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Congress
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23-26 October 2025
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www.hayatkongre.com

ABSTRACT BOOK

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Dear Colleagues,

We are proud to invite you to HAYAT 2025, the 7th edition of the National Congress on Rational Treatments in Disease Management, which brings together family physicians and stakeholders on a common scientific, social, and cultural platform.

With your valuable participation, we will hold the 1st International and 7th National Congress on Rational Treatments in Disease Management, HAYAT 2025, at the Selectum Family Resort Hotel in Antalya, between October 23–26, 2025.

This year, our congress has gained international status, and we are pleased to come together with the Board and members of the Balkan Medical Doctors Association (BMDA) on a scientific platform that goes beyond national borders. We are also honored to host the "International Critical Thinking and Case Reports Congress" and the "1st Balkan Medicine Symposium," featuring case presentations and expert consultation sessions.

In our congress, we aim to prepare a strong scientific program enriched with current literature and valuable speakers who possess national and international expertise, contributing to primary healthcare practices.

Courses, panels, oral and poster presentations, and interactive sessions will provide answers to our questions in primary care, while the social program will help us relax and rejuvenate. A full and inspiring HAYAT 2025 awaits us.

Being together will empower us. Together, we will elevate the value of family medicine and shape the future of primary healthcare services.

We sincerely thank you for your support of our congresses and cordially invite all our colleagues to join us.

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Prof. Dr. Hüseyin CAN

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HAYAT 2025 SCIENTIFIC PROGRAMS (TR)

COURSES (23 Oct 2025, Thursday)			
Time	**Topic**	**Speakers**	**Session Chairs**
13.30 – 17.00	**Wound Care School**	Prof. Dr. Şamil AKTAŞ Prof. Dr. Hüseyin CAN Op. Dr. Metin YALÇIN	Uzm. Dr. N. Ebru TERZİ Uzm. Dr. Fazilet YORGANCIOĞLU
17.00-17.20	Which Cancers Should We Screen For? What Do the Guidelines Say?	Prof. Dr. Engin Burak SELÇUK	Prof. Dr. Hüseyin CAN
13.30 – 17.00	**Geriatrics School**	Prof. Dr. Pınar SOYSAL Doç. Dr. Mehmet YÜRÜYEN Dr. Vildan KANDEMİR BÜTÜN	Uzm. Dr. Fatma Sümeyra YALÇIN Uzm. Dr. Tuğba BODUR
17.00 – 17.30	**OPENING PROGRAM**		

24 Oct 2025, Friday, SALON A (TR)			
Time	**Topic**	**Speakers**	**Session Chairs**
09.00 – 09.40	Fonksiyonel Tıbbın Temelleri Oksidatif Dengeye Fonksiyonel Yaklaşım	Dr. Öğr. Üyesi Bahar ÜRÜN ÜNAL Doç. Dr. Bahadır YAZICIOĞLU	Uzm. Dr. Göksu TEHÇİ Dr. Abdülhamit SAKUÇOĞLU
09.50 – 10.30	Beyin, Bağlanma ve Bildirimler Teknoloji Bağımlılığı ve Yeni Hastalıklar	Uzm. Dr. Çiğdem AKAYDIN Uzm. Dr. Halil Volkan TEKAYAK	Uzm. Dr. Mehmet ARSLAN Dr. Nahide TOKSAN
COFFEE BREAK			
11.00 – 11.40	HPV Bağışıklamada Güncel Gelişmeler Aşı Reddi ve Aşı Kararsızlığı	Doç. Dr. Yusuf Haydar ERTEKİN Doç. Dr. Özgür ERDEM	Prof. Dr. Cahit ÖZER Dr. Ufuk GÜLÜCÜ
11.50 – 12.30	Anemi Tanısında Laboratuar Testlerinin Yeri Tiroid Fonksiyon Testlerinin Yorumlanması	Prof. Dr. Yasemin KILIÇ ÖZTÜRK Prof. Dr. Özgür ENGİNYURT	Dr. Öğr. Üyesi Bahar ÜRÜN ÜNAL Dr. Hüseyin GÖKSU
LUNCH			
14.00 – 14.40	Prediyabet ve Diyabet Tedavisinde Güncel Yaklaşımlar Birinci Basamakta Konstipasyona Yaklaşım	Prof. Dr. Mehmet SARGIN Prof. Dr. M. Reşat DABAK	Dr. Nihat FAHLIOĞULLARI Uzm. Dr. Çiğdem AKAYDIN
14.50 – 15.30	Kronik Hastalık Yönetiminde Yaşam Biçimi Değişikliği Sigara Bırakmaya Yaklaşım	Prof. Dr. Cahit ÖZER Prof. Dr. Kamile MARAKOĞLU	Doç. Dr. Nil TEKİN Uzm. Dr. Emre ŞEN
COFFEE BREAK			
16.00 – 16.40	Eklem Ağrısına Birinci Basamakta Yaklaşım Majistral İlaç Reçeteleme	Prof. Dr. Tuğrul BULUT Ecz. Aslı ÇELEBİ	Prof. Dr. Melih Kaan SÖZMEN Dr. Merih Gökmen ŞİMŞEK
16.50 – 17.30	Varislerin Estetik ve Güncel Tedavi Yöntemleri Birinci Basamakta Kronik Yaraya Yaklaşım	Doç. Dr. İlker KİRİŞ Prof. Dr. Emre ÖZKER	Prof. Dr. Yusuf Cem KAPLAN Dr. Servet ALKAN

24 Oct 2025, Friday, SALON B (EN) **"International Critical Thinking and Case Reports Congress"**			
Time	**Topic**	**Speakers**	**Session Chairs**
09.00 – 09.10	Polypharmacy Management in Geriatrics	Dr. Rozalin ERDEM UPRAK	Prof. Dr. Onur ÖZTÜRK Dr. Öğr. Üyesi Volkan ATASOY Uzm. Dr. Ahmet Murat UZUN
09.10 – 09.20	Japanese Secrets to a Long and Happy Life	Uzm. Dr. Songül GÜNNAR	
09.20 – 09.30	Artificial Intelligence Applications for Geriatric Individuals	Dr. Abdullah ERDOĞAN	
09.30 – 09.40	TIMERS Criteria in Chronic Wound Management	Dr. Merveözge KAHRAMAN	
09.40 – 09.50	The Physician's Role in Smoking Cessation: 5A	Uzm. Dr. Göksu TEHÇİ DELATİOĞLU	Prof. Dr. Emine Neşe YENİÇERİ Doç. Dr. Bahadır YAZICIOĞLU Uzm. Dr. Fikret SÜTÇÜ
09.50 – 10.00	Family Medicine Practice in the Netherlands	Uzm. Dr. Halime Seda KÜÇÜKERDEM	
10.10 – 10.20	Approach to the Difficult Patient in Primary Care	Uzm. Dr. Fazilet YORGANCIOĞLU	
10.20 – 10.30	Current Status of RSV Vaccines	Uzm. Dr. Ayşe KAPLAN	
COFFEE BREAK			
11.00 – 11.10	Sarcopenia Management in Primary Care	Uzm. Dr. Elif NEGİŞ	Prof. Dr. Cahit ÖZER Prof. Dr. Tahsin ÇELEPKOLU Doç. Dr. Nil TEKİN
11.10 – 11.20	Current Approach to Food Supplements	Uzm. Dr. Zeynep Özün ERİNÇ	
11.20 – 11.30	Approach to Fungal Infections in Primary Care	Uzm. Dr. Emre ŞEN	
11.30 – 11.40	Tips for Managing Home Healthcare	Uzm. Dr. Mehmet ARSLAN	
11.40 – 11.50	Ethical and Legal Issues in Telemedicine Applications	Uzm. Dr. N. Ebru TERZİ	
11.50 – 12.00	Blood Pressure Monitoring and Hypertension Management with Telemedicine	Uzm. Dr. Tuğçe Selenay ERGEN	
12.00 – 12.10	Anaerobic Exercise and Diabetes	Uzm. Dr. Melike AKÇAKAYA	
12.20 – 12.20	The Immune System and Vaccination in Geriatric Individuals	Uzm. Dr. Tuğba BODUR	
LUNCH			
14.00 – 14.10	Primary Care Approach to Body Dysmorphic Disorder	Uzm. Dr. Serhat ERDOĞMUŞ	Prof. Dr. Burçin ÖZER Doç. Dr. Yusuf Haydar ERTEKİN Doç. Dr. Özgür ERDEM
14.10 – 14.20	Pain Management in Palliative Care	Uzm. Dr. Fatma Sümeyra YALÇIN	
14.20 – 14.30	Current Status and Future Perspectives in Cardiovascular Risk Management in Primary Care	Dr. Ilgın TİMARCI	
14.40 – 14.50	Seeing the Child as a Social Actor: The Contribution of the New Sociology of Childhood to Family Medicine	Ayşe Ümran ERDOĞAN	
14.50 – 15.00	Prevention and Management of Pressure Sores	Dr. Berfin SOY	

25 Oct 2025, Saturday, SALON A (TR)			
Time	**Topic**	**Speakers**	**Session Chairs**
09.00 – 09.40	Yara Tedavisinde GETAT Uygulamaları Periyodik Sağlık Muayenesi	Prof. Dr. Onur ÖZTÜRK Dr. Öğr. Üyesi Volkan ATASOY	Doç. Dr. Yusuf Haydar ERTEKİN Dr. Öğr. Üyesi Aynur ÖZDEMİR
09.50 – 10.30	Dislipidemi Tedavisinde Güncel Yaklaşımlar Metabolik Sendrom Yönetimi	Prof. Dr. Tahsin ÇELEPKOLU Doç. Dr. Burkay YAKAR	Doç. Dr. Özgür ERDEM Dr. Metin AKSAKAL
COFFEE BREAK			
11.00 – 11.40	**Çocuklarımız Sınavlara Hazır mı? Gıda Takviyelerinde Güncel Durum** **Prof. Dr. Hüseyin CAN**		
11.50 – 12.30	İki Can, Bir Reçete: Gebelikte Antidepresan Kullanımına Yaklaşım Birinci Basamakta Depresyon ve İntihar Vakalarına Halk Sağlığı Yaklaşımı	Prof. Dr. Yusuf Cem KAPLAN Prof. Dr. Melih Kaan SÖZMEN	Prof. Dr. Hüseyin CAN Dr. Fatih ARIPARLATAN
LUNCH			
14.00 – 15.00	**Menenjite Karşı En Başından Tam Koruyalım** **Prof. Dr. Hüseyin CAN**		
15.10 – 16.10	Yaşlıda Uykusuzluğa Yaklaşım: Melatoninin Yeri Demanstan Korunmak Mümkün müdür? Alzheimer Kader midir? Aile Hekimliğinde Dijital Sağlık Okuryazarlığı ve Yapay Zeka Destekli Karar Verme Sistemleri	Prof. Dr. Aslı TUFAN ÇİNÇİN Doç. Dr. Nil TEKİN Doç. Dr. Duygu İlke YILDIRIM	Doç. Dr. Burkay YAKAR Dr. Öğr. Üyesi Volkan ATASOY
COFFEE BREAK			
16.40 – 17.20	Mikrobiyatadan Sağlığa Güncel Yaklaşımlar Lipödem: Kalın Bacakların Az Bilinen Sorumlusu	Prof. Dr. Emine Neşe YENİÇERİ Doç. Dr. İlker KİRİŞ	Prof. Dr. Onur ÖZTÜRK Doç. Dr. Bahadır YAZICIOĞLU
17.30 – 18.30	Aile Hekimliğinde Hukuksal Sorunlar ve Çözüm Önerileri	Dr. Nihat FAHLIOĞULLARI Dr. Ahmet KANDEMİR Dr. Av. Oktay Tolga BÜYÜKHİLAL	Prof. Dr. Emine Neşe YENİÇERİ Uzm. Dr. Halime Seda KÜÇÜKERDEM

25 Oct 2025, Saturday, SALON B (TR)			
Time	**Topic**	**Speakers**	**Session Chairs**
09.00 – 10.30	**YENİDOĞAN OKULU (TR)**	Prof. Dr. Esra ARUN ÖZER Prof. Dr. Senem ALKAN ÖZDEMİR	Uzm. Dr. Halime Seda KÜÇÜKERDEM Uzm. Dr. Zeynep Özün ERİNÇ
COFFEE BREAK			
11.00 – 12.30	**YENİDOĞAN OKULU (TR)**	Prof. Dr. Esra ARUN ÖZER Prof. Dr. Senem ALKAN	Uzm. Dr. Tuğçe Selenay ERGEN Uzm. Dr. Serhat ERDOĞMUŞ
LUNCH			
14.00 – 15.00	**International Programme (EN)**		
15.00 – 17.00	Quaternary Prevention (TR) Palliative Care in Turkiye NSAIDs for Musculoskeletal Diseases: How to Use Them Wisely in Family Practice? Modern Principles of Cervical Cancer Screening Balo Concentric Sclerosis Prevalence of PTSD in the Population of VRS Veterans and Its Detection in the Practice of Family Doctors in the Kneževo and Gradiška Health Centers Is There Still a Risk of Arterial Hypertension After Repair of an Aortic Coarctation in Adolescents? Treatment of Genital Warts During Pregnancy Tomotherapy in the Treatment of Gynecological Tumors Degenerative Rheumatic Diseases Among the Elderly – Epidemiology Over three decades of experience with laparoscopic hysterectomy in Croatia	Prof. Dr. Serdar ÖZTORA Prof. Dr. Yasemin Kılıç Öztürk Prof. Dr. Ahmet Yıldırım Prof. Dr. Goran Dimitrov Prof. Dr. Slavejko Sapunov Dr. Onur Dika Spec. Dr. Zanka Cerovic (Mr Sc. Med) Spec. Dr. Suzana Radic Predrag Subotic Sinisa Markovic Assoc. Prof. Dr. Rina Rus (MD, PhD) - Dr. Primoz Rus, (MD, GP, SSM) Primarijus Doc. Dr. Med. Sci. Hidajet Rahimic Muniba Rahimic Dr. Stelios Kouvaris, Irini Kouvaris Prim. Dr. Maja Boskovic Prim. Dr. Nenad Djoković Dr.Zorica Djoković (GP) Prof. Prim. Rajko Fures, MD, PhD	Prof. Dr. Yasemin KILIÇ ÖZTÜRK Prof. Dr. Özgür ENGİNYURT Dr. Öğr. Üyesi Gülçin ÖZKAN ONUR Dr. Öğr. Üyesi Bahar ÜRÜN ÜNAL
COFFEE BREAK			
17.00 – 19.00	**WORKSHOP:** Mezoterapi: Doğal Cilt Gençleştirme (TR)	Dr. Burcu HABİBOĞLU	Uzm. Dr. Elif NEGİŞ Uzm. Dr. Melike AKÇAKAYA

26 Oct 2025, Sunday, SALON A (TR)			
Time	**Topic**	**Speakers**	**Session Chairs**
09.00 – 09.40	HT Tanı ve Tedavisinde Güncel Yaklaşımlar	Dr. Öğr. Üyesi Ayşe Nur TOPUZ	Uzm. Dr. Pelin TİRYAKİOĞLU Dr. Ali GÖZAYDIN
09.50 – 10.30	Erişkin Bağışıklama Seyahat Aşılama	Dr. Öğr. Üyesi Gülçin ÖZKAN ONUR Dr. Öğr. Üyesi Aynur ÖZDEMİR	Dr. Öğr. Üyesi Ayşe Nur TOPUZ Dr. Öğr. Üyesi Bahar ÜRÜN ÜNAL
COFFEE BREAK			
11.00 – 11.40	Birinci Basamakta Sağlıklı Beslenme	Doç. Dr. Duygu İlke YILDIRIM	Uzm. Dr. Çiğdem AKAYDIN Uzm. Dr. Zeynep Özün ERİNÇ
11.50 – 12.30	Akılcı İlaç Kullanımı Solunum Yolu Etkenlerinde Antibiyotik Direnci	Uzm. Dr. Ayşe KAPLAN Prof. Dr. Burçin ÖZER	Doç. Dr. Duygu İlke YILDIRIM Uzm. Dr. Melike AKÇAKAYA
CLOSING PROGRAM			

