saline (SF) 3 ml/kg and gallic acid (GA) group (n=8); GA was dissolved in SF and given by gavage at 100 mg/kg for 14 days. In the Lipopolysaccharide (LPS) group (n=8): LPS 5 mg/kg as a single dose intraperitoneal route (ip) on the 11th day. In the Lipopolysaccharide + Gallic acid (LPS+GA) group (n=8); GA was given 100 mg/kg dissolved in saline by gavage for 14 days, and additionally LPS 5 mg/kg was given by ip as a single dose on the 11th day. Liver tissues were taken from our animals by sacrifice 72 hours after lipopolysaccharide injection. Hematoxylin and eosin (H+E) staining was performed for histopathological evaluation. H+E stained sections were classified under the light microscope in order to determine the severity of damage. According to this classification; sections were scored from 0 to 4 for congestion, vacuolization of hepatocyte cytoplasm, and parenchymal necrosis. A score of 0 was given if there was no evidence of necrosis, congestion, or centrilobular vacuolization, and a score of 4 was given for severe obstruction, vacuolization, and >60% lobular necrosis. Interleukin 6 (IL6) immunoreactivity was evaluated to show its effect on inflammation.

Results: When the control and GA groups were evaluated histopathologically, hepatocytes were seen to be in normal organization. Congestion, vacuolization of hepatocytes, and necrosis findings were observed in the LPS group. According to the Suzuki score, it was found that the total score increased significantly compared to the control and GA groups (p <0.05). In the LPS+GA group, an improvement in histopathological findings and a significant decrease in Suzuki total score were observed (p<0.05). When IL6 immunoreactivity was evaluated for inflammation, it was found that there was a significant increase in the LPS groups compared to the control and GA groups (p<0.001). On the other hand, there was a significant decrease in IL6 immunoreactivity in the LPS+GA group compared to the LPS group.

Conclusions: The present study suggest that gallic acid may help prevent LPS-induced liver damage with its anti-inflammatory effect by suppressing IL6.

Keywords: Lipopolysaccharide, acute liver damage, inflammation, interleukin-6

Acknowledgement: This study was supported by Trakya University Scientific Research Projects (TÜBAP 2022/125).



OP25 – DISCUSSING THE EFFECTIVENESS OF ASPROSIN HORMONE IN EXERCISE AND CARDIOVASCULAR DISEASES WITH CURRENT LITERATURE

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Introduction: Asprosin is a hunger-sensitive protein hormone that induces hepatic glucose release in the liver and hypothalamic appetite stimulation via intracellular signaling pathways. This hormone was discovered in 2016. It was discovered by and determined that this hormone has an important regulatory role in glucose homeostasis. Although asprosin is defined as a glucogenic hormone secreted from adipose tissue and induced by fasting and increased hepatic glucose production, it is an orexigenic hormone that causes an increase in food consumption and body weight. Asprosin is expressed in a lot of organs in different levels and it's serum level has an effective role in cardiovascular disease and exercise which are the most common disease and sportive activity in this era.

The new adipokine, which is asprosin influences exercise metabolism by influencing glucose secretion to the blood stream. Aerobic exercise more greatly decreased serum asprosin, in obese people compared to normal weights. Also, aerobic exercise training affects hepatic asprosin secretion. On the other hand, the single anaerobic effort induced an increase in asprosin level. In diabetic rats, aerobic exercise training could decrease the circulating asprosin significantly. These outcomes are clearly revealing that circulating serum asprosin level might be regulated by different types of exercises.

Morover, patients who have cardiovascular disease have pathologically higher asprosin levels This outcome indicates a strong link between asprosin and cardiovascular disease. Researchers, in 2018 and 2020, respectively, identified that asprosin is a potential biomarker to predict coronary pathology in angina pectoris and dilated cardiomyopathy patients. It's also defined that asprosin might also predict the severity of pathology for coronary heart diseases.

Methods: The current data dealing with the asprosin relationship between the exercise and cardiovascular disease are carefully surveyed and outcomes are collected in this review.

Conclusion: The actual outcomes we have shows that asprosin appears to be a promising therapeutic target for cardiovascular disorders and asprosin level might be regulated by exercise.

Keywords: Asprosin, exercise, cardiavasular diseases, current literature



OP26 – HORMONE THERAPY IN PREMENOPAUSAL BREAST CANCER PATIENTS: THE PREVALENCE OF URINARY INCONTINENCE AND PRECIPITATING FACTORS

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Aim: The aim of this study is to investigate the prevalence of urinary incontinence and precipitating factors in premenopausal women undergoing adjuvant hormone therapy due to breast cancer. Additionally, the study aims to compare urinary incontinence between tamoxifen and aromatase inhibitors used as hormone therapy.

Methods: This study included premenopausal breast cancer patients aged ≤ 50 years who were receiving Tamoxifen (with or without LHRH) or an Aromatase inhibitor (with LHRH) for at least 6 months. Demographic data of all patients, including age, body mass index (BMI), gravida, parity, comorbidities, other medications, stage, and types of chemotherapy, were obtained through face-to-face interviews and from the hospital's electronic record system. The prevalence, severity, and type of incontinence were determined using the Turkish validation of the International Consultation on Incontinence Modular Questionnaire Urinary Incontinence Short Form (ICIQ UI-SF) questionnaire. A total ICIQ UI-SF score of 0 was considered as no urinary incontinence, and a score of ≥ 1 was considered as the presence of urinary incontinence.

Results: This study included a total of 145 breast cancer patients. 121 (83.4%) patients were receiving tamoxifen, and 24 (16.6%) were receiving aromatase inhibitors. The prevalence of urinary incontinence in this study was 36.6% (n:53). Urinary incontinence was present in 40.5% of patients taking tamoxifen and 16.7% of those taking aromatase inhibitors. There was a statistically significant difference in urinary incontinence between patients receiving tamoxifen or aromatase inhibitors ($p=0.003$). In univariate analysis predicting urinary incontinence, parity (≥ 2 vs < 2) ($p= 0.001$), tamoxifen (vs AI) ($p= 0.003$), age (≥ 40 vs < 40) ($p= 0.003$), vaginal deliveries (≥ 2 vs < 2) ($p= 0.004$), and body mass index (≥ 25 vs < 25) ($p= 0.021$) were found to be predictive. Tamoxifen ($p= 0.002$) and age ($p= 0.022$) remained independent predictors of incontinence in multivariate analyses.

Conclusions: We found that tamoxifen increased the risk of urinary incontinence in breast cancer patients receiving adjuvant hormone therapy. We showed that tamoxifen may have worse medication adherence than aromatase inhibitors. We recommend that patients using tamoxifen, especially those with the risk factors mentioned above, should be closely monitored for the development of urinary incontinence.

Keywords: Breast cancer, incontinence, tamoxifen, aromatase inhibitors



OP27 – BAROREFLEX SENSITIVITY IN OBESITY

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Introduction: The baroreflex system is a negative feedback mechanism that prevents acute fluctuations in blood pressure through rapid changes in cardiac output and peripheral resistance. When blood pressure rises, vagal stimulation of the heart increases, and sympathetic stimulation of the heart and blood vessels decreases; when blood pressure falls, vagal stimulation of the heart decreases, and sympathetic stimulation of the heart and blood vessels increases. In response to a change in blood pressure (mmHg), the interval between beats (msec) changes, and this changing ratio can be defined as baroreflex sensitivity (msec/mmHg). Cardiovascular and cardiometabolic diseases as well as hypertension lead to a decrease in baroreflex sensitivity. Studies have shown that obesity is an independent and preventable risk factor for cardiovascular events and a predisposing factor for cardiovascular events such as hypertension. Several studies suggest that obesity is a consequence of cardiovascular events and hypertension, and some other studies show that obesity is a cause of the disease. Various methods have been used to stimulate the baroreceptors, such as injection of vasoactive substances and mechanical stimulation techniques. Research suggests that the underlying pathophysiologic mechanisms for decreased baroreflex sensitivity may be sympathetic nervous system overactivity, vagal deprivation, inflammation, cardiac and vascular structural changes, insulin resistance and oxidative stress. It is important to determine the best methods and emphasize the underlying pathophysiological process of baroreflex failure so that cardiovascular health can be protected in obesity.

Methods: A comprehensive literature search was conducted in databases such as PubMed, Scopus, Web of Science, Google Scholar, and Cochrane Library using the terms “baroreflex sensitivity”, “baroreflex”, “obesity”, “obese”. In this review, no restrictions such as language, date, type of article or accessibility were applied when searching for articles. Forty articles on this topic were found and the references in these articles were also analyzed.

Conclusion: It is generally recognized that obese individuals have reduced baroreflex sensitivity due to overactivity of the cardiac and vascular sympathetic nervous system and suppression of the cardiac parasympathetic nervous system, even in the absence of concomitant diseases. Since prolonged activation of the sympathetic nervous system leads to a disturbance in blood pressure regulation, obesity is an independent risk factor for hypertension. Cardiovascular abnormalities can be prevented by early detection of a disorder of cardiovascular autonomic control by measuring baroreflex sensitivity.

Keywords: Baroreflex sensitivity, obesity, cardiovascular autonomic control



OP28 – EFFECT OF DIFFERENT EXERCISE TYPES ON AUTONOMIC ACTIVATION IN COLD WATER FACE IMMERSION TEST

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Aim: Face immersion in cold water stimulates autonomic nervous system and causes physiological changes such as apnea, decrease in heart rate and increase in blood pressure. These hemodynamic changes can be measured during various exercises. We aimed to investigate the effects of different exercise types on autonomic activation in the cold water face immersion test. We also planned to perform heart rate variability analysis via rhythm holter to evaluate the effect of the autonomic nervous system on heart rate and determine its neurogenic profile.

Methods: Twelve healthy young adult volunteers underwent a series of experiments designed to observe the effects of cold water face immersion test on heart rate and heart rate variability. Firstly, these parameters were measured at rest and then three different exercise types (six-minute walk test, isometric handgrip test, Wingate test) were applied to the volunteers, respectively. After each test, a face immersion test was performed at a water temperature of 10°C and they held their breath in the water for 15 seconds. Heart rate measurements were made both after exercise and after cold water face immersion test. Heart rate variability analysis was also performed throughout the entire test. In the statistical analysis of the data, mean \pm standard deviation was used as descriptive statistics. One-Way ANOVA was used for parametric values, and Friedman two-way ANOVA was used for non-parametric values. The significance level was considered as $p < 0.05$.

Results: Post-exercise heart rate was significantly higher in Wingate and six-minute walk tests than with isometric handgrip test ($p < 0.05$). When we compare the heart rates after getting out of the water, the heart rate after the Wingate test is significantly higher than the isometric handgrip test and resting conditions ($p < 0.05$). Very low frequency, low frequency and total power values, which are frequency domain parameters of heart rate variability and components of sympathetic nervous system activity, are significantly higher at rest than exiting the water after the Wingate and six-minute walk tests.

Conclusions: When we evaluated the effect of three different exercise types on autonomous activation in the cold water face immersion test, we found that the Wingate and six-minute walk tests gave similar results. Therefore, to increase comfort, we recommend six-minute walk test, which gives similar results, instead of the Wingate test, which is more difficult to perform.

Keywords: Wingate, isometric handgrip, six-minute walk test, heart rate variability, autonomic nervous system



OP29 – PROTECTIVE EFFECT OF VITAMIN D ON CARDIAC DAMAGE DUE TO ISCHEMIA/REPERFUSION IN OVARIECTOMIZED RATS

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Aim: Vitamin D is a vitamin that has protective effects against oxidative stress, in addition to its functions in endocrine and calcium homeostasis. Studies show that vitamin D deficiency is associated with increased heart disease. During menopause, the risk of cardiovascular disease increases in parallel with the decrease in the amount of estrogen. Infrarenal occlusion and reperfusion of the abdominal aorta causes ischemia-reperfusion injury in various distant organs such as the lungs, heart and kidney. Ischemia-reperfusion injury causes increased oxidative damage, disruption of cellular mechanisms and an increase in free radicals. We investigated whether vitamin D has a protective effect on acute cardiac damage caused by infrarenal abdominal aortic ischemia-reperfusion during menopause, which we will stimulate with ovariectomy in rats.

Methods: 24 young adult female Sprague-Dawley rats performed into four groups. Sham application of the incision made during the ovariectomy was applied to the control and vitamin D groups. Bilateral ovaries were surgically removed in the ovariectomy and Vitamin D+ovariectomy groups. Subcutaneous vitamin D was given to the vitamin D and vitamin D+ovariectomy groups, and subcutaneous physiological saline was given to the control and ovariectomy groups on days 1, 8, and 15. All groups underwent 60 minutes of ischemia followed by 120 minutes of reperfusion on the 21st day. Blood and heart tissue samples were taken from all groups on the 21st day. Malondialdehyde and troponin T levels in serum and heart tissue samples were examined using ELISA kits. One Way ANOVA and Tukey test were used for comparisons between groups. Kruskal-Wallis and "Dunn's Multiple Comparison Test" were used for data that did not comply with normal distribution. $P < 0.05$ was considered significant.

Results: Serum malondialdehyde levels increased significantly in the ovariectomy group compared to the control group ($p=0.021$) and decreased significantly in vitamin D+ovariectomy group compared to the ovariectomy group ($p=0.02$). Serum troponin T levels decreased significantly in the vitamin D+ovariectomy group compared to the ovariectomy group ($p=0.002$). No significance differences were detected in malondialdehyde and troponin T levels in heart tissue ($p > 0.05$).

Conclusions: Our findings showed that ovariectomy increases oxidative stress, while vitamin D administration reduces oxidative stress. Vitamin D supplementation may be protective against cardiac damage caused by ischemia-reperfusion by reducing oxidative stress during the menopausal period.

Keywords: Acute cardiac injury, Ischemia-reperfusion, Ovariectomy, Troponin T, Menopause

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OP30 – CYTOTOXIC EFFECTS OF POVIDONE-IODINE AND LUGOL SOLUTIONS ON HELA CELLS IN 2D AND 3D CULTURE CONDITIONS

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Aim: Cervical cancer is the fourth most common and causing death female cancer worldwide. The aim of this study was to investigate the cytotoxic potential of Povidone-iodine (Batticon) and Lugol's solution on the HeLa cell line as a cervical cancer model.

Methods: MTT assay and 3D spheroid cultures were conducted to investigate the effects of the povidone-iodine and Lugol's solution.

HeLa cell cultures were set up at 24h and 48 h for MTT(3-(4,5-Dimethylthiazol-2-yl)-2,5-Diphenyltetrazolium Bromide) assays. Lugol's concentrations were selected as follows: 1, 0.75, 0.5, 0.375, and 0.25 % in the whole medium. Povidone-iodine concentrations were also adjusted as 0.1, 0.075, 0.05, 0.025, 0.0125 and 0.005 %. Absorbances were measured at 570 nm with a spectrophotometer.

3D spheroid cultures were conducted in agarose-coated 96-well plates. The cells were incubated in the medium for 48 hours at 37 °C and in a 5 %CO₂ atmosphere. The area, diameter, and density were analyzed for spheroids.

Results: In MTT assays, povidone-iodine caused statistically significant cell loss at 0.1 and 0.075 percent concentrations. Lugol's solution showed similar results at 1 and 0.75 percent of concentrations.

Cells started to lose their ability to form spheroids, starting from 0.75% concentration for Lugol and 0.075% concentration for Povidone-iodine.

Conclusions: According to the results, either povidone-iodine or Lugol's solutions cause cell annihilation at the mentioned doses. In 3d cultures, it was also observed that spheroid formation was impaired even at low concentrations. When compared to control spheroids visually, it was concluded that both compounds prevented cells from connecting by disrupting intercellular connections.

Keywords: Povidon-iodine, lugol's solution, MTT, 3D culture, cytotoxicity



OP31 – EFFECT OF CARVACROL ON PALMITATE-INDUCED HEPATIC LIPOTOXICITY

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Aim: Non-alcoholic fatty liver disease is a serious and global public health problem with increasing prevalence. Carvacrol is a monoterpene phenol found in many plant essential oils and has antioxidant, anti-inflammatory, and hepatoprotective properties. The effect of carvacrol on hepatic lipotoxicity is unknown. In this study, we aimed to investigate the effect of carvacrol on palmitate-induced lipotoxicity in HepG2 cells.

Methods: HepG2 cells were treated with 1 mM palmitate conjugated with 0.7 mM fatty acid-free bovine serum albumin for 24 hours to induce the hepatic lipotoxicity model. For the treatment, cells were incubated with 25, 50, and 100 µM carvacrol treated with palmitate. Cell viability was measured using the 3-(4,5-dimethyl-2-thiazolyl)-2,5-diphenyl-2H-tetrazolium bromide assay.

Results: 1 mM palmitate treatment caused a significant decrease in cell viability in HepG2 cells ($p < 0.05$). 25, 50, and 100 µM carvacrol caused a significant increase in cell viability in 1 mM palmitate-treated cells ($p < 0.05$ for all).

Conclusions: Our study showed that carvacrol attenuated palmitate-induced lipotoxicity in HepG2 cells for the first time.

Keywords: Carvacrol, non-alcoholic fatty liver disease, palmitate, lipotoxicity



OP32 – THE EFFECT OF AGOMELATINE ADMINISTRATION ON CARDIAC HYPERTROPHY IN AN EXPERIMENTAL HYPERTENSION MODEL

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Aim: Hypertension, a common public health problem, is known to cause changes in cardiac tissue over time as in other organs. The aim of our study was to investigate the effect of agomelatine administration on cardiac hypertrophy in an experimental hypertension model induced by nitric oxide synthase inhibition.

Methods: In our study, 32 male Sprague-Dawley rats were used. They were divided into 4 groups as Control (C), Agomelatine (AGO), Hypertension (HT) and Hypertension+Agomelatine (HT+AGO). Hypertension and Hypertension+Agomelatine groups were given drinking water containing L-NAME (400 mg/L) for 6 weeks to induce hypertension. Agomelatine (40 mg/kg/day) was given intraperitoneally to the Agomelatine and Hypertension+Agomelatine groups for the last two weeks. Agomelatine solvent was administered to control and hypertension groups by the same route. Arterial blood pressure was monitored weekly by tail-cuff method. Total heart weight, left ventricular weight and the ratio of both to body weight were calculated. ERK1/2 and p-ERK1/2 levels in left ventricular tissue were examined histopathologically by western blot method and cardiomyocyte diameter by H&E staining. One-way ANOVA followed by post-doc Tukey's test was used for the comparison of variables conforming to normal distribution, Kruskal Wallis Test followed by Dunn's test with bonferroni correction was used for the comparison of variables not conforming to normal distribution. Statistically $p < 0.05$ was considered statistically significant.

Results: Mean arterial blood pressure was higher in the Hypertension group compared to the control group in all weeks starting from the first week ($p < 0.05$), while it decreased in the Hypertension+Agomelatine group with agomelatine administration compared to the Hypertension group ($p < 0.05$). Heart weight/body weight and left ventricular weight/body weight ratios were higher in the hypertension group compared to the control group ($p < 0.05$). The p-ERK1/2 / ERK1/2 ratio increased in the hypertension group compared to the control group ($p < 0.05$). It decreased in Hypertension+Agomelatine group compared to Hypertension group ($p < 0.05$). Cardiomyocyte diameters increased in Hypertension and Hypertension+Agomelatine groups compared to Control and Agomelatine groups ($p < 0.05$).

Conclusions: Although left ventricular weight/body weight and cardiomyocyte diameter did not change, agomelatine may have decreased ERK1/2 activation in the left ventricle. This suggests that two weeks of agomelatine administration was not sufficient to provide morphological changes. We think that further studies with different duration and doses of agomelatine are needed.

Keywords: Hypertension, hypertrophy, agomelatine, blood pressure, ERK1/2

Acknowledgement: This study was financially supported by Trakya University Scientific Research Projects (TÜBAP 2021/61).



OP33 – THE EFFECT OF AUTOPHAGY ON CELL DEATH IN ACRYLAMIDE TOXICITY IN HEPG2 CELLS

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Aim: We aimed to determine the effects of 3-methyl adenine, an autophagy inhibitor, and rapamycin, an autophagy activator, on apoptosis and cell death in acrylamide-induced cellular hepatotoxicity.

Methods: HepG2 cells were used in this experimental study. Cells were treated with chemicals for 24 hours. The effects of 3-methyl adenine and rapamycin alone or together with acrylamide on cell viability were measured by 3-(4,5-dimethyl-2-thiazolyl)-2,5-diphenyl-2H-tetrazolium bromide assay. Microtubule-associated protein 1A/1B-light chain 3-II as a autophagy marker, active caspase-3 as an apoptosis marker and procaspase-3 protein levels were measured by western blot.

Results: 2.5 mM, 5 mM, and 10 mM 3-methyl adenine and 100 nM and 250 nM rapamycin caused a significant decrease cell viability and according to these results, 1 mM 3-methyl adenine and 50 nM rapamycin co-administered with 10 mM acrylamide. Acrylamide caused a significant decrease in cell viability and procaspase-3 levels, and a significant increase in microtubule-associated protein 1A/1B-light chain 3-II and active caspase-3 levels. Rapamycin caused a significant decrease in cell viability and active caspase-3 levels and 3-methyl adenine caused a significant decrease in active caspase-3 levels in acrylamide-treated cells.

Conclusions: We found that acrylamide-induced autophagy does not change with 3-methyl adenine or rapamycin; rapamycin also increases cell death in acrylamide-treated cells. These results show that acrylamide-induced autophagy may be irreversible, and autophagy can be a cell death type instead of a cell protection mechanism in acrylamide-induced cellular hepatotoxicity.

Keywords: Acrylamide, HepG2, autophagy, apoptosis

Acknowledgement: This study was supported by Trakya University Scientific Research Projects (TÜBAP 2019/178).



OP34 – EFFECTS OF CADMIUM ON PARAOXONASE-3 PROTEIN LEVELS IN HEPG2 CELLS

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Aim: Cadmium is a metal extensively employed in various industrial sectors and predominantly accumulates in the liver—toxic concentrations of cadmium lead to hepatotoxicity. Paraoxonase-3 is an antioxidant and anti-atherosclerotic enzyme bound to HDL in circulation and the liver primarily synthesizes it in the body. The effect of cadmium on paraoxonase-3 levels is unknown, and this study aimed to investigate the effect of cadmium on paraoxonase-3 levels in the HepG2 cell line.

Methods: HepG2 cells were incubated with 2.5, 5 and 10 µM cadmium concentrations for 24 hours. Cell viability was determined by MTT assay. Paraoxonase-3 levels were measured by western blot.

Results: 5 and 10 µM cadmium caused a significant decrease in cell viability and paraoxonase-3 levels ($p < 0.05$ for all). 2.5 µM cadmium did not significantly affect cell viability or paraoxonase-3 levels in HepG2 cells ($p > 0.05$ for both).

Conclusions: Our study showed that cadmium decreases paraoxonase-3 levels in cytotoxic concentrations in HepG2 cells.

Keywords: Cadmium, paraoxonase-3, cytotoxicity, HepG2, hepatotoxicity

OP35 – MAY SILIBININ BE MORE CYTOTOXIC TO HEALTHY LIVER CELLS THAN CANCER CELLS?

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Aim: Silibinin is the main component of the plant *Silybium marinum*. It is thought that silibinin has protective and therapeutic properties against liver diseases such as hepatitis, cirrhosis, jaundice, and liver cancer. Due to these properties, the *Silybium marinum* plant and its extract, silibinin, are extensively used as supplements. In this study, the apoptotic and anti-proliferative effects of silibinin on cell viability in both the healthy liver cells AML12 and the hepatocellular cancer cells HepG2 were investigated.

Methods: The effects of different doses of silibinin on the viability of AML12 and HepG2 cells were determined by MTT; the calculation of apoptotic and necrotic cell numbers was done by flow cytometry; apoptotic cells and cell divisions were shown by light microscopy; and the changes in gene expressions were shown by RT-PCR methods.

Results: Based on the application of silibinin to AML12 and HepG2 cells for 48 hours, the IC₅₀ values were calculated as 529.23 µM and 15.51 mM, respectively. When the IC₅₀ value for AML12 cells was applied to both AML12 and HepG2 cells, it was determined that the amount of apoptosis and necrosis was 66.02% in AML12 cells and 1.16% in HepG2 cells compared to the control. In addition, for this application, it has been shown that cell division is suppressed and there are deteriorations in the nuclear structures in AML12 cells, which are signs of apoptosis. On the other hand, it has been observed that proliferative activity is promoted in HepG2 cells. In the AML12 cells, the expression of the p-GP gene was 1.03 fold, XIAP 1.45 fold, CAT 2.34 fold, Mn-SOD 0.71 fold, PTEN 0.16 fold, PI3K 1.72 fold, and Akt 0.58 fold compared to the control. In the HepG2 cells, the p-GP gene was expressed 3.23-fold, XIAP 2.66-fold, CAT 11.19-fold, Mn-SOD 1.91-fold, PTEN 2.92-fold, PI3K 3.08-fold, and Akt 2.11-fold.

Conclusions: 529.23 µM silibinin could not be excreted from AML12 cells with p-GP activity. Its destructive effects could not be suppressed by CAT and Mn-SOD genes. Akt expression in the PI3K/Akt signaling pathway decreased significantly, and the AML12 cells went to apoptosis. On the other hand, increased expression level of p-GP, XIAP, Mn-SOD, and CAT genes were observed in the HepG2 cells. It shows that the uptake of high amounts of silibinin into the cells is suppressed, and the destructive effects are eliminated. However, due to increased PTEN expression, it cannot suppress the PI3K/Akt signaling pathway, and proliferation continues for HepG2 cells.

Keywords: AML12, cytotoxic, HepG2, silibinin

Acknowledgement: This study was supported by the Trakya University Scientific Research Fund (TUBAP 2022/103). All laboratory experiments have been done at Trakya University Technology Research Development Application and Research Center (TUTAGEM).



OP36 – TREATMENT OF BURST FRACTURES WITH VERTEBROPLASTY: A CASE REPORT

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Aim: The purpose of this presentation is to demonstrate the effectiveness of vertebroplasty in burst fractures in accordance with academic literature.

Introduction: Percutaneous vertebroplasty is a widely used method for the management of traumatic or osteoporotic compression fractures. However, its application in cases of vertebral burst fractures to provide anterior column support for posterior instrumentation is relatively rare.

Methods: In this study, we present a case involving a 45-year-old female patient who experienced an L1 burst fracture following a fall down the stairs. The patient had a history of alcohol addiction, cirrhosis, pancytopenia, and coagulation disorders. Due to the patient's complex medical condition, L1 vertebroplasty was performed under fluoroscopic guidance. A total of 3 cc of polymethylmethacrylate was injected into the vertebral body. No complications were observed during the procedure or in the early postoperative period. The patient was mobilized with a brace on the first postoperative day and discharged with a recommendation for rest. However, the patient returned on the 10th postoperative day with complaints of lower back pain. Radiographic evaluation revealed a 20% increase in the collapse of the L1 vertebra and a 26-degree increase in kyphosis compared to the early postoperative images. Further inquiry revealed that the patient had not been wearing the brace, remained continuously mobile, and even engaged in daily dancing at home.