International Programme / 25 October 2025, Saturday, Saloon B, 15.00 – 17.00 (EN)

"1st Balkan Medicine Symposium"

Chairs: Prof. Dr. Yasemin KILIÇ ÖZTÜRK, Prof. Dr. Özgür ENGİNYURT, Assoc. Prof. Dr. Bahar ÜRÜN ÜNAL, Assist. Prof. Dr. Gülçin ÖZKAN ONUR

Topic	Lecturers	Country
Modern Principles of Cervical Cancer Screening	Prof. Dr. Goran Dimitrov Prof. Dr. Slavejko Sapunov Dr. Onur Dika	MK
Wound Care in Home Care Unit Palliative Care in Turkiye NSAIDs for Musculoskeletal Diseases: How to Use Them Wisely in Family Practice?	Prof. Dr. Hüseyin Can Prof. Dr. Yasemin Kılıç Öztürk Prof. Dr. Ahmet Yıldırım	TR
Balo Concentric Sclerosis	Spec. Dr. Zanka Cerovic (Mr Sc. Med)	ME
Prevalence of PTSD in the Population of VRS Veterans and Its Detection in the Practice of Family Doctors in the Kneževo and Gradiška Health Centers	Spec. Dr. Suzana Radic Predrag Subotic Sinisa Markovic	SK / RS
Is There Still a Risk of Arterial Hypertension After Repair of an Aortic Coarctation in Adolescents?	Assoc. Prof. Dr. Rina Rus (MD, PhD) Dr. Primoz Rus, (MD, GP, SSM)	SL
Treatment of Genital Warts During Pregnancy	Primarijus Doc. Dr. Med. Sci. Hidajet Rahimic Muniba Rahimic	BIH
Tomotherapy in the Treatment of Gynecological Tumors	Dr. Stelios Kouvaris, Irini Kouvaris	GR
Degenerative Rheumatic Diseases Among the Elderly - Epidemiology	Prim. Dr. Maja Boskovic Prim. Dr. Nenad Djoković Dr.Zorica Djoković (GP)	RS
Over three decades of experience with laparoscopic hysterectomy in Croatia	Prof. Prim. Rajko Fures, MD, PhD	CRO

LECTURERS

Modern Principles of Cervical Cancer Screening

Prof. Dr. Goran Dimitrov (MD, PhD), University Clinic for Gynecology and Obstetrics – Skopje

Abstract:

Cervical cancer remains one of the most preventable malignancies through timely detection and treatment of precancerous lesions. Advances in molecular diagnostics, particularly high-risk HPV testing, have transformed screening strategies and shifted clinical practice toward more sensitive and risk-based models. This abstract outlines the core principles of modern cervical cancer screening and highlights their relevance for contemporary gynecological practice.

Modern screening focuses on the use of primary high-risk HPV testing as the foundation of early detection, supported by reflex cytology or other triage methods for HPV-positive women. Genotype-specific risk assessment—especially for HPV 16 and 18—plays a central role in determining the urgency of colposcopy and further management. Age-appropriate screening intervals, individualized follow-up, and quality assurance in sample collection and laboratory processing are essential to ensure accuracy and safety.

In addition, screening programs increasingly integrate HPV vaccination coverage, digitalized follow-up systems, and standardized colposcopy pathways to improve patient outcomes and reduce system delays. For countries in transition toward HPV-based screening, effective implementation relies on organized screening protocols, adequate training of personnel, and continuous monitoring of performance indicators.

Modern cervical cancer screening therefore represents a shift toward precision prevention—combining molecular testing, risk stratification, and structured management—aimed at reducing the burden of cervical cancer and improving women's health outcomes.

Is There Still A Risk Of Arterial Hypertension After Repair Of An Aortic Coarctation In Adolescents?

[1,2]Rina R Rus, [3]Primož Rus

[1]University Medical Centre Ljubljana, Children's Hospital, Department of Pediatric Nephrology, Ljubljana, Slovenia;

[2]University of Ljubljana, Faculty of Medicine, Ljubljana, Slovenia

[3]Group practice, Ljubljana, Slovenia

Background: Coarctation of the aorta is a narrowing of the aortic arch and can occur at any age. Repair of aortic coarctation significantly improves the outcome and survival rate. However, it has been described that even after successful repair, there is a high risk of cardiovascular morbidity and mortality, which in most cases is related to arterial hypertension and premature atherosclerosis. According to the literature, up to one third of patients are affected by arterial hypertension after surgical correction of coarctation.

The aim of our study was to investigate the prevalence of arterial hypertension in adolescents after repair of aortic coarctation in our centre.

Methods: We conducted a retrospective study of adolescents after aortic coarctation repair, who were treated at our centre between January 2020 and January 2025. Information on each patient was collected from medical records at last clinic visit.

Results: 71 adolescents (46 boys and 25 girls) aged between 11 and 18.9 years (mean: 15.6 ± 2.15 years) who were treated after aortic coarctation were included in the study. 45/71 (63.4 %) patients had coarctation repaired in the neonatal period. 50/71 (70.4 %) patients had other cardiac anomalies, the most common being a bicuspid aortic valve in 25/71 (35.2 %). 25/71 (32.5 %) patients had arterial hypertension, of which 17 (23.9 %) had isolated systolic arterial hypertension. 14/71 (19.9%) adolescents had hypertrophy of the left ventricle. Out of 25 patients, 6 were treated with beta-blockers, 11 with ACE inhibitors, and 8 with combination therapy. Arterial hypertension was detected in 9/45 adolescents with coarctation repair in the neonatal period, and 16/26 adolescents with coarctation repair after one month of age ($p < 0.001$). 15/71 (21.1%) adolescents had recoartation, 8 of whom also have arterial hypertension. 17 out of 56 patients without recoarctation have arterial hypertension ($p=0.98$).

Conclusion: According to our results, arterial hypertension occurs significantly more often in adolescents in whom coarctation of aorta was surgically repaired after first month of age. Results are comparable to similar studies in the literature. We also confirmed that arterial hypertension occurrence is not necessarily related to aortic recoarctation.

Balo Concentric Sclerosis

Žanka Cerović (MD), Neuroradiologist, President of the Medical Chember of Montenegro, Podgorica/Montenegro

Balo concentric sclerosis is an atypical, rare, and progressive form of multiple sclerosis (MS), accounts for less than 1% of demyelinating diseases worldwide. Unlike the classical form of MS, it is characterized by a rapid worsening of symptoms including muscle spasms, paralysis, intellectual and cognitive deficits, and the formation of concentric layers or rings with preserved myelin in between. This results in a characteristic MRI appearance of alternating hypo- and hyperintense rings, making MRI crucial for diagnosis. Differential diagnosis includes tumefactive multiple sclerosis, gliomas, and brain abscesses due to the atypical concentric ring appearance on MRI, which may resemble neoplastic or infectious processes. The experience of the Clinical Center of Montenegro is based on only two patients diagnosed over 25 years of MRI diagnostics at the institution. This is a case presentation of a patient with a rapidly progressive clinical course leading to paralysis and significant intellectual and cognitive impairment. MRI clearly revealed alternating concentric hypo- and hyperintense rings of demyelinated and preserved brain parenchyma.

CSF analysis for oligoclonal bands was negative. Following corticosteroid and symptomatic therapy, and crucially, plasma exchange treatment. Plasma exchange plays a key role in fulminant and atypical forms of the disease, especially when corticosteroid therapy fails. The result of treatment was fully recovered patient.This case emphasizes the importance of early MRI diagnosis and the potential reversibility of severe neurological deficits with timely intervention.

Key words: Balo concentric sclerosis, inflammatory demyelinating disease, MRI concentric ring appearance.

Approach to Insomnia in Older Adults

Prof. Dr. Aslı TUFAN ÇİNÇİN, Marmara University Faculty of Medicine, Department of Geriatrics

With normal aging, sleep undergoes several changes such as a phase advance of sleep timing, delayed sleep onset, a reduction in total sleep duration, increased sleep fragmentation, prolonged wakefulness during the night, decreased slow-wave sleep, and increased stages N1 and N2 sleep. Disruption of sleep structure—either by shortened duration or altered architecture—negatively affects cognitive function during wakefulness. Healthy sleep is essential for learning and memory processes, as memory consolidation occurs during sleep. Older adults are at particularly increased risk for cognitive decline due to sleep fragmentation, reduced deep NREM sleep duration, alterations in NREM sleep components, and coexisting sleep disorders. A detailed evaluation is necessary to differentiate physiological changes and parasomnias. If left untreated, insomnia can lead to secondary medical and psychiatric problems and a decrease in quality of life. When planning treatment for insomnia, comorbid conditions and current medications must be considered; non-pharmacological interventions should be prioritized in older adults. If pharmacological treatment is required, benzodiazepine-class medications should be avoided whenever possible.

Restless legs syndrome (RLS) is a movement disorder characterized by an uncontrollable urge to move the legs, often accompanied by unpleasant or painful sensations that exhibit diurnal variation. Its prevalence increases with age and it typically follows a chronic and progressive course. RLS may be primary (idiopathic) or secondary to underlying conditions such as iron deficiency or end-stage renal disease. Treatment is mainly symptomatic and depends on the severity and frequency of symptoms, including both non-pharmacological (e.g., lifestyle modifications) and pharmacological interventions (dopaminergic agents, alpha-2-delta calcium channel ligands, opioids). REM sleep behavior disorder (RBD) is a parasomnia characterized by the loss of muscle atonia during REM sleep, resulting in complex motor behaviors that may cause injury to the patient or bed partner. Individuals with RBD are at increased risk for developing neurodegenerative disorders. Diagnosis requires a detailed history from the patient and/or bed partner as well as polysomnography. Treatment includes behavioral strategies and safety precautions, and any causative medications should be discontinued. In older adults, melatonin—owing to its safer side-effect profile—should be the first-line treatment. Clonazepam may be used in patients who do not tolerate or respond to melatonin. Finally, patients with RBD should be informed about their increased risk for future neurological diseases and advised to have regular medical follow-up.

The most common sleep pathology encountered in older adults is obstructive sleep apnea syndrome (OSAS), a disorder characterized by recurrent upper airway obstructions during sleep, often accompanied by hypoxemia. OSAS can lead to cardiovascular, neurological, and metabolic complications. Therefore, older adults should be routinely evaluated for symptoms suggestive of obstructive sleep apnea to prevent potential complications.

Oksidatif Dengeye Fonksiyonel Yaklaşım / A Functional Approach to Oxidative Balance

(TR)

Doç. Dr. Bahadır YAZICIOĞLU, Samsun Eğitim ve Araştırma Hastanesi, Aile Hekimliği Kliniği, GETAT Uygulama Merkezi

Fonksiyonel Tıp; semptomların yönetimini önceliklendirip odaklanmak yerine, patolojik belirtilerden önce ortaya çıkan altta yatan fizyolojik bozuklukları belirlemeyi ve bunları ele almayı amaçlayan kanıta dayalı bir yaklaşımdır (1).

Oksidatif Denge; reaktif oksijen türleri (ROS) ve reaktif nitrojen türleri (RNS) üretimi ile bunları dengeleyen antioksidan savunma mekanizmaları arasındaki homeostatik dengeyi ifade eder. Bu hassas denge, hücresel sinyal iletimi, bağışıklık fonksiyonu ve genel fizyolojik düzenlemede önemli bir rol oynar (2).

Oksidatif Stres; Oksidatif denge aşırı oksidatif aktiviteye doğru kayarsa oksidatif stres olarak adlandırılır. Birçok patolojik süreç başlayabilir veya şiddetlenebilir. Kardiyovasküler hastalıklar, nörodejeneratif bozukluklar, metabolik sendrom ve gibi birçok kronik hastalığın gelişimine katkıda bulunabilir (3).

Reaktif Oksijen Ürünleri; Fizyolojik koşullar altında birçok hücresel süreç ROS üretimine katkıda bulunur. Mitokondriyal elektron taşıma zinciri birincil kaynak olarak karşımıza çıkar (4). Vücut içi enzimatik kaynaklar arasında NADPH oksidazlar, sitokrom P450 enzimleri ve lipoksijenazlar gibi enzimler bulunur. Tüm hücrelerde farklı oranlarda ROS üretilir (5). Ultraviyole ışınlar, iyonlaştırıcı radyasyon, çevresel toksinler ve bazı ilaçlar gibi çevresel faktörler, ROS üretimini önemli ölçüde etkiler. Özellikle ileri glikasyon son ürünü veya okside lipitler açısından zengin besinler, oksidatif yüke daha da katkıda bulunabilir (6).

Antioksidan Sistem; Vücudun oksidatif stres ile mücadele eden savunmasıdır. Birbirini tamamlayan birçok mekanizma aracılığıyla çalışır. Enzimatik antioksidanlar süperoksit dismutaz (SOD), süperoksitin hidrojen peroksite dönüşümü; katalaz ve glutatyon peroksidaz, hidrojen peroksiti detoksifiye eder; glutatyon redüktaz, indirgenmiş glutatyonu yeniden üreten enzimler bulunur (7). Enzimatik olmayan antioksidanlar, glutatyon, ürik asit ve koenzim Q10 gibi endojen moleküllerin yanı sıra C vitamini, E vitamini, karotenoidler ve polifenoller gibi besin bileşenlerini içerir. Bu çeşitli elementler, farklı hücre bölmelerinde ve değişen koşullar altında belirli antioksidanların baskın olduğu sinerjik bir şekilde işlev görür (8).

Fonksiyonel Tıp ve Oksidatif Denge; Fonksiyonel tıp, temel olarak sistem biyolojisi perspektifinden hareket eder ve insan organizmasını izole sistemler olarak değil, birbiriyle bağlantılı fizyolojik süreçlerin entegre bir ağı olarak kavrar. Oksidatif denge, birçok fizyolojik ağı etkileyen ve etkilenen temel bir düzenleyici mekanizmayı temsil eder (9).

Fonksiyonel Tıp ve Oksidatif Stres; Fonksiyonel tıp, oksidatif stresi tekil bir patoloji olarak değil, her kişinin kendine özgü fizyolojisi ve kendine özgü yaşam tarzını etkileyebilen çok boyutlu bir durum olarak görür. Oksidatif stres çeşitli nedenlerle (çevresel maruziyet, beslenme,

genetik varyasyon, psikososyal stres vb.) oluşur ve kişiselleştirilmiş değerlendirme ve müdahaleler gerektirir (10).

Oksidatif Strese Cevap; Oksidatif strese cevap 13. yüzyılda yaşamış filozof ve kimyager Paraselsus'un önemli cümlesi olan "İlacı zehirden ayıran onun dozudur" cümlesindeki gibidir (11). Fonksiyonel tıbbın oksidatif dengeye yaklaşımını anlatan temel teorilerden biri hormesis'tir. Hormesis, bir stres faktörünün düşük dozlarda yararlı, yüksek dozlarda ise zararlı etkiler göstermesiyle karakterize edilen iki fazlı doz-yanıt fenomenidir (12). Hormetik tepkileri uyaran uyarlanabilir kişisel müdahaleler kullanır. Bunlar arasında bazı fitokimyasallar (kurkumin vb), egzersiz protokolleri, aralıklı oruç ve sıcaklık değişikliği, ozon tedavisi gibi hafif oksidatif zorluklar yaratan yaklaşımlarla adaptif mekanizmalar uyarılır (13). Uyarlanabilir stres, hafif oksidatif zorluklara maruz kalmanın ardından antioksidan enzimler, ısı şok proteinleri ve DNA onarım sistemleri dahil olmak üzere endojen koruyucu mekanizmaların yukarı regülasyonunu içerir (14).

Redoksiyon Sistemi İşleyişi; Fizyolojik konsantrasyonlarda, ROS'lar, ikinci haberci görevi görür. Özellikle hidrojen peroksit, proteinlerde sistein kalıntılarının, yapısını ve işlevini değiştirir. Böylece büyüme faktörü, anti-inflamatuar etki ve hipoksiye adaptasyon gibi çeşitli süreçleri düzenler (15, 16).

Redoksiyon Sistemi Etkileri; Redoksiyon süreçleri enerji metabolizmasını, detoksifikasyon yolaklarını, bağışıklık fonksiyonunu ve nöroendokrin sinyalleşmeyi modüle eder. Bunların tümü fonksiyonel tıp yaklaşımında değerlendirilen temel alanlardır (17).

Redüktif Stres; Aşırı antioksidan aktivite, fizyolojik redoks sinyalini bozarak redüksiyon stresi yapabilir. Bu fenomen, kardiyomiyopatilere, metabolik bozukluklara ve immünolojik işlev bozukluklarına neden olabilir (18).

Oksidatif Stres ve Kronik Hastalıklar; Oksidatif stres birçok patolojik duruma katkıda bulunur. Oksidatif stres LDL oksidasyonunu, endotel disfonksiyonunu ve vasküler inflamasyonu artırarak kardiyovasküler hastalıklar güçlü bir ilişki gösterir (19). Alzheimer ve Parkinson gibi nörodejeneratif hastalıklarda, etkilenen beyin bölgelerinde lipitler, proteinler ve DNA'da önemli oksidatif hasara neden olur (20). DM gibi metabolik bozukluklar, hiperglisemiye bağlı ROS üretimi ve bozulmuş antioksidan sistem kaynaklı sistemik oksidatif stres sebebidir. Kanser, proliferasyon ve metastazı teşvik eden oksidatif DNA hasarı ve hücre sinyali değişiklikleri içerir (21, 22).

Oksidatif Denge ve İmmünite; Oksidatif denge ve bağışıklık fonksiyonu arasında iki yönlü ilişki vardır. Denge durumunda birbirlerini olumlu etkilerler (23). Bağışıklık sisteminde fagositik hücreler, enfeksiyonlarla mücadele ederken NADPH oksidaz enzimi aracılığıyla ROS üretirler. Bu ROS, güçlü mikrobisidal ajanlar olarak işlev görür (24). Hafif - orta derecede oksidatif sinyal iletimi, T hücresi aktivasyonu, B hücresi farklılaşması ve sitokin üretimi dahil olmak üzere adaptif bağışıklığın birçok yönünü düzenler (25).

Kişiselleştirilmiş Değerlendirme; Genetik varyasyonlar (polimorfizmler), epigenetik, mikrobiyota profili ve çevresel etkileşimler; redoks biyolojisi üzerindeki bireysel farklılaşmayı

etkiler. Bu etkileşimler sonucunda, bireylerin belirli patolojilere olan yatkınlığı ve farmakolojik tedavilere yanıtın heterojenliği oluşur (26). Gen analizi, oksidatif stres biyobelirteçleri ve antioksidan kapasitenin fonksiyonel değerlendirmeleri ile kapsamlı değerlendirmeler yapılarak bireysel özellikler tespit edilir. Bu sayede, belirli dengesizlikleri ve bazı güçlü yönleri kullanan hedefli müdahale stratejileri kullanılır (27).

Oksidatif Denge Modülasyonu; Oksidatif denge üzerinde bütün gıdaların sinerjik etkileri vardır. İzole besinlerden ziyade beslenme alışkanlıkları daha önemlidir. Meyve, sebze, tam tahıllar, baklagiller ve zeytinyağı türü Akdeniz beslenme, antioksidan ve antienflamatuar etkilidir (28). Akdeniz tipi beslenme, ROS temizleme, antioksidan enzimler için kofaktör sağlama ve endojen savunma sistemlerinin aktivasyonu gibi modülasyon yapar (29). Quercetin, resveratrol ve epigallocatechin gallate (EGCG) gibi polifenoller, Nrf2 aktivasyonunu modüle ederek endojen antioksidan enzimleri ve detoksifikasyon sistem aktivitelerini yukarı doğru düzenler (30). Endojen antioksidan sistemlerin optimal fonksiyonu için yeterli mikro besin durumu gereklidir. Selenyum, glutatyon peroksidaz ve redoks homeostazında önemli rol oynayan diğer selenoproteinler için bir kofaktör görevi görür. Çinko, süperoksit dismutazın yapısına ve işlevine katkıda bulunur ve glutatyon metabolizmasını düzenler. Manganez, bakır ve demir, çeşitli antioksidan enzimler için gerekli kofaktörler olarak işlev görür (31, 32, 33). B vitaminleri, özellikle riboflavin ve niasin, glutatyon redüktaz aktivitesini için gerekli NADPH üretimini destekler. C vitamini ve E vitamini, lipit peroksidasyonunu azaltmak ve diğer antioksidanları yenilemek için sinerjik olarak işlev görür (34, 35).

Fiziksel aktivite, hormetik ilkelere uygun etki gösterir. Akut egzersiz, mitokondriyal solunumun artması ve NADPH oksidaz aktivasyonu yoluyla ROS üretimini artırır. Bu oksidatif stres, antioksidan enzimlerin yukarı regülasyonunu sağlar (36, 37). Uyku bozukluğu ve sirkadiyen uyumsuzluk, oksidatif dengeyi önemli ölçüde etkiler. Uyku yetersizliği, antioksidan kapasiteyi azaltırken, lipit peroksidasyon belirteçlerini ve inflamatuar sitokinleri artırır (38). Psikolojik stres, hipotalamus-hipofiz-adrenal aks aktivasyonu, katekolamin salınımı ve bozulmuş immün-inflamatuar yanıtlar dahil olmak üzere birçok yol aracılığıyla oksidatif dengesizliğe neden olur (39). Zihin-beden müdahaleleri oksidatif denge için önemli faydalar sağlar. Meditasyon, farkındalık temelli yaklaşımlar, antioksidan etkinliği artırırken oksidatif stresi ve inflamatuar sitokinleri azaltır (40).

Sonuç

- Fonksiyonel tıp, sistem biyolojisine dayalı kişiselleştirilmiş bir tıp yaklaşımıdır.
- Oksidatif denge, ROS üretimi ile antioksidan savunma mekanizmaları arasındaki dengeyi ifade eder.
- Oksidatif strese cevap kapasitesi, immünite, metabolizma ve yaşlanma ile doğrudan ilişkilidir.
- Oksidatif stres; kardiyovasküler, nörodejeneratif ve metabolik hastalıklarda kritik rol oynar.
- Redüktif stres gibi karşıt dengesizlikler de fizyolojik işlevi bozabilir.
- Bireylerin genetik ve çevresel farklılıkları değerlendirilerek kişisel müdahaleler planlanmalıdır.
- Beslenme: Akdeniz diyeti, yüksek glikasyon yükü olmayan besinler.

- Yaşam tarzı: Uyku, egzersiz, stres yönetimi.
- Moleküler destek: NAC, Q10 gibi dengeleyici ve destekleyici takviyeler.
- Bütüncül yaklaşımlar, fonksiyonel tıbbın temelini oluşturur.

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Foundations Of Functional Medicine

Assoc. Prof. Dr. Bahar Ürün Ünal, Department of Family Medicine, Faculty of Medicine, Selçuk University, Konya, Türkiye

It is estimated that 74% of all deaths worldwide are caused by non-communicable diseases (NCDs). In Türkiye, this rate reaches up to 90%.
Recent studies have emphasized that lifestyle factors play a much larger role than genetic factors in the development of most chronic diseases globally.
While genetic predisposition explains only about 20% of health outcomes, up to 80% can be attributed to modifiable factors such as nutrition, exercise, sleep, stress, and environmental exposures. For these reasons, the high NCD rate in Türkiye — nearly 90% — represents a significant opportunity area for Functional Medicine. Functional Medicine is defined as a systems biology–based approach that aims to identify and address the root causes of disease to restore health for each individual.

Leaky Gut; The intestinal epithelium is normally semi-permeable. However, an increase in proteins such as zonulin disrupts tight junctions, leading to increased intestinal permeability. This condition may predispose individuals to:

- Food intolerances
- Autoimmune diseases (e.g., Hashimoto's thyroiditis, rheumatoid arthritis)
- Neuroinflammation (brain fog, anxiety, depression)
- Skin conditions (eczema, acne, rosacea)

The 5R Protocol in Functional Medicine; Developed to improve gut health, the 5R protocol is a structured, stepwise treatment plan designed to remove underlying triggers and restore physiological balance.

1. **Remove:** Elimination diets
2. **Replace:** Hydrochloric acid, bile acids, digestive enzymes, and nutritional supplements
3. **Repair:** Support for intestinal barrier integrity (e.g., bone broth, collagen supplements)
4. **Reinoculate:** Restoration of gut flora through probiotics and dietary fibers
5. **Rebalance:** Stress management, meditation, psychotherapy, lifestyle optimization, healthy nutrition, and immune support

In the coming years, further studies will clarify the long-term effects, cost-effectiveness, and optimal patient groups for Functional Medicine interventions.

However, current evidence already suggests that a holistic, root, cause, oriented approach to patient care may serve as a powerful tool against the modern epidemic of chronic diseases.

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Antibiotic Resistance in Respiratory Pathogens

Prof. Dr. Burçin Özer, Hatay Mustafa Kemal University, School of Medicine, Department of Medical Microbiology

Anatomically, the respiratory system is divided into upper (nasal cavity, pharynx, larynx) and lower (trachea, bronchi, lungs) compartments, each with distinct infectious agents and clinical implications. Respiratory tract infections are divided into two types: upper respiratory tract infections and lower respiratory tract infections (1).

Upper respiratory tract infections are self-limiting infections and inflammations affecting the upper respiratory tract, usually accompanied by cough without symptoms of pneumonia. This group includes sinusitis, pharyngitis, epiglottitis, laryngitis, acute otitis media, diphtheria, and colds. Microorganisms that cause pharyngitis and tonsillitis are *Streptococcus pyogenes, Corynebacterium diphtheriae, Neisseria gonorrhoeae, Mycoplasma pneumoniae*. Microorganisms that cause epiglottitis and laryngotracheitis are *Haemophilus influenzae* type B and *C. diphteriae*. Microorganisms that cause sinusitis are *Streptococcus pneumoniae*, *H. influenzae, Moraxella catarrhalis*, obligate anaerobes, *Pseudomonas* and other gram-negative bacilli (nosocomial sinusitis), *Staphylococcus aureus*. Microorganisms that cause laryngitis are *Influenza virus, Parainfluenza virus, Rhinovirus, Adenovirus, Coronavirus, Human metapneumovirus, Streptococcus pyogenes, C. diphtheriae* and *Epstein Barr virus* (2).

Lower respiratory tract infections are infections that affect the lower respiratory tract below the larynx, including the trachea and alveolar sacs. Lower respiratory tract infections include bronchitis, bronchiolitis, tuberculosis, Legionnaires' disease, Q fever, whooping cough, and pneumonia. Bronchitis and bronchiolitis agents are *H.influenzae, S.pneumoniae, M. pneumoniae, Bordetella pertussis, Bordetella parapertussis, M. pneumoniae, Chlamyda pneumoniae*. In addition, *Influenza virus, Adenovirus, Rhinovirus, Coronavirus* cause bronchitis, while *Respiratory Syncytial Virus, Parainfluenza virus, Rhinovirus, Influenza virus, Adenovirus, Enterovirus, Human metapneumovirus* cause bronchiolitis. Pneumonia, a type of lower respiratory tract infection, is grouped according to its causative agents, acquisition mechanisms, and clinical presentations as community-acquired pneumonia, hospital-acquired (nosocomial, healthcare-associated) pneumonia, and pneumonia in immunocompromised patients (3).

<u>Community-Acquired Pneumonias</u>

Community-acquired pneumonia (CAP) is an acute infection that occur due to community-acquired pathogens in individuals who have no known immune deficiency and who have no history of hospitalization in the last 10 days. It is an infection of the lower respiratory tract with a high mortality rate worldwide. The diagnosis of community-acquired pneumonia can be established in patients without any contact with hospitals or other health care settings over a 3 months period before hospitalization (2, 4).

The most common cause of community-acquired acute bacterial pneumonia is *S. pneumoniae*. More than 80 serotypes determined by capsular polysaccharides are known, but 23 serotypes account for more than 90% of all pneumococcal pneumonias. Pneumonia due to *S. pyogenes* is often associated with hemorrhagic pneumonia and empyema. Community-acquired pneumonia caused by *S. aureus* is also rare and usually develops after influenza or staphylococcal bacteremia. Infections caused by *H. influenzae* are more common in people with chronic obstructive pulmonary disease (COPD) and a history of smoking. Infections due to *Klebsiella pneumoniae* are more common in patients over 50 years of age with COPD or alcoholism.

Hospital-Acquired Pneumonia

Pneumonia that develops within 48 hours of admission and within 48 hours of discharge in a patient who does not have any clinical signs or symptoms suggesting the development of pneumonia at the time of hospitalization. The most common agents are aerobic gram-negative bacilli, which rarely cause pneumonia in healthy individuals. *P. aeruginosa, Klebsiella, Escherichia coli, Enterobacter, Proteus* and their species are frequently detected. *Mycobacterium tuberculosis* can cause pneumonia. *M. tuberculosis* infections continue to be a significant public health problem, especially among immigrants from developing countries, intravenous drug addicts, HIV-infected patients, and elderly people living in nursing homes. Atypical Mycobacterium species can cause lung diseases indistinguishable from tuberculosis (5).

Pneumonia in immunocompromised patients

These are pneumonias that occur in individuals with congenital or acquired immune deficiency, are usually caused by many unusual opportunistic pathogenic microorganisms, have clinical courses that differ significantly from those in individuals without immune deficiency, and generally have much more severe mortality and morbidity (6).
.

Aspiration pneumonia

Aspiration pneumonia due to anaerobic organisms usually occurs in patients with periodontal disease or impaired consciousness. The bacteria involved are usually part of the oral flora, and cultures often show a mixed bacterial growth. *Actinomyces, Bacteroides, Peptostreptococcus, Veilonella, Propionibacterium, Eubacterium,* and *Fusobacterium* species are frequently isolated (7).

Atypical Pneumonia

Atypical pneumonias are pneumonias that are not typical bacterial lobar pneumonias. Atypical pneumonia agents are *M. pneumoniae, Legionella pneumophila, Chlamydia trachomatis, Chlamydia psittaci, Chlamydia pneumoniae* and *Coxiella burnetii* (8).
.
The distribution of agents by groups in community-acquired pneumonia is shown in Table 1 (9). And antibiotic options for empirical treatment of community-acquired pneumonia is shown in Table 2 (9).

Group 1 is the group of patients who will be followed up as outpatients. Outpatients were divided into subgroups according to the presence (Group 1a) or absence (Group 1b) of concomitant chronic diseases (chronic lung, heart, kidney, liver, neurological diseases, diabetes mellitus, etc.). Patients who need to be hospitalized are in Group 2, and patients who need to be admitted to the Intensive Care Unit are in Group 3 (9).

Table 1. Distribution of causative microorganisms in community-acquired pneumonia by groups (9).

Group I	**Group II**	**Group III**
Patients who do not meet hospitalization criteria CURB-65 <2 A) No changing factors B) There is a changing factor	No criteria for admission to intensive care CURB-65 ≥ 2	There is a criterion for admission to intensive care CURB-65 ≥ 2 A) No risk of Pseudomonas B) There is a risk of Pseudomonas
Grup IA S.pneumoniae M.pneumoniae C.pneumoniae Mix infection H.influenzae Viruses Others **Grup IB** S.pneumoniae M.pneumoniae C.pneumoniae Mix infection H.influenzae Enteric Gram-negative Viruses Others	**Grup II** S.pneumoniae H.influenzae M.pneumoniae C.pneumoniae Mix infection Enteric Gram-negative Anaerobes Viruses Legionella spp. Others S.aureus	**Grup IIIA** S.pneumoniae Legionella spp. H.influenzae Enteric Gram-negative S.aureus M.pneumoniae Viruses Others **Grup IIIB** P.aeruginosa + Pathogens in Group A

Table 2. Antibiotic Options for Empirical Treatment of Community-Acquired Pneumonia (9).