Results: Vertebroplasty is an effective method for the treatment of vertebral compression fractures. Nonetheless, its ability to provide stabilization is limited in burst fractures where the outer cortical shell of the vertebra is compromised.

Conclusion: A review of the literature revealed a scarcity of publications related to the use of vertebroplasty as a sole treatment method for burst fractures. This case highlights the importance of recognizing that vertebroplasty may not be sufficient in cases where the outer cortical shell of the vertebra is compromised. It emphasizes the significance of considering patient compliance before the procedure and the potential need for posterior instrumentation to achieve stabilization when necessary.

Keywords: Vertebroplasty, spinal fractures, osteoporosis

OP37 – DEVELOPMENT OF NEUROLOGICAL DEFICIT THREE DAYS AFTER DECOMPRESSION SURGERY FOR CERVICAL STENOSIS: A CASE REPORT

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Aim: Cervical stenosis is a condition characterized by compression of the spinal cord or nerve roots, often presenting with symptoms such as weakness and pain in the arms, as well as clumsiness when performing fine motor tasks, particularly in the hands. As the disease progresses, it can lead to myelopathic symptoms, including gait disturbances and urinary and fecal incontinence. Clinical findings of increased reflexes, the presence of pathological reflexes, sensory loss in the hands and feet, and gait instability indicate spinal cord involvement and myelopathy. The gold standard for diagnosis is magnetic resonance imaging, although computed tomography is commonly used to assess bony structures in the spinal canal. While conservative non-surgical methods are initially employed in patients with mild or asymptomatic disease, surgery may be recommended for many to prevent the progression of symptoms. The goal of surgical treatment for cervical stenosis is to relieve spinal cord compression by widening the spinal canal through either anterior or posterior cervical decompression.

Methods: In our clinic, we observed an unusual case of increased neurological deficit in a 54-year-old woman who had undergone posterior cervical decompression and stabilization. Apart from a history of a previous transient ischemic attack and myelopathic symptoms for approximately four years, the patient had no other underlying medical conditions. She underwent C4-5-6 posterior instrumentation and decompression surgery.

Results: Postoperatively, the patient showed no deficits in neurological examination; however, on the third postoperative day, she developed neurological deficits in her right arm. Right arm abduction strength was graded as 1/5, while elbow flexion and extension had a strength of 4/5. Postoperative imaging did not reveal a significant increase in neural structure compression. Early physiotherapy and rehabilitation were initiated, and the patient exhibited improvement in her neurological deficit six months postoperatively, with her right arm abduction strength increasing to 3/5.

Conclusion: A review of the literature indicates that the incidence of postoperative neurological deficits is reported to be around 1.3% for radicular symptoms and 3.3% for myelopathic symptoms. However, there is a scarcity of reported cases of similar late-onset postoperative neurological deficits beyond 48 hours post-surgery in the literature. Cervical stenosis is a common cause of spastic paraparesis that develops in the middle and older age groups. Patients with long-standing myelopathic symptoms may be at risk for postoperative spinal cord or nerve root involvement, as demonstrated in our case. This highlights the importance of close monitoring and early intervention in postoperative care for cervical stenosis patients, even in cases where deficits may develop beyond the immediate postoperative period. Further studies are warranted to better understand the underlying mechanisms and risk factors associated with these rare occurrences.

Keywords: Radiculopathy, myelopathy, spinal stenosis

OP38 – SPINAL INFECTION CASE REPORT

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Aim: The aim of this study is to report the outcomes of the suction and irrigation method employed in a case of spinal infection. Spinal infections have been increasingly reported in recent years, and it is undeniable that the rise in numbers is attributed to both faster diagnosis and an increase in spinal surgery procedures. Spinal infections account for 2-7% of musculoskeletal infections. The mortality associated with spinal infections is reported to be between 2-4%. They are more commonly observed in males than females. Risk factors for spinal infections include a history of spinal surgery, distant infection focus, diabetes, advanced age, intravenous drug use, Human Immunodeficiency Virus (HIV) infection, immunosuppression, oncological history, kidney failure, rheumatologic diseases, and liver cirrhosis. Currently, discitis following spinal surgery accounts for approximately 30% of all pyogenic discitis cases. The most common causative agent of spinal infections today is reported to be *Staphylococcus aureus*, ranging from 30-80%. Gram-negative bacteria like *Escherichia coli* constitute 25%, while *Mycobacterium tuberculosis*, especially in HIV patients, accounts for 60% of cases. Diagnosis is often challenging, and it is reported to be established with an average delay of 2-6 weeks. A high level of suspicion is required for diagnosis, and laboratory tests (Erythrocyte Sedimentation Rate (ESR), C-Reactive Protein (CRP), White Blood Cell (WBC), blood culture) and radiological imaging (X-ray, Magnetic Resonance Imaging (MRI), and Computer Tomography (CT)) are recommended. Clinically, approximately 15% of patients may be asymptomatic. Continuous pain in the chest and abdominal regions is the most common symptom, and fever is less common. Neurological symptoms such as leg weakness, numbness, and urinary incontinence are present in about one-third of patients. ESR and CRP are elevated in more than 90% of discitis cases, with WBC count being the least reliable among all inflammatory markers due to its low sensitivity. When a spinal infection is suspected, obtaining blood and urine cultures before starting antibiotic therapy is recommended. The culture positivity rate is 59%. A definitive diagnosis is only established by demonstrating the microbiological agent. The success rate of closed biopsy is reported to be between 30-70%.

Methods: A patient, a 69-year-old male, with a history of two lumbar disc hernia surgeries one week apart a month ago, and who developed a paravertebral abscess on the 45th postoperative day, will be presented. Contrast-enhanced magnetic resonance imaging revealed findings consistent with osteomyelitis at the L4-L5 disc level, involving the L4 and L5 vertebrae, and a paravertebral abscess on the right side. The patient underwent surgical debridement, and a suction irrigation system was established with a washout drain placed in the disc space and a drainage tube placed over the fascia. The area was irrigated daily with 2000 cc of normal saline containing a total of 320 mg of gentamicin.

Results: During the first postoperative week, a gradual decrease of 28-fold was observed in CRP monitoring (preoperative: 140, postoperative first week CRP: 5). With the patient's clinical symptoms improving, concurrent oral antibiotic therapy was continued.

Conclusion: Based on our experiences, we can say that if biochemical tests, along with clinical and radiological findings, suggest an infection, obtaining an open surgical sample, performing debridement, and establishing a compartmental lavage system are the most effective treatment options. We recommend antimicrobial therapy directed at the agent for 6-8 weeks after this method, which increases the likelihood of the agent being produced. A weekly 50% decrease in CRP indicates improvement. Presentation with neurological deficits is a poor prognostic factor. The criteria for discontinuing antimicrobial treatment generally involve symptom improvement and the normalization of ESR or CRP.

Keywords: Spondylodiscitis, osteomyelitis, infections

OP39 – A CASE OF URINARY INCONTINENCE AFTER CERVICAL DISC HERNIATION

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Aim: Cervical Disc Herniation: Cervical disc herniation is a condition that can occur as a result of degenerative processes in the cervical nucleus pulposus, annulus fibrosus, and endplates. It is more commonly observed in women than in men, with the most frequent age group affected being between 30 and 60 years old. Clinically, patients may be asymptomatic, or they may present with axial neck pain, radiculopathy, or myelopathy symptoms. In contemporary practice, neurological examination and cervical magnetic resonance imaging (MRI) are considered the gold standard for diagnosis. The decision for treatment should align with the correlation of neurological examination findings and radiological imaging. Patients with cervical disc herniation often present with radiculopathy in routine clinical practice, followed by myelopathy and signs of deep tendon reflexes.

Methods: In our clinic, a 46-year-old male patient presented three times in the last 24 hours with a complaint of sudden urinary incontinence. After excluding the most common factors that could cause sudden urinary incontinence (such as excessive weight, advanced age, constipation, cystitis, prostate enlargement, diabetes, and medication history), lumbar MRI was performed when his symptoms could not be correlated with the findings. When cervical MRI was performed, compatible findings with C5-6 and C6-7 cervical disc herniation were detected. During the neurological examination, the patient exhibited full muscle strength in both upper extremities, plantar and dorsiflexion muscle strength of 4/5 in the right lower extremity (he described it as such since undergoing surgery on his right femur three months ago), full muscle strength in the left lower extremity, increased deep tendon reflexes (DTR) in the right upper extremity, normal DTRs in the left upper extremity, and a positive Hoffman reflex in the right upper extremity and a negative Hoffman reflex in the left upper extremity. The patient also had sphincter control impairment.

Results: After completing the anesthesia preparations, a 2-level cervical anterior discectomy operation was performed. During postoperative follow-ups, it was observed that the patient's urinary incontinence improved acutely, and the Hoffman reflex and DTR examination findings improved within about a month. However, motor power loss in the right lower extremity did not improve, and there was no observed hoarseness.

Conclusion: In conclusion, we would like to emphasize that urinary incontinence may occur after cervical disc herniation, and prompt surgery after the onset of symptoms may increase the likelihood of success.

Keywords: Anterior cervical discectomy; disk herniation; urinary incontinence



OP40 – CASE REPORT OF A PATIENT WITH ACROMIOCLAVICULAR JOINT DISLOCATION AND EYRES TYPE 3 CORACOID FRACTURE

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Aim: To discuss the treatment of scapula coracoid process fracture with acromioclavicular joint dislocation through a case report.

Methods: Surgery was planned for the patient by us. In the bench-chair position, a longitudinal incision was made from the distal right clavicle, and the acromioclavicular joint was exposed by separating the deltoid muscle from the clavicular attachment point. After the dislocation was reduced, it was fixed with 2 k-wires. Joint movements were checked with fluoroscopy and it was found to be stable. The deltoid muscle was refixed to the clavicular adhesion site. Then, it was entered through a vertical incision over the corocoid process. The fracture line was revealed by dissection. After fracture reduction, fixation was achieved with 1 screw.

Results: In the postoperative period, the patient's right shoulder was immobilized for 4 weeks. At the 4th week, the k-wires were removed and passive movement was started. Active shoulder movements were started at the 5th week follow-up. At the 2nd month postoperative check-up, it was observed that the patient had full range of motion.

Conclusions: Although many methods have been described in the treatment of acromioclavicular joint dislocation, there are still no treatment methods available today.

There is no full consensus on this. In the presentation we reported in the case report, we presented the treatment we performed for the rare acromioclavicular joint dislocation accompanied by scapula coracoid process fracture. Additional studies on this subject will provide guidance in the treatment of these injuries in the future.

Keywords: Acromio clavicular joint seperation, scapula corocoid fracture, eyres classification



OP41 – SIMULTANEOUS ORIF AND REVERSE SHOULDER ARTHROPLASTY FOR BILATERAL COMMINUTED PROXIMAL HUMERUS FRACTURES: CASE REPORT IN AN ELDERLY PATIENT

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Aim: To describe the simultaneous bilateral proximal humerus fracture in a geriatric patient and the treatment applied for it in the form of a case report.

Methods: On the right side, the deltoid was entered through a split incision, and the skin and subcutaneous tissue were passed. The fracture line was reached with subsequent dissection. Following fracture reduction, fixation was achieved with a washer cannulated screw. Then, a deltopectoral incision was made on the left shoulder and the skin and subcutaneous tissue were passed. The cephalic vein was dissected and preserved. The fracture area was reached by deepening with dissection. Then, the humeral diaphysis was reamed with appropriate reamers and the metaphyseal region was prepared with rasps. Humeral stem and humeral tray were placed. Then, the glenoid was rimerized with the help of a guide. The reverse shoulder base plate, glenosphere and reverse shoulder humeral head were placed and fixed with screws. The joint was then reduced. After checking the range of motion, the operation was terminated following wound suturing.

Results: In the postoperative period, both shoulders of the patient were immobilized for 2 weeks. Passive movement was started in the 2nd week. Active shoulder movements were started at the 4th week follow-up.

At the 2nd month postoperative check-up, it was observed that the patient had full range of motion.

Conclusions: Bilateral proximal humerus fractures are rare injuries and the treatment process and selection must be well planned, as they are a difficult condition to treat. Although many methods are selected and applied according to the type of fracture in the treatment of proximal humerus fractures, there are still many different opinions in planning the treatment method and fracture management if these fractures are bilateral. In this article, we present a case of bilateral proximal humerus fracture in a geriatric patient.

Keywords: Proximal humerus fracture, reverse shoulder arthroplasty, fracture

OP42 – CAUSES OF MORTALITY IN PATIENTS TREATED WITH PARTIAL HIP PROSTHESIS FOR HIP FRACTURES

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Aim: The aim of this study was to determine the one-year survival impact of preoperative characteristics of patients who underwent partial hip arthroplasty due to hip fractures.

Methods: Information of 227 patients aged 60 and over who underwent partial hip prosthesis surgery for femoral neck fractures or intertrochanteric femur fractures at our hospital between September 2020 and November 2022 was retrospectively collected. Data such as age, gender, complete blood count parameters (hemoglobin level, mean corpuscular volume (MCV), reticulocyte distribution width (RDW), platelet count, mean platelet volume (MPV), neutrophil/lymphocyte ratio, platelet/lymphocyte ratio, monocyte/lymphocyte ratio, MPV/platelet ratio), the number of days until surgery, length of hospitalization, postoperative intensive care admission, and the number of requested consultations were compared with one-year mortality rates. Anemic status was defined as hemoglobin <12 g/dL for women and <13 g/dL for men. One-year mortalities were investigated based on whether the patients had surgery on the first day and/or within the first three days versus not to be operated within this duration.

Results: Of the patients with an average age of 82.37 (range 60-97 ± 7.82), 160 (67.5%) were female. Within one year, 96 patients (42.3%) had passed away. Patients were consulted an average of 4.34 times. Mean hemoglobin level was 11,46 (range 6.1-15.5 ± 1,86) g/dL and mean platelet count was 231.73 (range 25 - 704 ± 88,47) *10³ /uL. Gender, platelet count, MCV, MPV, RDW values, neutrophil/lymphocyte ratio, platelet/lymphocyte ratio, monocyte/lymphocyte ratio, MPV/platelet ratio, and total hospitalization time were not found to have an impact on one-year mortality. However, it was observed that age, anemia, total number of consultations, not having surgery on the first day and/or within the first 3 days, and postoperative intensive care admission increased one-year mortality (p<0.05).

Conclusions: Hip fractures and related complications are a significant cause of mortality in geriatric patients. In our study, when the characteristics of patients who underwent partial hip prosthesis due to hip fractures were investigated, it was found that older patients, anemic patients and patients who required more consultations and postoperative intensive care had higher one-year mortality. It was also observed that performing surgery on the first day or at least within the first 3 days after hip fracture reduced one-year mortality.

Keywords: Hip fracture, partial hip prosthesis, mortality, geriatric



OP43 – A NEW DIAGNOSIS IN ADULT PATIENT OPERATED FOR FEMORAL NECK FRACTURE: OCHRANOSIS (CASE REPORT)

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Aim: Alkaptonuria diagnosis was made in a patient who had no previous diagnosis and was scheduled for emergency surgery. This case aims to share the orthopedic pathology of a rare disease requiring emergency surgery and how it was managed.

Case: A 60-year-old female patient presented to the emergency medical clinic with the complaint of inability to walk and left hip pain after a fall at home. In the patient's examinations, a left femoral neck fracture was detected, and emergency closed reduction and internal fixation were planned. The patient was also evaluated by anesthesiologists and had a history of diabetes mellitus and hypertension diagnoses, along with cardiac bypass surgery six years ago. The patient had greenish spots under her eyes and on her nose, but routine blood tests showed no issues, so she was taken into surgery urgently. When open reduction was necessary due to the failure of closed reduction, it was found that the femoral head was degenerated and black. Therefore, the decision was made to complete the surgery by applying a partial hip prosthesis. During the postoperative period, the patient mentioned that her urine was dark in color, leading to urine tests and extended biochemistry tests. When her family history was questioned, she stated that her mother and siblings also had similar facial spots. The patient was diagnosed with alkaptonuria based on the clinical findings and consultations.

Conclusions: Alkaptonuria is an autosomal recessive disorder in which homogentisic acid accumulates in connective tissues. Its frequency is one in 250,000 to 1 million individuals. The diagnosis can be made by the darkening of urine with urine alkalization. Diagnosis can also be made during surgery when encountering black-colored cartilage and connective tissue. The pathogenesis of alkaptonuria includes chronic inflammation, degeneration, and eventually osteoarthritis. There is no permanent solution for the disease, and its treatment involves conservative and surgical methods for tendinopathies and chondropathies. This case should better be operated in an elective manner with total hip prosthesis. But due to misunderstanding of the patients' special conditions patient was treated in an emergent manner with the aim of closed reduction and internal reduction. Every physician should take even the slightest symptoms and differences of their patients into consideration.

Keywords: Alkaptonuria, femoral neck fracture, degenerative arthritis

OP44 – PSYCHOLOGICAL EVALUATION OF THE PROBLEMS EXPERIENCED OF WOMEN DIAGNOSED WITH MULTIPLE SCLEROSIS: CASE SERIES

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Aim: Multiple sclerosis an immune-based, chronic inflammatory disease characterized by neuroinflammation and neurodegeneration in the central nervous system that affects young adults and causes disability is 1.5 - 2 times more common in women than in men. Individuals in daily life due to multiple sclerosis disease face many social and psychological problems such as stress, anxiety, depression, family problems, loss of job and status, stigmatization and inequalities of opportunity. There are reasons that negatively affect the quality of life of individuals such as negative impact on the family economy due to the costs of diagnosis and treatment of the disease, increased dependence on others due to the limitations imposed by physical health problems, change in family roles, decrease in social and leisure activities and job loss. For this reason, women diagnosed with multiple sclerosis need psychological counseling, which is often overlooked during the treatment process, in order to find the strength to solve the problems they encounter in daily life and to gain psychological resilience by learning coping skills. The purpose of this study to contribute to the literature by emphasizing the importance of psychological counseling in female individuals diagnosed with multiple sclerosis.

Methods: The notes taken during the counseling process of 6 female cases, who were treated and followed up in the neurology outpatient clinic of a university hospital and referred to a psychologist by a neurologist between 2020 and 2023, were retrospectively examined.

Results: The cases are between the ages of 30 and 51. It has been found that as a result of psychological counseling provided by psychologists by eclectically applying cognitive behavioral therapy, bibliotherapy and humanistic approaches to patients who are affected by family and social life, for a period of at least one year or at most 2 years, individuals' self-awareness increases, problem-solving skills improve and anxiety and depression levels decrease.

Conclusion: By adopting a multidisciplinary team approach, psychological counseling practices applied together with medical treatment to individuals diagnosed with multiple sclerosis contribute to increasing the quality of life of individuals by increasing their self-efficacy. In order to raise awareness among healthcare professionals about the importance of counseling in individuals diagnosed with multiple sclerosis, we recommend that studies conducted with larger samples, including male individuals, be planned and brought into the field.

Keywords: Multiple sclerosis, women, psychological counseling

OP45 – EMPLOYMENT EXPERIENCES OF WOMEN WITH MULTIPLE SCLEROSIS: A QUALITATIVE STUDY

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Aim: The aim of the research is to examine the workplace experiences of women diagnosed with multiple sclerosis who are actively involved in business life.

Methods: The study was designed in a phenomenological pattern using a semi-structured interview method based on a qualitative research approach. Ethics committee permission for the study was obtained from a university. The study included 14 women diagnosed with multiple sclerosis who were actively working and volunteered to participate in the research, who applied to the Department of Neurology outpatient clinic of a university hospital between June 2022 and July 2023. After the research was explained and a voluntary consent form was obtained, the data were collected with a "personal information form" created by the researchers, containing information about the individual with multiple sclerosis, and "semi-structured interview form" containing 5 open-ended questions prepared. Numerical data obtained from the research were presented as average and percentage. Qualitative data were interpreted using descriptive analysis.

Results: The average age of the women participating in the study was 36, and almost all of them were married and had children. 35.71% were high school graduates and 64.28% had been working for more than 11 years. 3 of the participants worked in shifts and 8 of them worked more than 9 hours a day. It was determined that 12 people were satisfied with the workplace environment. As a result of the analysis of the texts, all of the women stated that they shared the diagnosis with their workplace supervisors or friends, nearly half of them thought about quitting their job when they received the diagnosis but continued, all of them complained of fatigue related to multiple sclerosis, and less than half of them stated that their family life was negatively affected. Participants, for multiple sclerosis patients; stated that they want rest periods to be created in workplaces, working hours to be reduced, employees to be employed in jobs that do not require physical strength, and stress levels to be minimized by providing flexible working opportunities.

Conclusions: According to our results, we think that providing support from family, spouse and friends, informing colleagues at work and arranging working conditions by taking into account the existing symptoms of individuals will increase women's quality of life by positively affecting their job satisfaction, family and social lives.

Keywords: Multiple sclerosis, women, work life, employment experiences



OP46 – ANALYSIS OF CASES APPLYING TO A NEWLY ESTABLISHED FORENSIC MEDICINE CLINIC IN THE FIRST YEAR

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Aim: In Türkiye, forensic medicine specialists are employed at the Council of Forensic Medicine, Universities, or hospitals affiliated with the Ministry of Health. Especially in the past five years, after the completion of the organization process of the Council of Forensic Medicine in all provinces, newly appointed forensic medicine specialists have begun to take on more part in the hospitals affiliated with the Ministry of Health. Since most of these hospitals have not previously employed forensic medicine specialists, a forensic medicine outpatient clinic has been opened for the first time. This study aims to examine the quantitative and qualitative characteristics of forensic reports for cases that applied to a newly established forensic medicine outpatient clinic in a hospital over a one-year period.

Methods: The forensic reports of cases that applied to the Forensic Medicine Clinic which was established within the Tekirdağ Dr. İsmail Fehmi Cumalıoğlu City Hospital between 01.03.2021, the date of establishment, and 28.02.2022 have been retrospectively examined. In the study, the identity information of individuals was kept confidential, and ethical principles were observed in accordance with the Helsinki Declaration.

Results: During the 1-year period, a total of 456 cases applied to the clinic. Of these, 126 (27.6%) were female, and 330 (72.4%) were male. Among the cases, 308 (67.5%) applied in the year 2021, and 148 (32.5%) applied in the year 2022. The most common month for applications was determined to be December with 95 cases (20.8%). In March, beginning month of the clinical services, no cases were referred to the clinic. It was also found that most of the cases, 282 (61.8%), came from Süleymanpaşa, the central district of Tekirdağ, while 3 (0.7%) cases came from outside the province. When the types of injuries classified, it was observed that the most common type of injury was physical assault, with 198 cases (43.4%).

Conclusions: Forensic Medicine Specialists play a key role in the functioning of the justice system that evaluates cases of bodily harm. It is believed that the official introduction of newly established forensic medicine clinics to the relevant law enforcement agencies and judicial bodies will shorten individuals' legal proceedings and expedite the legal processes.

Keywords: Clinical forensic medicine, forensic reports, forensic traumatology.

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OP47 – THE LINK BETWEEN SOCIODEMOGRAPHIC DATA AND CYBERCHONDRIA LEVEL OF VOCATIONAL SCHOOL OF HEALTH SERVICES STUDENTS

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Aim: With advancing technology and increasing use of the internet, more and more people have easy access to health-related information. The internet has replaced traditional sources of health information such as social networks (friends, family members). This has advantages as well as disadvantages such as confusing, unreliable, inaccurate and outdated information and increasing health anxiety. In recent years, this negative situation has been defined as cyberchondria, derived from the words cyber and hypochondriasis. The aim of this study was to determine the relationship between the sociodemographic data and the level of cyberchondria in the students of Vocational School of Health Services.

Methods: The population of the cross-sectional descriptive study consisted of students of Trakya University Vocational School of Health Services. Vocational school students who volunteered to participate in the study were included. Data were collected using a personal information form and cyberchondria severity scale. Statistical analysis was performed with SPSS 19 program. Descriptive statistical methods and nonparametric tests were used for analysis. Significance level was accepted as $p < 0.05$.

Results: A total of 100 individuals participated in the study. The mean age of the participants was 20.01 ± 2.56 years (min:18; max:40); 75 (75%) were female and 25 (25%) were male. No significant relationship was found between cyberchondria total scores and gender and the departments they studied. There was a significant relationship between the income status of the families of the participants and their cyberchondria levels ($p = 0.022$).

Conclusions: Income status plays an effective role in people's access to health services. The need to access health information over the internet may have increased. This may increase the level of cyberchondria in young individuals. This study is a preliminary definition for prospective studies on cyberchondria.

Keywords: Anxiety, cyberchondria, health



OP48 – THE ROLE OF MORAL ART WORKSHOPS IN CORPORATE COMMUNICATION MANAGEMENT: ANKARA BILKENT CITY HOSPITAL CASE

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Aim: Corporate culture is the concept that keeps the employees of an institution together within the framework of its mission, values and beliefs; strengthens their institutional commitments; support to the sense of belonging to the institution and shapes the corporate image. In this context, this study will reveal an affective corporate communication management example with the activities carried out in the Moral Art Workshops established in Ankara Bilkent City Hospital, which is the one of the largest hospitals in Europe, where exist approximately 18.000 employees and 100.000 patient-patient relative mobility per day. Within the scope of our hospital's cooperation with Çankaya Public Education Center; in the company of trainers, to hospital staff, patients and patient relatives trainings such as painting, tile, felt, wood painting, photography and diction, etc. are given.

Methods: During and after the trainings, the thoughts and satisfaction of the employees, patients and their relatives were determined through focus group discussions. At the end of four years, focus group discussions were held again and the impact of Moral Art Workshops was discussed using the observation technique.

Results: With the focus group discussions, it was observed that corporate communication was strengthened and employees were motivated thanks to the handicrafts and personal development courses that the employees attended in the training halls after working hours. In the courses for patients, it was possible to observe that in the handicraft courses given in the workshops in the clinics, the negative judgments of the patients about the treatment process decreased, their communication with the clinic staff and other patients improved and the self-confidence of the patients increased. In addition, in our hospital, a kermess is organized and the works of the patients and employees are exhibited. The products made by the patients are sold, the profits are used to buy handicraft materials for the patients, and thus the sustainability of these activities is possible. In the kermess, it has been observed that the pride of the patients in their works and the feeling of being a part of the Ankara Bilkent City Hospital Family are reinforced

Conclusions: Health means physical, social and psychological well-being so in hospitals health care professionals especially managers should create social fields such as workshops for their patients. On the other hand it is known that health care professionals live burnout syndrome comparing other sectors so such social areas will help them to feel better and support the institution gratefully.