Group I	**Group II**	**Group III**
Patients who do not meet hospitalization criteria CURB-65 <2 A) No changing factors B) There is a changing factor	No criteria for admission to intensive care CURB-65 ≥ 2	There is a criterion for admission to intensive care CURB-65 ≥ 2 A) No risk of Pseudomonas B) There is a risk of Pseudomonas
Outpatient treatment	**Treatment in Clinic**	**Treatment in the Intensive Care Unit**

Group IA	**Group II**	**Group IIIA**
Amoxicillin or Macrolide **Group IB** 2nd- or 3rd-generation oral cephalosporin or Amoxicillin + clavulanate ± Macrolide or Doxycycline	Third-generation no anti-Pseudomonas cephalosporin or aminopenicillin with a beta-lactamase inhibitor + Macrolide or New fluoroquinolone alone	Third-generation no anti-Pseudomonas cephalosporin or aminopenicillin with a beta-lactamase inhibitor + Macrolide or new florokinolon **Group IIIB** Anti-Pseudomonas beta-lactam ciprofloxacin, or aminoglycoside + macrolide

In a review written in 2021, *S.pneumoniae, M. pneumoniae, S.aureus, L.pneumophila* and bacteria in the *Enterobacterales* family were most frequently detected as pneumonia agents in the USA between 2010 and 2012, while in Europe between 2003 and 2014, *S.pneumoniae, L.pneumophila, M. pneumoniae, S.aureus, H.influenzae, P.aeruginosa, C. pneumoniae, C.burnetii* and bacteria in the *Enterobacterales* family were reported as pneumonia agents (10). *S.pneumoniae, L.pneumophila, M. pneumoniae, C. pneumoniae, K. pneumoniae, MRSA, P.aeruginosa* and *MSSA* were found to be the causative agents of community-acquired pneumonia that occurred between 2013 and 2015 in India. In the same review, in China, *M. pneumoniae, S. pneumoniae, H. influenzae, C. pneumoniae, K. pneumoniae, S. aureus, P. aeruginosa, L. pneumophila* and *M. catarrhalis* were reported to be the causative agents of pneumonia in 2004 and 2005 (10).

There are many studies showing the pneumonia agents in Turkey. In our article, where we reported the microorganisms isolated from 1516 respiratory samples in the Hatay Mustafa Kemal University Hospital Central/Microbiology laboratory between 2012 and 2014, *A.baumannii, P.aeruginosa, K.pneumoniae, E.coli*, and *S. aureus* were the most common (11). The reason for this was that since we were a tertiary hospital, the majority of the patients from whom samples were taken to our laboratory had hospital-acquired infections. And the highest resistance was found to be against sulbactam/ampicillin (97%), ampicillin (96.2%), cefuroxime (82.8%), and amoxicillin clavulanic acid (84.9%).

Antibiotic Resistance in Respiratory Pathogens

H. influenzae* ve *S. pneumoniae

Vaccination has reduced certain serotypes along with antibiotic resistance; however, other serotypes with increased resistance now predominate in infections. In many countries, *H. influenzae* is highly resistant to ampicillin, producing high levels of beta-lactamase. *S. pneumoniae* continues to show reduced susceptibility to beta-lactam antibiotics globally, and

treatment with fluoroquinolones and macrolides has resulted in increasing resistance to these agents (12).

Moraxella catarrhalis

They are often resistant to beta-lactams due to the high prevalence of beta-lactamases (>80%) and have reduced susceptibility to macrolides and fluoroquinolones.

Bordetella pertussis

The incidence of *B. pertussis* has been successfully reduced, but cases are increasingly being reported in some countries, often with resistance to macrolides, fluoroquinolones, and tetracyclines.

Finally, not only is there an increase in rates of single-agent resistance, but multidrug-resistant (MDR) pathogens, MDR *S. pneumoniae* and MDR *A. baumannii*, are also becoming evident.

Antibiotic Resistance Mechanisms in Respiratory Pathogens (13).

Resistance to Beta-lactam Antibiotics; *S. aureus, K. pneumonia, P. aeruginosa, A. baumanii, H. inflenzae* and *M. catarhalis* show resistance to beta-lactam antibiotics that act on the cell wall (e.g., penicillin G) with altered penicillin-binding proteins, efflux pumps and beta-lactamase enzymes. S. aureus exhibits resistance to glycopeptides (e.g., vancomycin) through altered peptidoglycan precursors.

Resistance to Lipopeptides; *S. aureus, K. pneumonia* and *M. catarhalis* develop resistance to lipopeptides (e.g. colistin), which are effective by disrupting the integrity of the cell envelope, by increasing the positive charge on the cell surface.

Resistance to Quinolones; *M. tuberculosis, S.pneumoniae, K. pneumonia, H. Inflenzae* and *M. catarhalis* show resistance to quinolones (e.g. ciprofloxacin) by target mutations and synthesis of target protection proteins.

Resistance to Sulfonamides; *P. aeruginosa, K. pneumoniae, A. baumanii* show resistance to sulfonamides (e.g. sulfanilamide) by target overproduction, mutation, and target replacement.

Resistance to aminoglycosides; *A. baumanii, P. aeruginosa, K. pneumoniae, S.pneumoniae* show resistance to aminoglycosides (e.g. kanamycin A) by synthesizing aminoglycoside modifying enzymes.

Resistance to Oxazolidinones; *S. aureus* shows resistance to oxazolidinones (e.g. linezolid) through 23S rRNA methyltransferase enzyme and rRNA mutations.

Resistance to Tetracyclines; *P.aeruginosa* and *S.pneumoniae* show resistance to tetracyclines (e.g. tetracycline) through efflux pumps and ribosomal protection proteins.

Resistance to Macrolides; *S.aureus, S.pneumoniae, H.influenzae* develop resistance to macrolides (e.g., erythromycin) through mutations in the 23S rRNA, efflux pumps, and methyltransferase enzyme.

Resistance to Streptogramins; *S.aureus* and *S.pneumoniae* develop resistance to streptogramins (e.g., pristinamycin) through 23S rRNA methyltransferases and antibiotic modification.

Resistance to chloramphenicol; *S.aureus, P.aeruginosa, K.pneumoniae* show resistance to chloramphenicol with 23S rRNA methyltransferases, efflux pumps and acetyltransferase enzyme.

Resistance to Ansamycins; *M.tuberculosis* and *S.aureus* show resistance to ansamycins (e.g. rifampin) through RNA polymerase mutations.

Antibiotic resistance mechanisms in respiratory tract infection agents are shown in Table 3 (13).

Table 3. Antibiotic resistance mechanisms in respiratory tract infection agents (13).

Primary Target	Antibiotic Class	Major Resistance Mechanisms	Resistance Prevalent in Respiratory Pathogen
Cell wall biosynthesis	Beta-Lactams (eg, penicillin G)	Modified penicillin-binding Proteins (ftsI, mecA genes), efflux, Beta-lactamases	SA, KP, PA, AB, HI, MC
	Glycopeptides (eg, vancomycin)	Modified peptidoglycan precursors (van gene family)	SA
Cell envelope integrity	Lipopetides (eg, colistin)	Increase in positive charge on the cell surface, (mprF, mcr-1)	SA, KP, MC
DNA replication and transcription	Quinolones (eg, ciprofloxacin)	Mutations in targets: gyrAB, parEC; target protection (Qnr)	MT, SP, KP, HI, MC
Nucleotide synthesis or folate biosynthesis	Sulfonamides (eg, sulfanilamide)	Target overexpression, mutation or modified target: sul family	PA, KP, AB
Protein synthesis	Aminoglycosides (eg, kanamycin A)	Aminoglycoside-modifying enzymes; 16S rRNA methyltransferases	AB, PA, KP, SP
	Oxazolidinones (eg, linezolid)	23S rRNA methyltransferase: Cfr; mutations in rRNA	SA
	Tetracyclines (eg, tetracycline)	Efflux, tet gene family, MexAB-OprM; ribosomal protection proteins (TetM)	PA, SP
	Macrolides (eg, erythromycin)	23S rRNA methyltransferase: erm family; efflux (mef); 23S rRNA mutation	SA, SP, HI
	Streptogramins (eg, pristinamycin IIa)	23S rRNA methyltransferases; Antibiotic modification	SA, SP
	Chloramphenicol	23S rRNA methyltransferase; efflux; acetyltransferase (cat)	SA, PA, KP
RNA synthesis	Ansamycins (eg, rifampin)	Mutations in RNA polymerase (rpoB gene)	MT, SA

AB; Acinetobacter baumannii; HI; Haemophilus influenzae; KP; Klebsiella pneumoniae; MC ;Moraxella catarrhalis; MT; Mycobacterium tuberculosis; PA; Pseudomonas aeruginosa; SA; Staphylococcus aureus; SP; Streptococcus pneumoniae, rRNA; ribosomal RNA;

In early 2017, the World Health Organization published a list of priority pathogens requiring research and development for antibiotic treatments (14). This list included carbapenem-resistant *A. baumannii,* carbapenem-resistant *P. aeruginosa*, carbapenem- and third-generation cephalosporin-resistant *Enterobacteriaceae* (including *K. pneumoniae*), *S. aureus* (methicillin-resistant and vancomycin-resistant), Penicillin-nonsusceptible *S. pneumoniae*, and Ampicillin-resistant *H. influenzae*. The respiratory pathogen *M. tuberculosis*, which is not on this list, was

previously considered a global health priority due to multidrug resistance and the need for new antibiotics.

Community-acquired pneumonia due to multidrug-resistant organisms

The most common resistant pathogens in patients with community-acquired pneumonia admitted to the intensive care unit are *MRSA* and *P. aeruginosa*, as well as other gram-negative bacilli.

Risk factors for community-acquired pneumonia caused by multidrug-resistant pathogens include antibiotic treatment in the last 6 months, hospitalization in the last 3 months, the presence of immunosuppression, and poor functional status defined as the inability to perform daily living activities.

Patients with one risk factor and severe community-acquired pneumonia should receive empiric broad-spectrum antibiotic therapy, while non-severe patients should have two or more risk factors before starting broad-spectrum therapy.

Factors affecting antimicrobial resistance rates in respiratory tract infections are previous antibiotic use, broad-spectrum antibiotic use, prolonged antibiotic use, underlying disease, and hand hygiene compliance (15).

In conclusion; the list of antibiotics that are resistant and susceptible against respiratory pathogens were presented in the table 4 (16).

Table 4. Antibiotics Resistant and Susceptible Against Respiratory Tract Infection Patogens (16).

Organisms	**Antibiotic Resistance**	**Antibiotic Susceptible**
Streptococcus pneumoniae	Macrolides, Gentamicin, Isoniazid, Colistin, Sulphonamides, Tetracycline, Cephalosporin	Penicillin, Fluoroquinolones, Ceftriaxone, Vancomycin, Levofloxacin, Meropenem, Linezolid
Haemophilus influenzae	Ampicillin, Erythromycin, Cefuroxime, Ciprofloxacin, Cefaclor	Cefotaxime, Clarithromycin, Azithromycin, Fluoroquinolones, Tetracycline,
Staphylococcus aureus	Amoxicillin, Oxacillin, Erythromycin, Chloramphenicol	Amikacin, Tetracycline, Cefoxitin, Levofloxacin, Imipenem, Vancomycin
Pseudomonas aeruginosa	Ciprofloxacin, Aztreonam, Aminoglycosides, Fluoroquinolones, Carbapenems, Tetracyclines	Doxycycline, Ceftazidime, Ceftriaxone, Colistin
Klebsiella pneumoniae	Ampicillin, Amoxicillin, Ceftazidime, Cefotaxime, Cefepime, Tetracycline,	Amikacin, Meropenem, Cefepime, Ertapenem, Levofloxacin, Ceftazidime, Ciprofloxacin, Cefuroxime
Streptococcus pyogenes	Streptomycin, Ceftriaxone, Vancomycin,	Penicillin, Cefotaxime, Chloramphenicol, Levofloxacin
Acinetobacter baumannii	Penicillin, Aminoglycosides, Fluoroquinolones, Carbapenems, Gentamicin, Polymyxins	Amikacin, Colistin, Tigecycline, Ciprofloxacin, Ceftazidime, Cefepime
Mycobacterium	Rifampicin, Isoniazid	Azithromycin, Amikacin, Ciprofloxacin, Clarithromycin, Ethambutol, Streptomycin, Isoniazid

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Metabolik Sendrom Yönetimi (TR)

Doç. Dr. Burkay Yakar, Fırat Üniversitesi, Tıp Fakültesi, Aile Hekimliği AD, Elazığ, Türkiye

Metabolik sendrom (MetS), aynı zamanda sendrom X, insülin direnci, polimetabolik sendrom vb. olarak da bilinir ve DSÖ tarafından abdominal obezite, insülin direnci, hipertansiyon ve hiperlipidemi ile karakterize patolojik bir durum olarak tanımlanır. Metabolik sendrom tanısı abdominal obeziteye, yükselmiş trigliserit düzeyi (>150 mg/dL), düşük HDL düzeyi (Erkeklerde 40 mg/dL'den az veya kadınlarda 50 mg/dL'den az), açlık kan şekerinin 100 mg/dL veya daha fazla yükselmesi ve kan basıncının sistolik 130 mm Hg veya daha yüksek veya diyastolik 85 mm Hg kriterlerinden en az ikisinin eşlik etmesi ile konur. Metabolik sendromu olan hastaların, genel popülasyona kıyasla aterosklerotik kardiyovasküler hastalık riskinin 2 kat, diabetes mellitus riskinin ise 5 kat arttığı tahmin edilmektedir. MetS'nin etkili tedavisi ve önlenmesi, dünya genelinde morbidite ve mortalitede önemli bir azalma sağlamak için çok sayıda risk faktörünün aynı anda ele alınmasını gerektirir. Bu nedenle, erken tanı ve koruyucu sağlık hizmeti sunabilmek için MetS'nin herhangi bir bileşenine sahip bireylerin belirlenmesi zorunludur. Sağlıklı beslenme alışkanlığı, fiziksel aktivite, sigarayı bırakma ve alkol tüketimini azaltma gibi yaşam tarzı değişiklikleri MetS yönetiminin temel taşlarıdır. Akdeniz ve DASH diyetleri gibi kanıta dayalı beslenme düzenleri, insülin direncini, inflamasyonu ve kardiyometabolik riski azaltmada güçlü faydalar göstermiştir. Yaşam tarzı değişikliklerine ek olarak farmakolojik ajanlar (GLP-1 analogları, statinler, antihipertansif ajanlar ve antidiyabetik ajanlar) bireysel olarak tedaviye eklenebilir. Farmakolojik ajanlara ek olarak uygun hasta grubunda Bariatrik cerrahi seçeneği de alternatif tedavi yöntemidir.

Lifestyle Medicine in the Management of Chronic Diseases: The Role of Family Medicine

Prof. Dr. Cahit ÖZER, Hatay Mustafa Kemal University, School of Medicine, Department of Family Medicine

Introduction; Non-communicable diseases (NCDs) occupy the top ten positions among the leading causes of death worldwide. Many modifiable risk factors for these diseases can be addressed through lifestyle changes. Unhealthy lifestyle behaviors have created a global epidemic of chronic conditions and are responsible for approximately 63% of deaths globally. In response, Lifestyle Medicine (LTM) has emerged as a clinical approach aimed at promoting healthy living within society. LTM seeks to help individuals and communities implement evidence-based lifestyle interventions—such as proper nutrition, regular physical activity, stress management, and social support—to prevent, treat, and even reverse the progression of chronic diseases. Its primary focus is improving health through sustainable behavioral change. Numerous medical studies have explored the management of NCDs and associated mortality, particularly in relation to cardiovascular health, and consistently recommend adopting low-risk lifestyle behaviors based on strong scientific evidence.