Keywords: Communication, corporate communication, corporate culture, hospital



OP49 – THE IMPORTANCE OF CORPORATE COMMUNICATION ACTIVITIES IN HOSPITALS IN TERMS OF CORPORATE CULTURE: ANKARA BILKENT CITY HOSPITAL CASE

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Aim: Corporate communication enables an organization to manage its communication processes with its stakeholders. Thanks to this management, corporate culture is created. Corporate communication is more important in hospitals that have multiple stakeholders. This study was conducted to draw attention to the importance of corporate communication in hospitals and to share the good practice experience so that it can be an example for all hospitals. Because today, especially in public hospitals, the corporate communication structure carried out in a planned and scientific manner has still not been fully established.

Methods: Ankara Bilkent City Hospital was opened in 2019 with the coming together of 6 hospitals with a historical past. 18,500 healthcare professionals work in the hospital, which has 4,153 patient beds, 30,000 outpatient clinic examinations per day, and nearly 100,000 people entering and exiting. Planned corporate communication efforts were carried out so that healthcare professionals from hospitals with different corporate cultures could unite in the new institution and create a new and common corporate culture. During the planning process of these studies, the managerial expectations of the employees, the new corporate environment and the expectations of the employees were determined through focus group discussions and a corporate communication management guide was created. At the end of four years, focus group discussions were held again and the impact of corporate communication activities was discussed using the observation technique.

Results: In the focus group interviews held at the end of four years, it was observed that the employees developed a sense of belonging to the institution and worked with the image and reputation of the institution in mind. It has been observed that they participate in social responsibility projects with corporate citizenship awareness. It has been observed that, with good corporate communication management planning and successful activities, healthcare professionals from different cultures unite around a single corporate culture and strive to achieve this within a four-year period.

Conclusions: A planned corporate communication structure is still a great need, especially in public hospitals. It is important to manage communication with stakeholders with the idea that "He who manages communication manages the institution." In hospitals that include multidisciplinary studies, have a complex structure and multiple stakeholders, corporate communication activities affect issues such as improving health, increasing health literacy, preventing violence in healthcare and creating a corporate culture. Sharing good practice examples among institutions will also accelerate the planning needed in this field.

Keywords: Communication, corporate communication, health communication, hospital



OP50 – MORTALITY PREDICTION IN INTENSIVE CARE UNIT PATIENTS USING THE MACHINE LEARNING ALGORITHMS

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Aim: The aim of our research is to compare the prediction performance of the APACHE 2 mortality predicting score with the artificial neural networks, and decision tree methods in the intensive care unit patients.

Methods: Apache 2 scores and their's components at the first hospitalization of all patients hospitalized in Trakya University intensive care unit between 2018 and 2023 constituted the data set. Variables in the data set were body temperature, mean blood pressure, heart rate, respiratory rate, partial arterial oxygen pressure, arterial pH, serum sodium, serum potassium, serum creatinine, hematocrit, white blood cell, Glasgow coma score, age, chronic health condition, and acute kidney failure condition. After the data set was taken from the Enlil program Oracle database, it was transferred to the R-studio environment and data pre-processing stages were applied. After the data pre-processing stages were completed in R-studio, the data set was analyzed by using the Multilayer Perceptron Neural Networks (MLP), Chi-square Automated Interaction Detection (CHAID), and Classification and Regression Trees (CART) models. Then the CHAID, CART and MLP models were established to predict patient mortality and their classification performance was compared with the performance of the Apache 2 scoring system.

Results: The MLP achieved highest accuracy (79.0%), sensitivity (83.0%), and negative predictive value (79.7%) while APACHE II scoring system the lowest values (64.1%, 47.5%, and 55.8%, respectively). However, APACHE II scoring system achieved highest specificity (85.6%), and positive predictive value (81.0%).

Conclusions: It was concluded that the MLP model gives successful results in mortality prediction in the intensive care unit patients.

Keywords: Mortality prediction, apache 2 scoring system, machine learning, acute physiology and chronic health assessment, intensive care



OP51 – DOSIMETRIC QUALITY ASSURANCE IN ENDOMETRIAL CANCER BRACHYTHERAPY

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Aim: In endometrial cancer, brachytherapy is commonly used in addition to or alone with external beam radiotherapy. Receiving the full dose of the upper vagina, which is considered the target volume in vaginal brachytherapy, is one of the important parameters that increase the quality of treatment. In this study, it was aimed to evaluate the doses received by the target volume when 5 mm depth was selected as the dose definition point, according to the reference points recommended in the published literature for the purpose of checking dosimetric compliance with the PORTEC-4a study protocol.

Methods: In the study, dose distributions of 60 patients who underwent vaginal brachytherapy using multi-channel applicators with different diameters were evaluated. In the Oncentra treatment planning system, the target volume to be irradiated in each patient was created three-dimensionally from the vaginal surface to a depth of 5 mm. Reference dose points used in the PORTEC-4a study were added to each plan. Normalization points were defined at a depth of 5 mm from the vaginal surface. In each plan, normalization and graphic optimization were performed so that the dose defined in the target volume was 90% and the organs at risk remained below the limit dose values. In each patient, the target volume and reference isodose volume length, the doses received by the target volume and reference points, and the doses received by the risky organs were evaluated.

Results: IN the evaluation results, it was found that the mean target volume length was 5.22 cm and the reference isodose volume length was 29% longer than the target volume length. When the doses at the reference points were evaluated, it was seen that the target volume received the prescribed dose, and the doses at the 5 mm depth at the top of the vagina were significantly lower than the prescribed dose. However, it was observed that the doses at the reference points placed on the side wall received the target dose. It was observed that the bladder, rectum and sigmoid doses were below the organ dose limits at risk.

Conclusions: In vaginal brachytherapy applications, target volume length and treated reference volume length are separate parameters and should be taken into account during treatment planning. In addition, using reference points during optimization and making a treatment plan by checking the doses at these points can increase the quality of treatment.

Keywords: Endometrial cancer, brachytherapy, dosimetric quality assurance



OP52 – THE EFFECT OF COCHLEAR IMPLANTS ON CERVICAL AND OCULAR VESTIBULAR EVOKED MYOGENIC POTENTIALS

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Aim: The cochlear implant stimulates the auditory system and enhances hearing by delivering electrical stimulation to the cochlea. Due to the proximity of the cochlea and otolith organs, the electrical current emitted by the CI may influence the otoliths. The aim of this study was to assess the otolith functions in individuals with cochlear implants under two conditions: when the cochlear implant is activated (cochlear implant-on) and when it is deactivated (cochlear implant-off).

Methods: This study included 25 unilateral cochlear implant users (mean age: 22.6 ± 4.3 years). The participants' average duration of cochlear implant use ranged from 2 to 18 years, with a mean of 8.8 ± 4.9 years. Otolith evaluations were performed on the side of the participants' ear with a cochlear implant. In the assessment of otolith function, cervical vestibular evoked myogenic potential was utilized to assess the saccule, whereas ocular vestibular evoked myogenic potential was employed to assess the utricle. P13-N23 amplitude, P13 and N23 latency values were recorded for cervical vestibular evoked myogenic potential in both the cochlear implant-on and cochlear implant-off conditions, while N10-P15 amplitude, N10 and P15 latency values were recorded for ocular vestibular evoked myogenic potential.

Results: Both cervical and ocular vestibular evoked myogenic potentials were not obtained in 8 participants (%32) in the cochlear implant-on and cochlear implant-off conditions. In 1 participant, vestibular evoked myogenic potentials were obtained in the cochlear implant-on but not in the cochlear implant-off, and vice versa for 1 participant. In both cochlear implant-on and cochlear implant-off, cervical and ocular vestibular evoked myogenic potentials were obtained from 15 participants (%60). The P13-N23 amplitude value, P13 and N23 latencies in the cervical vestibular evoked myogenic potential, and the N10-P15 amplitude value, N10 and P15 latencies in the ocular vestibular evoked myogenic potential did not differ statistically between the cochlear implant-on and cochlear implant-off conditions ($p>0.05$).

Conclusions: Our study indicate that the vestibular evoked myogenic potentials were similar among cochlear implant users in both the cochlear implant-on and cochlear implant-off conditions. Vestibular evoked myogenic potential parameters demonstrated that the electrical current emitted by the cochlear implant did not have a significant, measurable influence on the otolith organs. However, it is essential to acknowledge the limitations of our study, such as the relatively small sample size and the need for further research to explore potential long-term effects or individual variations in otolith function.

Keywords: Otolith function, vestibular system, cochlear implant

OP53 – THE EFFECT OF PERCEIVED STRESS LEVEL ON THE SEVERITY OF TINNITUS IN YOUNG POPULATION

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Aim: Tinnitus is defined as the perception of sound in the absence of an external source and individuals with tinnitus describe it as ringing, wind sound, humming. Stress is defined as a situation in which an individual has difficulty in finding the necessary resources to cope with the negative or challenging factors encountered in the life cycle and is mentally and physically highly stimulated. Stress and tinnitus can disrupt the hormone balance and cause various physiological reactions with the effect it creates in our body. The aim of our study is to examine the relationship between tinnitus and stress, which we frequently encounter in the society, in young individuals from an audiological point of view.

Methods: The study included 34 individuals who had subjective tinnitus complaints for at least 3 months and whose bilateral hearing was tested at normal level. Following the otoscopic examination, detailed anamnesis was taken and immittancemetric measurements, pure tone/speech audiometry, tinnitus assessment, Tinnitus Handicap Inventory and Perceived Stress Scale-14 were administered respectively. Individuals were included in the normal stress level group if their stress scale score was between 0-35 points and in the high stress level group if their stress scale score was between 36-56 points.

Results: The age range of 19 women and 15 men included in the study was 18-40 years and the mean age was 25.3±7.2 years. The results of immittancemetric measurements and pure tone/speech audiometry were within normal limits in all individuals. According to the perceived stress levels of the individuals, 16 individuals with normal stress (23.68±5.43) and 18 individuals with high stress (41.29±5.31) were grouped. When we compared tinnitus frequency and tinnitus severity averages at normal and high stress levels, although similar tinnitus frequency averages were observed, an increased tinnitus severity was observed. In the statistical analyses between the groups, no significant difference was observed in both tinnitus frequency and severity. When the tinnitus disability questionnaire score was analysed according to the perceived stress level, 32.12±22.55 was observed at normal stress level; 43.29±24.43 was obtained at high stress level and no statistically significant difference was observed between the groups.

Conclusions: Stress and tinnitus are commonly observed in the society and can lead to physiological disorders that can trigger each other. When we evaluated the perceived stress level with subjective measurements, we showed that stress levels did not cause a significant effect on the existing tinnitus of individuals.

Keywords: Hearing, stress, subjective tinnitus



OP54 – EVALUATION OF AUDITORY AND VESTIBULAR FUNCTIONS IN VIOLIN PLAYING MUSICIANS: PRELIMINARY DATA

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Aim: The violin is the smallest member of the viola family, playing at the highest tone. Due to the holding position of the violin and its close proximity to the ear, musicians are exposed to high intensity sound for a long time, which can lead to noise-induced hearing loss and efferent auditory system damage. Due to the way the violin is held, the head is constantly turned to the left, which may cause asymmetry in the balance system. The aim of the study is to determine the possible negative effects of regular use of the violin on the auditory and vestibular system and to raise awareness of musicians and to ensure that they continue their professional lives in a healthier way.

Methods: The study included 10 musicians and 11 non-musical individuals who had been using the violin on the left for at least 5 years. Audiometric measurements were performed and all participants had Type A tympanogram and pure tone hearing in the normal range. High frequency audiometry, Contralateral Suppressed Transient Evoked Otoacoustic Emission and lateral Video Head Impulse Test and Cervical Vestibular Evoked Myogenic Potential tests were performed to evaluate the hearing system and balance systems, respectively.

Results: The mean duration of performing violin in violin players was 6.4±1.2 years. The mean age of the violin players was 21.8±3.1 years, while that of the control group was 21.7±0.6 years. When pure tone averages, high frequency hearing thresholds, contralateral suppressed transient emission and video head impulse test were compared between the groups, no statistically significant difference was observed in both ears. When cervical vestibular evoked myogenic potential P1 and N1 latencies were analysed between the groups in both ears, no statistically significant difference was obtained. When P1-N1 amplitudes were compared, a statistically significant difference was observed between the groups on both sides.

Conclusions: In the present study included young musicians with short violin playing experience, we think that their hearing findings may be similar to those of their peers. The lack of difference in head impulse test results may be due to the fact that their vestibulo-ocular reflexes were developed due to frequent note following as a requirement of their profession. The decrease in P1-N1 amplitude observed in vestibular evoked myogenic potential results in violin players suggests that saccular sensitivity may be decreased and this may be related to exposure to loud sound.

Keywords: Cervical vestibular evoked myogenic potential, head impulse, vestibular, violin



OP55 – THE RELATIONSHIP BETWEEN AUDIOLOGICAL CHARACTERISTICS AND FUNCTIONAL HEARING SKILLS IN ADULTS WITH HEARING LOSS: PRELIMINARY FINDINGS

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Aim: The effects of hearing loss are not limited to decreased hearing sensitivity. Hearing-related functional skills of individuals with hearing loss, such as speech perception, spatial hearing, and sound quality, are also negatively affected. The aim of this study is to examine the relationship between the audiological characteristics and functional hearing skills of adults with hearing loss.

Methods: The sample of the study consists of 66 participants, adults with hearing loss between the ages of 18 and 65, who were reached from various institutions and the internet. A personal information form included participants' audiological information and the Speech, Spatial, and Qualities of Hearing Scale were used to collect data. Descriptive statistics, the Independent-t test, the One-way analysis of variance, and Pearson correlation analyses were used in the statistical analysis of the data.

Results: The Speech, Spatial, and Qualities of Hearing Scale total score and subscale scores were statistically significant ($p < 0.05$) in analyses performed according to the type and degree of hearing loss. There was no statistical difference in Speech, Spatial, and Qualities of Hearing Scale scores between congenital and acquired hearing loss, between those with and without tinnitus, and between those using hearing aids and cochlear implants ($p > 0.05$). In the correlation analysis between duration of hearing loss, duration of hearing aid and/or cochlear implant use, age, and Speech, Spatial, and Qualities of Hearing Scale scores, a negative correlation of negligible significance was observed between duration of hearing loss and Speech, Spatial, and Qualities of Hearing Scale-Hearing Quality subscale score ($p < 0.05$), whereas no statistical relationship was found between the other variables ($p > 0.05$).

Conclusions: Our study investigated on the interaction between audiological characteristics and hearing-related functional skills in adults with hearing loss. Mild hearing loss was found to be associated with better functional hearing than moderate and severe hearing loss, and those with conductive hearing loss had higher Speech, Spatial, and Qualities of Hearing Scale scores than those with sensorineural hearing loss. In addition to objective hearing evaluation, subjective hearing evaluation permits effective planning of audiological interventions and rehabilitation processes for adults with hearing loss.

Keywords: Hearing loss, hearing aid, cochlear implant, speech perception, spatial hearing



OP56 – AN OVERVIEW OF CAREER DECISION REGRET THROUGH CHILDHOOD EXPERIENCES

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Aim: Individuals have various decisions to make throughout their lives and one of the most important of these decisions is the choice of career. Since choosing a career is a complex decision that will affect one's whole life, making the wrong choice may lead to regrets. This study aims to investigate how childhood experiences affect individuals' regrets about their career decisions.

Methods: "Early Life Experiences Scale" and "Career Decision Regret Scale" were used as data collection tools in the relational survey model research. The sample group of the study was formed by random and snowball sampling method. With the data collection forms prepared with the "Google Forms" application, participants were reached via e-mail/WhatsApp application with the online survey link. A total of 277 people participated in the study. Pearson correlation coefficients: One-Way Analysis of Variance-(ANOVA), Independent Groups T-Test and multiple linear regression analysis statistical methods were used.

Results: When the research findings were analyzed, it was seen that the level of career decision regret of male participants was higher than that of female participants ($p < .01$). The results of the analysis show that age makes a significant difference on participants' career decision regrets ($p < 0.01$). Among the age groups, the group with the highest level of regret is the 36-45 age-group (60.62), while the group with the lowest level of regret is the 18-25 age-group (22.65). [26-35 age-group: 38.21 and 45+ age-group: 35.42].

As a result of the correlation analysis, it was seen that there was a positive and low-level significant relationship between the participants' career decision regret scores and the unvalued subscales ($r = 0.296$, $p < 0.01$), submissiveness subscale ($r = 0.280$, $p < 0.01$) and threat subscale ($r = 0.187$, $p < 0.01$).

When the results of multiple linear regression analysis were analyzed, it was determined that unvalued subscales ($R = 0.296$, $R^2 = 0.087$, $p < 0.01$), submissiveness subscale ($R = 0.280$, $R^2 = 0.078$, $p < 0.01$) and threat subscale ($R = 0.187$, $R^2 = 0.055$, $p < 0.01$) had a significant, low-power relationship with participants' career decision regret scores. According to the t-test results, it was determined that all sub-dimensions of the early life experiences scale positively and significantly predicted the participants' career decision regret. According to the standardized regression coefficient (β), the relative order of importance of the predictor variables on professional decision regret is as follows: unvalued subscales, submissiveness subscale, threat subscale.

Conclusions: According to the results of the study, the more the individuals' childhood memories contain memories of submissiveness, unvalued or threatening memories, the higher their level of career decision regret.

Keywords: Childhood experiences, career decision, career decision regret



OP57 – ANTIMICROBIAL EFFECT OF POMEGRANATE (*PUNICA GRANATUM L.*) PEEL

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Aim: The use of medicines and nutritional supplements derived from plants has increased in recent years and many studies have been conducted on this. Among these studies, there are also studies on the antimicrobial activity of plants. *Punica granatum L.* (Pomegranate) is a plant rich in tannins with antimicrobial activity. Peel extracts of *Punica granatum* have higher antimicrobial activity than fruit juice and seed extracts. In our study, it was aimed to examine the antimicrobial effect of *Punica granatum L.* (pomegranate) fruit peel extracts prepared using different solvents on various microorganism strains using the microdilution method.

Methods: The fruit peels of pomegranate were dried and powdered, and extracts were prepared using different solvents through direct extraction method. Susceptibility tests were performed in accordance with EUCAST recommendations. Standard strains *Pseudomonas aeruginosa* ATCC 27853, *Escherichia coli* ATCC 25922, *Staphylococcus aureus* ATCC 29213, *Enterococcus faecalis* ATCC 29212 and *Candida albicans* ATCC 10231 were used. The antimicrobial effect of extracts obtained by drying the peel of the pomegranate plant was investigated. The MIC was determined as the lowest concentration of substance that completely inhibited the growth of the microorganism in the microdilution wells.

Results: It has been observed that extracts of fruit peels have antibacterial effects mostly against *S. aureus* and *E. faecalis*. The extracts did not show antimicrobial activity on *E. coli*, *P. aeruginosa* and *Candida albicans*. The highest antimicrobial effect among the extracts was seen in the ethanol extract. DCM extract did not show antimicrobial activity against any strain.

Conclusions: All parts of the pomegranate plant, which is a symbol of abundance and described as "a pharmacy in itself", should be evaluated. The significant antimicrobial effect of the shell part, which is especially seen as waste, as revealed in our study, has the potential to be a preservative in the food industry and a natural solution to the concern brought about by increasing antibiotic resistance in the pharmaceutical industry. The compounds in the extracts obtained from the fruit peels of *Punica granatum L.* should be analyzed. It is thought that these compounds, which have many antioxidant, antimicrobial and anticancer effects, can be developed with appropriate formulations and turned into many pharmaceutical products of natural origin.

Keywords: Antimicrobial activity, extract, microdilution method, pomegranate peel, *Punica granatum Linn*



OP58 – ANTIMICROBIAL EFFECT OF BENZAZOLE DERIVATIVE COMPOUNDS

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Aim: The number of people affected by infectious diseases is increasing day by day in our world. As a result, infectious diseases are becoming a global public health problem. In the treatment of infectious diseases, antimicrobial drugs have a critical importance. The resistance developed by microorganisms against these drugs is one of the problems we encounter in treatment. For this reason, new biologically active combinations are being developed by scientists. At this point, benzazol derivative compounds are among the important compounds studied. The aim of this study is to investigate the activities of benzazole-derived compounds, which are thought to have high antimicrobial activity, using various test methods.

Methods: Susceptibility tests were performed in accordance with EUCAST recommendations. In this study, the antimicrobial activity of 12 different benzazol derivative compounds was examined. *E. coli*, *P. aeruginosa*, *E. faecalis*, *S. aureus* and *C. albicans* strains were used in our study. The MIC was determined as the lowest concentration of substance that completely inhibited the growth of the microorganism in the microdilution wells.

Results: Antimicrobial activity against *E. coli* was observed in four compounds. Antimicrobial activity against *P. aeruginosa* was observed in one compound. Antimicrobial activity against *E. faecalis* was observed in all compounds. Antimicrobial activity against *S. aureus* was observed in six compounds. No antimicrobial activity was observed against *C. albicans* in all compounds.

Conclusions: Antimicrobial activity was observed against *E. faecalis* in all 12 different benzazol derivatives in the study. Based on these results, benzazole-derived compounds are thought to be promising new drug candidates against infectious diseases caused by *E. faecalis* in the future. Based on the results of our study, it is recommended that the antifungal effects of the benzazol derivatives examined be tested on different fungal species. It is thought that the reason why the antimicrobial activity seen against *E. faecalis* is not seen against *P. aeruginosa* is due to the difference in their cell walls. According to the findings; It is thought that benzazole-derived compounds can be turned into target molecules for new drugs to be developed against infections caused by *S. aureus*.

Keywords: Antimicrobial activity, benzazol, microdilution method



OP59 – AWARENESS OF FREELANCE PHARMACISTS ABOUT VACCINES: EDİRNE PROVINCE EXAMPLE

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Aim: Immunization with vaccines is undoubtedly one of the most effective methods of combating preventable diseases. Vaccination programs significantly reduce the incidence and mortality of diseases. However, it is observed that individuals tend to avoid vaccination due to their misinformation about vaccines. This situation poses a serious health threat and leads to social problems, especially in cases such as pandemics and epidemics. Pharmacists have important public health responsibilities in providing support and counseling services. They can increase patients' awareness of vaccines by providing accurate information about vaccines. In our study, we aimed to measure the level of awareness of pharmacists working freelance in Edirne province by conducting a questionnaire about vaccines.

Methods: In the study, 50 pharmacists who volunteered to participate in the study were asked 20 questions about their level of awareness about vaccines created by the researchers. The ethics committee approval numbered 2023/109 was obtained by TÜTF-GOBAEK. The questions were answered as "Strongly Agree", "Agree", "Undecided", "Disagree" and "Strongly Disagree". The data to be obtained from the study were analyzed using IBM SPSS version 20.0 and Fisher's Exact test was used for categorical variables. In all statistical analyses, p value <0.05 was considered for statistical significance.

Results: The evaluation results of the survey questions were analyzed according to gender. The rate of correct answers was 82.76% for women and 57.14% for men. Since Human Papilloma Virus (HPV) causes cervical cancer and this type of cancer is seen in women, it was determined that female pharmacists had more knowledge on this subject. Correct answers to the other questions were similar in men and women (p>0.05 for all other questions). In the evaluation of the survey questions according to the year of graduation, 51.61% of the participants who graduated in 2005 and later answered the questions correctly, while 89.47% of the participants who graduated before 2005 answered the questions correctly.

Conclusions: As a result of the study, it was determined that the awareness of community pharmacists about vaccines was at a high level. Current information about vaccines should be closely monitored by pharmacists, because pharmacists have important responsibilities in providing support and counseling services to patients. It is very important for public health that they convey accurate, up-to-date and complete information to their patients. Increasing the level of awareness of pharmacists will contribute to increasing social immunity and changing their perspectives on vaccine hesitation and refusal.

Keywords: Vaccine, vaccine awareness, pharmacist, Edirne.



OP60 – INVESTIGATING THE COMBINED EFFECT OF ANTIBIOTICS TO VANCOMYCIN RESISTANT ENTEROCOCCUS (VRE) ISOLATES

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Aim: Enterococci are commensal bacteria that live in the gastrointestinal tract of many organisms, including humans. Enterococci with multidrug resistance genes can cause nosocomial infections and cause very serious clinical pictures. These bacteria have acquired resistance to antibiotics such as gentamicin, ampicillin and vancomycin. Their treatment has become very difficult, especially as a result of resistance to glycopeptides. Due to the increase in the number of enterococci isolates resistant to these antibiotics, studies are being conducted to search for new treatments. Since the discovery and introduction of new antibiotic agents is a very long process, the combined use of existing antibiotics has come to the fore. However, these studies are usually conducted on the combined effect of 2 antibiotics. In the literature, there are very few susceptibility method studies on the combined use of 3 and/or more antibiotics. In our study, we aimed to investigate the efficacy of double and triple combinations of ampicillin, vancomycin and gentamicin against Vancomycin Resistant Enterococci (VRE) strains.

Methods: In the study, 3 Vancomycin Resistant *Enterococcus faecalis* isolates and *E. faecalis* ATCC 29212 strain obtained from Trakya University Health Research and Application Center were used. Antimicrobial susceptibility tests were performed by microdilution method. Microdilution methods recommended by CLSI M100-S28 and EUCAST were used in the study. In addition, 3-way checkerboard test was performed using gentamicin, ampicillin and vancomycin. The evaluation of the combination test was based on the fractional inhibitory concentration (FIC) index. Synergy was evaluated according to the checkerboard results.

Results: When we were evaluated the checkerboard test results of different combinations of ampicillin, gentamicin and vancomycin antibiotics at different concentrations, no synergistic interaction was observed in ampicillin-gentamicin, gentamicin-vancomycin and ampicillin-vancomycin combinations. In 1 VRE isolate in the study, vancomycin-gentamicin combination showed antagonist effect. All other combinations were found to have additive effect.

Conclusions: In conclusion, antibiotic resistance is quite common in VRE isolates. In our study, although FIC values very close to the synergy limit were observed according to the checkerboard test results, no synergy was observed. It would be appropriate to plan similar synergy studies for this group of bacteria by combining ampicillin, vancomycin and gentamicin with newer antibiotics such as daptomycin, linezolid, dalfopristin-quinopristin.

Keywords: Enterococcus, VRE, combination, checker board, gentamicin, ampicillin, vancomycin



OP61 – STANDARDIZATION AND SAFE USE OF BEE PRODUCT- CONTAINING FORMULATIONS SOLD IN PHARMACIES

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Aim: The use of bee products, which have been proven to have a rich nutritional and chemical content and various therapeutic effects, has shown an increase, especially in recent years, among people. Bee products are offered to consumers as direct food items, dietary supplements, or as components in various preparations with therapeutic effects (such as throat lozenges, nasal sprays etc.). The aim of this study is to discuss factors such as the potential uses of bee products, their safe use, botanical origin, the importance of knowing their chemical content, an examination of international and national standards, and their adequacy, as well as parameters to be considered in the apitherapeutic use.