Barriers to Lifestyle Change; Patients often face multiple barriers when attempting to adopt and maintain healthy lifestyle behaviors. Many lack sufficient awareness of the effectiveness of lifestyle changes in managing chronic diseases. Limited health literacy may hinder their ability to understand and apply health information. Some patients may resist behavioral change due to low self-efficacy, fear of failure, or loss of motivation. Time constraints, competing responsibilities, and unsupportive cultural or social environments may further reduce adherence. Mental health conditions such as depression and anxiety can also impair motivation, energy, and self-management abilities. The first step in guiding patients toward lifestyle modification involves assessing their readiness for change and identifying key obstacles. Evaluating their stage of change and applying motivational interviewing principles are critical components of effective patient education. A patient-centered approach that emphasizes shared decision-making, individual assessment, ongoing support, and empowerment can help overcome these barriers and improve chronic disease management. Digital health technologies—such as web-based tools and mobile applications—can enhance patient engagement by providing personalized feedback and recommendations. Physicians also encounter obstacles in promoting lifestyle medicine. Heavy workloads may limit the time available for counseling, and many lack formal training in LTM. Patient non-adherence can reduce physicians' motivation, and they may themselves perceive lifestyle change as difficult. Limited collaboration with allied health professionals—such as psychologists, dietitians, pharmacists, and physiotherapists—further complicates implementation.

Incorporating LTM into medical education and encouraging interdisciplinary collaboration can help address these challenges. Providing physicians with training in effective communication and behavioral counseling techniques can facilitate their interactions with patients and improve the sustainability of lifestyle changes.

Modern Chronic Care Models; The Chronic Care Model (CCM) was developed in the 1990s by Ed Wagner and colleagues at the MacColl Institute to improve care quality and reduce costs associated with chronic disease management. The model emphasizes a productive interaction between an informed, motivated patient and a proactive, prepared healthcare team.

When patients are equipped with knowledge, skills, and confidence—and healthcare teams possess the necessary expertise, experience, and resources—together they can make effective decisions and achieve high-quality, cost-effective chronic care.

Patient Education; Patient education is a cornerstone of lifestyle medicine. Today, educational content can be delivered in standardized formats (such as articles and text messages) and through multimedia platforms including videos, podcasts, and interactive modules tailored to diverse learning preferences. Research demonstrates that patients who actively participate in their treatment and follow-up care incur lower healthcare costs. Effective education extends beyond information delivery; it involves two-way interaction and personalized guidance based on the individual's needs and goals. Telemedicine and digital health tools provide robust infrastructure for integrating patient follow-up and education, facilitating continuous engagement and support.

Lifestyle Medicine: Definition and Principles; Lifestyle Medicine is a branch of medicine that employs evidence-based lifestyle interventions to prevent, treat, and often reverse chronic diseases. This emerging discipline focuses on addressing the root causes of disease by modifying daily behaviors—nutrition, physical activity, stress management, and sleep—rather than relying solely on pharmacological treatments. Its therapeutic approach emphasizes balanced nutrition, regular exercise, adequate sleep, stress reduction, avoidance of harmful substances, and nurturing positive social connections. Alongside traditional medical treatments, motivational interviewing and health coaching techniques are used to encourage and sustain patient-driven lifestyle change.

The Role of Family Medicine in Lifestyle Medicine; Achieving the goals of LTM requires holistic care built on a strong, trusting patient–physician relationship. The process should align with the patient's values and priorities while integrating education and skill development. Family medicine provides an ideal platform for implementing lifestyle medicine principles. Continuity of care, comprehensive assessment, and first-contact accessibility make family physicians uniquely positioned to promote preventive health and manage chronic diseases. Multidisciplinary collaboration—among nurses, psychologists, physiotherapists, dietitians, and social workers—under the coordination of family physicians, enhances the success of lifestyle interventions. Applying behavioral change theories within primary care can significantly improve lifestyle habits, quality of life, treatment adherence, and health outcomes across the spectrum of chronic diseases. Effective implementation requires physicians to communicate empathetically, use motivational techniques, tailor interventions to individual needs, and connect patients with social and community resources.

Contemporary guidelines consistently recommend lifestyle modification as a first-line or complementary therapy in managing conditions ranging from cardiovascular and metabolic disorders (such as diabetes and obesity) to musculoskeletal problems and mental health issues like depression and anxiety. For widespread adoption of positive health behaviors, primary care services must be accessible, technologically equipped, and grounded in supportive patient–physician relationships.

Conclusion; Lifestyle Medicine offers a transformative, evidence-based framework for addressing the global burden of chronic diseases. Integrating its principles into family medicine practice—through patient education, behavioral counseling, multidisciplinary collaboration, and supportive healthcare infrastructure—can enhance prevention, treatment, and long-term management outcomes while promoting healthier communities.

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Healthy Nutrition

Assoc. Prof. Duygu İlke YILDIRIM, Selçuk University, Medical Faculty, Department of Family Medicine. Konya, Turkiye

Abstract; Healthy nutrition is a fundamental pillar that directly influences quality of life, metabolic health, and the risk of developing chronic diseases. Modern lifestyle patterns characterized by increased consumption of processed foods, irregular eating habits, and rapid dietary choices—have contributed significantly to the rising prevalence of obesity, diabetes, hypertension, cardiovascular diseases, and certain cancers. Current evidence highlights that nutritional behaviors should be evaluated not only in terms of energy intake but also through their impacts on inflammation, oxidative stress, hormonal balance, and gut microbiota diversity.

In this context, the Mediterranean diet has emerged as a highly protective nutritional model. Its emphasis on healthy fats such as olive oil, abundant fresh fruits and vegetables, high dietary fiber, whole grains, and omega-3–rich fish has been shown to reduce cardiometabolic risk factors. Similarly, plant-based dietary approaches and foods rich in antioxidants—such as polyphenols, flavonoids, and probiotics—play a crucial role in reducing inflammation and supporting immune function. Another concept that has gained prominence in recent years is personalized nutrition. Variations in genetic structure, epigenetic modifications, gut microbiota profiles, and individual metabolic responses have all been shown to significantly influence the effectiveness of dietary interventions. Therefore, rather than relying on a single universal nutrition model, approaches tailored to individuals based on scientific data provide more successful and sustainable outcomes.

This abstract provides a comprehensive overview of the physiological basis, contemporary scientific evidence, and clinical reflections of healthy nutrition. It aims to emphasize the essential role of nutrition-based strategies in preventive healthcare, as well as in the prevention and management of chronic diseases.

Keywords: Healthy nutrition, acid–base balance, alkaline diet, inflammation, metabolic health

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Digital Health Literacy and Artificial Intelligence–Supported Decision-Making in Family Medicine

Assoc. Prof. Duygu İlke YILDIRIM, Selçuk University, Medical Faculty, Department of Family Medicine. Konya, Turkiye

Abstract: The rapid digital transformation in healthcare has fundamentally reshaped the practice of **family medicine**, where personalized, continuous, and preventive care are essential. **Digital health literacy**—the ability of individuals and healthcare professionals to access, understand, and effectively use digital health information—has emerged as a key determinant of health outcomes and patient engagement. Integrating **artificial intelligence (AI)–supported decision-making systems** into family medicine provides an unprecedented opportunity to enhance diagnostic accuracy, optimize treatment choices, and support evidence-based preventive strategies.

AI-driven clinical decision support tools can assist physicians in identifying risk factors earlier, predicting disease progression, and recommending tailored interventions, particularly in chronic disease management. However, the success of these technologies depends largely on the digital literacy of both providers and patients, as well as the ethical and legal frameworks governing data privacy, transparency, and accountability.

In conclusion, empowering healthcare professionals and patients with strong **digital health literacy** and implementing **AI-assisted decision systems** can improve healthcare efficiency, safety, and patient satisfaction in family medicine. Future strategies should focus on education, digital inclusion, and the responsible integration of AI into primary care workflows.

Keywords: Family medicine, digital health literacy, artificial intelligence, clinical decision support, primary care

Approach to Sarcopenia in Primary Care

Spec. Dr. Elif NEGİŞ, İzmir Kiraz 1st Family Medicine Center

Sarcopenia is defined as the progressive and generalized loss of skeletal muscle mass, strength, and physical performance, typically associated with aging. It is now recognized as an independent clinical syndrome rather than a natural consequence of aging and is assigned a specific ICD-10 code (M62.84). The main risk groups include adults aged ≥65 years, those with sedentary lifestyles, individuals with chronic diseases such as diabetes, heart failure, or COPD, persons at risk of malnutrition, and patients with prolonged immobility. Closely linked to falls, fractures, hospitalizations, and mortality, sarcopenia is a modifiable and partly reversible condition when detected early. Globally, it has also become a significant economic burden, accounting for more than 20 billion USD in annual healthcare costs in the United States, a figure expected to rise by over 30% in the coming decade due to population aging.

The European Working Group on Sarcopenia in Older People (EWGSOP2) highlights muscle strength as the key diagnostic criterion and proposes a four-step approach: Find, Assess, Confirm, Severity. In primary care, screening and assessment are usually sufficient to initiate management. The SARC-F questionnaire and calf circumference (<34 cm in men, <33 cm in women) are simple field tools for early detection. Handgrip strength remains the preferred measure; values below 27 kg for men and 16 kg for women indicate probable sarcopenia. The five-times-sit-to-stand test is a practical alternative, with >15 seconds suggesting reduced strength. Despite recent advances, no single globally accepted diagnostic criterion exists. Definitions differ among regional groups such as EWGSOP and AWGS. To address this, the Global Leadership Initiative on Sarcopenia (GLIS) was established, bringing together over 15 international organizations to create a unified, worldwide definition. Currently, there is no approved pharmacological treatment for sarcopenia. The evidence-based "triple prescription" approach—resistance training, adequate protein intake, and lifestyle modification—remains the cornerstone of care. Resistance training should target major muscle groups at least twice per week with progressive intensity. Daily protein intake of 1.0–1.2 g/kg (up to 1.5 g/kg in frail individuals) is recommended, emphasizing leucine-rich foods such as eggs, dairy, and legumes. Creatine monohydrate (3–5 g/day) and HMB (β-hydroxy-β-methylbutyrate) may offer additional benefits when combined with exercise, while vitamin D should be replaced if deficient. Strong clinical evidence supports this integrated approach. The LIFE trial showed that structured physical activity reduced major mobility disability over 2.6 years, and the SPRINTT trial demonstrated that a multicomponent intervention combining moderate-intensity exercise and personalized nutrition reduced mobility disability (inability to walk 400 m independently within 15 min) by 22% among frail older adults.

In summary, sarcopenia is a preventable and reversible condition that should be routinely screened and managed in primary care. Incorporating lifestyle modification alongside medical management preserves functional capacity, independence, and quality of life. Starting with simple tools such as the SARC-F questionnaire and a tape measure, and advancing toward

personalized exercise and nutrition plans, allows clinicians to safeguard not only muscle strength but also autonomy and vitality in older adults.

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Approach to Superficial Fungal Infections in Primary Care

Spec. Dr. Emre ŞEN, Fatih Family Medicine Center, Uşak/Turkiye

Background; Superficial fungal infections (SFIs) are infections affecting the outermost layers of the skin, nails, and mucous membranes, mainly caused by dermatophytes, Candida species, and Malassezia species. They represent one of the most prevalent dermatological disorders worldwide, with higher incidence in developing countries due to warm and humid climates, hygiene practices, and socioeconomic conditions. SFIs are contagious, often chronic, and may cause cosmetic discomfort and psychosocial distress, thus posing a significant burden in primary care. Family physicians play a key role in early diagnosis, appropriate treatment selection, and prevention of recurrence. However, the wide clinical spectrum and the resemblance to other dermatoses often complicate diagnosis and management. This paper aims to provide an evidence-based, up-to-date overview of the epidemiology, etiology, clinical presentation, diagnostic approach, and treatment of SFIs from a primary care perspective.

Methods; This review was developed through an analysis and synthesis of current national and international clinical guidelines, World Health Organization (WHO) and American Academy of Dermatology (AAD) recommendations, and recent peer-reviewed literature. The presentation systematically addresses the classification, diagnostic methods, treatment steps, and follow-up strategies for SFIs in primary care. Clinical images, case-based discussions, and diagnostic algorithms were used to illustrate common infection types and differential diagnoses.

Results; The main causative organisms of SFIs include Trichophyton, Microsporum, and Epidermophyton species, while Candida albicans and Malassezia furfur are frequent causes in intertriginous and sebaceous regions. The most common clinical entities are tinea corporis (body ringworm), tinea cruris (jock itch), tinea pedis (athlete's foot), tinea unguium (onychomycosis), tinea capitis (scalp ringworm), and cutaneous candidiasis. Characteristic clinical findings depending on lesion localization and pathogen type provide valuable diagnostic clues. The cornerstone of diagnosis is the direct microscopic examination (KOH test), which allows visualization of hyphae or spores. Culture techniques can identify the organism at species level but are less frequently used in primary care. In most cases, the combination of clinical evaluation and KOH testing is sufficient for diagnosis.

Treatment is guided by the type, severity, and extent of the infection as well as the patient's immune status. Topical antifungal therapy (azoles such as ketoconazole, clotrimazole, econazole; and allylamines such as terbinafine, naftifine) is the first-line approach for localized infections. Systemic therapy (terbinafine, itraconazole, fluconazole) is indicated for extensive, resistant, nail, or scalp involvement. Treatment duration varies: typically 2–4 weeks for topical therapy and 4–12 weeks for systemic regimens. Preventive measures such as reducing moisture, wearing breathable cotton clothing, avoiding shared towels or footwear, and treating infected contacts are essential for minimizing recurrence. Patient education and adherence to therapy significantly influence treatment success. Enhancing primary care physicians' diagnostic and

therapeutic competence reduces misdiagnosis and unnecessary antibiotic use, contributing to overall healthcare efficiency.

Conclusion; SFIs are among the most frequent and manageable conditions in primary care. However, when inadequately treated, they may become chronic, widespread, or complicated by secondary bacterial infections. Family physicians play a central role in early recognition, rational antifungal use, patient counseling, and prevention of relapse. Adherence to updated clinical guidelines, continuing medical education, and heightened physician awareness are essential for improving patient outcomes, reducing healthcare costs, and preventing antifungal resistance. Strengthening knowledge and practice standards in primary care will ensure sustainable success in the management of superficial fungal infections.

Hangi Kanserleri Tarayalım? Kılavuzlar Ne Diyor? (TR)

Prof. Dr. Engin Burak SELÇUK, İnönü Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalı

Kanser, dünya çapında morbidite ve mortalitenin önde gelen nedenlerinden biridir ve erken teşhis, hastalığa bağlı ölüm oranlarını ve tedavi maliyetlerini azaltmada en etkili stratejiler arasında yer almaktadır. Uluslararası Kanser Araştırma Ajansı'nın (IARC) GLOBOCAN 2022 verileri, bu küresel yükün ciddiyetini ortaya koymaktadır: 2022 yılında dünya genelinde yaklaşık 20 milyon yeni kanser vakası (melanom dışı cilt kanserleri dahil) ve 9.7 milyon kanser kaynaklı ölüm gerçekleşmiştir. İnsidans ve mortalitede başı çeken kanser türleri Akciğer, Kadın Meme ve Kolorektal kanserlerdir. Bu kanser türleri, ulusal tarama programlarının neden bu üç alana odaklandığını epidemiyolojik olarak doğrulamaktadır. Kanser tarama kılavuzları, bir taramanın fayda ve zarar dengesini değerlendirmek için Kanıta Dayalı Tıp ilkelerini kullanır ve genellikle en yüksek kanıt düzeyini (Randomize Kontrollü Çalışmalar - RCT'ler ve Meta-analizler) temel alır. Ancak, önde gelen uluslararası kılavuzlar (USPSTF, ESMO, ACS, NCCN) arasında sıklık, başlangıç yaşı ve öneri düzeyinde farklılıklar gözlemlenmektedir. Bu farklılıklar, kanıtın metodolojik yorumundan ve popülasyon sağlığı hedeflerindeki öncelik farklarından kaynaklanmaktadır.

Kolorektal Kanser (KRK) Taraması; KRK taraması, kanser insidansını (polip rezeksiyonu sayesinde) ve mortaliteyi azaltma yeteneği nedeniyle kanser tarama alanında en güçlü kanıta sahip programlardan biridir. Kılavuzlar, tarama yöntemleri konusunda bir esneklik sunmaktadır: Yıllık Gaita İmmünokimyasal Test (FIT) veya 10 yılda bir yapılan Kolonoskopi. FIT, non-invaziv, maliyet-etkin ve birinci basamakta kabulü yüksek bir tarama aracıdır.

Kılavuz	Önerilen Yaş Aralığı	Sıklık ve Tercih Edilen Yöntemler
USPSTF	45-75 Yaş	Biennial FIT, 10 yılda bir Kolonoskopi (Grade A)
ACS	45-75 Yaş	USPSTF ile benzer, 45 yaş başlangıcı vurgusu
Türkiye SB (KETEM)	50-70 Yaş	2 yılda bir FİT, 10 yılda bir kolonoskopi

2021 yılında USPSTF ve ACS'nin tarama başlangıç yaşını 50'den 45'e çekmesi, önemli bir kılavuz değişikliğini işaret etmektedir. Bu karar, genç yetişkinlerde (40-50 yaş) artan erken başlangıçlı KRK insidansı eğiliminin doğrudan bir sonucudur.

Meme Kanseri Taraması; Mamografi, 50-69 yaş aralığında meme kanserine bağlı mortaliteyi %20 ila %30 oranında azalttığı kanıtlanmış bir yöntemdir. Ancak, tarama başlangıç yaşı ve sıklığı konusundaki kılavuz farklılıkları, klinisyenler için en karmaşık alanlardan biridir.

USPSTF, Nisan 2024'te yayımladığı güncel tavsiyesinde, 40 ila 74 yaş arasındaki kadınlar için **iki yılda bir (biennial)** tarama mamografisini (B Sınıfı) tavsiye ederek önceki "bireysel karar" (40-49 yaş için) önerisinden ayrılmıştır. ACS ise 45-54 yaş aralığında yıllık taramayı, 55 yaş

üstü için ise iki yılda bir taramayı önermektedir. Türkiye'deki ulusal program (KETEM) ise 40-69 yaş aralığında 2 yılda bir mamografi uygulamaktadır.

Servikal Kanser Taraması; Servikal kanser taraması, Human Papillomavirus (HPV) enfeksiyonuna bağlı prekürsör lezyonların uzun latent dönemi sayesinde, kanser öncesi aşamada yakalanma açısından oldukça başarılıdır. Kılavuzlar, son yıllarda önemli bir paradigma değişimi yaşamıştır: Sitoloji (Pap-smear) testinden, daha yüksek duyarlılığa sahip olan **Birincil HPV DNA Testine** geçiş. Tarama genellikle 25/30-65 yaş aralığında ve 5 yılda bir yapılmaktadır. HPV testi, yüksek riskli prekürsör lezyonları saptamada sitolojiye göre daha üstündür. Koruyucu hekimlik açısından HPV aşısının (özellikle 9-değerlikli aşı) yaygın olarak kullanılması, gelecekteki servikal kanser insidansını radikal bir şekilde azaltacaktır. Bu başarılı önleme stratejisi, gelecekte tarama programlarının sıklığının azaltılmasını veya başlangıç yaşının yükseltilmesini gündeme getirecektir.

Kanser Tarama Kılavuzlarının Karşılaştırmalı Özeti

Kanser Tipi	**Hedef Yaş (ABD Kılavuzları)**	**Yöntem/Sıklık**	**USPSTF Kanıt Düzeyi**	**Türkiye SB (KETEM) Protokolü**
Kolorektal	45-75 Yaş	FİT (1-2 yıl) / Kolonoskopi (10 yıl)	A/B	50-70 Yaş, 2 yılda bir FİT, 10 yılda bir kolonoskopi
Meme	40-74 Yaş	Mamografi (2 yılda bir)	B	40-69 Yaş, 2 yılda bir Mamografi
Serviks	25-65 Yaş	Birincil HPV Testi (5 yılda bir)	A/B	30-65 Yaş, 5 yılda bir HPV Testi
Akciğer	50-80 Yaş (20 paket/yıl öyküsü)	Yıllık LDCT	B	Rutin popülasyon taraması yok
Prostat	55-69 Yaş (SDM)	PSA Testi/Rektal Muayene	C	Rutin popülasyon taraması yok

Türkiye'deki Durum: Sağlık Bakanlığı Kanser Tarama Programları; Türkiye Cumhuriyeti Sağlık Bakanlığı, kanser erken teşhisini yaygınlaştırmak amacıyla Kanser Erken Teşhis Tarama ve Eğitim Merkezleri (KETEM), Aile Sağlığı Merkezleri (ASM) ve Toplum Sağlığı Merkezleri (TSM) aracılığıyla ücretsiz kanser tarama programlarını yürütmektedir. Bu programlar, küresel epidemiyolojik yüke paralel olarak Meme, Serviks ve Kolorektal kanser türlerine odaklanmıştır.

Türkiye'de halihazırda uygulanan programlar şunlardır:

1. **Meme Kanseri:** 40-69 yaş aralığındaki kadınlara 2 yılda bir mamografi taraması.
2. **Servikal Kanser:** 30-65 yaş aralığındaki kadınlara 5 yılda bir HPV DNA testi (uluslararası kılavuzlardaki modern yönteme uyum).
3. **Kolorektal Kanser:** 50-70 yaş aralığındaki bireylere 2 yılda bir Gaita İmmünokimyasal

Test (FİT), 10 yılda bir kolonoskopi

Rutin Taraması Önerilmeyen Kanserler: Nedenleri

Wilson & Jungner kriterlerinin karşılanmaması veya aşırı tanı risklerinin çok yüksek olması nedeniyle, bazı kanser türleri için popülasyon bazlı rutin tarama önerilmemektedir:

A. Over (Yumurtalık) Kanseri: Rutin popülasyon taraması (CA-125 ve Transvajinal Ultrasonografi) USPSTF tarafından kesinlikle önerilmemektedir (D Sınıfı). Over kanseri için kullanılan bu biyobelirteçler ve görüntüleme yöntemlerinin duyarlılıkları ve özgüllükleri, sağlıklı popülasyonda tarama yapıldığında yüksek oranda yanlış pozitif sonuç verir. Büyük randomize çalışmalar (örn. UKCTOCS), bu tarama yöntemlerinin over kanserine bağlı mortaliteyi azaltmadığını göstermiştir. Tespit edilen erken evre vakalarının azlığı ve yüksek yanlış pozitiflerin yol açtığı gereksiz cerrahi riskleri, bu taramanın popülasyon için net zarar getirdiğini ortaya koymaktadır. İstisna olarak, BRCA mutasyonu gibi genetik yatkınlığı olan yüksek riskli gruplar kişiselleştirilmiş protokollerle izlenmelidir.

B. Tiroid Kanseri: Tiroid kanseri için rutin tarama önerilmez. Boyun ultrasonografisiyle yaygın tarama, indolent seyirli ve hastanın ömrünü etkilemeyecek olan papiller mikrokanserlerin aşırı tanısına yol açmaktadır. Bu durum, gereksiz biyopsi ve cerrahi müdahalelere neden olarak popülasyonun net faydasını negatife çevirmektedir.

C. Pankreas Kanseri: Pankreas kanseri düşük prevalansa sahip olduğu ve erken evrede kısa bir latent döneme sahip olduğu için, genel popülasyonda tarama maliyet etkin değildir ve önerilmez. Sadece güçlü aile öyküsü veya genetik sendromlar (BRCA, Peutz-Jeghers sendromu) gibi çok yüksek riskli bireyler için Endoskopik Ultrasonografi (EUS) veya MRI ile tarama protokolleri mevcuttur.

D. Karaciğer Kanseri (HCC): Karaciğer kanseri taraması genel popülasyonda önerilmez; ancak, siroz tanısı olan (Hepatit B, C, alkol, NASH/NAFLD kaynaklı) tüm hastalar kesinlikle risk grubu olarak kabul edilir ve 6 ayda bir ultrasonografi ve Alfa-fetoprotein (AFP) testi ile taranmalıdır.

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Pain Management in Palliative Care

Spec. Dr. Fatma Sümeyra Yalçın

Definition: The International Association for the Study of Pain (IASP) defines pain as an unpleasant sensory and emotional experience resulting from actual or potential tissue damage.

Signs and Symptoms: Autonomic responses such as sweating, increased pulse and blood pressure, pupil dilation, respiratory changes, nausea and vomiting may be observed.

Causes:

• **Physical:** Nociceptive (somatic, visceral, bone-related) and neuropathic (nerve damage) pain.

• **Psychosocial:** Anxiety, anger, fear, sadness, helplessness, social and family distress.

Assessment: The location, type, duration, intensity, and influencing factors of the pain are determined.

VAS (Visual Pain Scale): 0–3 indicates mild pain, 4–6 indicates moderate pain, and 7 and above indicates severe pain.

Treatment Approach (WHO Analgesic Ladder):
Step 1: Non-opioid + adjuvant drugs
Step 2: Weak opioid + non-opioid ± adjuvant
Step 3: Strong opioid + non-opioid ± adjuvant

Medications should be administered regularly; oral administration is preferred; a laxative should always be added to patients taking opioids.

Invasive Methods: Peripheral nerve blocks, epidural/spinal blocks, celiac and hypogastric plexus blocks, radiofrequency applications, port and pump systems.

Non-Pharmacological Methods: Supportive methods such as TENS, physiotherapy, acupuncture, relaxation therapies.

Side Effects and Management:
• Constipation: Unavoidable, preventive laxatives required.
• Nausea: Managed by dose titration or antiemetics.
• Sedation and hallucinations: Indicates overdose.
• Respiratory depression: Rare, preventable with careful dosage adjustment.

Conclusion: Effective pain management in palliative care improves patients' quality of life and promotes a peaceful, safe death. Establishing trained pain teams contributes to addressing treatment challenges in our country.

"Pain relief is a divine art." – Hippocrates

Approach to the Difficult Patient In Primary Care

Spec. Dr. Fazilet KARAPINAR YORGANCIOĞLU

Abstract

This presentation aims to define the concept of the "difficult patient," frequently encountered by primary care physicians, to explore the underlying communicational and psychosocial dynamics of challenging doctor–patient interactions, and to share effective communication strategies tailored for primary care settings.

Based on recent literature, communication models, and motivational interviewing techniques, a practical framework was developed for use in primary care. A representative clinical case was analyzed to illustrate typical patterns of interaction, and specific recommendations were proposed for patient groups with communication difficulties.

Although the "difficult patient" label is often attributed solely to individual personality traits, emotional, cognitive, and systemic factors within the doctor–patient interaction play a crucial role. Patients with psychiatric disorders, low health literacy, substance dependence, or language and cultural barriers frequently pose communication challenges. Core strategies include empathy, active listening, a nonjudgmental approach, and respect for patient autonomy. Motivational interviewing was found to enhance internal motivation and treatment adherence among resistant patients.

In primary care, the "difficult patient" concept is less about the patient and more about managing the relationship effectively. Recognizing one's emotional responses and applying empathic, structured communication skills can transform these interactions. Difficult patients are not obstacles but opportunities that strengthen the physician's humanistic side and professional resilience.

Keywords: Difficult patient, communication skills, primary care, psychosocial approach, motivational interviewing

The Role of the Physician in Smoking Cessation: The 5A Model

Spec. Dr. Goksu Tehci Delatioglu, Izmir Kâtip Çelebi University, Faculty of Medicine, Department of Family Medicine

Introduction: Tobacco addiction is a chronic disease with both physiological and psychological components caused by the effects of nicotine. Long-term tobacco use is a major cause of morbidity and mortality, leading particularly to cardiovascular diseases, cancers, and respiratory system disorders.

The 5A Model in Smoking Cessation

1. ASK

Regardless of the reason for the patient's visit, the physician should **always inquire about tobacco use** and document it in the medical record.

Information about tobacco use should be recorded alongside vital signs such as blood pressure, pulse, temperature, and respiratory rate.

The following should be asked:

- Age of first trial and regular use
- Type(s) of tobacco product used
- Duration and quantity of use
- Previous quit attempts and experiences
- Withdrawal symptoms

2. ADVISE

Every tobacco user should be **strongly advised to quit.** This advice should be clear, firm, personalized, and supportive.

Example message to the patient:

"I believe it's very important for your health that you quit tobacco use. Cutting down is not enough — even occasional smoking harms your health. The best thing you can do for yourself is to stop using tobacco completely. I am here to help you through this process."

The physician should also discuss:

- The patient's current health condition
- The financial burden of tobacco use
- The harm to family and children
- The health improvements expected after quitting

3. ASSESS

The physician should **assess the patient's willingness to quit** and their level of motivation.

- Determine the **level of nicotine dependence** (e.g., **Fagerström Test**).
- Perform **carbon monoxide (CO) measurement** if possible.
- Review any **previous quit attempts**, difficulties faced, and the longest period of abstinence.

Patients in certain groups may have **lower success rates** and therefore need closer follow-up:

- Highly nicotine-dependent individuals

- People with low socioeconomic or educational levels
- Those with smokers in their immediate environment

4. ASSIST

A **quit plan** should be made with the patient, ideally within **two weeks** after the consultation, and shared with family or close contacts to strengthen support.

- Educate the patient about **possible withdrawal symptoms** and **coping strategies** (e.g., deep breathing, drinking water, physical activity).
- Encourage the patient to **avoid smoking cues** in their environment.
- Help them find **new, healthy activities** suited to their physical, social, and emotional state.

5. ARRANGE

The **follow-up process** should be carefully planned and structured:

- **First follow-up:** within **one week** after the quit date (in-person or by phone)
- **Subsequent follow-ups:** typically at **2 weeks, 1 month, 3 months, 6 months, and 1 year**

At each follow-up:

- **Congratulate** the patient for progress and adherence
- **Discuss challenges** and find practical solutions together
- **Review pharmacotherapy** (e.g., nicotine replacement therapy, varenicline, bupropion) and adjust if necessary

The patient should be reminded that **returning to smoking is never the solution** and that **every problem has a better answer than relapse.**

Teknoloji Bağımlılığı ve Yeni Hastalıkları - Technology Addiction and New Diseases (TR)

Spec. Dr. Halil Volkan TEKAYAK, Çukurova Kurttepe Family Medicine Center, Adana/Turkiye

Postmodern, enformasyon, teknoloji ya da dijital çağ gibi birçok tanımlama ile betimlenen bu dönem, internet ve teknoloji bağımlılığı olarak nitelendirilen çok sayıda hastalığın da ortaya çıkmasına neden oldu. Günümüzde sosyal medyanın daha aktif olarak kullanılmaya başlanmasıyla, yeni tanımlanan veya daha önceleri internet kullanımıyla tanımlanmış ancak artık daha sık karşılaştığımız bazı hastalıklar bulunmaktadır. Çağımız insanlarının yanlarından ayıramadıkları akıllı cep telefonları ve tablet cihazlar ile dizüstü veya masaüstü bilgisayarların etyolojide ana unsur olduğu hastalıklar sıklıkla görülmeye başlamıştır. Bunlara sosyal medya hastalıkları, internet hastalıkları veya dijital çağın modern hastalıkları adı verilmektedir.