Methods: Within the scope of the study, research studies and literature data related to bee products that have been conducted so far have been compiled. Standards and contents related to the use of bee products in food, dietary supplements, and apitherapeutic applications have been examined, highlighting the considerations required for their potential therapeutic uses.

Conclusions: The conducted studies reveal that the chemical content, quality, and consequently the therapeutic effects of bee products are influenced by various factors, including the local flora where the beehives are located, climate and storage conditions. Additionally, the presence of multiple active compounds within bee products, which can provide therapeutic effects, poses a significant challenge, especially when it comes to adjusting the dosage, potential interactions with medications, or other substances within the preparation. The insufficiency of research studies in this regard has led to debates regarding the safe use of bee products. Therefore, the standardization of bee products within preparations sold in pharmacies and their appropriate use is of utmost importance. While standardization should ideally begin at the production stage of bee products, there are certain shortcomings that need to be addressed. Additionally, there are significant challenges such as the lack of information on product labels, the reliance on beekeepers' statements for the botanical origin of bee products, inadequate research and development efforts to determine the quantity of bee products in preparations, inappropriate pre-processing storage conditions for sourced bee products, incorrect beekeeping practices in bee product production, environmental factors, and residue issues. In conclusion, it is essential to thoroughly characterize bee products, inspect them at the production stage, determine their botanical origin along with their chemical content, and prioritize the selection of bee products suitable for the intended purpose before benefiting from their therapeutic effects.

Keywords: Bee products, Standardization, OTC



OP62 – THE EFFECT OF GUT MICROBIOTA SUPPLEMENTED WITH *LACTOBACILLUS ACIDOPILUS* ON WNT, β -CATENİN, p53, TGF β , KRAS, APC AND PI3K MARKERS IN COLON CANCER

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Aim: In this study, we aimed to investigate in colon cancer model rats the effect of intestinal microbiota supplemented with *Lactobacillus acidophilus* on Wnt, β -catenin, p53, TGF β , KRAS, APC and PI3K markers in colon tissue

Methods: In this study, 50 rats were randomly divided into 5 groups (n=10) as control (Group control), *Lactobacillus acidophilus* fed group (Group I), DMH-induced colon cancer induced group (Group II), *Lactobacillus acidophilus* fed pretreatment cancer group (Group III), *Lactobacillus acidophilus* fed post-treatment cancer group (Group IV). Fecal samples were collected from the rats every 3 weeks for microbiota analysis. Sequence analysis of bacteria related to the microbiota in fecal samples was determined by next generation sequencing (NGS) method. In colon tissue samples, Wnt, β -catenin, p53, TGF β , KRAS, APC and PI3K markers were evaluated immunohistochemically.

Results: Total bacteria, total *Lactobacillus* spp. and *Lactobacillus acidophilus* were measured in fecal samples. The highest *Lactobacillus* spp. ratio was observed in Group I at the 3rd week. In Group II, the ratio of *Lactobacillus* spp. to total bacteria was low at the beginning. In Groups III and IV, decrease was observed in the ratio of total *Lactobacillus* to total bacteria at week 9, while an increase was observed at weeks 15 and 18 in both groups. In colon tissue samples, β -catenin, p53, TGF β , KRAS expressions were statistically significantly higher in Group II compared to the control group. In addition, these expression levels lower in Groups III and IV compared to Group II. WNT expressions were close to each other in groups II, III and IV and the difference between them was not significant. PI3K were found at low levels in groups II, III and IV. A increase in APC expression was observed in group II to other groups.

Conclusions: In colon cancer pathogenesis, changes in the Wnt-beta-catenin molecular complex increase in the colon cancer group and decrease in the treatment groups. APC gene doesn't lead to any activation of Wnt-beta-catenin molecule complex, *Lactobacillus acidophilus* administration is independent of APC tissue expression increase in colon cancer group. TGF β promotes accelerated proliferation of tumor cells, but it is thought that it is not effective in suppressing tumor growth in *Lactobacillus acidophilus*-treated groups. PI3K signaling pathway activated cell proliferation but was not as effective as Wnt-beta-catenin pathway. In this context, it was concluded that probiotic effect decreased the development of colon cancer and showed protective effects.

Keywords: Microbiota, colon cancer, Wnt-beta-catenin pathway, PI3K signaling pathway.

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OP63 – ANALYTICAL COMPARISON OF THE TYPE OF DEVICE USED IN JET NEBULISATION WITH A NEW GENERATION IMPACTOR FOR THE DELIVERY OF IPRATROPIUM AND SALBUTAMOL

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Aim; The aim is to investigate how aerodynamic particle size analyses (European Pharmacopoeia 0671 and United States Pharmacopeia <1601) are affected by the type of nebuliser used during the development of nebulised products.

Next generation impactors are used to determine the aerodynamic particle size of nebulised drug products thanks to their different particle chambers. The aerosol characteristics, mass median diameter and mass fraction below 5 microns of nebuliser pumps differ. The effect of this difference on the active pharmaceutical ingredients was investigated.

Methods: The study used Inqua NEB Plus and Pari Master nebuliser pumps together with Next Generation impactors for Pari LC Plus nebulisers.

Sampling was performed at 15 litres/minute for drug delivery. After 20 minutes for total drug delivery, the amounts remaining in the nebuliser device and retained in the stage of the impactor were dissolved with the mobile phase solution prepared for high pressure liquid chromatography and collected. The amounts of ipratropium and salbutamol detected in the mouth, throat and 8 different layers of the impactor and the amount of residue in the nebuliser device were analysed by high pressure liquid chromatography.

Results: Two different inhalation studies of the nebules product containing two active pharmaceutical ingredient (ipratropium and salbutamol) were performed and the effects of changing nebuliser pump type were compared.

According to the results, the effect of nebuliser pump type change on the fine particle dose (<5micron) was 0.121 and 0.594 in Inqua pro NEB Plus and 0.126 and 0.625 in Pari Master for ipratropium and salbutamol, respectively.

Conclusions: The type of nebuliser pump used had no significant effect on the amount inhaled. It is recommended that the performance of the type of nebuliser rather than the type of nebuliser pump used for nebulisation should be investigated and that a detailed risk assessment should be made by the clinician for relevant situations.

Keywords: Nebuliser, salbutamol, ipratropium, next generation impactor.

OP64 – THE EFFECT OF BREATHING PATTERN FOR JET NEBULIZATION ON THE DELIVERY OF IPRATROPIUM AND SALBUTAMOL WITH A BREATH SIMULATOR

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Aim; Nebulisers convert liquids into a cloud of droplets suitable for inhalation. Nebulisers are designed to be used with a variety of drugs; the choice of nebuliser and/or drug depends on the prescribing clinician. For this reason, the nebuliser and the drug are usually marketed and sold as two separate products. The difference between different nebulisers and the pumps that deliver them is therefore important.

This study were compare the effects of nebuliser type, pump and the use of an exhalation filter, which was used in “Preparations for Nebulisation: Characterisation” (European Pharmacopeia 2.9.44 and United States Pharmacopeia Chapter <1601>) for salbutamol/ipratropim nebules. The aim is to establish a relationship between the device - pump - exhalation filter within the dose delivered.

Methods: Delivered dose sampling apparatus for nebulisers with breathing simulator model BRS 1100 was used in the study. Sampling was performed at 3, 20 and 40 minutes for active substance delivery rate. Sampling was performed at 3, 20 and 40 minutes for active substance delivery rate. The amounts remaining in the nebuliser device and retained in the filters after the 40th minute were dissolved with the mobile phase solution prepared for high pressure liquid chromatography and collected for total active substance delivery. The use of Pari LC Plus and Pari LC Sprint jet nebulisers, Inqua NEB Plus and Pari Master nebuliser pumps and exhalation filters was compared. The amounts of ipratropium and salbutamol on the inhalation, exhalation and exhalation filters and the residual amount in the nebuliser device were determined by high pressure liquid chromatography.

Results: 4 different inhalation studies of the same product containing two active substances were performed and the effects of changing nebuliser type, pump type and exhalation filter during the study were compared.

According to the results, the effect of nebuliser type change was 13.6% and 13.8%, pump type 3.9% and 3.4%, and exhalation filter 2.1% and 2.6% for salbutamol and ipratropium of inhaled amount %, respectively.

Conclusions: This study found that the type of nebuliser used had a significant effect on the amount inhaled. It is recommended that the performance of the type of nebuliser used for nebulisation should be investigated and that a detailed risk assessment for relevant conditions should be carried out by the clinician.

Keywords: Nebuliser, salbutamol, ipratropium, breath simulator



OP65 – HYROPHILIC INTERACTION LIQUID CHROMATOGRAPHIC DETERMINATION OF BUTAMIRATE CITRATE in TABLET DOSAGE FORMS

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Aim: Develop a validated hydrophilic interaction liquid chromatographic method for determination of butamirate citrate in tablet dosage forms.

Methods: Butamirate citrate in tablet formulations was quantitatively determined by HPLC using a HILIC (95Å, 2.1 x 150 mm, 1.8 µm) column and a mobile phase of %0.1 H₃PO₄ - acetonitrile (15:85, v:v) by isocratic elution at 20 °C. Flow rate of the mobile phase was 0.4 mL/min, injection volume was 5 µL. Butamirate citrate was detected at 225 nm wavelength. Determination of butamirate citrate in tablet formulation was performed by comparing the UV spectrum and retention times of tablet samples with standard compound.

Results: Quantification of the butamirate citrate in tablet formulations performed by using external standard. Retention time was 3.21 minute, theoretical plate number (USP) was 6897, capacity factor was 1,96 and symmetry factor was 1.18.

Conclusions: Chromatographic method is simple, fast, accurate and sensitive and it was applied for assay of butamirate citrate in tablet formulations. HILIC chromatography show better results at the analysis of polar and small molecules according to the normal phase chromatography. Developed method could be applied for routine analysis of butamirate citrate formulations.

Keywords: Butamirate citrate, tablet, HILIC, HPLC, DAD



OP66 – ANTI-ALZHEIMER EFFECT OF COENZYME Q10 LOADED DQASOMES

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Aim: Coenzyme-Q10 (CoQ10) is one of the most important endogenous antioxidant sources for cells. The benefits of dietary CoQ10 supplementation, particularly in connection to cardiovascular health. Unfortunately, neither its water solubility nor its bioavailability is good. DQAsomes (Dequalinium-based Liposome-like Vesicles) are a novel type of vesicular carrier system that has been designed specifically for the delivery of drugs to mitochondria. They are formed from dequalinium, a dicationic (having two positive charges) amphiphile molecule. The unique feature of DQAsomes is their ability to selectively target and accumulate within mitochondria due to the high membrane potential of these organelles. The goal of the research is the development of CoQ10 loaded DQAsomes and boosting the therapeutic efficacy of CoQ10 in Alzheimer treatment.

Methods: In our study, DQAsomes have been prepared with a thin film method facilitated by the design of experiment (DoE) software. Formulations have been compared regarding size (PS), polydispersity index, zeta potential (ZP), encapsulation efficiency% (EE) and product yield (PY). Optimum formulation has been appraised for thermal analysis, in vitro drug release, and cytotoxicity analysis. Anti Alzheimer effect was investigated on APPSL-GFP lentivirus-infected human neural cells (APPSL-GFP-L-HNC) by MTT cytotoxicity test.

Results: PS, size distribution, ZP, EE%, and process yield of the optimum formulation was found 203,7±5,879 nm, 0.225±0.019, -38,6±5,82 mV, 79,95± 0,18, and 97.33%, respectively. DSC studies also confirm for drug loading. A higher dissolution rate was obtained by encapsulation. The IC50 values of empty DQAsomes, pure CoQ10 and CoQ10 loaded DQAsomes on infected-Alzheimer cells were found 33.45µg/mL, 21.15µg/mL, 13.36µg/mL, respectively.

Conclusions: In conclusion, safe and effective CoQ10 loaded DQAsomal formulation against Alzheimer disease were produced successfully.

Keywords: Dequalinium chloride, coenzyme Q10, DQAsome, toxicity, alzheimer

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OP67 – DETERMINATION OF FAVIPIRAVIR IN TABLET DOSAGE FORM BY HYDROPHILIC INTERACTION LIQUID CHROMATOGRAPHY

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Aim: Develop a validated hydrophilic interaction liquid chromatographic method for the quantification of favipiravir in tablet dosage forms.

Methods: The chromatographic analysis was conducted using an HPLC instrument consisting of an Agilent 1260 model diode array detector, vacuum pump, column thermostat, and auto-sampler components (Agilent Technologies, Santa Clara, California, USA). The analysis was carried out using an analytical column, ZORBAX RRHD HILIC Plus (95Å, 2.1 x 150 mm, 1.8 µm). The mobile phase consisted of acetonitrile and water (80:20 v/v). Chromatographic separation was achieved with isocratic elution at a flow rate of 0.8 mL/min, and Favipiravir was monitored at a wavelength of 322 nm.

Results: Favipiravir's retention time was found to be 1.8317 ± 0.002 , the limit of detection (LOD) was 6.65 µg/mL, the limit of quantification (LOQ) was 20.17 µg/mL, and the regression equation was $y = 451.9x + 22033$ with an R^2 value of 0.9976.

Conclusions: The developed HILIC method is fast, precise, and accurate, making it suitable for routine analysis of favipiravir.

Keywords: Favipiravir, HILIC, tablet



OP68 – MEDICAL DEVICE-RELATED PRESSURE INJURIES IN INTENSIVE CARE PATIENTS: A PROSPECTIVE AND DESCRIPTIVE STUDY

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Aim: In this study, it was aimed to examine the risk factors, incidence and characteristics of medical device-related pressure injuries in intensive care patients.

Methods: This study has a prospective and descriptive design. The study was carried out in the adult intensive care unit of a healthcare institution located in the western Türkiye. During data collection period (February-June 2022), 184 patients were treated in the adult intensive care unit. 138 intensive care patients who met the inclusion criteria constituted the sample of the study. The first observations and evaluations of intensive care patients in terms of pressure injuries were made within the first 24 hours after admission to the clinic. Observations continued daily during the hospitalization period of the patient. Data were collected with the Intensive Care Patient Information Form, Glasgow Coma Scale, Braden Pressure Ulcer Risk Assessment Scale and Identification Form for Medical Device-related Pressure Ulcers. Analysis of data was performed with descriptive statistical methods, Shapiro-Wilk Test, Mann-Whitney U Test, Chi-Square Test and Logistic regression analysis.

Results: Medical device-related pressure injury developed in 11.6% (n=16) of intensive care patients. Anatomically, pressure injury occurred most frequently on the lip (37.5%) and most frequently due to the intubation tube (37.5%). Most of the developed wounds (75.0%) were found to be stage 2. Logistic regression analysis, which was performed to determine the effect of independent variables on medical device-related pressure injuries in intensive care patients, was found to be statistically significant ($X^2=37.098$, $p<0.001$). When the regression coefficients were examined, it was found that total hospitalization time in the intensive care unit ($\beta=0.948$, $p<0.01$) and PaCO₂ level ($\beta=0.923$, $p<0.01$) had a positive, and duration of aerobic respiration with nasal cannula or mask ($\beta=-0.920$, $p<0.01$) and Braden score ($\beta=-0.948$, $p<0.01$) had a negative and significant effect on medical device-related pressure injuries. It was also determined that total hospitalization time was longer, PaCO₂ level was higher, the duration of aerobic respiration with nasal cannula or mask was shorter and the Braden score was lower in intensive care patients with medical device-related pressure injuries compared to patients without pressure injuries.

Conclusions: In this study, many risk factors were found to be effective in the development of medical device-related pressure injuries. The high incidence of device-related pressure injuries in intensive care units indicates that there is a need for risk identification as with pressure injuries caused by body weight forces.

Keywords: Intensive care unit, critical care, nursing care, risk identification, medical device-related pressure injury



OP69 – DETERMINATION OF DISASTER PREPAREDNESS OF NURSES WORKING IN ADULT INTERNAL MEDICINE-SURGICAL EMERGENCY DEPARTMENT

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Aim: The aim of this study was to determine the disaster preparedness of nurses working in the adult internal medicine-surgery emergency department.

Methods: This research is a descriptive and cross-sectional research. The research was carried out between July and September 2023 in two hospitals, with the participation of 66 adult internal medicine-surgical emergency nurses. Face-to-face interviews were used to collect the research data using the Nurse Information Form and the Disaster Preparedness Perception Scale of Personnel Working in Pre-Hospital Emergency Health Services Scale. In order to perform the study, the necessary written permissions were obtained from the University of Trakya University Faculty of Medicine Non-Invasive Scientific Research Ethics Committee and the Health Research and Application Centre's Central Directorate. Descriptive analyses, the Mann-Whitney U test, and Spearman's correlation analysis were conducted to evaluate the data. The value of $p < 0.05$ was considered statistically significant for the results.

Results: It was determined that there was a significant positive relationship between the working year of the nurses participating in the study and the self-efficacy sub-dimension of the scale ($p = 0.015$). It was determined that the benefit sub-dimension of female nurses was significantly higher than that of male nurses ($p = 0.024$). The mean total scale score of nurses with bachelor's degrees was found to be statistically significantly higher than that of nurses with high school degrees ($p = 0.000$). The mean scale total score of nurses who did not participate in any disaster other than COVID-19 was found to be statistically significantly higher than that of those who participated in the earthquake ($p = 0.024$).

Conclusions: In the study, it was determined that working year, gender, and education level affected the determination of disaster preparedness of nurses working in the adult internal medicine-surgical emergency department. In order to reduce the effects of disasters as much as possible, the level of education of nurses who are at the forefront of all kinds of disasters should be increased.

Keywords: Medical-surgical nursing; disaster; emergency; preparedness



OP70 – EFFECT OF SOUR LIQUID ON SWALLOWING FUNCTION OF THE PATIENTS WITH POST-STROKE DSYPHAGIA

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Aim: Untreated and undetected swallowing disorders lead to increased morbidity and mortality in acute stroke patients due to inadequate nutrition, dehydration, and aspiration pneumonia leading to prolonged hospital stays, decreased functionality, and increased long-term care needs. The aim of this study was to evaluate the effect of early administration of sour liquid on swallowing function of patients with post-stroke dysphagia.

Methods: This study was a randomized controlled trial, which was conducted with 95 patients with confirmed diagnosis of ischemic stroke and dysphagia, admitted to the neurology department of a university hospital. The intervention group (n=47) received 4 ml of room temperature lemon juice, while the control group (n=48) received 4 ml of room temperature water before breakfast, lunch, and dinner for a duration of 7 days. The Standard Swallowing Test, Gugging Swallowing Screen, and National Institutes of Health Stroke Scale were applied. Swallowing function and stroke severity were assessed at initial assessment, at the end of the 7th and 30th days.

Results: It was found that patients in the intervention group showed improvement in swallowing function compared to those in the control group at the end of the 7th and 30th days. In both the intervention and control groups, as stroke severity decreased, swallowing function improved (p<0.05).

Conclusions: Early administration of sour liquid to patients with post-stroke dysphagia was found to have a positive effect on swallowing function. Providing sour liquid to patients diagnosed with stroke in the early stages of disease would be recommended.

Keywords: Stroke, dysphagia, sour liquid, swallowing function, nurse

Acknowledgement: We would like to thank all patients and their families who participated in this study.



OP71 – INVESTIGATION OF THE QUALITY OF LIFE IN PATIENTS WITH SHOULDER PAIN AFTER STROKE

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Aim: The aim of this study was to investigate the relationship between the personal and disease-related characteristics of patients with poststroke shoulder pain and their quality of life, anxiety, and depression.

Methods: The sample of the study consisted of 112 patients who applied to the Physical Medicine and Rehabilitation outpatient clinic of the Physical Medicine and Rehabilitation Department of a university hospital due to post-stroke shoulder pain. Data were collected with the personal and disease-related characteristics information form and the "Stroke-Specific Quality of Life Scale. Data were analyzed by percentage, mean, Mann Whitney U test, Kruskal Wallis variance analysis. Values with $p < 0.05$ were considered statistically significant.

Results: The mean age of the patients was 56.38 ± 14.57 years and 80.7% of them were women. It was found that the patients' mean total score of shoulder pain and disability index (SPADI) was 42.47 ± 19.26 , and the mean total score of stroke-specific quality of life (SS-QOL) was 3.57 ± 0.64 . It was found that as the pain severity and medication intake of the patients increased, their pain level also increased ($p < 0.001$, $p = 0.039$). It was found that the mean score of SS-QOL subscale language was higher in patients diagnosed with stroke originating in the left hemisphere than in patients diagnosed with stroke originating in the right hemisphere ($p = 0.004$). It was found that actively working patients had higher mean scores of the SS-QOL vision subscale and the SS-QOL mood subscale than those who were not working ($p = 0.012$ and 0.042 , respectively). It was found that the mean SS-QOL subscale vision score was higher in male patients than in female patients ($p = 0.015$). It was found that the mean SS-QOL subscale score for mood was higher in patients with normal speech status ($p = 0.038$).

Conclusions: It was found that the quality of life of patients with post-stroke shoulder pain, polypharmacy, prolonged post-stroke hospitalisation, and severe pain had a worse quality of life. It was also found that the quality of life of patients with low educational level, unemployment, right hemispheric stroke type, mild to moderate aphasia, and pain throughout the shoulder area was negatively affected. It is recommended that nurses diagnose shoulder pain in post-stroke patients.

Keywords: Stroke patient, shoulder pain, quality of life

OP72 – EVALUATION OF FACTORS AFFECTING IMMOBILIZATION COMFORT, HEMATOMA AND PAIN IN PATIENTS UNDERGOING CORONARY ANGIOGRAPHY

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Aim: Research; It was conducted in a descriptive-sectional type in order to determine the factors affecting the immobilization comfort, hematoma and pain of the patients undergoing coronary angiography.

Methods: The study was completed with 202 patients who underwent coronary angiography between 10.12.2020 and 15.01.2021 at Kahramanmaraş Sütçü İmam University Health Practice and Research Hospital. The data of the research; The data were collected with the “Patient Descriptive Information Form”, “VAS (Visual Analogue Scale)” and “Immobilization Comfort Scale”, which included sociodemographic features created by the researcher through a literature review. Behaviors of quantitative variables were indicated using centralization and measures of variance: Mean±SD, Fisher Exact (in case of low sample size), and Chi-square test were used to identify differences in ratios or relationships between categorical variables. To show the behavioral differences of the group averages; Student t-test was used when normality and uniformity assumptions were met, MannWhitney U Test was used when three or more groups were compared, One-way Anova Test was used for data with normal distribution when three or more groups were compared, and Kuruskal Wallis test was used in cases where they did not. Non-parametric Spearman's Rank Correlation test was used to calculate the correlation between any two numerical variables, since the data did not have a normal distribution.

Results: Statistical significance was determined as $p < 0.05$ for all cases. Statistical analyzes were provided with the IBM SPSS 22.00 package program. Of the patients participating in the study, 63.9% were male, 89.1% were married, 85% were primary school graduates, and the mean age was 62.39 ± 11.96 . The comfort status of individuals is measured with the Immobilization Comfort Scale. In the study, it was determined that the patients got the lowest 60 and the highest 114 points from the Comfort Scale, and their total mean score was 93.08 ± 12.26 .

Conclusions: As a result of the scale and findings applied in this study, it was revealed that the choice of puncture site affects pain and comfort but does not affect bleeding and hematoma in patients who have undergone coronary angiography.

Keywords: Coronary angiography, pain, hematoma, comfort

OP73 – THE INFUSION PUMP FLOW RATE AND INFLUENCING FACTORS IN PATIENTS RECEIVING 5-FLUOROURACIL TREATMENT WITH ELASTOMERIC INFUSION PUMP

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Aim: To evaluate the pump flow rate and influencing factors in patients receiving 5-Fluorouracil treatment with an elastomeric infusion pump.

Methods: This descriptive study was conducted in the outpatient chemotherapy unit of a research hospital between April 2023 and August 2023. Data were obtained from 60 oncology patients receiving 5-Fluorouracil (5-FU) treatment with an elastomeric infusion pump. In this study, researchers used, created by the researchers “Patient Identification Form” to investigate factors affecting patients pump flow rate, and the status of completing their treatments within the expected time frame was inquired via telephone.

Results: In the study, the majority of the patients were diagnosed with colon cancer (76.7%), 53.3% were male and the average age was 63.93±10.10 years. 51.7% of patients (n=31) reported that they couldn't perceive when the medication in the elastomeric infusion pump was finished. There was no significant difference in terms of gender and education level regarding the ability to recognize the end of treatment (p<0.05). 60% of patients (n=36) reported that their treatment did not finish within the expected time frame, with early and late completion times often varying between 15-30 minutes. The medication completion time in the pump was not influenced by the presence of physically demanding activities, the position of the pump, or Body Mass Index (BMI) (p>0.05). The most common concern among patients was adherence to the pump treatment (78.3%), while the behavior they most often avoided during treatment was lifting heavy objects (90%). Concerns regarding pump breakage or puncture and catheter port obstruction were more prevalent among men than women (p<0.05). 40% of patients (n=24) used stabilizing equipment during treatment to prevent the pump from moving, and those who did not use stabilizing equipment were found to be more concerned about the pump falling (p<0.05).

Conclusions: Patients should be provided with education on the use of elastomeric infusion pumps, and strategies to enhance patients pump usage compliance should be developed.

Keywords: Elastomeric Infusion Pump, Flow Rate, 5-Fluorouracil



OP74 – ASSESSMENT OF THE COMPLAINTS AND THE HOSPITAL ADMISSION OF PATIENTS WITH ACUTE CORONARY SYNDROME, AND THE PATIENT'S KNOWLEDGE AND BEHAVIORS REGARDING THE MANAGEMENT OF CARDIOVASCULAR RISK FACTORS

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Aim: This research was carried out to determine the complaints and duration of hospital admission of patients with Acute Coronary Syndrome and to evaluate their healthy lifestyle behaviors related to the management of cardiovascular risk factors.

Methods: It is a descriptive cross-sectional study. The study cohort consisted of a total of 202 inpatients who underwent diagnosis and received treatment for Acute Coronary Syndrome within a training and research hospital during the defined period spanning from September 2022 to August 2023. All the data were collected using the Hospital Admission and Symptom Assessment Form, Cardiovascular Disease Risk Factor Diagnostic Form, Healthy Lifestyle Behaviors Scale II (HPLP II) and Cardiovascular Disease Risk Factors-Knowledge Level Scale (CARRIF-KL). The data were obtained by face-to-face survey method.