Bugüne kadar internet hastalıkları veya dijital çağın modern hastalıkları olarak tanımlanabilmiş 20 civarında hastalık mevcuttur. Bu hastalıkların isimleri; Fomo Hastalığı, Nomofobi, Jomo Hastalığı, Fobo Hastalığı, Whatsappitis, Selfitis, Hikikomori Fenomeni, Ego Sörfü, Blog İfşacılığı, Youtube Narsizmi, Google Stalking,, Siberhondrik, Photolurking, Wikipedializm, Cheesepodding, Enfornografi, Crackberry, Myspace Taklitçiliği, Nintendinitis, ve Prematür Instagramülasyon olarak sayılabilir.

Sürekli yeni bireylere erişen dijital ortamların ilerleyen yıllarda tüm dünya nüfusunu etkisi altına alacağı öngörülürse polikliniklerimizde dijital çağın modern hastalıkları nedeniyle başvuru sayılarında artışlar gözlenecektir. Başta hekimler olmak üzere tüm sağlık çalışanlarının yukarıda isimleri sayılan ve dijital çağın modern hastalıklarıyla ilgili bilgi sahibi olması, tanımlanmış tanı kriterleri ve tedavi protokolleriyle ilgili donanımlarını arttırmaları, konuyla ilgili farkındalık sahibi olmaları kaçınılmazdır.

Brain, Attachment Disorder and Notifications

Spec. Dr. Çiğdem AKAYDIN, Denizli Şht Jand. Uzm. Çvş. Burhan Acar Family Medicine Center

Objective: Human brains evolved over millions of years to form social bonds through face-to-face interaction. In recent decades, this capacity has shifted into the digital realm. This study aims to explore how the neurobiological mechanisms of bonding (oxytocin, serotonin, and dopamine balance) have been transformed by digital interaction, leading to addictive behavioral patterns.

Methods: Data from evolutionary neuroscience, social psychology, and fMRI research were integrated. Key references include Takeuchi et al. (2015) and Montag & Reuter (2020) on digital addiction and brain plasticity.

Results: In face-to-face interaction, eye contact, tone of voice, and touch increase oxytocin and serotonin levels, enhancing trust, belonging, and emotional regulation. In digital interaction, these long-cycle hormonal mechanisms are replaced by short-loop dopamine bursts. Each scroll activates the VTA and nucleus accumbens within 100–200 ms, with dopamine release lasting 0.5–1 s. Unexpected rewards such as likes or notifications increase dopamine levels by 2–3 times, reinforcing the expectation–reward loop. This "anticipation → trigger → reward → repetition" cycle mirrors behavioral addiction models. fMRI studies reveal reduced prefrontal cortex activation (weakened impulse control) and heightened anterior cingulate activity (increased anxiety). Over time, dopamine receptor desensitization, attention fragmentation, and emotional dissatisfaction emerge.

Conclusion: Social media platforms have transformed the brain's evolved mechanisms for human bonding into short-term reward loops. This shift diminishes the quality of social connection and fosters emotional dysregulation. Rebuilding healthy connection in the digital era requires restoring oxytocin-based, real-world social interaction while maintaining dopamine balance.

Approach to Quitting Smoking

Prof. Dr. Kamile MARAKOĞLU, Selcuk University, Faculty of Medicine, Department of Family Medicine

Abstract: Tobacco use and smoking is one of the most important and preventable public health problems for all countries of the world. Tobacco products are defined as substances produced from tobacco and manufactured for use by smoking, "sucking, chewing or snuffing and made wholly or partly from tobacco leaf as raw material". Cigarettes, hookahs, pipes, cigars, bidi, snuff, kreteks, rolled tobacco, chewing tobacco are the main tobacco products. Among these products, cigarettes are the most widely used. Every year, 8 million people in the world die due to diseases related to tobacco product use. While more than 6 million of these deaths are the direct result of tobacco use, more than 1 million people die not because they use tobacco products but because they are exposed to tobacco smoke. In our country, approximately 100,000 people die every year due to tobacco-related diseases (Presidency of the Republic of Turkey, 2018). Our country is among the countries where smoking and tobacco use is quite high. 2/3 of the world's smokers and tobacco users are in 10 countries, including Turkey. In terms of the number of smokers, our country ranks 8th. The frequency of smoking in Turkey was found to be 24.6% according to the 2012 Global Adult Tobacco Survey (GATS), 28% in the 2016 GATS, and 37.6% in the February 2022 survey of the Economic Policy Research Foundation of Turkey (EPRFT). The reason for the high frequency of tobacco products and cigarette smoking in Turkey is the high amount and variety of tobacco cultivation, the high level of addiction among smokers, the popularity among the young population, and the increase in hookah consumption among the society day by day. With the entry into force of the Law No. 4207 on the Prevention of Harms of Tobacco Products in 2008, there has been a 13% decrease in the frequency of cigarette use in our country and our country has set the target of a smoke-free and smoke-free country. In 2013, Turkey was the first state to implement the tobacco control programme recommended in the report announced by the WHO (World Health Organization), and was among the top 4 most successful states in the world in terms of criteria.

Smoking during adulthood can lead to many cancers, primarily lung cancer, but also cancer of the lips, tongue, larynx, esophagus, stomach, and kidneys, as well as leukemia, cardiovascular disease, COPD and asthma, premature aging, and early death. Other known harms include premature aging of the skin, stomach ulcers and gastroesophageal reflux, cataracts, weakened senses of taste and smell, decreased bone density, tooth loss, difficulty healing, diabetes, back and neck pain, and a weakened immune system. Smoking increases the risk of lung cancer by 22 times and the risk of oral cancer by 30 times. Smoking during adolescence increases infertility in both men and women. During pregnancy, it triggers miscarriages, unwanted pregnancy losses (stillbirths), hypertension and pregnancy toxemia, folate, B1, B6, and B12 vitamin deficiencies, cleft palate and lip formation, and lung development problems. There is a link between smoking during pregnancy and low birth weight babies. Smoking during pregnancy causes 20-30% of low birth weight babies. It has been shown that compounds in cigarettes such as carbon monoxide, nicotine, toluene, cyanide, and cadmium dramatically

cause fetal growth defects. During infancy and childhood, maternal smoking and passive exposure cause cognitive-behavioral problems, hyperactivity, and unexplained mental retardation in children. It leads to sudden infant death, frequent middle ear and upper respiratory tract infections, asthma and pneumonia, burns, and burn-related deaths.

Among medical treatments, the first-line treatments include: Nicotine Replacement Therapy (NRT) (nicotine gum, nicotine patches, nasal sprays, sublingual tablets), Varenicline, Bupropion, and Cytisine. These treatments are tailored to the individual and must be used strictly under the guidance and supervision of a physician. During the smoking cessation process, individuals are followed up and treated for at least two years through telephone calls on the 3rd day, 15th day, 1st month, 3rd month, 6th month, 1st year, and 2nd year, and face-to-face meetings when necessary

In conclusion, physicians, who play an important role in protecting public health, should ask their patients about their smoking status at every appointment and advise smokers to quit. The first step in smoking cessation treatment is to motivate, inform, and support the patient to quit smoking. Ultimately, keeping in mind the principle that there is no disease, only patients, the most effective and safest medication for each individual should be recommended, taking into account the patient's previous smoking cessation experiences, medications, and methods used. Providing appropriate medical treatment accompanied by behavioral therapy to patients quitting smoking and following up with them for two years via telephone and clinic visits increases success rates.

Keywords: Smoking, Approach to quitting.

Tips for Home Health Care Management

Spec. Dr. Mehmet Arslan, Çiğli Training and Research Hospital, Home Health Care Unit

Aging; According to the WHO: Between 2015 and 2050, the proportion of people aged 60 and over in the total population is expected to nearly double, increasing from 12% to 22%. By 2050, 80% of older adults will be living in low- and middle-income countries.

According to TÜİK: The proportion of older adults in the total population increased from 9.1% in 2019 to 10.6% in 2024. This rate is projected to reach 13.5% in 2030, 17.9% in 2040, 27% in 2060, 33.4% in 2080, and 33.6% in 2100. Only 9.6% of these households have been able to access professional health and care services.

What is Home Health Care?

Definition: Home health care is the provision of medical evaluation, treatment, care, rehabilitation, and psychosocial support services in the individual's living environment, without the need for hospitalization, delivered by multidisciplinary teams.

Purpose: To improve quality of life, reduce hospitalizations, and ensure cost-effectiveness.

Covered conditions: Bedridden patients, individuals with chronic diseases, end-of-life care patients, those in need of palliative care, elderly individuals, and patients requiring follow-up after hospital discharge, etc.

Benefits of Home Healthcare

The option for individuals to remain in the comfort of their own homes. Patients are not required to adapt to hospital routines (they can eat their own meals, watch TV whenever they want, and sleep in their own beds). Reduced risk of adverse (undesirable) events associated with hospital admissions. Family members and friends can visit without being restricted by hospital schedules. Providing healthcare services to suitable patients at home can help reduce hospital bed occupancy, thereby increasing availability for patients who truly require inpatient care.

Service Components

Medical Evaluation: Examination, prescription, and treatment plan by a physician. Nursing Service: Dressing, medication administration, monitoring of vital signs. Rehabilitation: Exercise and mobilization under the supervision of a physiotherapist. Psychosocial Support: Family and patient support provided by a social worker. Coordination: Visit planning, data entry, and compliance with quality standards.

Legal framework of home health care in Türkiye

The development of home healthcare services in Türkiye has been shaped by a series of key regulatory milestones over the past two decades. In 2005, the first official regulation titled

Regulation on Providing Home Care Services was introduced, laying the foundation for structured home care delivery. In 2010, the Ministry of Health issued the Instructions on Procedures and Principles for Home Health Services, which clarified operational standards. That same year, public institutions and organizations began offering home healthcare services. In 2015, a new regulation was enacted: Regulation on the Provision of Home Health Services by the Ministry of Health and its Affiliate Institutions. This expanded and formalized service delivery under the Ministry's umbrella. In 2017, the responsibility for providing home healthcare services was transferred to hospitals, marking a shift in service coordination and infrastructure. Most recently, in 2023, the Regulation on Providing Home Health Services was updated, redefining the scope and implementation principles of home healthcare across the country.

In the context of home healthcare in Türkiye, professionals are expected to operate within a well-defined legal and ethical framework. The key principles guiding this framework include: respect for patient rights, compliance with roles and authority, documentation obligations, data privacy and kvkk compliance, safe work environment and ethical principles, oversight and legal responsibility.

Scope of Home Health Care Services in the Regulation

Providing examination, diagnostic tests, analyses, treatment, medical care, and rehabilitation services to the patient at home within the framework of the established diagnosis and planned treatment. Prescribing medications whose long-term use is documented by a medical report, without prejudice to specific regulations regarding prescription of medicines. Assisting in the preparation of reports related to the use of medical devices and supplies. Informing the patient and their family about the disease and care processes, as well as the roles they can undertake in home care. Providing training and consultancy services to the patient regarding the medical devices and equipment to be used at home. Transporting the patient to the relevant healthcare institution and/or from the institution back home when deemed necessary.

Situation and Statistics in Türkiye

7.8% of households have at least one member in need of home care services. Only 9.6% of those in need have been able to receive such services. The number of people benefiting from home care assistance increased from 28,583 in 2007 to 569,627 as of April 2023. Infection risk: The incidence of infections among patients receiving home health care is around 15%. Among those receiving home healthcare services, the most common disease groups are neurological (e.g., stroke, dementia), psychiatric and cardiovascular diseases; the prevalence of chronic illnesses increases the demand for such services. (Table 1, Figure 1)

Team Management

Case load and route optimization: proper planning of staff daily routes. Intra-team communication and task distribution: clarification of roles and responsibilities. Regular case meetings. Training and continuous professional development. Prevention of burnout syndrome.

Short meetings held every morning to review patient priorities and route updates. This practice enhances team coordination and clarifies the day's plan. Enable real-time scheduling between mobile teams and coordinators, allowing visits, tasks, and resources to be organized more efficiently. Clear task definitions are made according to professional competencies and patient needs, allowing team members to work effectively within their areas of expertise. GPS-based monitoring ensures both safety and logistical efficiency by allowing real-time tracking of team locations. Structured feedback is collected from patients after each visit to continuously improve service quality. Joint decision-making processes are conducted among nursing, physiotherapy, and social work teams, ensuring holistic and coordinated care.

Table 1. Türkiye Home Healthcare Statistics – Comparative Overview (2023-2025)

Patients Served	1,472,285	1,665,671	~1,800,000	+13.1% (2023→2024)	76% of patients are aged 65 and above
Mobile Healthcare Teams	3,200	—	~3,840	+20% (2023→2025)	Nationwide deployment across all 81 provinces
Digital Record Rate (e-Nabız)	68%	—	>90%	+32% (2023→2025)	Significant progress in digitalization
Patient Satisfaction Rate	91%	—	>97%	+7% (2023→2025)	Reflects improved patient experience
QMS Compliance (SKS)	88%	—	>96%	+7% (2023→2025)	Stronger adherence to Ministry standards
Visit Frequency	1.6 visits/ month	—	>2.0 visits/ month	+25% (2023→2025)	Enhanced continuity of care
Initial Response Time	<72 hours	—	<48 hours	—	Faster onboarding for new patients

Quality and Safety Monitoring

Visit Completion Rate: Indicates the percentage of home visits that were missed or only partially completed. This metric is used to assess service continuity and adherence to scheduling. Average Response Time: Refers to the average time taken to respond to patient calls and alerts. It measures the speed of emergency response and the accessibility of teams. Patient Safety Index: A metric that includes the total number of safety incidents and near-miss events. It is important for monitoring risks and developing preventive strategies. Error Reduction Trend: A monthly analysis of incident types and root causes. It guides continuous improvement efforts and interventions targeting underlying issues.

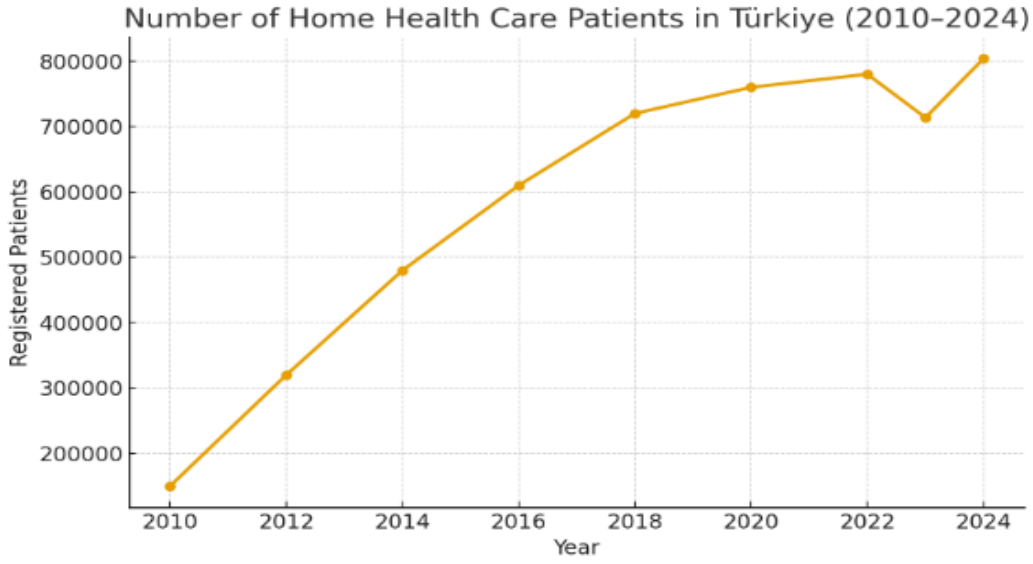

Figure 1: Number of the Health Care Patients in Türkiye (2010-2024)

Use of Technology

Technology use includes the following: Telehealth and remote monitoring systems (vital signs, video consultations), Electronic Patient Tracking Systems, electronic documentation and reporting, care plan monitoring through mobile applications, data security protocols.