Results: The mean age of the patients was 64.63 ± 11.27 years and of these patients 64.9% were male. The mean duration of the decision making for admission to the hospital was found to be 648.84 ± 1615.02 minutes, and the mean duration until arrival to the hospital was found to be 17.35 ± 9.76 minutes. There was no statistically significant difference between the duration of admission decision according to the association of cardiac complaints with heart disease ($p > 0.05$). CARRIF-KL total scale mean score was calculated to be 19.98 ± 4.41 and HPLP II total scale mean score was found as 107.69 ± 18.09 . A positive and statistically significant correlation was found between CARRIF-KL total scale scores and HPLP II total scale scores ($r = 0,49$, $p < 0.05$).

Conclusions: The duration of admission to hospital for individuals diagnosed with ACS was within the period recommended by the guidelines, it is noteworthy that they did not associate their complaints with heart defects, in their decision to be admitted to hospital. Even though the education level was found to be low, the level of knowledge about cardiovascular risk factors in patients diagnosed with ACS was above median.

Keywords: Acute coronary syndrome, hospital admission, cardiovascular risk factors, knowledge, behaviors



OP75 – INVESTIGATION OF THE IMPACT OF BOWEL PREPARATION TRAINING AND SUBSEQUENT MONITORING ON ANXIETY LEVELS, BOWEL PREPARATION COMPLIANCE AND BOWEL CLEANSING AMONG PATIENTS SCHEDULED FOR COLONOSCOPY PROCEDURE

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Aim: Bowel Preparation is a fundamental and vital prerequisite for the optimal execution of procedures such as colonoscopy. Proper Bowel Preparation not only facilitates the achievement of the desired results during the colonoscopy procedure but also leads to a reduction in intervention costs and an uplift in the overall success rate of the procedure. This necessitates detailed pre-procedural training and concordant subsequent monitoring. Concurrently, patients' level of compliance with bowel preparation and anxiety levels are also significant aspects of this process. This research was carried out to investigate the impact of bowel preparation training and Subsequent Monitoring on anxiety levels, bowel preparation compliance, and colonic cleansing among patients scheduled for colonoscopy procedures.

Methods: The present research is an intervention study employing a randomized controlled trial methodology, characterized by a two-group experimental using pre-test and post-test design. The sample was made of 40 randomly selected patients formed the intervention group and 40 patients formed the control group, selected between December 2022 and August 2023. Patients who were scheduled for colonoscopy underwent a training [intervention] regarding the colonoscopy protocol and were counselled via instant messaging/communication applications during the pre-procedural preparation phase. The control group received routine bowel preparation training from the colonoscopy practice nurse. The data were obtained by utilizing the Patient Information Survey, Beck Anxiety Inventory, Pre- and Post-Operation Assessment Survey, and Ottawa Bowel Preparation Scale.

Results: Analyses did not reveal any statistically significant correlation between the intervention and control groups according to the indication of colonoscopy and complaints before the colonoscopy procedure ($p > 0.05$). There was a statistically significant correlation detected between the intervention and control groups in terms of Beck Anxiety Inventory scores ($t = 2.186$; $p = 0.032$). The anxiety scores of the control group were higher (mean: 11.28) than the anxiety scores of the intervention group (mean: 7.90). Current study did not find a statistically significant correlation between the intervention and control groups in terms of Ottawa Bowel Preparation Scale scores ($t = 2.019$; $p = 0.047$). The Ottawa Bowel Preparation Scale total scores in the intervention group (mean: 5.73) were lower than those patients in the control group (mean: 7.75). There was no statistically significant correlation between the two groups, in terms of the perceptions about personal compliance with the bowel preparation program ($p > 0.05$).

Conclusions: The results of the research revealed that in the cohort of patients scheduled for a colonoscopy, the implementation of bowel preparation training by a nurse within the clinical setting, using instant messaging support approach, telephone calls, or communication applications, exhibited a notable impact in reducing patients' anxiety and also results in better post-procedure bowel cleansing.

Keywords: Colonoscopy, bowel preparation, training, anxiety, compliance



OP76 – THE EFFECT OF EDUCATION GIVEN TO HYPERTENSIVE INDIVIDUALS BY MOBILE PHONE ON DASH DIET COMPLIANCE, QUALITY OF LIFE, MINDFULNESS, AND STRESS

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Aim: This randomized controlled study was planned to evaluate the effect of the mobile learning on hypertensive individuals on DASH diet compliance, healthy lifestyle behaviors, quality of life, mindfulness, and stress levels.

Methods: The study was conducted as a randomized controlled manner with 134 hypertensive individuals (68 in the experimental group and 66 in the control group). "Health-Promoting Lifestyle Profile (HPLP) II", "EQ-5D Questionnaire", "Mindful Attention Awareness Scale (MAAS)" and "Perceived Stress Scale (PSS)" were used to collect data.

Results: It was found that after mobile learning, the healthy lifestyle behaviors of hypertensive individuals improved, their quality of life and mindfulness levels increased and their stress levels and body mass index decreased ($p < 0.05$). It was determined that as the mindfulness levels of hypertensive individuals increased after the mobile learning, their healthy lifestyle behaviors also increased ($p < 0.05$). It was also determined that as the mindfulness levels and the healthy lifestyle behaviors of hypertensive individuals increased, their stress levels decreased ($p < 0.05$).

Conclusion: This study found that mobile learning given to hypertensive individuals increased self-management skills, reduced stress levels, increased mindfulness, and improved quality of life. The use of mobile learning applications in the education of hypertensive individuals is recommended by healthcare professionals.

Keywords: Hypertension, DASH diet, quality of life, mindfulness, stress

Acknowledgement: We would like to thank all hypertensive individuals who participated in the study and Prof. Dr. Zumra Atalay.



OP77 – INVESTIGATION OF THE RELATIONSHIP BETWEEN HEALTH LITERACY AND COMPLIANCE WITH ANTIHYPERTENSIVE DRUG TREATMENT IN GERIATRIC INDIVIDUALS WITH HYPERTENSION

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Aim: This study is descriptive- cross sectional study designed to examine the relationship between health literacy and compliance with antihypertensive drug treatment in geriatric individuals with hypertension.

Methods: For this research, data were collected in cardiology, cardiovascular surgery service, internal medicine and nephrology services of Gebze Fatih State Hospital between 01.01.2021 and 30.06.2021 and it was carried out with 284 elderly individuals who met the sample selection criteria. Descriptive characteristics data collection form, Turkish Health Literacy Scale and Antihypertensive Drug Treatment Adherence Scale were used to collect research data. T- Test and One-Way Analysis of Variance analysis were used for demographic comparisons with the scales used in the study. In this study whether there is a relationship between qualitative (categorical) variables was examined by Chi-Square analysis Pearson Chi-Square and Fisher Exact tests were used.

Results: In this study, the mean age of individuals was 73.15 ± 7.18 year, %51.1 were female, %48.9 were male. %47.9 of individuals have hypertension for 180 months. The majority (%27.8) of elderly individuals participating in the study have insufficient health literacy. %87.7 of women have excellent health literacy. As the age increases, the level of health literacy also increases. %37.2 of people whose blood pressure is measured by their relatives at home have excellent health literacy. %85.6 of individuals are compatible with antihypertensive drug therapy %84.4 of individuals who have a blood pressure monitor at home and %82.6 of individuals whose blood pressure is measured by their relatives are compatible with drug therapy. %39.9 of individuals using diuretic drugs are compatible with drug therapy.

Conclusions: As a result of the analysis performed in the study, no significant relationship was found between Turkish Health Literacy Scale levels and compliance with antihypertensive drug therapy.

Keywords: Hypertension, elderly individual, health literacy, accordance to antihypertensive drug therapy, nursing



OP78 – THE RELATIONSHIP BETWEEN ATTITUDES TO COPING WITH THE DISEASE AND QUALITY OF LIFE IN PATIENTS WITH BREAST CANCER

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Aim: This study aimed to determine the relationship between the attitudes toward coping with the disease and the quality of life of patients with breast cancer.

Methods: The population of the study consisted of outpatients who applied to the medical oncology department in a medical faculty hospital. 146 patients who were diagnosed with breast cancer during the data collection period and agreed to participate in the study constituted the sample of the study. The Patient Diagnosis Form, the COPE (Committee on Publication Ethics) Coping Attitudes Assessment Scale, and the EORTC QLQ-C30 (European Organisation for Research and Treatment of Cancer) (Version 3.0) Quality of Life Scale were used to collect research data. The data obtained in the study were evaluated using the IBM SPSS 20 (International Business Machines Statistical Package for Social Sciences) program. For comparison of means between groups, t-test for independent samples in two samples, ANOVA (Analysis Of Variance) test for comparison of means of three and more than three samples, Mann-Whitney U test for two independent samples in cases where the assumptions are not met, and Kruskal-test for comparison of three or more samples. The Wallis H Test was used.

Results: In this study, the mean score of coping attitudes of patients with breast cancer was found to be 155.86 ± 21.95 . It was observed that as the problem-focused coping attitudes of patients with breast cancer increased, the well-being of their functional status increased significantly. In addition, as the patient's perceptions of their health status went from bad to better, the well-being of their global status increased significantly. When the coping attitudes assessment scale was examined, it was found that the average of problem-focused coping attitudes was high, and when the European Organisation for Research and Treatment of Cancer Quality of Life Scale was examined, the mean score of Global Health Status was found to be the highest.

Conclusions: As a result of this study, it was concluded that there is a significant relationship between coping attitudes and the quality of life of patients with breast cancer and that as coping attitudes increase, their quality of life also increases.

Keywords: Breast cancer, nursing, handle, quality of life



OP79 – THE EFFECT OF PREOPERATIVE TRAINING PROVIDED TO PATIENTS UNDERGOING CORONARY ARTERY BYPASS GRAFT SURGERY ON THE LEVEL OF POSTOPERATIVE COMFORT

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Aim: The most popular surgical procedure for treating coronary artery disorders is coronary artery bypass graft surgery. The comfort of patients after coronary artery bypass graft surgery is affected. The purpose of this study is to ascertain the impact of preoperative education on postoperative comfort in patients undergoing coronary artery bypass graft surgery.

Methods: The study was conducted as a quasi-experimental study with the participation of 46 patients (23 patients in the experimental group and 23 patients in the control group) who underwent coronary artery bypass graft surgery. The study included patients aged 18 to 65 who had coronary artery bypass graft surgery for the first time. Preoperative training was given to the patients in the experimental group, and no intervention was made to the patients in the control group. A general comfort questionnaire was applied to all patients before discharge. The necessary ethical and institutional permissions were obtained before the research. Transparent reporting of evaluations with non-random designs was used as a research reporting guide in the study.

Results: It was found that the postoperative the general comfort questionnaire total score ($p<0.001$), mean scores of all sub-dimensions ($p<0.001$) and comfort levels of the experimental group were higher than the control group ($p<0.001$).

Conclusions: According to the study, preoperative instruction provided to patients improved their postoperative comfort. It is recommended that surgical nurses increase patient comfort by providing patient training before coronary artery bypass graft surgery and that nurses should be supported regarding the role of patient training.

Keywords: cardiac surgery, education, patients, nurses

Acknowledgement: The patients who took part in this study are acknowledged by the authors for their support.



OP80 – CONFLICT ACTION STYLES OF NURSES WORKING IN PRIVATE HOSPITAL AND FACTORS AFFECTING THESE STYLES

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Aim: The main purpose of this research is to determine nurses' conflict action styles and the factors affecting conflict action styles.

Methods: The research was carried out in a descriptive model. The sample of the research consists of 170 nurses working in a private hospital operating in Kocaeli between June and August 2023. Research data was obtained using the Personal Information Form and Conflict Action Styles Scale (CESÖ).

Results: 67.6% of the nurses participating in the study stated that they did not receive conflict management, 71.8% stated that they occasionally had conflicts with their teammates, and 41.8% frequently experienced conflicts with their fellow nurses. Nurses' Conflict Action Styles Scale sub-dimension "avoidant approach" mean score is 19.25 ± 4.94 , "coercive approach" mean score is 22.17 ± 4.60 , "facilitative approach" mean score is 24.71 ± 4.17 , "conciliatory approach" mean score is 24.64 ± 4.29 and "oppositional approach" mean score is 24.64 ± 4.29 . The mean score of "prescriptive approach" was determined as 24.94 ± 3.91 . It was determined that the "avoidant approach" scores of the participants who were not currently in a managerial position were higher. In addition, those who had previously received conflict training had higher "conciliatory approach" scores; It was determined that those who frequently had conflicts with their teammates had lower "conciliatory approach" scores ($p < 0.05$). It was determined that nurses who stated that they shut down in case of conflict had lower "avoidant approach" scores ($p < 0.05$).

Conclusions: It is recommended that conflict management training programs be developed for nurses and implemented for all nurses.

Keywords: Conflict, conflict management, strategies, nurse.



OP81 – THEIR READINESS FOR DISCHARGE AND THE FIRS BREASTFEEDING TIME ACCORDING TO ETHNIC GROUPS IN MOTHERS WHO POSTNATAL IN TETOVO STATE HOSPITAL NORTH MACEDONIA

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Aim: In North Macedonian hospitals, the delivery and newborn care training and quality of care are insufficient and the training of health professionals (nurse, midwife, doctor) who will manage care and discharge services should be improved. This study aimed to examine the their readiness for discharge and the firs breastfeeding time according to ethnic groups in mothers who postnatal in Tetovo State Hospital North Macedonia.

Methods: This cross-sectional study was conducted with 202 Macedonian, Albanian, Turkish, Bosnian, and Romanian mothers who were hospitalized in the maternity service of Tetovo State Hospital in North Macedonia. Data were collected before discharge through face-to-face interviews.

Results: The mothers reported that the first postpartum breastfeeding started after an average of 22.0±20.6 hours. Macedonian mothers reported that they received more training on bathing and hygiene, nutrition and fluid intake, sleep and rest, and family planning for self-care, than Albanian and other mothers ($p<0.05$). The Albanian mothers indicated that they received less training on navel care, bathing and skin care, gas problems, cleaning and emptying diaper, dressing, regular health checks, jaundice, and vaccinations compared to Macedonian and other mothers ($p<0.05$).

Conclusions: The first breastfeeding time after birth is quite late in North Macedonia. Readiness for discharge differs between ethnic groups. The training of health professionals and the conditions access to postpartum care in North Macedonian health system should be improved.

Keywords: Breastfeeding, discharge, ethnic group, North Macedonia, postnatal



OP82 – PREFERENCE AND MANAGEMENT OF THE USE OF MENSTRUAL HYGIENE PRODUCTS IN REPRODUCTIVE AGE WOMEN

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Aim: This study aimed to examine the preference and management of menstrual hygiene product use in reproductive age women.

Methods: This cross-sectional study was conducted on 1211 reproductive age women between 16.01.2023 and 01.06.2023. In data collection; A data form consisting of a total of 32 questions was used, including women's personal characteristics and their preference and management of menstrual hygiene products.

Results: The average age of the women participating in the study was 27±6.3. The menarcheal age of women is 13±1.3 and the menstrual cycle length is 27.9±3.5 days. During the menstrual period, it was determined that 94.1% of women use disposable pads, 3.2% use washable pads, 3.2% use tampons, 3.1% use disposable wipes, 2.3% use menstrual cups, 2.1% use menstrual underwear, and 2.1% use cloth, etc. Regarding the frequency of use of menstrual hygiene products on days outside the menstrual period, 29.6% of women answered "never", 43.8% answered "sometimes" and 26.6% answered "daily". A statistically significant relationship was found between women's readiness to use new generation menstrual hygiene products and their age groups ($X^2(18, n=1197)=55.39, p<0.001$). 42.2%, 44.9% and 36.4% of those who are ready to use washable pads, menstrual cups and menstrual panties, respectively, are between the ages of 25-30. It was determined that when choosing a menstrual hygiene product, 83.9% of the women paid attention to "comfort", 80.5% to "not leaking", and 78.6% to "not cause skin problems", 63.1% to "having natural ingredients", 56.5% of them paying attention to the features of "being hygienic", and 53.7% of them paying attention to the features of "being economical", 51.7% to "easiness to use", 43.6% to "easily supply", and 18% to "duration of use" and 7.9% to "reusability". A statistically significant relationship was found between age groups and the negative impact of economic reasons on the frequency of changing menstrual hygiene products ($X^2(6, n=1211)=72.94, p<0.001$). 82.2% of women consider disposable pads, 56.6% tampons, 27.5% menstrual panties, 24.3% menstrual cups and 15.8% washable pads as ecological dangers.

Conclusions: In conclusion; It can be said that the majority of women use disposable pads among menstrual hygiene products, that they pay attention to the features of comfort, leakage and not causing skin problems when choosing a menstrual hygiene product, that economic reasons affect the frequency of use of menstrual hygiene products, and that women mostly consider disposable menstrual hygiene products as an ecological dangers.

Keywords: Menstruation, menstrual hygiene, menstrual health



OP83 – EXAMINING THE VALIDITY AND RELIABILITY OF THE PANDEMIC-RELATED POSTPARTUM STRESS SCALE

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Aim: Epidemic diseases are among the important health problems affecting the society. Although life-threatening epidemics have a negative impact on the mental health of the general population, it is inevitable that they have an effect on the mental health of women in the postpartum period. This study aims to examine the Turkish adaptation of the Pandemic-Related Postpartum Stress Scale (PRPSS) and its validity and reliability in women in the postpartum period.

Methods: This study was conducted as methodological design. Ethics committee approval and institutional permission were obtained before starting the study. During data collection, the participants were asked to fill out an informed consent document. Volunteers participated in the study. This study was conducted with methodological study design. The study was conducted on 188 postpartum women who came to Süleyman Demirel University Research and Application Hospital between August 2022 and October 2022. Descriptive Variables Form, PRPSS, and Postpartum Specific Anxiety Scale were used in the study. In the study, language validity, content validity and construct validity were examined in the validity study of the scale. Cronbach' Alpha coefficient, item analysis, item discrimination index and equivalent forms method were used in reliability analyses. SPSS 26.0 and SPSS AMOS 25.0 software was used to analyze the data.

Results: The women in the postpartum period who participated in the study had a mean age of 28.9734±5.31. The total content validity index of the scale was found to be 0.973. In the factor analysis, it was determined that KMO=0.901 and Bartlett's test of sphericity was p<0.05. As a result of the exploratory factor analysis, a two-factor structure with a total variance of 79.355% was decided. In the confirmatory factor analysis, following values were obtained; $\chi^2/df = 4.026$ and RMSEA=0.127. The reliability analysis of the scale revealed that the total Cronbach's Alpha value was 0.940. When the item-total correlations of the scale items were examined, it was observed that they ranged between 0.725 and 0.858. There was a statistically significant positive correlation between PRPSS and PSAS in the equivalent form reliability of the scale. ($r=0.732$ and $p<0.001$).

Conclusions: The results of this study indicated that PRPSS is a two-factor, nine-item valid scale in Turkish society and can be used reliably in women in the postpartum period.

Keywords: Pandemic-related postpartum stress scale, postpartum, validity, reliability, methodological study



OP84 – NURSING STUDENTS' OPINIONS ABOUT GAMETE DONATION AND SURROGACY

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Aim: The aim of this study is to determine the opinions of nursing students regarding gamete donation and surrogacy.

Methods: This cross-sectional study was conducted on students (n=297) at Trakya University Nursing Department between May 2023 and June 2023. A data form consisting of 20 questions about students' personal characteristics and their views on gamete donation and surrogacy was used to collect the data.

Results: The mean age of the nursing students participating in the study was 21.0±1.6 and 85.5% were female. 83.8% of the nursing students stated that “they would not want to be a donor for gamete donation”, 63.0% stated that “gamete donation should be legal in our country”, 64.6% stated that “they do not find it appropriate to receive and donate gametes due to their religious beliefs”, and 76.8% said that “infertile couples can be helped with gamete donation”. 45.1% of the students answered as “there is a genetic disease in the family” and 34.3% as “gamete donation should not be allowed under any circumstances”. Regarding surrogacy, 51.5% of the students stated that “they found surrogacy appropriate”, 52.5% stated that “surrogacy should be legal in our country”, and 69.7% stated that “it is possible to help infertile couples with surrogacy”. The rate of male students saying “I can be a donor for gamete donation” (30.2%) was significantly higher than the rate of female students (13.8%) (p=0.007), the rate of female students saying “I do not find it appropriate to receive or donate gametes due to my religious beliefs” (38.6%) was significantly higher than the rate of male students (16.3%) (p=0.005), the rate of female students who said “I do not find surrogacy appropriate due to my religious beliefs” (39%) was significantly higher than the rate of male students (20.9%) (p =0.023). The rate of those who said “I can be a donor for gamete donation” and expressed no/low level of religious beliefs (40%), the rate of those who said “Gamete donation should be legal in our country” and expressed a moderate level of religious beliefs (69.3%), the rate of those who said that “I would not be a donor for gamete donation but there may be those who want” and expressed a moderate level of religious belief (82.4%), and the rate of those who expressed a high level of religious belief by saying “I do not find it appropriate to receive or donate gametes due to my religious beliefs” (52.2%) were significantly higher (p<0.05).

Conclusions: Consequently, following views of the nursing students were determined; a great majority of them stated that they would not want to be a donor for gamete donation, half of them did not find surrogacy appropriate, nearly half of them said that gamete donation may be appropriate in the presence of a genetic disease, religious beliefs of female students affected their thoughts more, those who stated their religious beliefs as high level were not more likely to consider gamete donation and surrogacy appropriate. It can be asserted that the views of nursing students, who were health professional candidates, regarding gamete donation and surrogacy were more positive in the presence of a genetic disease, while the views of those who were female and had a high level of religious belief were more negative.

Keywords: Nursing, student, gamete donation, surrogacy



OP85 – DO YOU KNOW ABOUT SEXUALLY TRANSMITTED DISEASES? A CROSS-SECTIONAL STUDY

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Aim: Infectious agents that cause sexually transmitted diseases can be transmitted in various ways. According to World Health Organization data, it is estimated that more than 1 million people are infected every day. Reducing the possible complications of sexually transmitted diseases and preventing infection, which is the most important point in maintaining health, is to increase the knowledge level of individuals. It was aimed to determine the level of knowledge of sexually transmitted diseases among academics from multiple occupational groups.

Methods: The study, designed as a cross-sectional and descriptive type, was conducted with 148 academics who worked at a university between March and June 2023 and agreed to participate in the study. Data via Google Forms; It was collected with an introductory information form and the Sexually Transmitted Diseases Knowledge Level Measurement Form. The data were evaluated with the SPSS.26 package program. The data was analyzed using defining statistics, Kruskal Wallis and Mann Whitney U tests.

Results: The average age of the participants in the study is 37.07 ± 7.19 (min: 24 max: 66). 66.9% of the participants are married, 52% are men, 35.8% work in the field of social sciences and 34.5% work as faculty members. It was determined that 77% of the participants had not received training on sexual and reproductive health before, and 56.1% of those who wanted to receive training on the subject wanted to receive training through the website. 91.9% of participants identified men and women as both responsible for protecting themselves from sexually transmitted infections, 91.2% said that condom should be used, and 87.2% identified people who had sex with more than one partner as a risk group. It was determined that the total score of the sexually transmitted diseases knowledge test was (76.08 ± 14.00) and the knowledge level of academicians working in health-related units was high ($p < 0,05$).

Conclusions: Academics have good knowledge about sexually transmitted diseases. Information, awareness and early diagnosis about sexually transmitted diseases are important to raise public awareness.

Keywords: Knowledge, sexual health, sexually transmitted diseases



OP86 – THE RELATIONSHIP BETWEEN NURSING STUDENTS' LEVEL OF ATTACHMENT TO LGBTI SOCIAL MEDIA PHENOMENON AND THEIR ATTITUDES TOWARDS LGBTI INDIVIDUALS

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Aim: In this study, it was aimed to determine the relationship between nursing students' level of attachment to LGBTI (Lesbian, Gay, Bisexual, Transgender, Intersex) social media phenomena and their attitudes towards LGBTI individuals.

Methods: This cross-sectional study was conducted on n=265 students of T.U. Faculty of Health Sciences, Department of Nursing during the 2022-2023 academic year. The data were collected with an information form prepared by reviewing the literature, the Attitude Towards LGBTI Individuals Scale and the Scale of Opinion Leadership of Social Media Phenomena (SMP) in the Perception of Followers.

Results: The mean age of the nursing students participating in the study was 20.87±1.75 and 85.7% of them were female. It was determined that the students used Instagram as the first preferred social media platform (37.7%), and the most preferred reason for using social media was to follow current news (18.7%). 86.8% of the students stated that the idea of caring for LGBTI patients was not different from caring for other patients. A weak negative correlation was found between the "othering" and "illness" sub-dimensions of the Attitude Towards LGBTI Individuals scale and the "fun" sub-dimension of the (SMP) Opinion Leadership scale ($r=-0.204$; $p=0.00$ and $r=-0.237$; $p<0.001$). Weak negative correlations were found between the "overdoing" sub-dimension of the Attitude Towards LGBTI Individuals scale and the "closeness" ($r=-0,154$; $p=0,012$), "trust" ($r=-0,130$; $p=0,034$), "fun" ($r=-0,223$; $p<0,001$) sub-dimensions and total score ($r=-0,164$; $p=0,007$) of the SMP Opinion Leadership scale. There was a positive correlation between the sub-dimensions and total score of the Attitude Towards LGBTI Individuals scale and having a female gender ($p=0.02$), not having any belief ($p=0.010$) and increasing the mother's education level ($p=0.012$). There was a positive correlation between the "fun" sub-dimension of the SMP Opinion Leadership scale and being female ($p=0.022$), having a higher level of maternal education ($p=0.037$), and having a higher economic level ($p=0.036$); and between the "closeness" sub-dimension and being female ($p=0.010$).

Conclusions: Nursing students who follow LGBTI phenomena on social media for entertainment purposes follow the phenomena without alienating them, without seeing them as patients, without thinking that they are overdoing it; students who feel close to LGBTI phenomena and follow them with trust follow the phenomena without thinking that they are overdoing it. It is thought that LGBTI phenomenon follow-up may be useful for nursing students who will be health professionals to have more positive attitudes towards LGBTI individuals in patient care.

Keywords: LGBTI individual, social media phenomena, nursing student, attitudes towards LGBTI individuals



OP87 – THE RELATIONSHIP BETWEEN WOMEN'S INSTAGRAM ADDICTION LEVELS AND THEIR ACCEPTANCE OF COSMETIC SURGERY

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Aim: The aim of this study is to examine the effect of Instagram addiction status of women using Instagram on their acceptance level of cosmetic surgery.

Methods: The descriptive and relationship-seeking type of research was conducted with 378 women living in Türkiye and using Instagram between August 2022 and January 2023. Research data was obtained with an introductory questionnaire, Aesthetic-Cosmetic Surgery Acceptance Scale and Instagram Addiction Scale.

Results: The average age of the women participating in the research is 30.83 ± 9.76 and 50.8% are married. 88.1% of women are university graduates, 59% are employed and 59.5% have an income equal to their expenses. 73.8% of women stated that they live in cities in the west of Türkiye, 56.3% of them spend 1-3 hours a day on Instagram, and 36.2% of them never use filters when sharing photos. 33.9% of women stated that they follow doctors or centers that perform plastic surgery on Instagram, 11.9% stated that they had undergone plastic surgery, and 43.7% stated that they did not want to have plastic surgery. 23.3% of women stated that they wanted to have rhinoplasty, 14.8% of them wanted to have dental aesthetics, and 12.4% of them wanted to have breast aesthetics. Women's Aesthetic-Cosmetic Surgery Acceptance Scale mean score was found to be 56.21 ± 20.59 and the Instagram Addiction Scale mean score was 41.45 ± 15.50 . A weak positive relationship was found between women's plastic surgery acceptance levels and their Instagram addiction levels ($p < 0.05$). Women's ages and acceptance levels of plastic surgery are at a positive and moderate level; A weak negative relationship was found with Instagram addiction level ($p < 0.05$).

Conclusions It is recommended that women in the younger age group be directed to different activities to prevent Instagram addiction, and women in the older age group should be informed about plastic surgery.

Keywords: Instagram addiction, cosmetic surgery, acceptance, women



OP88 – THE RELATIONSHIP BETWEEN SURGICAL NURSES' PROFESSIONAL SELF-EFFICACY LEVELS AND THEIR ATTITUDES TOWARDS EVIDENCE-BASED NURSING

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Aim: Evidence-based care practices offered by nurses with high professional self-efficacy contribute to improving patient outcomes by ensuring that surgical patients receive quality and safe nursing care. This cross-sectional and correlational study was conducted to examine the relationship between surgical nurses' professional self-efficacy levels and their attitudes towards evidence-based nursing.

Methods: This study was conducted between February 1, 2023 and July 30, 2023 with 67 nurses who working in Trakya University Health Research and Application Center surgery clinics and volunteered to participate in the study. Data were collected using the "Data Collection Form", "Nursing Profession Self-Efficacy Scale" and "Scale of Attitudes Towards Evidence-Based Nursing". In addition to descriptive statistics, t-test, variance and correlation analysis were used to analyze the data. The results were evaluated at 95% confidence interval and significance was evaluated at $p < 0.05$.

Results: As a result of the study, it was found that the mean score of the surgical nurses on the Nursing Profession Self-Efficacy Scale was 69.46 ± 10.64 and the nurses' professional self-efficacy levels were at a good level, the mean score of the nurses on the Scale of Attitudes Towards Evidence-Based Nursing was 63.48 ± 8.79 and the nurses' attitudes towards evidence-based nursing were positive. It was determined that there was a positive and moderately significant correlation between nurses' professional self-efficacy levels and their attitudes towards evidence-based nursing and 41.8% of the nurses used evidence-based practices while providing care to their patients.

Conclusions: Surgical nurses' professional self-efficacy levels are at a good level and their attitudes towards evidence-based nursing are positive. There is a relationship between nurses' professional self-efficacy levels and their attitudes towards evidence-based nursing. It is recommended that surgical nurses should be supported institutionally as well as making individual efforts to improve their professional self-efficacy and attitudes towards evidence-based nursing.

Keywords: Surgery, nurse, evidence-based practice, self-efficacy, attitude



OP89 – EVALUATION OF FATIGUE AND COMFORT IN PATIENTS WITH BREAST CANCER

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Aim: This descriptive and cross-sectional study aimed to evaluate fatigue and comfort levels in patients with breast cancer.

Methods: This research was conducted between November 2021 and April 2022. The sample consisted of 218 breast cancer patients undergoing chemotherapy treatment in a medical oncology clinic. Data were collected using a personal and disease-related characteristics questionnaire, the Fatigue Severity Scale (FSS), and the General Comfort Scale (GCS). Data were analyzed using statistical methods (number, percentage, mean, etc.), independent-sample t-test, one-way ANOVA, Pearson's correlation test, and multivariate linear regression model.

Results: Patients had a mean age of 53.93 ± 11.0 . Most patients were married (90.4%). More than half of the patients were in the primary stage (57.3%). Less than half of the patients had an ECOG performance score of 1. Patients had a mean FSS score of 48.29 ± 10.22 , which was high. Marital status, occupation type, active employment status, income level, smoking, presence of chronic diseases, continuous medication use, metastasis status, ECOG performance score, and sleep duration affected patients' FSS scores ($p < 0.05$). Patients had a mean GCS score of 140.61 ± 11.42 . Age, education level, active employment status, income, tobacco use, continuous drug use, metastasis status, ECOG performance score, radiotherapy status, number of chemotherapy cycles, receiving an additional chemotherapy protocol, and sleep duration affected patients' GCS scores ($p < 0.05$). There was a negative correlation between FSS and GCS scores ($p < 0.05$). Disease status, ECOG performance score, sleep duration, and GCS relief and superiority subscale affected fatigue. Tobacco use, ECOG performance score, number of chemotherapy cycles, sleep duration, and fatigue severity affected comfort ($p < 0.05$).

Conclusions: There is a negative correlation between fatigue and comfort. Sociodemographic and disease-related characteristics (tobacco use, ECOG performance score, sleep duration, etc.) affect fatigue and comfort. These results suggest that nurses should consider the sociodemographic and disease-related characteristics of patients with breast cancer to assess their fatigue and comfort levels. Nurses should also implement the right interventions to help patients with breast cancer experience lower levels of fatigue and higher levels of comfort.

Keywords: Breast cancer, fatigue, comfort, nursing care

OP90 – EVALUATION OF ORAL MUCOSITIS LEVEL AND AFFECTING FACTORS IN CANCER PATIENTS RECEIVING CHEMOTHERAPY

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Aim: This descriptive and cross-sectional study was planned the factors affecting the level of oral mucositis in patients with cancer receiving chemotherapy and affecting factors.

Methods: The study was conducted at a medical oncology clinic between January 2022 and July 2022. The sample consisted of 245 patients with cancer receiving chemotherapy. The data were collected using a survey (personal, oral health, disease, and treatment characteristics) and the World Health Organization (WHO) Oral Mucositis Assessment Scale (OMAS). The data were analyzed by independent-sample t-tests, Chi-square tests (Person Chi-square, Yates Chi-square, Fisher's Exact Test), paired-sample t-tests, and multivariate logistic regression ($p<0,05$).

Results: The patients had mean age 62.31 ± 10.70 . More than a quarter of the patients were diagnosed with lung cancer (32.7%). More than half of the patients were diagnosed with cancer less than three months ago (56.7%). Most patients had an ECOG performance score of 0. More than half of the patients had oral mucositis (52.2%). More than a quarter of the patients had an oral mucositis score of 1. The presence chronic disease of the patients, continuous medication use, oral and dental disease, dental check-up before chemotherapy, knowledge about oral mucositis, previous history of oral mucositis, cancer diagnosis, type of chemotherapy protocol, and ECOG performance scores significantly affected patients WHO-OMAS scores ($p<0.05$). Moreover, the presence chronic disease, chemotherapy protocol, and ECOG performance score were the independent variables that affected the development of oral mucositis ($p<0.05$).

Conclusions: In conclusion, patients receiving chemotherapy developed oral mucositis. Most patients who developed oral mucositis had a low oral mucositis grade. Disease and treatment-related characteristics (presence of chronic disease, oral and dental health problems, ECOG performance score, etc.) were affected the development of oral mucositis. These results suggest that nurses should evaluate the risk of oral mucositis before and during chemotherapy by taking into account disease and treatment-related characteristics. They should implement appropriate interventions to reduce the severity of oral mucositis.

Keywords: Cancer, chemotherapy, oral mucositis, nursing care



OP91 – BREAST CANCER EARLY DIAGNOSIS PRACTICES OF WOMEN BETWEEN THE AGES OF 15-49 REGISTERED TO FAMILY HEALTH CENTER AND FACTORS AFFECTING THESE PRACTICES: THE CASE OF FATİH DISTRICT OF ISTANBUL PROVINCE

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Aim: The aim is to investigate the awareness of breast cancer screening methods of women between the ages of 15-49, their preferences of applying them, their knowledge level and the factors affecting the use of these methods.

Methods: A descriptive type of study was conducted and a questionnaire using the “Champion Health Belief Model” was prepared including the questions evaluating demographic characteristics, knowledge of breast self-examination (BSE), clinical breast examination (CBE), and mammography, whether to have it done or not. The data of the participants were collected online. This study consists of 10,315 women who registered at twelve family medicine clinics in Hekimoğlu, Sılvrikapı and Mevlanakapı Family Health Centers in Fatih district of Istanbul. The sample size was calculated as 371 participants at 50% prevalence, 5% deviation and 95% confidence level, and it was applied to 380 women between the ages of 15-49. SPSS 27 package program was used in the analysis of the data.

Results: When the frequency of breast-self examination of the participants is evaluated, 43.2% out of hundred percent of the participants declared that they did it at irregular interval of times 28.7% said that they have never done it, and when the rates of having a clinical breast examination before are considered, 62.3% declared that they have never done it, 17.9% indicated that they have never heard of mammography. 53.4% of the participants stated that they did not receive information about breast health and early diagnosis screenings, 80.8% demanded to get information about breast cancer and early diagnosis screenings. Moreover, when their access to information about breast cancer is elaborated, 47.4% stated that they obtained this information from health professionals and 22.9% from social media.

Conclusions: Considering these values, it is recommended to support policies and studies aimed at increasing women's awareness of breast cancer early diagnosis methods and their applications.

Keywords: Family medicine, breast cancer, screening methods, early diagnosis



OP92 – THE WIEV OF POSTGRADUATE STUDENTS ON RESEARCH ETHICS

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Aim: This study was planned as descriptive and relationship-seeking in order to determine the wiews and thoughts of postgraduate students in the department of Nursing and Social Sciences on research ethics and to determine the influencing factors. This study aims to draw attention to the issue by taking the opinions of graduate students who are academician candidates on ethics. In this way, it is aimed to raise awareness on the subject both among graduate students and the academicians who shed light on them.

Methods: The population of this study consisted of a total of 150 students enrolled in the Department of Nursing and the Department of Social Sciences receiving postgraduate education at a university. No sampling method was used in our research. It was aimed to reach all graduate students in the study population who volunteered to participate in the research, and the study was completed with a total of 66 (44%) participants. The data of the research were collected through an e-questionnaire between 25/05/2023 and 31/05/2023, through the Personal Information Form consisting of 11 questions and the Research Ethics questionnaire consisting of 25 questions, prepared by the researchers in line with the literature. The data were analyzed to the SPSS 22.00 package program and number, mean, percentage and chi-square test were used. Values of $p < 0.05$ were considered statistically significant.

Results: It was found that the behaviors of 'writing more than one article using the same data', 'hiding the results of the research that could harm the participant', 'presenting the same research in more than one meeting' to be ethical, the behavior of 'hiding the results of the research that could be harmful to the participant' and the behavior of 'forcing people to participate' was shown by my colleagues. The rate of students in the Social Sciences Department was found to be higher than the students in the Nursing Department ($p < 0.05$). The rate of master's students who said it has been found 'it ethical to publish the same research article in more than one article' was found to be higher than that of doctoral students ($p < 0.05$).

Conclusions: As a result, it can be recommended to increase awareness of research ethics in postgraduate courses and to ensure that students participate in more academic and scientific activities on the subject together with their advisors.

Keywords: Ethics, research ethics, graduate education



OP93 – NURSING STUDENTS' ATTITUDES TOWARDS POSTGRADUATE EDUCATION AND AFFECTING FACTORS

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Aim: The aim of this study was to determine the attitudes of nursing students towards postgraduate education and the factors affecting them.

Methods: This cross-sectional study was conducted on Trakya University Faculty of Health Sciences, Department of Nursing undergraduate students n=139 and Trakya University Institute of Health Sciences graduate students n=37 during the 2022-2023 academic year. Data were collected using an information form prepared by reviewing the literature and attitudes towards postgraduate education were evaluated using the Attitudes Towards Postgraduate Education Scale.

Results: 71.9% of the undergraduate students and 94.6% of the graduate students were female. It was determined that 43.9% of the undergraduate students chose the nursing profession by their own will, 33% by the ease of assignment and 56.8% of the graduate students chose the nursing profession by their own will, 24.3% by the request of their family. The reasons for the students who wanted to receive postgraduate education: 85,3% of the undergraduate students wanted postgraduate education to ensure professionalisation of the profession, 66,2% of the undergraduate students wanted to become academicians, 100% of the graduate students wanted to become academicians, 73,3% of the graduate students wanted postgraduate education to ensure professionalisation of the profession. It was found that 52.1% of the undergraduate students did not want postgraduate education because of the intensive working hours, 45.1% because of the lack of financial return, 100% because the workplace did not assign duties in the specialised branch, 100% because the doctorate conditions could not be provided and 85.7% because the postgraduate education was difficult. The mean total score of the scale was found to be 50.7 ± 6.1 in undergraduate students. The mean scores of "facilitating roles", "professional recognition" and "barrier factors" sub-dimensions were determined as $(25.3 \pm 4.4, 11.4 \pm 1.8$ and $14.0 \pm 2.1)$, respectively. The mean total score of the scale in graduate students was 54.4 ± 4.6 . The mean item scores for the "facilitating roles", "professional recognition" and "barrier factors" subscales were $(27.9 \pm 2.7, 12.5 \pm 2.1$ and $14.0 \pm 2.0)$, respectively. The total score ($p<0.01$), "facilitating roles" ($p<0.01$) and "professional recognition" ($p=0.002$) subscale scores were significantly higher in graduate students than in undergraduate students.

Conclusions: The attitudes of graduate students towards postgraduate education were found to be positive compared to undergraduate students. It is thought that introducing postgraduate education programmes to the students during the education process, enabling them to take part in scientific studies and providing workplaces with job opportunities in specialised fields will increase the attitude towards postgraduate education.

Keywords: Attitude, student, postgraduate, research

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OP94 – THE ROLE OF THE NURSE IN THE CARE OF THE PEDIATRIC PATIENT REQUIRING PALLIATIVE CARE

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Aim: With the developing technology in the global world, there are treatments for many diseases day by day. Every new treatment found brings new hope and a reason to reconnect with life. It plays a very important role in both treatment and care, especially in diseases that require long-term treatment, diseases encountered at a young age due to trauma or genetics, and new diseases that require palliative care as a result of the complications of these diseases. Cancer, also known as the disease of our age; It causes us to encounter different results, especially in children. In our study, we aimed to increase the quality of life and comfort of the patient by involving the family in the care of progressive, incurable and fatal diseases.

Methods: At various time intervals to the patient diagnosed with brain tumor; Due to lack of nutritional tolerance, a peg was opened and as the need for respiratory support developed, a tracheostomy was performed and treatment and follow-up continued at home. An 8-year-old girl whose general condition deteriorated at home was taken to the intensive care unit and her close treatment and follow-up began. During the 9-month palliative care process of a mechanically ventilated cancer patient in the pediatric intensive care unit; The pediatric patient was evaluated daily for physical symptoms, family-centered care was planned, care results were evaluated, improvement of the quality of life of the patient and his family was supported, informing the patient's family was supported, and continuity in treatment was ensured.

Results: The process was very difficult for the patient to whom we provided palliative care services. During the daily care of the patient who was asleep, it was noticed that there was retinal deterioration and more effective eye care was applied. Passive ROM exercises were performed every 2 hours with the support of the family, appropriate position changes were made and no contracture development was observed. Correct application of aspiration methods was ensured, hygiene rules were observed and infection was prevented. Nutrition was supported and weight loss was prevented. Care was supported in line with the family's beliefs, and as a result of their participation in care, no pressure sores were found in our patient. During this period, the family was allowed to practice their religious beliefs and mourning process.

Conclusions: Explaining the care process fully to the relatives of cancer patients who are responsible for their care makes the process a little easier. In line with the training given to the family or individuals responsible for their care during this difficult process; It is observed that they actively participate in care and the quality of life and comfort of the individual receiving care increases.

Keywords: Palliative, pediatric patient



OP95 – USE OF KETOGENIC DIET IN SPORTS NUTRITION AND DISEASES

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Aim: The ketogenic diet encourages ketone body production with low carbs, moderate protein, and high fat intake, particularly monounsaturated and saturated fats. Athletes use it for weight loss without performance compromise, effectively reducing body fat while preserving muscle mass. It also benefits certain disease treatments. The review examines ketogenic diet use in athletes and for therapeutic purposes in diseases, with outcome analysis.

Methods: This compilation study was prepared using PubMed, Scopus, Google Scholar, ScienceDirect databases.

Results: The ketogenic diet is a popular dietary approach with potential benefits and drawbacks. It can promote ketone production, preserving muscle during weight loss and may have therapeutic effects for conditions like epilepsy and Alzheimer's. However, it may cause short-term gastrointestinal issues and long-term concerns like high cholesterol. Athletes should choose nutrition tailored to their needs, and overall, adopting healthy eating habits is crucial for well-being.

Conclusions: Nutrition is a fundamental element in maintaining health and holds significant importance throughout all stages of life. While ketogenic diets may have positive effects on endurance athletes and epilepsy patients, they can lead to negative outcomes in other sports and health conditions. To mitigate these adverse effects, nutrition programs should be customized based on factors such as the athlete's sport, training regimen, and competition schedule for athletes, in the case of patients, it should be planned according to the individual's needs.

Keywords: Ketogenic diet, ketone bodies, athletes performance



OP96 – EVALUATION OF THE RELATIONSHIP BETWEEN DIABETES AND DIETARY PATTERNS: FINDINGS FROM THE TÜRKİYE NUTRITION AND HEALTH SURVEY 2017

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Aim: This study aimed to empirically determine the dietary patterns of individuals living in Türkiye who have been diagnosed with diabetes and examine their relationship with demographic characteristics, anthropometric measurements, tobacco use, nutritional supplement use, and type 2 diabetes, using the survey data of the Türkiye Nutrition and Health Research 2017.

Methods: Data analysis was performed using IBM SPSS (version 26). Dietary patterns were classified using the answers to the food consumption frequency survey The Türkiye Nutrition and Health Survey 2017 and Principal Components Analysis. The foods from the food consumption frequency survey were analyzed by classification. Variables that may have an effect on dietary patterns were analyzed by Multivariate Analysis of Covariance and R programming language (version 4.2.0).

Results: Among the Türkiye Nutrition and Health Survey 2017 participants (n=12,977), 7.5% (n=967) reported having been diagnosed with type 2 diabetes. Of these individuals, 535 (55.3%) were female and 432 (44.7%) were male. The average age of individuals with type 2 diabetes was 58.97±11.8, the median total education time was 5 [0-29] years, and the average body mass index was 32.71±6.68 kg/m². The tobacco use percentages were as follows: never 49.5% (n=479), quit 28.5% (n=276), and current 21.9% (n=212). The marital status of the participants was as follows: married 80.2% (n=776), widowed 15.7% (n=152), divorced 2.4% (n=23), never married 1.3% (n=13), and living apart 0.3% (n=3). Three different dietary patterns were classified as a result of Principal Components Analysis. The majority of individuals who followed the healthy dietary pattern were women, married people, individuals with average and high physical activity levels, those with high income levels, those who work, those who do not use nutritional supplements, those who had quit tobacco use, and individuals with type 2 diabetes.

Conclusions: The dietary patterns consumed by individuals with diabetes in Türkiye are correlated with marital status, physical activity level, gender, income level, employment status, nutritional supplement use, tobacco use, and type 2 diabetes.

Keywords: Diabetes, dietary pattern, TNHS 2017, type 2 diabetes



OP97 – EVALUATION OF THE RELATIONSHIP BETWEEN PERCEIVED STRESS, EMOTIONAL EATING AND EATING HABITS AMONG UNIVERSITY STUDENTS

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Aim: The purpose of this study is to evaluate the relationship between perceived stress, emotional eating and eating habits among university students.

Methods: This study was conducted on students from Kırklareli University Faculty of Health Sciences. The main outcomes were assessed using an online survey form. The questionnaire included socio-demographic questions, self-reported body weight and height, an emotional eating scale, a food frequency questionnaire, and perceived stress scale. Eventually, 51 participants completed the study.

Results: Of the participants, %88.2 were female, and %11.8 were male. The mean age of the participants was 22.7 ± 3.37 and the mean BMI was 21.2 ± 3.01 . The mean BMI for males (22.7 ± 3.27) was higher than for females (21.0 ± 2.96). The mean perceived stress scores were 29.4 ± 7.04 . Among women (30.2 ± 6.75), perceived stress scores were significantly higher than among men (23.5 ± 6.92) ($p=0.026$). There was a negative relationship between nut consumption and perceived stress scores ($p=0.016$). The mean scores of those who consumed nuts more frequently were 30.9 ± 6.84 , while the scores of those who consumed them less frequently were 13.5 ± 4.95 . The perceived stress scores of emotional eaters (32.5 ± 5.20) were significantly higher than those of participants who did not report emotional eating (24.9 ± 8.8) ($p=0.016$). The mean BMI of those who reported emotional eating was higher (22.5 ± 3.12) than those who did not report (20.6 ± 2.96) or report low levels (20.7 ± 2.85) of emotional eating.

Conclusions: This study suggests that emotional eating and perceived stress among university students appear to be related. However, further studies with larger participant groups should be conducted to confirm these results.

Keywords: Stress, emotional eating, eating habits



OP98 – EFFECT OF VITAMIN D ON CARDIOVASCULAR DISEASES

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Introduction: Cardiovascular disease is the leading cause of death worldwide and 17.9 million of these deaths are preventable. Many metabolic diseases affect the cardiovascular system. The common occurrence of vitamin D deficiencies in these diseases draws attention to the relationship between vitamin D and cardiovascular diseases.

Methods: Vitamin D is a fat-soluble hormone produced from dietary sources from cholesterol in animals and ergosterol in plants. Vitamin D is produced in the skin by ultraviolet B radiation from 7-dehydrocholesterol. It is activated by 25-hydroxyvitamin D in the liver and then by hydroxylation processes in the kidney to 1,25-dihydroxyvitamin D. 25-hydroxyvitamin D and 1,25-dihydroxyvitamin D are transported in the body mainly by vitamin D binding protein. The main function of vitamin D binding protein is to buffer the levels of free and biologically active vitamin D and prevent intoxication. In studies, tissues with vitamin D receptor and 1 α -hydroxylase can produce active vitamin D. The 1,25-dihydroxyvitamin D produced has positive effects on the vascular wall such as reducing thrombogenicity, reducing vasoconstrictors, inhibiting oxidative stress and atherogenesis. Fibroblast growth factor-23 is effective in the regulation of 1,25-dihydroxyvitamin D in the heart and vasculature and reduces the production of 1,25-dihydroxyvitamin D. Another role of vitamin D is its anti-inflammatory effects in cardiovascular disease. Vitamin D stimulates anti-inflammatory substances such as interleukin-10.

Conclusions: Vitamin D is known to be associated with inflammation in the pathogenesis of arterial fibrosis and atherosclerosis. The presence of vitamin D in cardiomyocytes and vascular endothelial cells, its regulation of inflammatory responses and its contribution to the mechanism of various cardiovascular diseases have been closely studied. In the light of this information, the aim of this review is to gain an up-to-date approach in the light of new studies on the effects and possible roles of vitamin D on cardiovascular diseases.

Keywords: Vitamin D, cardiovascular diseases, inflammation



OP99 – BOTANICAL ORIGIN AND STANDARDIZATION OF BLACKTHORN (PALIURUS SPINA-CHRISTI MILL.) HONEYS PRODUCED IN THRACE WITH APITHERAPEUTIC POTENTIAL

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Aim: honeys in which specific plant pollens are present at a certain concentration within the honey are classified as "monofloral honey". The required pollen ratios within monofloral honey are defined by the Turkish Food Codex (TGK) 2020/7 titled "Honey Regulation." Blackthorn honey, obtained from the *Paliurus spina-christi* Mill. (Blackthorn) plant naturally distributed in the Marmara and Thrace regions, is one of the monofloral honeys produced in our region. Studies indicate that blackthorn honeys have antioxidant, antimicrobial, antitumoral effects due to their rich bioactive compound profile. Blackthorn honeys have the potential to be used in the production of dietary supplements and formulations for apitherapy due to their therapeutic effects. Therefore, standardization should begin at the production stage to ensure their quality and consistency. Quality and therapeutic effects of honey can be influenced by various factors, including the local flora, climate, and storage conditions, knowing the botanical origin is the most fundamental step in honey standardization. Melissopalynological analyses based on microscopic examination and diagnosis provide information not only on determining the botanical origin but also on the hygiene and possible sugar adulteration of honeys. This study aims to determine the botanical origins of blackthorn honeys, which is the first step in their standardization and potential transformation into an apitherapeutic formulation by identifying their possible therapeutic effects.

Methods: Total of 24 honey samples were collected from Edirne, Kırklareli, and Tekirdağ in the years 2022-2023. Fieldwork was organized to collect plant samples from the surrounding area in beehives where samples were taken during June and July. Melissopalynological analyses and of Total Pollen Count in honeys were conducted using the Sorkun (2008) method.

Results: Four honey samples have been diagnosed as monofloral sunflower honey. The remaining 20 honey samples have blackthorn plant pollen ratios ranging from 46% to 95%. Honey TPS10 values ranged from 4,058 to 172,755, with 3 low, 4 high, and 17 normal quality. As a result of microscopic examination of the honeys, it was determined that 1 sample had over 10% starch, 1 sample had parasite eggs, and 1 sample had a *Nosema* sp. spores. This suggests some honeys may not meet purity and hygiene standards.

Conclusions: This study conducted microscopic examinations, which represent the first step in the standardization of monofloral blackthorn honeys. In subsequent studies, the botanical origin of monofloral blackthorn honeys, intended for apitherapeutic use, has been determined.

Keywords: Monofloral, blackthorn honey, standardization, apitherapeutic effects

Acknowledgement: This study encompasses some of the outputs of the Unconditional Research Project titled "Determination of Botanical and Geographical Characteristics of *Paliurus spina-christi* Miller (Blackthorn) Honeys Produced in the Thrace Region," with the project number 2022/183, funded by Trakya University Scientific Research Projects.



OP100 – EVALUATION OF PHARMACOKINETIC PROPERTIES OF PROPOLIS INGREDIENTS BY IN SILICO ANALYSIS METHOD

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Aim: Propolis is a resinous natural product obtained from the secretions of plants by honey bees. Due to its pharmacological activity, it is widely used in traditional medicine. The composition of propolis is closely related to the resins of the plant sources used to produce it. Studies have identified the most important bioactive components responsible for the pharmacological effects of propolis as pinocembrin, quercetin, gallic acid, chlorogenic acid, and kaempferol. In our study, we aimed to determine the pharmacokinetic and drug-likeness properties of the five main molecules in propolis using in silico analysis methods.

Methods: The pharmacokinetic analysis of pinocembrin, quercetin, gallic acid, chlorogenic acid, and kaempferol was conducted using SwissADME and pkCSM.

Results: According to SwissADME and pkCSM results, pinocembrin showed the highest oral absorption. Pinocembrin could easily cross the blood-brain barrier, while the passage of the other molecules was weaker. Drug-likeness was found to be high for all molecules except chlorogenic acid based on Lipinski's rules. Pinocembrin, quercetin, and kaempferol were identified as substrates of P-glycoprotein (PGP), but none of the molecules were PGP inhibitors. Pinocembrin, quercetin, and kaempferol were found to inhibit the cytochrome P450 CYP1A2 enzyme. None of the molecules exhibited toxic effects.

Conclusions: This study provides a practical perspective on using in silico methods for evaluating food-drug and drug-drug interactions, especially for medicinal products containing multiple bioactive ingredients. Propolis with drugs metabolized through the CYP1A2 pathway can likely inhibit enzyme activity. Pinocembrin, quercetin, and kaempferol are believed to have the potential to alter the effectiveness of drugs during multiple drug usage. Furthermore, the active substances in propolis, with their drug-likeness and strong pharmacological properties, demonstrate the potential impact of these molecules in drug development studies.

Keywords: Drug-likeness, In silico, pharmacokinetics, propolis



OP101 – INVESTIGATION OF THE CLINICAL EFFECTS OF HERBAL PRODUCT USE IN ADDITION TO MEDICATION IN ADULTS WITH INFLAMMATORY BOWEL DISEASE

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Aim: The aim of this study is to enable the adult population diagnosed in Türkiye with Inflammatory bowel disease (IBD), with a face-to-face survey that includes questions about herbal product use.

Methods: In this research, the information about sociodemographic and disease characteristics, anthropometric measurements, physical activity status and herbal product use of adult individuals diagnosed with IBD between the ages of 18-65 who applied to Izmir Katip Celebi University Gastroenterology Polyclinic questioned through a face-to-face questionnaire. The data analyzed with certain methods and the clinical effects of using herbal products in addition to drug treatment in adults with IBD will be examined.

Results: 208 adults (36.5% of male and 63.5% female) diagnosed with IBD participated in this study. It has been found that 61.6% of individuals with IBD, use herbal products for their diseases. It was determined that herbal products were mostly obtained from herbalists and shared with physicians/pharmacists. 44.7% of the participants reported that they benefited greatly from the herbal product they used.

Conclusions: Our research is important in terms of providing the first data to the literature of our country on this subject. In addition, evaluating and raising awareness of patients' use of herbal products are other important achievements of our research.

As a result, herbal medicines/products can have a positive effect on the disease if it is used in the appropriate disease, in a standardized form, in the appropriate dose, duration and formulation, under the control of a physician/pharmacist and if it is obtained from the right source. These products are not considered "miraculous/alternative treatments" and caution should be exercised in their use.

Keywords: Enflammatary bowel disease, Ulcerative colitis, Crohn's disease, Medicinal plant, Herbal product



OP102 – EFFECTS OF EXERCISE ON INDIVIDUALS RECEIVING TREATMENT FOR SOME PHYSICAL AND PSYCHOLOGICAL DISORDERS

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Aim: Exercise is a crucial component of the treatment process, offering benefits not just for physical health but also for mental well-being. Engaging in regular exercise as part of therapeutic activities can uplift patients' mood, enhance motivation, and improve their overall quality of life. This study aimed to discuss the possible benefits of physical activity and exercise on individuals receiving treatment for psychological and physical disorders.

Methods: The data in this review study was tried to be accessed by using the keywords "Effects of Exercise on Individuals in the Treatment Process", "Effects of Exercise on Psychological and Physical Disorders", "Exercise and Health" in Trakya University Library database and Google Scholar search engines.

Conclusion: In light of the sources available on the subject; it can argued that physical activity and exercise programs have positive effects on individuals treated for both physical and psychological disorders. In addition, the duration and intensity of the exercise programs to be applied should be adjusted correctly and included in the program appropriately during the treatment process (before, during and after the treatment). Moreover, it is advisable for treatment facilities to equip themselves with suitable facilities and apparatus for exercise programs. In cases where facilities and equipment are lacking, it is suggested that treatment centers take steps to address these deficiencies.

Keywords: Physical activity, psychological disorders, physical disorders, treatment



OP103 – A COMPARISON OF MOTIVATIONAL FACTORS DRIVING PHYSICAL ACTIVITY PARTICIPATION: 20th CENTURY vs. 21st CENTURY

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Aim: This review briefly aims to discuss motivational factors in exercise participation from historical perspective. In the review there are two time periods (20th century and 21st century). While factors or necessities like functional necessity, active transportation, military preparedness, health and hygiene movements were discussed in the beginning of the 20th century, factors like health and well-being, fitness trends and culture, technology and fitness applications, aesthetic goals, mental health benefits, convenience and accessibility, and environmental awareness were discussed in the 21st century.

Methods: The data in this review study was tried to be accessed by using the keywords "Effects of Exercise on Individuals in the Treatment Process", "Effects of Exercise on Psychological and Physical Disorders", "Exercise and Health" in Trakya University Library database and Google Scholar search engines.

Conclusion: In conclusion, the motives for engaging in physical activity have evolved from traditional health-focused reasons in the 20th century to a more holistic approach in the 21st century. The contemporary landscape is characterized by a synthesis of physical and mental well-being, driven by advancements in technology, social media influence, and a broader array of activity options catering to diverse motivations in the pursuit of a healthy and fulfilling lifestyle.

Keywords: Motivational factors, exercise participation, 20th century, 21st century.



OP104 – KINEMATIC ANALYSIS OF FREE THROW IN BASKETBALL

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Aim: In this study, it is aimed to investigate the kinematic values of free throw in basketball with devices supporting 4D motion technology.

Methods: The research was conducted on five male athletes with at least five years of licensed basketball resumes. Kinematic evaluations of the elbow and wrist joints during the shot were measured with the notch wearable sensor device. To determine the planning positions of joint movement, the Ipad Pro camera (shooting at 240 frames per second) was Thus placed and the simulation of movement was simultaneously provided. Calibration operations in the plane where the movement takes place have been performed according to the manufacturer's recommendations of the notch sensor kit. The research only took into account the accurate shots of the subjects that entered the circle and crucible without touching. The data obtained through the Notch wearable sensor are recorded by digitizing the simulation of movement with BiomechTools software. The elbow joint angles, angular velocities and accelerations of the athletes up to the moment of throwing the ball were examined based on the acquired values.

Results: The research, there was no difference between the free throw elbow joint angles athletes according to the methods measured by new technological devices compared to the methods measured by manual methods.

Conclusions: The angle of the elbow joint is important for successful throws. Since our research took place on the static plane, we did not find a significant difference. As a research proposal, the kinematic relationship between a basketball jump shot and a free throw can be examined.

Keywords: Basketball, sports biomechanics, motion analysis, kinematic analysis, sports information and technology



OP105 – EFFECT OF PILATES EXERCISES ON FUNCTIONAL MOVEMENT ANALYSIS AND BODY COMPOSITION IN ADULT WOMEN

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Aim: The aim of this study is to investigate the impact of mat Pilates exercises on the functional movement analysis and body composition of adult women.

Methods: The study included a total of 16 adult women, with 8 participants in the Pilates exercise group and 8 in the control group. The mean age of the participants was 30.56 ± 5.36 in the study group and 32.75 ± 8.08 in the control group. Participants underwent mat Pilates exercises for 50 minutes, three times a week, over an 8-week period. Body composition and Functional Movement Screen scores were assessed before and after the study.

Results: Although no significant differences were observed in body composition based on the evaluation results, there was a low impact noted in the Deep Squat and Shoulder Mobility movements. While moderate impact was observed in the Hurdle Step, Active Straight Leg Raise, Trunk Stability, and Rotation Stability movements, significant differences were detected in the Functional Movement Analysis total score and In Line Lunge movement ($p < 0.05$).

Conclusions: The progressive mat Pilates exercises may not have a notable impact on body composition; however, they are suggested to have a positive effect on specific Functional Movement Screen (FMS) assessments.

Keywords: Pilates exercises, body composition, functional movement analysis

Acknowledgement: This study is derived from the thesis titled "Effect Of Pilates Exercises On Functional Motion Analysis And Body Composition In Adult Women," which was completed in the Department of Physical Education and Sports Sciences at Trakya University Institute of Health Sciences.



OP106 – EXAMINING THE EFFECT OF INTELLIGENCE TYPES OF INDIVIDUALS WORKING IN HEALTHCARE INSTITUTIONS ON TURNOVER INTENTION

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Aim: This research is significant as it is the first to test how individuals working in healthcare institutions, from a human resource management perspective, are affected in their intention to leave their job based on their types of intelligence. By assuming the realization of the research hypotheses, it will be assessed which individuals, in terms of their types of intelligence, are less likely to intend to leave their job during the recruitment processes in the health sector, by identifying the effects on the intention to leave in terms of recruitment processes and performances.

Methods: The independent variables of the study are bodily intelligence, existential intelligence, interpersonal intelligence, intrapersonal intelligence, logical intelligence, musical intelligence, naturalist intelligence, verbal intelligence, and visual intelligence. The dependent variable is the intention to leave the job. A total of 296 people working in the health sector in Istanbul, Kırklareli, and Tekirdağ participated in the study. In the research, Bartlett's Test, KMO Test, Reliability Analyses, Independent Sample t Test, Variance Analysis, Correlation Analysis, Regression Analysis were conducted.

Results: 73% of the health workers participating in the study were female and 27% were male. When marital status was examined, it was seen that 70.3% were married and 29.7% were single. Regarding educational status, it was observed that 41.2% were associate degree graduates, 46.6% were undergraduate degree graduates, and 12.2% were postgraduate graduates. The regression analysis showed that verbal intelligence did not have a significant effect on the intention to leave ($p=0.065$). It was observed that bodily intelligence, existential intelligence, interpersonal intelligence, intrapersonal intelligence, logical intelligence, musical intelligence, naturalist intelligence, and visual intelligence ($p<0.01$) had an effect on the intention to leave.

Conclusions: The research has shown that the intelligence levels of employees in health institutions are partially effective on their intention to leave the job.

Keywords: Intelligence, types of intelligence, intention to leave the job



OP107 – EXAMINATION OF THESES RELATED TO SUSTAINABLE DEVELOPMENT AND HEALTH

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Aim: Sustainable development is defined as meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. In order to enhance social well-being and fulfill the responsibility of preserving our planet, the United Nations General Assembly adopted the Sustainable Development Goals (SDGs) in 2015. The Sustainable Development Goals consist of 17 objectives and 169 targets, with the aim of achieving them by the year 2030. Since the adoption of the Sustainable Development Goals, various developments have been made towards achieving these goals. However, according to the United Nations 2023 Global Sustainable Development Report, the world is not yet on track to reach the 2030 Targets. In fact, the report indicates that there have been various deviations from the path to achieving these goals compared to four years ago. Sustainable development encompasses environmental, economic, socio-demographic, and health factors. The health factor stands out as a crucial factor that directly influences social well-being due to factors such as lifestyle, environmental factors, socioeconomic status, and access to healthcare, which are defined as determinants of health. In this context, it can be said that health is in intensive interaction with all the elements that make up sustainable development. In this context, it can be said that health is in intensive interaction with all the elements that make up sustainable development. The aim of this study is to draw attention to the concept of sustainable development and to examine scientific studies related to health and sustainable development in our country in order to present the current situation.

Methods: In order to determine the theses to be examined within the scope of the study, the Council of Higher Education (CoHE) National Thesis Center was utilized. A search was conducted in the database using the term "sustainable development" with the fields of the "search in, access type, and thesis type" set to "all". As a result of the search, the 1399 theses were refined by filtering for the terms related to health that yielded results, such as "patient(1)", "hospital(5)", "health(16)", "healthcare(17)", "medical(2)", "pharmaceutical(2)", "nurse(1)" and "medical(2)". This refinement process led to the identification of a total of 36 theses related to the relationship between sustainable development and health. Descriptive statistics and content analysis were performed on 35 theses determined as a sample.

Results: According to the analysis results, it was determined that scientific research at the thesis level related to the concepts of 'sustainable development' and 'health' increased in Türkiye in and after the year 2020. The research covered 21 different departments, with the most studies conducted in the departments of economics (5) and health management (5). It was determined that 30 theses were written in Turkish and 5 theses were written in English. Content analysis of these theses revealed that each thesis contributed to at least one sustainable development goal. Specifically, 22 theses were found to be related to the third sustainable development goal, 'Good Health and Well-being,' and 9 theses were linked to the twelfth sustainable development goal, 'Responsible Consumption and Production.'

Conclusions: It is recommended to work on targets and sub-goals that are important to show progress, such as the goal of increasing vaccination coverage, which has shown a decline in the 2023 Global Sustainable Development Report, or climate action, air pollution and related health effects, which are stated to be no progress. Expanding the number of English-language publications can broaden the scope of the research's impact. To maintain and further accelerate the increasing number of theses published in and after 2020, awareness can be raised among students.

Keywords: sustainable development goals, united nations, health, bibliometric analysis



OP108 – EFFECT OF VIDEO GAME-BASED LUNG VOLUME INCREASING TRAINING ON RESPIRATORY MECHANICS IN CHILDREN WITH DEVELOPMENTAL DELAYS: RANDOMIZED CONTROLLED STUDY

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Aim: The aim of the study was to investigate the effect of video game-based lung volume increasing training on respiratory mechanics in children with developmental delays.

Methods: 18 special education students with developmental delays between the ages of 7-18 were included in the study. Cases meeting the inclusion criteria were randomized and divided into 2 groups, and the groups were named Study Group (SGr) and Control Group (CGr). The programs were applied to each group with supervision twice a week and home exercise once (except exercise with a spirometer) for 6 weeks. Lung volumes were measured by spirometric (SFT) measurement.

Results: For SGr, the last measurement FVC ($p=0.01$), FVC (%) ($p=0.01$), FEV1 ($p=0.02$), FEV1 (%) ($p=0.03$) values were higher than the first measurement. was found to be statistically significant. No significant difference was seen in other values ($p>0.05$).

Conclusions: While conventional pediatric rehabilitation did not affect lung volumes, breathing and video-based breathing exercises applied in addition to conventional exercise had a positive effect on lung volumes. The advantage of our study was that it was effective even if the effect time was shortened by adding video-based breathing exercises to the program instead of applying classical breathing exercises.

Keywords: Biofeedback, children with developmental delay, lung volume, spirometry, video game-based

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OP109 – THE RELATIONSHIP BETWEEN BODY COMPOSITION AND PHYSICAL FITNESS IN YOUNG MALE BASKETBALL PLAYERS

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Aim: This study aims to investigate the relationship between body composition and aerobic capacity, trunk muscle endurance and peripheral muscle strength in young basketball players. Revealing the interactions of physical fitness parameters, which are important for basketball, with body composition will contribute to shaping the exercise programs of basketball players.

Methods: Ethics committee approval and registration number (Clinical Trial Number: NCT05928559) of the study were obtained. 29 young male athletes who have been interested in basketball for at least one year were included in the study. The body composition of participants was evaluated by recording their body weight, body fat and skeletal muscle mass with "OMRON BF511 Body Composition Monitor". In order to evaluate the aerobic capacities of participants, maximum oxygen consumption (VO₂max) levels were indirectly calculated with help of the formula obtained as a result of the Multi-Stage 20 m Shuttle Run Test. Trunk muscle endurance was evaluated with Biering-Sorensen and Kraus-Weber Tests. Peripheral muscle strength evaluation was performed with dominant side M. Biceps Brachii, M. Triceps Brachii, M. Quadriceps and M. Hamstring muscles using "MicroFET® 2" hand dynamometer.

Results: Mean age of the participants was 15.62±0.62 and all were male. As a result of statistical analysis, participants' body fat showed a significant negative correlation with VO₂max levels (p<0.05), trunk flexor muscle endurance (p<0.01) and trunk extensor muscle endurance (p<0.01). Skeletal muscle mass showed a significant positive correlation with trunk flexor muscle endurance (p<0.05) and trunk extensor muscle endurance (p<0.01). No correlation was found between body composition and peripheral muscle strength.

Conclusions: According to the results of the study, body composition is a critical factor affecting physical fitness parameters. These results showed that low body fat and high skeletal muscle mass can lead to better physical fitness levels. At the same time, it was concluded that these athletes should be evaluated multidimensionally.

Keywords: Basketball, body composition, aerobic capacity, trunk muscle endurance, muscle strength



OP110 – RELATIONSHIP OF THE NEUROCOGNITIVE LEVEL AND PHYSICAL PERFORMANCE IN INDIVIDUALS LIVING IN NURSING HOMES

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Aim: To examine the relationship in between relationship in between cognitive assessment outcomes and physical performance, activities of daily living in individuals living in nursing homes.

Methods: A total of 39 individuals (men:women; 35:4) living in nursing homes were enrolled to the study. Demographic information of the individuals was recorded. Additionally, The Central Nervous System Vital Signs Neurocognitive Test Battery, Timed Up and Go Test, Berg Balance Scale and Katz Index of Independence in Activities of Daily Living were assessed. Relationship in between cognitive parameters and physical performances were analyzed.

Results: A weak positive relationship was detected in between the neurocognition index, composite memory, verbal memory, and motor speed and the Berg Balance Scale ($r=0.325$; $r=0.356$; $r=0.368$; $r=0.352$; relatively $p<0.05$ for all). No statistically significant relationship could be detected between in between psychomotor speed, reaction time, complex attention, cognitive flexibility, processing speed, executive function, social acuity, reasoning, sustained attention and Katz Index of Independence in Activities of Daily Living ($p>0.05$).

Conclusions: Since it has been determined that some cognitive parameters and physical performances are related to each other, monitoring these parameters at regular intervals in individuals living in nursing homes may provide the opportunity to detect some findings in advance.

Keywords: Nursing home, neuropsychological tests, physical performance, daily living activities

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POSTER PRESENTATIONS



PP1 – SELF ASSESSMENT METHODS FOR THE EVALUATION OF FETAL MOVEMENTS

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Introduction: Antenatal care is essential for a successful delivery, a healthy baby and a happy mother. The main aim of antenatal care is to take appropriate interventions to assess, maintain and improve maternal and fetal health during pregnancy. There are many methods to assess fetal health during pregnancy, including ultrasonography (USG) and non stress testing (NST). Along with these methods, maternal perception and counting of fetal movements is the only method that can be easily used by the mother without the need for clinicians or equipment. Therefore, feeling and counting fetal movements is the basis for the assessment of fetal health. Therefore, this review aims to review the self-assessment methods used by pregnant women to assess fetal movements.

Methods: In the 70s and 80s, there was a great deal of interest in the identification and counting of fetal movements and many publications on the impact of this. In the 1970s, two methods were proposed for the identification of fetal movements. The first was to measure the time required to observe a certain number of fetal movements and the second was to count the number of fetal movements at a given time. The first of these methods was described by Sadovsky and Yaffe (1973). The second self-assessment method is the fetal movement counting method known as "Count to ten" or "Cardiff method". This method, proposed by Pearson and Weaver (1976), is a method that is used more frequently in normal pregnancies because it takes less time and the mother follows the fetus until it completes at least 10 of its daily movements. In assessing fetal health, not only the number of movements per unit of time is important, but also the strength and nature of these movements. To take this into account, Radestad introduced another method of observing the character of movement in 2012, called "Mindfetalness". Mindfetalness is defined as an awareness of the health of the unborn baby, a mindfulness-based focus on fetal movements.

Conclusions: The rationale for fetal movement counting is that if a woman reports decreased fetal movements, immediate action can be taken in the hope of preventing fetal death. Therefore, the methods used to assess fetal movements should be taught to women starting from antenatal education and awareness of the quantity and quality of fetal movements should be ensured, especially in primary health care services.

Keywords: Pregnancy, fetal movement counting, mindfetalness



PP2 – ARTIFICIAL INTELLIGENCE APPLICATIONS IN NURSING: A BIBLIOMETRIC ANALYSIS

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Aim: Artificial intelligence studies in nursing practices have gained increasing momentum, especially in recent years. This study was conducted to shed light on future studies and offer a new perspective by looking at the use of artificial intelligence (AI) in nursing practices, education and research from a broad perspective through bibliometric analysis.

Methods: "Web of Science" database was used for analysis. 32 studies focusing on the keywords "artificial intelligence", "machine learning" and "nursing" were included in the analysis. While scanning, English and Turkish languages were filtered and only studies between January 2000 and November 2023 were evaluated. Only original research articles published open access were included in the results.

Results: According to the date range included in the search results, the original research article in Web of Science was first prepared in 2019. According to the years, 5 studies were conducted in 2019, 7 in 2020, 6 in 2021, 6 in 2022 and 5 in 2023. The most prolific writer in the research is Fritz, Roschelle. The journal with the most publications was determined as "Journal of Management Nursing". Most research on artificial intelligence has been done in America.

Conclusions: Although the study shows that research conducted in the last few years has increased, it also reveals that research showing the use of artificial intelligence in nursing practices is still limited and more research on artificial intelligence is needed. Including information about artificial intelligence applications in nursing education and supporting research on artificial intelligence by organizations can meet the current need.

Keywords: Artificial intelligence, bibliometric analysis, machine learning, nursing.



PP3 – USING TELE-HEALTH IN INDIVIDUALS WITH DIABETES: A LITERATURE REVIEW

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Introduction: With the increase in average life expectancy, the incidence of chronic diseases has increased. Diabetes, one of the most common chronic diseases, is one of the leading causes of death worldwide, affecting 1 in every 10 people in the world. According to 2021 data, Türkiye is the country with the highest prevalence of diabetes among European countries (14.5%). The increase in chronic diseases such as diabetes creates a burden on the individual and the country's economy. This situation has made it necessary to use technological applications to reduce health expenditures. The use of tele-health services has gained importance in recent years. Tele-health is the use of communication technologies to provide health care services. The purpose of this research is to examine the use and effectiveness of tele-health applications in diabetes.

Methods: The national thesis center, Pubmed, Google Academic, the search engines of Trakya University Library were searched between 20-30 October 2023 with the keywords "tele-health", "tele-nursing", "diabetes" and the obtained data were examined. From a total of 277 studies, studies whose full text was not available (n=34), studies that did not include tele-health applications in diabetes (n=218), and studies that were traditional reviews (n=7) were excluded. A total of 18 studies were included in the review.

Conclusion: In the studies reviewed, it was seen that the use of tele-health applications in individuals with diabetes had positive effects to the management of the disease. Studies have shown that the use of tele-health applications provides improvements in HbA1c values, glycemic control and metabolic parameters, and perceived cognitive social factors, and it is effective in increasing diabetes self-management skills and self-care competencies. In addition; It was seen that monitoring diabetic patients via SMS had a positive effect on self-efficacy and quality of life. Nursing follow-ups made via tele-health service; It is stated that it is effective in reducing the pain and fear caused by self-injection and blood sugar measurements.

As a results, tele-health applications seem to be effective in the disease management, metabolic control and other disease management parameters in patients with diabetes. In this regard, it is important to include tele-health applications in the curriculum and in-service training in the field of health and to expand its use in primary health care services. Additionally, long-term and further studies involving tele-health applications in diabetes management are recommended.

Keywords: Diyabetes, chronic disease, tele-health



PP4 – NURSING AND EVIDENCE-BASED PRACTICES

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Introduction: Evidence is information based on scientific evaluation of practice that is available to decision makers in the health care system. Evidence-Based Practice is the ability to solve problems by integrating scientific research results and proven knowledge with clinical experience, the patient's needs and preferences, and integrating them into nursing practices for the best benefit of the patient. Evidence-based nursing is defined as "the approach of using the best evidence obtained through scientific methods in nursing care, combining experiences and patient preferences in decisions regarding patient care in order to provide the best care to patients."

Methods: The International Union of Nurses (ICN) invited Nurses to duty in 2012, emphasized the importance of evidence-based practice in all kinds of care and determined the theme of the year as "Filling the gap - From evidence to action". Evidence-based practice in nursing is the best way to support clinical decisions. Evidence is a tool to ensure patients receive the best care possible. Increasing the quality of nursing care, difference in clinical practices and patient care results, standardization of care and increase in patient satisfaction will be facilitated by evidence-based practices. The quality of care and working environment can be achieved by combining evidence-based nursing and evidence-based management.

Conclusion: Nurses responsible for holistic health care, which constitutes the most basic need of humans; Knowledge levels should be increased through evidence-based practices, skills should be developed, and a culture of being able to critically evaluate and develop research and base applications on scientific foundations should be created. For this reason, evidence-based practices should not only be integrated into nursing education courses, but also should be included in in-service training and orientation programs.

Keywords: Evidence, evidence-based practices, evidence based nursing



PP5 – INVESTIGATION OF NURSING GRADUATE THESES ON ITCHING SYMPTOMS IN HEMODIALYSIS PATIENTS IN TÜRKİYE

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Aim: This study was aimed at investigating the nursing graduate theses on pruritus symptoms in hemodialysis patients in Türkiye.

Method: Theses published between 2000 and September 2023 in the Council of Higher Education National Thesis Center were scanned by the researchers. The keywords used for scanning were "dialysis and itching", "hemodialysis and itching", "dialysis and pruritus" and "hemodialysis and pruritus". Twenty-six theses were found in the screening. Nine of these theses did not meet the inclusion criteria of the research, and six theses that were duplications were not included in the study. The data from eleven theses were examined in the study. The data was recorded in the data information form developed by the researchers. The Excel program was used for data analysis. The analysis results were expressed as frequency and percentage values.

Results: It was determined that 54.5% (n = 6) of the theses were graduate theses, 45.4% (n = 5) were randomized controlled experimental studies, and 27.3% (n = 3) were conducted in 2022. In the theses examined, more than half of the patients receiving hemodialysis treatment had moderate uremic pruritus. It was observed that pruritus symptoms were more common in patients receiving hemodialysis treatment and negatively affected their comfort. It was determined that 42.4% of the patients receiving hemodialysis treatment used medication for pruritus, and 19.2% used traditional methods. It has been observed that aromatherapy applications, live music therapy performed with kaval, acupressure applications, education based on the Health Belief Model, and reiki applications are effective in reducing pruritus symptoms in patients receiving hemodialysis treatment. It was determined that the Benson relaxation technique, virtual reality applications, and autogenic relaxation therapy were not effective in reducing pruritus symptoms in patients receiving hemodialysis treatment.

Conclusions: In thesis studies, it was observed that the effectiveness of many different methods in pruritus symptom management in patients receiving hemodialysis treatment was investigated, but each method has been investigated in limited numbers. It is thought that an increasing number of evidence-based thesis studies on the subject will benefit academicians and clinical nurses.

Keywords: Hemodialysis, pruritus, thesis



PP6 – SYMPTOM MANAGEMENT IN ELDERLY PATIENT WITH CANCER

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Introduction: Individuals experience physical, psychological and social changes due to the aging process. The lives of the elderly and their families become more difficult when cancer accompanies this process.

The most common cancer types in the world include female breast cancer (11,7%), lung (11,4%), colorectal (10%), prostate (7,3%) and stomach cancer (5,6%). 60% of newly diagnosed cancer cases in Europe are individuals aged 65 and over. 73% of those who die due to cancer in Europe are individuals aged 65 and over.

Elderly people may experience many symptoms such as pain, fatigue, dyspnea, mucositis, infections, toxicity, gastrointestinal problems, depression, anxiety and sleep disorders due to both cancer and treatments. In addition, the incidence and severity of geriatric syndromes, which are very common in the elderly, are increasing due to cancer and its treatment.

Methods: This review discusses the symptom management in elderly individuals with cancer.

Conclusion: Many pharmacological and non-pharmacological methods (acupuncture, hypnosis, acupressure, aromatherapy, music therapy, massage, reflexology, etc.) are used in the management of symptoms. In addition, in order to provide holistic oncological care to the elderly, detailed geriatric evaluation should not be skipped.

Throughout the process, conditions such as comorbidities, mental status, polypharmacy, fall risk and osteoporosis of the elderly person with cancer should be closely monitored. Managing symptoms effectively, in cooperation with the family, and based on evidence is extremely important in increasing both the functional capacity and quality of life of the elderly individual.

Keywords: Elderly, cancer, symptom management, geriatric oncology



PP7 – IS INTIMATE PARTNER VIOLENCE A REASON FOR EARLY TERMINATION OF BREASTFEEDING?

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Introduction: The World Health Organization recommends that breastfeeding be initiated within 1 hour after birth, that the baby be exclusively breastfed for 6 months, and that breastfeeding be continued with additional nutrients for 2 years. Although breastfeeding is vital for maternal and child health, it is known that the rate of breastfeeding in the first six months after birth is 37% worldwide.

Methods: Considering the factors that cause early termination of breastfeeding; there may be maternal reasons such as insufficient milk perception, mother's starting to work, new pregnancy, or there may be factors belonging to the baby such as the baby's unwillingness to breastfeed or the baby's disease. Another factor is the suppression of lactogenesis due to the environment or the spouse/close partner's approaches to increase the mother's stress level. At this point, we encounter intimate partner violence. Intimate partner violence is defined by the World Health Organization as "the behavior of a close partner or former partner that causes physical, sexual, or psychological harm, including physical aggression, sexual coercion, psychological abuse, and controlling behaviors." When the effect of intimate partner violence on breastfeeding duration is evaluated in the literature, it is understood that the studies reported conflicting results. When meta-analysis studies including many world countries such as the United States, India, Brazil, China, Australia, African Countries, Spain, Sweden and Norway, are evaluated, it has been reported in some studies that intimate partner violence increases the risk of termination of breastfeeding before 6 months regardless of the type of violence, increases the risk of early termination of breastfeeding of mothers who experience both physical, psychological and sexual violence 2 times, and exposure to violence during pregnancy increases the risk even more. On the other hand, there are also studies reporting that intimate partner violence does not affect the duration of breastfeeding. On the other hand, there are also studies reporting that intimate partner violence does not affect the duration of breastfeeding. In addition to being exposed to intimate partner violence, it is reported that factors such as lack of social support, depression, lack of self-confidence, negative body image and anxiety may contribute to the early termination of breastfeeding.

Conclusion: In this context, it can be argued that the effects of intimate partner violence can change direction based on cultural scenarios, the availability and quality of prenatal care, widespread beliefs about breastfeeding, and current public health initiatives to promote breastfeeding.

Keywords: Intimate partner violence, breastfeeding termination



PP8 – MENSTRUAL POVERTY

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Introduction: Menstrual poverty, in addition to the menstrual products such as pads and tampons that menstruating people need during this period; It is the problem of not being able to access basic needs such as clean water, a clean toilet and trash can. Menstrual poverty causes disadvantages in many areas of individuals' education, business and social lives in many countries of the world. In addition, menstrual poverty negatively affects the quality of life by causing individuals not to use unhygienic materials during menstruation and the development of reproductive system and urinary tract infections due to the lack of clean water and sink facilities. In addition, taboos about menstruation make it a social norm not to talk about and hide menstruation and the needs that come with it, and make it difficult to access accurate information on this subject.

Methods: Current research on the subject was used. Although studies on the subject are limited in the literature, in a study conducted in Istanbul, 73.6% of women over the age of 18 stated that they had difficulty purchasing menstrual products, 67.4% could not access a toilet where they felt safe, and 58.1% did not have access to clean toilet paper. He stated that he was having difficulties. In a study conducted in the USA, it was found that 14.2% of women experienced menstrual poverty within a year, and 10% experienced menstrual poverty every month. In a study conducted in India, it was determined that 12.5% of female high school students had difficulties accessing sanitary pads during the quarantine period of the COVID-19 pandemic.

Conclusion: Menstrual poverty particularly affects young girls of school age and affects their school attendance. Nurses and midwives should determine the menstrual poverty situation of adolescent girls and take part in creating social awareness that accessing menstrual products during menstruation is not a luxury.

Keywords: Menstruation, poverty, hygiene



PP9 – EVIDENCE BASED PRACTICES IN ORAL MUCOSITIS MANAGEMENT

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Introduction: Oral mucositis is defined as an important problem that occurs in the oral mucosa due to the effects of chemotherapeutic agents and head and neck radiotherapy, accompanied by inflammation, erythema, and ulceration, and reduces the quality of life. The incidence of oral mucositis was determined to be approximately 40% in patients receiving standard-dose chemotherapy and almost 100% in patients receiving high-dose chemotherapy, stem cell transplantation, or head and neck radiotherapy. If oral mucositis cannot be controlled, additional problems such as reducing the treatment dose, discontinuing treatment, dehydration, cachexia, anorexia, and malnutrition occur. Due to these problems, it becomes necessary for patients to switch to parenteral nutrition and serious decreases in their quality of life are observed. Preventing oral mucositis and managing it if it develops are among the important nursing practices. The purpose of this review is to report evidence-based practices that nurses can apply while managing oral mucositis.

Methods: In this review, 61 research articles published in Google Scholar, PubMed and Web of Science databases with the keywords oral mucositis, nursing, evidence-based practice from 2010 to the present, full text accessible and suitable for the purpose of the study, as well as National Cancer Institute (NCI), American Society of Clinical Oncology (ASCO), Multinational Cancer Support Care Association/International Society of Oral Oncology (MASCC/ISOO) recommendations expressed with the level of evidence were used.

Conclusions: In the evidence-based clinical practice guide prepared by MASCC/ISOO and published after the latest updates in 2020; While chlorhexidine is not recommended (evidence level III), benzydamine hydrochloride is recommended in head and neck cancer patients receiving radiotherapy and chemotherapy (evidence level II) and in those receiving medium dose radiotherapy (evidence level I). While sucralfate is not recommended (level of evidence II), 0.2% topical morphine gargle is recommended (level of evidence III). While keratinocyte growth factor (KGF-1) and low-level laser are recommended (level of evidence I), granulocyte macrophage colony stimulating factor (GM-CSF) is not recommended (level of evidence II). Basic oral care, including patient education, is recommended (level of evidence III), while cryotherapy (level of evidence II) is recommended. From herbal approaches; While oral glutamine and honey (evidence level II) are recommended, some studies also recommend the use of propolis, chamomile extract, black mulberry molasses, zinc sulfate, turmeric and plantago ovata without any evidence level. More randomized controlled studies with large samples are needed to ensure the level of evidence for these practices.

Keywords: Nursing, evidence-based practice, oral mucositis



PP10 – DISTRIBUTION RATES OF HEALTH WORKERS WORLDWIDE

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Aim: Health workers are unfairly distributed around the world. The aim of this review is to present the global distribution of professional health workers.

Methods: Statistical data on the distribution of professional health workers were obtained from the databases of the World Health Organization, the International Labour Organization and the Organization for Economic Cooperation and Development.

Conclusions: The most common health personnel are nurses, followed by doctors. The highest number of nurses is in the American region, while the lowest number of nurses is in the African region. The highest number of doctors is in the European region, while the lowest number of doctors is in the African region. While the African region does not have sufficient access to world resources and health workers, it carries 22 percent of the global disease burden. In Türkiye, the ratio of nurses is reported to be 2.4 per 1000 inhabitants and the ratio of physicians is 2.0 per 1000 inhabitants. Although 40 million new health workers are expected to be trained by 2030 within the scope of the Sustainable Development Goals, it is estimated that there will still be a need of 14 million. Sustainable Development Goals 2030 were disrupted by the Covid-19 Pandemic. Countries with the lowest need have the largest number of health workers, while those with the highest burden of disease have a much smaller share.

Keywords: Global distribution rate, health professionals, sustainable development goals



PP11 – SYSTEMATIC REVIEW OF STUDIES ON SPIRITUAL PRACTICES AS COPING METHODS IN CHILDREN

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Introduction: Spiritual practices are therapeutic practices in which spiritual or religious components are at the center. These applications; It helps recognize and respond to the spiritual needs of individuals facing trauma, illness and anxious situations. The purpose of using spiritual practices is to help the individual find meaning and purpose in life and to make it easier to cope with difficult situations such as chronic diseases, cancer and death. These practices, which make coping easier, are effective, inexpensive and safe methods that help children, families and healthcare professionals. These practices are not among the therapeutic practices and help the individual feel better. Since Florence Nightingale, spiritual care and spiritual practices have been an integral part of nursing and holistic care. It is known and accepted by nurses that when patients' spiritual needs are met, their healing processes, coping skills and quality of life increase. Although nurses have difficulty providing spiritual care in children, most believe that addressing patients' spiritual needs is part of basic nursing care. This study was conducted to examine research on spiritual practices in children.

Methods: In this study, the data were collected in the databases of "Pubmed, Google Scholar, Elsevier-Science Direct, Cochrane, EBSCOhost, Clinical Key, Web of Science, ULAKBİM, Springer" published in Turkish and English between 2012-2022. The words "Spiritual practices" and "child" and the Turkish versions of these words were used as keywords in the databases. As a result of the screening, 29 studies that met the specified criteria were included in the study. Spiritual practices are widely applied in children, are quite diverse and these care and practices are mostly; Spiritual Counseling Program (11 studies), gratitude diaries (2 studies), use of games and puppets (3 studies), spiritual posts on social networks (1 study), painting (2 studies), spiritual conversations (9 studies) and therapeutic music. (1 study) was found to have applications.

Conclusions: Spiritual practices in children are mostly done in school children between the ages of 6-12 and in adolescence, and with the spiritual well-being levels of children; It was found that the relationship between children's anxiety, depression, happiness, hope and self-efficacy was examined, It has been found that regardless of the type of spiritual practice, it increases the spiritual well-being. Spiritual practices, the child; It was concluded that spiritual practices make it easier for the child to cope with traumatic situations such as anxiety, depression, addiction, social withdrawal, chronic disease, cancer, and family divorce.

Keywords: Child, spiritual care, spiritual practices, nursing



PP12 – ETHICAL DILEMMAS IN ONCOLOGY NURSING

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Introduction: Oncology nurses have ethical and social responsibilities when carrying out the treatment and care of their patients. It is extremely important professionally and socially for nurses to be able to decide these problems within the framework of ethical principles. The fact that the treatment/care of cancer patients is a sensitive and complex process can lead to ethical dilemmas in the field of oncology. In many cases, oncology nurses may experience ethical conflicts with colleagues, other healthcare team members, patients, their families or relatives, and the institution they work for.

Methods: One of the ethical problems in our country is still hiding the cancer diagnosis from the patient. This ethically unacceptable situation leads to violations of the principles of truth telling, honesty, autonomy and human dignity. One of the frequently encountered problems is the issue of end-of-life care and death with dignity. Patients often choose to continue treatment until the last moment. In the care of a patient in the terminal period, the nurse must provide comprehensive care and effective psychosocial support to both the patient and his family in order to meet the physical and emotional needs of the patient. The decision not to start/end treatment also poses an ethical problem for oncology nurses.

Conclusions: As a result, ethical principles guide practices and behaviors in oncology nursing as well as in the nursing profession. Oncology nurses should continue their practices based on the uniqueness of the human being, respecting human dignity and rights, and adhering to professional values and ethical principles. They should make decisions in light of the ethical problems they encounter in the provision of services and make efforts to improve their ethical sensitivity and ethical problem-solving skills. In order to improve ethical understanding and behavior in nursing, the issue of professional ethics should be addressed in nursing education programs, nursing ethics committees should be established, and professional organizations should give due importance to this issue and support their members.

Keywords: Oncology, nursing, ethical dilemma, ethical proble



PP13 – NUTRIENT DRUG INTERACTION AND DIETITIAN- PHARMACIST COLLABORATION: THE EXAMPLE OF GRAPEFRUIT JUICE

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Introduction: Nutrition refers to the process of obtaining and utilizing essential elements necessary for human growth, development, and the ability to maintain a healthy and productive life. Nutrients derived from food provide energy to the body while also exerting various physiological effects. Medications, on the other hand, have their own effects on the body, but interactions between drugs and nutrients can lead to alterations in their efficacy and undesirable consequences. Healthcare professionals and patients should consider their dietary habits when taking medications, as this conscious approach can contribute to more effective treatment outcomes and the healthy recovery of individuals. Food-drug interactions, especially for specific types of medications, are important and can help prevent treatment failures or unwanted effects. One prominent example is the influence of grapefruit juice, which can have profound effects on the body's drug metabolism. Grapefruit juice is a significant CYP3A4 inhibitor, an enzyme crucial for drug metabolism. Grapefruit juice inhibits CYP3A4 enzymes in the intestines, thus potentially altering the effects of medications. Particularly when taken in combination with certain drugs, such as sedatives, calcium channel blockers, or antibiotics, grapefruit juice can pose potential risks. This may lead to side effects such as drowsiness, hypotension, cardiac arrhythmias, and changes in the absorption of drugs like statins, cyclosporine, and sertraline.

Methods: This poster study was prepared using PubMed, Scopus, Google Scholar, ScienceDirect databases.

Conclusions: It is emphasized that nutrition and medication use should be considered together. The importance of being cautious regarding grapefruit juice's interactions with drugs is highlighted. Healthcare professionals and patients are advised to take into account their dietary habits to ensure a safer and more effective treatment process. This conscious approach can ultimately aid patients in their healthy recovery.

Keywords: Food-drug interactions, grapefruit juice, cytochrome P450, CYP3A4



PP14 – PHYTOESTROGENS: FRIEND OR FOE?

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Introduction: Menopause is a period that every woman encounters throughout her life and is characterized by various physiological and psychological changes. During this period, ovarian functions end and menstruation is permanently interrupted. In addition to these changes, symptoms such as vaginal dryness, flora changes, sleep changes, headache, dizziness, tremors, hot flashes, and anxiety may also occur. But the most common symptom that occurs in this process is estrogen deficiency. Due to estrogen deficiency, climacteric symptoms and progressive osteoclasia leading to osteoporosis can be observed. This situation not only poses a problem for individuals in the postmenopausal period, but also causes large public health expenses worldwide. Therefore, phytoestrogens, which mimic the structure of estradiol, which has major estrogenic activity in the body, are frequently used to relieve these symptoms.

Methods: In this study, it was aimed to determine the medicinal plants showing phytoestrogenic activity with a current and detailed literature review in PubMed, Science Direct, Google Scholar, BioMed Central, TUBITAK Ulakbim databases, to examine the potential mechanism of action of the most frequently used ones and to reveal their positive/negative effects.

Conclusion: Phytoestrogens are plant substances with estrogenic properties discovered in plants in the late 19th century. In recent years, its use has become increasingly widespread in the world and in our country to relieve premenopausal and postmenopausal symptoms. There are many studies in the literature to examine the effects of these substances taken into the body with food or as supplements on women in the premenopausal and postmenopausal periods. The mechanism of action of phytoestrogens has not been fully elucidated in these studies. However, phytoestrogens are described by many scientists as a "Double-edged knife". In addition to having effects such as protection against carcinogenesis, atherosclerosis and osteoporosis, it is known that phytoestrogens can increase the clinical or subclinical growth of breast tumors at low levels and suppress the growth of breast tumors at high levels. However, the information in the literature is not considered sufficient to evaluate whether phytoestrogens are "Friend or foe", since their mechanism of action has not been fully elucidated. However, it should not be ignored that it will be a "Potential complementary treatment method" if the mechanism of action of phytoestrogens is clarified and the right phytoestrogen type, the right product, the appropriate dose and duration are taken into consideration. More studies are needed in order for these compounds to be widely used.

Keywords: Estrogen, phytoestrogen, medicinal plants



PP15 – INVESTIGATION OF THE EFFECTS OF SPLICING REGION VARIATIONS DETERMINED IN NEUROFIBROMATOSIS TYPE 1 GENE ON RNA LEVEL

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Aim: Neurofibromatosis type 1 is a tumor predisposition syndrome caused by mutations in the tumor suppressor gene Neurofibromin 1 (NF1), inherited in an autosomal dominant manner. The average global prevalence of Neurofibromatosis type 1 is 1 in 3,000. This condition, which can be observed in all ethnic groups, is a multisystemic disease that often affects the dermatological, orthopedic, central, and peripheral nervous systems. Out of the 3303 mutations listed for the NF1 gene, 468 of them are related to splicing.

Methods: In our study, four cases with Neurofibromatosis Type 1 symptoms, in whom a variation in the splicing region of the NF1 gene was determined through genetic analysis, were included along with four healthy control individuals in the Department of Medical Genetics at Trakya University Health Research, Diagnosis, and Evaluation Center. From each volunteer in our study group consisting of four patients and four controls, samples from two different tissues, peripheral blood and skin biopsy, were taken, and RNA isolation was performed. The samples were initially sequenced on the Applied Biosystems ABI 3500 Sanger sequencing machine. Subsequently, using the Illumina Stranded mRNA Prep Ligation kit and Nextera XT DNA Library Preparation Kit, sequencing was carried out with the NextSeq 550 System.

Results: Considering the read lengths in our next-generation sequencing and the peak sizes in Sanger sequencing, we observed that the NMD mechanism was more effective in skin biopsies compared to samples obtained from blood. In our study, we identified mutations involving exon skipping by performing Sanger sequencing and targeted next-generation sequencing with Nextera. Additionally, our findings indicate the need for a more detailed investigation into the connections between neurofibromin deficiency, expression of ribosomal proteins, and signals associated with stress occurring in the translation process.

Conclusions: In our study, it was observed that NF1 gene transcript levels showed a significant decrease compared to controls in all transcriptome analyses. However, due to the low reading levels of the NF1 gene, practical detection of exon skipping through RNA transcriptome was not feasible. Despite this limitation, the obtained results provided meaningful data regarding the molecular pathogenesis of the disease in terms of expression values. The comparison of transcriptome data between cases and controls revealed target pathways and provided important insights into molecular pathological mechanisms.

Keywords: Neurofibromatosis Type 1, NF1, Splicing, Transcriptome

Acknowledgement: I would like to thank the employees of the Department of Medical Genetics at Trakya University Health Research, Diagnosis, and Evaluation Center and the volunteers who participated in the study.



PP16 – ASSESSMENT OF THE GLOSS VALUES OF DIFFERENT COMPOSITE RESIN MATERIALS USED IN CLEAR ALIGNER ATTACHMENT CONSTRUCTION: A COMPARATIVE STUDY

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Aim: Clear aligner treatments consist of orthodontic treatment approaches that do not involve the use of brackets for tooth alignment. During treatment, tooth movements are facilitated through the application of attachments to the teeth using dental composite material. The objective of this study was to conduct a comparative analysis of the gloss values exhibited by the composite resins that are frequently used in orthodontic clinics for the building of attachments.

Methods: Three composite resins were examined: Transbond XT (3M/Unitek, Monrovia, CA, USA), Ruby Comp P (InciDental, Türkiye), and Ruby Flow (InciDental, Türkiye). Ten specimens (5 mm × 2 mm) of each material were prepared in plexiglass molds by polymerizing the composite resins with a Light Curing Unit (Light Emitting Diode-LED, 3M Elipar-S10, 3M ESPE, St. Paul, Minnesota, USA) for 20 seconds. Gloss measurements were made with a glossmeter (Novo-curve). A total of thirty measurements were conducted for each material, with three measurements taken at different locations on each sample. Each measurement was recorded in gloss unit (GU), and variance analysis was conducted.

Results: According to the findings of the study, it was observed that the gloss measurements for Transbond XT, Ruby Comp P, and Ruby Flow composite resin were recorded as 68.13 GU, 75.93 GU, and 64.05 GU, respectively. There was a significant difference between the gloss values of materials ($p=0.001$). The gloss value of the Ruby Comp P was significantly higher than other groups. On the other hand, the gloss of Ruby flow resin material was comparatively lower compared to the Transbond. However, this difference was not statistically significant.

Conclusions: The surface properties such as gloss of dental composite materials have a significant effect on plaque accumulation, discoloration, wear, and appearance. The more aesthetic orthodontic treatment options could enhance patient compliance with the prescribed treatment plan and also increase patients' motivation for oral care. Considering these factors, condensable composite resins can be used in the construction of orthodontic attachments. The results of the present study exhibit that the resin matrix composition and type have a significant effect on gloss. Since the filler ratio of the condensable composites is higher than the flowable ones, a glossier surface can be achieved with condensable ones.

Keywords: Orthodontics, clear aligners, attachments, composite resins, gloss

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PP17 – INTERDISCIPLINARY APPROACH TO INDIVIDUALS RESCUED FROM THE WRECKAGE

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Aim: Earthquakes are frequent and severe disasters that cause loss of life and property, and due to their strong destructive effects, they cause buildings to be damaged and collapsed in settlements, people to be trapped under wreckage, and therefore various health problems and even deaths. In the first hours after the earthquake, the injured are evaluated according to the triage system, and if necessary, they are transferred to the hospital and the treatment process begins. Individuals trapped under the rubble are gradually rescued, but as time progresses, the rate of complications increases. The aim of this review is to discuss nursing care and physiotherapy and rehabilitation practices, taking into account the risks that may occur in individuals removed from the wreckage.

Methods: In this review, planned as descriptive, between 2019-2023; Studies published in Turkish and English were scanned using Google Scholar, Pubmed and Ulakbim databases with the keywords 'Nursing, physiotherapy and rehabilitation, earthquake, wreckage, patient, injury, emergency care'.

Conclusions: Individuals trapped under the rubble are gradually removed, and in cases of long-term exposure to wreckage, the number of injured people rescued increases as time progresses and the health conditions of the injured deteriorate. Some complications may occur as a result of injuries sustained in individuals trapped under wreckage. It seems that the nursing and physiotherapy approach is important in order to prevent these complications from causing mortality and morbidity in the patient.

Keywords: Emergency care, earthquake, wreckage, physiotherapy and rehabilitation, nursing



PP18 – PHARMACEUTICAL EFFECTS OF IMMORTAL FLOWER (*Helichrysum* Mill.) PLANT ON HUMAN HEALTH

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Aim: Immortal flower (*Helichrysum* Mill.), which belongs to Asteraceae, has six hundred species known worldwide, and thirty-four species grow in our country. The stems of the immortal flower, which has a very bright yellow color, contain chitin-like components. Therefore, it has a very durable structure even after drying. The pungent smell of the flower is due to the essential oil it contains. It is a plant that has been used as tea in traditional medicine for a long time, especially due to its bile regulating properties and diuretic effects. It is also used in kidney diseases and kidney stones, abdominal, stomach and kidney pain, regulating heartbeat, liver disorders, jaundice, healing burns and wounds, cracked hands and feet, diarrhea, asthma and ear disorders. Due to its widespread use by the public, this plant is given many different names in different parts of Anatolia.

Methods: By entering keywords such as immortal flower, *Helichrysum* Mill., human health, information has been collected using the Google academic database between 2013 and 2023.

Conclusions: Research on the immortal flower (*Helichrysum* Mill.), has been reviewed from the literature. Considering the results of the study,); it has been shown that the teas prepared by the people from flowers (1-3% infusions) are used as a diuretic, blood sugar reducer, bile diuretic and regulator. In addition, many different biological activities have been found in studies that support its widespread use among the native people. The aim of this work is to draw attention to the medicinal plant used in many diseases treatment and to promote their use in terms of public health.

Keywords: Immortal flower, *Helichrysum* mill., human health, pharmaceutical effect



PP19 – INFORMATIC ERA AND ITS MISCELLANEOUS RESULTS ON HEALTH SCIENCES

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Informatic has made number of advances possible in the last century. Maybe it can be considered as a crucial field to catalyzed the most improvements and innovations. This discipline provides number of benefits to other fields as well as individual life. Nevertheless, this technic comes with its own restrictions and drawbacks. To name some positive features. It can be utilized in the preparation of outstanding predictions of diagnosis of many diseases that is difficult or impossible to be determined with conventional methods. Another positive example is that it allows high performance computer-assisted and/or independent surgical operations. On the other hand, it has number of obstacles. One of the undesirable issues are most high-tech materials are expensive and rely on foreign sources. Another unfavorable concern is the weak computer network infrastructure of the institutions as well as the Internet in the broad-spectrum. This study discusses various examples of pros and cons of information technology in health sciences recently. To this end, currently available health informatics in the world in general and in Türkiye in particular analyzed. Different state and private hospitals in Türkiye have evaluated in this research. The findings were compared with international hospitals available in the literature. Some of the findings includes the identification of limited wired and wireless computer network infrastructure. This cause limitations of operating diverse health informatic issues such as synchronous health informatic processes for instance remote surgeries. Another result shows that remarkable amount of money might be lost with the irrelevant hardware, software investments unless appropriate precaution taken. Paper concludes with implications and proposed solutions to subjects discussed in this work.

Keywords: Computer Science, health informatics, computer networks.



PP20 – CLIMATE CHANGE EFFECTS ON HUMAN HEALTH ISSUES: A SPACE ORIENTED ANALYSIS

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Weather has a dynamic characteristic that may variate within a season as well as in a period of years. On the other hand, other issue climate change, is usually confused with weather, which has substantial effects to earth in number of parameters. Climate change appears negligible effects with changing small number of atmospheric conditions at the initial glance but this is not the case most of the time. For example, one degree Celsius increase of the temperature, may leads to enormous consequences on planet. Moreover, usually these outcomes not evenly distributed throughout our globe. For instance, some parts of the earth may be exposed to drought, whereas other parts may have severe floodings. Climate change affects flora, fauna as well as humans for a certain region or even globally. In this study, effects of climate change has studied in general and human health in particular. This study utilized space-based information resources that are provided through various satellite provides such as European Union, European Space Agency, The European Organisation for the Exploitation of Meteorological Satellites, The National Aeronautics and Space Administration. Study demonstrates number of observations that includes increase of sea water temperature and its health consequences, drought report and prosperity. Analysis of this work is especially focused on Eastern Balkan and Aegean regions.

Keywords: Climate change, data collection from space, Balkan and Aegean