Challenges and Proposed Solutions

The challenges encountered and proposed solutions are as follows: Insufficient staff and resources, transportation and logistics costs, geographic access and transportation issues, infection risk, lack of patient–family support, education gaps, and communication problems, difficulties in data management, solution: training, protocols, and support networks.

Conclusion and Recommendations

Maintaining a patient-centered approach is essential to ensure that care is tailored to individual needs and preferences. Balanced use of technology and human resources helps

achieve efficiency without compromising the human touch in care delivery. Continuous training and monitoring ensure that healthcare teams remain competent and up to date with best practices. Ongoing evaluation and improvement of service quality promote better outcomes and higher patient satisfaction. Raising awareness within the community fosters understanding, participation, and support for home healthcare services.

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Birinci Basamakta Depresyon ve İntihar Vakalarına Halk Sağlığı Yaklaşımı (TR)

Prof. Dr. Melih Kaan SÖZMEN, İzmir Katip Çelebi Üniversitesi Tıp Fakültesi Halk Sağlığı AD.

İntihar, dünya genelinde her yıl 700 binden fazla insanın yaşamını kaybetmesine neden olan ve özellikle 15–29 yaş grubunda önde gelen ölüm nedenlerinden biri olarak kabul edilen önemli bir halk sağlığı sorunudur; bu ölümler her 40 saniyede bir kişinin intihar ederek hayatını kaybetmesi anlamına gelmektedir. Dünya Sağlık Örgütü verileri, intiharların %77'sinin düşük ve orta gelirli ülkelerde gerçekleştiğini göstermektedir (1). Türkiye İstatistik Kurumu (TÜİK) verilerine göre ülkemizde yıllık intihar hızı 100.000'de 2-3 düzeyinde bildirilmektedir; ancak kayıt sistemlerindeki yetersizlikler ve damgalanma korkusu nedeniyle bu rakamların gerçeği tam olarak yansıtmadığı düşünülmektedir (2). Özellikle erkeklerde intihar oranı kadınlara göre 3 kat daha yüksektir; kadınlarda en yüksek intihar oranları 45–54 yaş grubunda görülürken, erkeklerde bu oran 65 yaş ve sonrasında en yüksek seviyeye çıkmaktadır. İntihar eden kişilerin %50'sinden fazlasının ölümden önceki 12 ay içinde, yaklaşık %20'sinin ise son bir ayda birinci basamak sağlık kuruluşuna başvurduğu bilinmektedir; bu nedenle aile hekimleri ve birinci basamak sağlık çalışanları, intihar riskinin erken tanınması ve önlenmesi için eşsiz bir fırsata sahiptir. Aile hekimlerinin bu süreçteki en önemli sorumlulukları, depresyon ve diğer ruhsal bozuklukların erken tanı ve tedavisini sağlamak, risk gruplarını belirlemek ve gerekli yönlendirmeleri zamanında yapmaktır. Depresyon intihar için en güçlü öngörücü faktörlerden biridir ve intihar eden bireylerin yaklaşık %60–70'inde depresyon öyküsü bulunmaktadır. Tarama ve risk değerlendirmesinde Beck İntihar İdeasyonu Ölçeği (BSSI), Columbia Suicide Severity Rating Scale (C-SSRS), PHQ-9, Geriatrik Depresyon Ölçeği (GDS) ve Edinburgh Postnatal Depresyon Ölçeği (EPDS) gibi geçerliliği kanıtlanmış araçlar kullanılabilir; Türkiye'de bu ölçeklerin büyük kısmının geçerlilik ve güvenilirlik çalışmaları yapılmıştır ve birinci basamakta rutin kullanıma uygundur. Aile hekimleri, bu tarama araçlarını riskli gruplar (ergenler, perinatal dönem kadınlar, yaşlılar, işsizler, kronik hastalığı olanlar, madde ve alkol kullananlar, aile içi şiddete maruz kalanlar) üzerinde uygulayarak erken dönemde risk belirleyebilir. Literatürde aile hekimlerinin intihar riskini azaltmada oynadığı rolü kanıtlayan birçok çalışma bulunmaktadır: ABD'de yürütülen PROSPECT çalışması (3), yaşlı depresif hastalarda özel bakım ve takip programının intihar düşüncelerini azalttığını; Macaristan'da aile hekimlerinin depresyon eğitimi ve destek programına katılmasıyla intihar oranlarında belirgin düşüş sağlandığını (4); İsveç'in Gotland adasında ise benzer eğitimlerin kısa dönemde depresyon tanı oranlarını artırıp intihar oranlarını azalttığını göstermiştir (5). Bununla birlikte, bu programların kalıcı olabilmesi için düzenli aralıklarla tekrarlanması gerektiği vurgulanmıştır. İntihar girişiminde bulunanların yaklaşık %16'sının bir yıl içinde yeniden girişimde bulunduğu, bu oranın 4 yıl sonunda %23'e kadar yükseldiği bildirilmektedir. Bu nedenle aile hekimlerinin girişimcileri uzun vadeli izlem altına alması, düzenli kontrollerle ve kısa temas girişimleri (telefon aramaları, mesajlar, kartlar, ev ziyaretleri) ile takip etmesi büyük önem taşır. Araştırmalar, kısa temas girişimlerinin tekrar intihar girişimlerini anlamlı düzeyde azalttığını ortaya koymuştur (6). Ayrıca aile hekimleri, sadece bireysel klinik uygulamalarda

değil, aynı zamanda toplumsal düzeyde de sorumluluk taşır; örneğin alkol ve madde kullanımının azaltılmasına yönelik danışmanlık, aile içi şiddet tespitinde yönlendirme, işsizlik ve sosyal sorunları olan bireylerin sosyal destek mekanizmalarına bağlanması ve toplumda ruh sağlığı okuryazarlığını artıracak bilgilendirme çalışmaları yapabilirler. Öte yandan intiharın bilişsel erişilebilirliği yani kişinin çevresinde intihar yöntemlerini öğrenmesi de risk faktörüdür; bu nedenle aile hekimleri, özellikle basında veya sosyal medyada çıkan haberlerin hastalar üzerindeki olumsuz etkilerine karşı dikkatli olmalı, medya kaynaklı tetiklenmeleri fark ederek bireylere güvenli danışmanlık yapmalıdır. Birinci basamakta ruh sağlığı hizmetlerinin en büyük zorluklarından biri, zaman kısıtlılığı, damgalanma ve kaynak yetersizliğidir; buna rağmen hekimlerin doğru sorularla açık ve yargılamayan bir iletişim kurması, kapalı uçlu olumsuz sorulardan ("Siz intihar etmeyi düşünmüyorsunuz, değil mi?" gibi) kaçınması ve kanıta dayalı ölçekler üzerinden yönlendirmeler yapması çok önemlidir. Sonuç olarak, intiharın önlenmesinde birinci basamak sağlık hizmetleri ve aile hekimleri, erken tanı ve risk değerlendirmesi, depresyon ve ruhsal bozuklukların etkin tedavisi, intihar girişimcilerinin izlenmesi ve toplum temelli önleme programları ile merkezi bir role sahiptir (7). Bu süreçte birinci basamak sağlık çalışanlarının eğitimi, düzenli risk taramaları, güçlü sevk zincirleri ve toplumsal farkındalık programlarıyla desteklenmesi, intihar oranlarının azaltılmasına ciddi katkılar sağlayacaktır.

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Anaerobic Exercise And Diabetes

Spec. Dr. Melike AKÇAKAYA, İzmir City Hospital, Family Medicine Clinic

Exercise is a key component of diabetes management that improves glycemic control, enhances insulin sensitivity, and supports cardiometabolic health. Aerobic exercises strengthen cardiovascular function, lower blood pressure, raise HDL cholesterol, boost metabolism, and improve mood.

Aerobic exercise consists of sustained activities in which sufficient oxygen reaches the muscles, enabling the use of both fat and glucose for energy. In contrast, high-intensity, short-duration anaerobic exercise occurs under oxygen-limited conditions, relying mainly on glycogen stored in muscles. Lactic acid accumulation causes earlier fatigue. While aerobic activity enhances endurance, anaerobic training increases muscle mass and strength. Most physical activities include both components, yet resistance training and high-intensity interval training (HIIT) are classified as anaerobic forms.

Adults with diabetes should engage in at least 150 minutes of moderate-intensity aerobic exercise per week, spread over at least three days, with no more than two consecutive days without activity. Sessions of 10 minutes or longer are recommended, while vigorous activities such as running may yield similar benefits with 75 minutes weekly. Additionally, resistance training two to three times per week on nonconsecutive days is advised. These exercises enhance strength, balance, and daily functioning, while increasing muscle mass, reducing sarcopenia risk, and maintaining functional capacity—especially in older adults. Beginning combined sessions with resistance training may also lessen the risk of exercise-induced hypoglycemia, particularly in type 1 diabetes.

HIIT involves short bursts of high-intensity activity lasting 10 seconds to 4 minutes, performed at 65–90% of maximal aerobic capacity or 75–95% of maximum heart rate, alternating with active or passive recovery lasting 12 seconds to 5 minutes. For instance, three to five minutes of moderate walking or jogging followed by 30–60 seconds of maximal effort, repeated two or three times, represents a typical session. Rather than maintaining a steady pace, intensity is alternated to progressively improve fitness. This time-efficient model elicits significant physiological and metabolic adaptations. In type 2 diabetes, it reduces HbA1c and body mass index, while in type 1 diabetes it can lower HbA1c and insulin requirements. Transient hyperglycemia or delayed hypoglycemia may occur after HIIT; therefore, glucose monitoring is recommended. If pre-exercise glucose is elevated, intense activity may temporarily raise glucose levels.

Anaerobic exercise improves muscle mass, strength, and insulin efficiency. Weightlifting and HIIT enhance glycemic control, decrease fat mass, and improve overall fitness. Combining aerobic and anaerobic exercise yields optimal results in diabetes management. Performing mixed training three times per week improves glucose control more effectively than aerobic or resistance training alone and results in greater HbA1c reduction. Exercise frequency, duration, and intensity should be individualized, and regular glucose

monitoring maintained. For individuals with diabetes, the most effective and sustainable approach is to incorporate both aerobic and resistance exercises into a balanced weekly routine.

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Türkiye'de Yara bakımında kullanılan topikal ürünler (TR)

Op. Dr. Metin YALÇIN, Antalya Eğitim ve Araştırma Hastanesi, Genel Cerrahi Kliniği, Yanık Ünitesi

Özet

Yara iyileşmesi karmaşık, çok aşamalı bir süreç olup hemostaz, inflamasyon, proliferasyon ve maturasyon evrelerinden oluşur. Kronik yaralarda özellikle inflamasyon fazında bozulmalar sık görülür ve bu durum iyileşmeyi geciktirir. Bu derlemede, yara bakımında kullanılan tıbbi krem, merhem, pomad ve jeller; etken madde, farmakolojik özellik ve etki mekanizmalarına göre sınıflandırılmıştır. Epitelizasyon, granülasyon, debridman ve nem dengesi gibi yara iyileşmesini etkileyen süreçlerde kullanılan topikal ürün grupları ayrıntılı olarak incelenmiştir. Uygun ürün seçiminin, yaranın fazı, eksüda miktarı ve doku tipi dikkate alınarak yapılması gerektiği vurgulanmaktadır.

Anahtar Kelimeler: Yara bakımı, topikal tedavi, epitelizasyon, granülasyon, debridman, hyalüronik asit, büyüme faktörü

Giriş: Yara iyileşmesi, doku bütünlüğünün bozulmasıyla başlayan ve fizyolojik süreçlerin koordineli şekilde ilerlediği bir onarım sürecidir. Yara iyileşmesinin temel fazları; inflamasyon, proliferasyon ve maturasyon evreleridir. Günümüzde yara tedavisinde çok sayıda topikal ürün bulunmakla birlikte hiçbir ürün tüm yara tipleri için ideal değildir.

Yara İyileşmesinin Fizyolojik Aşamaları: İyileşme süreci hemostaz ile başlar, ardından inflamasyon fazı (4–6 gün), proliferasyon fazı (2–3 hafta) ve maturasyon fazı (3 hafta–2 yıl) gelir. Bu süreçte fibroblast aktivitesi, kollajen sentezi ve epitel hücre proliferasyonu yara kapanmasında kritik rol oynar.

Topikal Ürünlerin Sınıflandırılması: Yara bakımında kullanılan tıbbi krem, merhem, pomad ve jeller farklı etki mekanizmalarına sahiptir. Bu ürünler genel olarak aşağıdaki gruplarda incelenebilir:

1. Antibakteriyel ve antimikrobiyal ürünler (Gümüş sülfadiazin, povidon iyot, PHMB içeren ürünler)
2. Nemlendirici ve bariyer oluşturan ürünler (hidrojel, hidroklolloid, gliserin, vazelin)
3. Epitelizasyonu destekleyen ürünler (dexpanthenol, Centella Asiatica, hyalüronik asit, EGF)
4. Granülasyon dokusunu destekleyen ürünler (bitkisel yağlar, fitokimyasallar)
5. Debridman sağlayan ürünler (enzimatik ve otolitik ajanlar)
6. Ağrı kesici ve soğutucu ürünler (lidokain, trolamin, mentol içeren ürünler)
7. Skar ve anti-skar ürünleri (silikon bazlı jeller, soğan ekstresi, allantoin)
8. Bal bazlı ve doğal ürünler (Manuka balı, propolis, balmumu içeren preparatlar)

Devlet Malzeme Ofisi (DMO) Listesine Göre Sınıflama: Türkiye'de sosyal güvenlik kurumu ödeme kapsamında bazı topikal ürünler poliklinikte reçete edilebilmekte iken yataklı tedavi kuruluşlarında kullanılan birçok krem, merhem, pomad ve jel de DMO tedarik sisteminde

sınıflandırılmıştır. Bu sınıflama, ürünlerin etken madde ve kullanım amacına göre düzenlenmiştir. Antibakteriyel (ör. Silvamed, Dermazin), epitelizan (ör. Madecassol, Fito krem), hyalüronik asit içeren (ör. Hyalo4 serisi), enzimatik debridman sağlayan (ör. Hyalo4 Start) ve ağrı kesici (ör. Biafine, Lamiderm) ürünler örnek olarak gösterilebilir. **Tartışma:** Yara tedavisinde kullanılacak topikal ajan seçimi; yaranın tipi, iyileşme fazı, eksüda miktarı ve enfeksiyon varlığına göre yapılmalıdır. TIME yaklaşımı (Tissue, Infection, Moisture, Edge) bu seçimde rehberlik sağlar. Özellikle hyalüronik asit ve büyüme faktörü içeren ürünler, epitelizasyonu ve granülasyon dokusunu desteklemede etkin bulunmuştur. Ancak hiçbir ürün tüm yaralar için tek başına yeterli değildir.

Sonuç: Yara bakımında kullanılan tıbbi krem, pomad ve jellerin doğru seçimi, yara iyileşmesinin her fazında farklı biyolojik süreçleri desteklemek açısından önemlidir. Klinik uygulamalarda ürün tercihi marka bağımlılığından ziyade yara özellikleri ve iyileşme fazına göre yapılmalıdır.

Teşekkür: Sınıflandırma çalışmasında katkılarından dolayı Antalya Eğitim ve Araştırma Hastanesi baş eczacısı Hamide Buket Er hanıma ve hastanemiz Sarf Malzeme Satın Alma Direktörü sayın Muhammet Kahraman'a teşekkür ederim.

Çıkar Çatışması: Yazar herhangi bir çıkar çatışması bildirmemektedir.

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Ethical and Legal Challenges in Telemedicine: Gaps in the Turkish Regulatory Framework

Spec. Dr. Nafiye Ebru Terzi, Küçükçekmece No. 18 Family Health Center, Istanbul, Türkiye

Background: Telemedicine has become a permanent component of healthcare delivery, particularly after the COVID-19 pandemic. Although it improves accessibility and continuity of care, existing ethical principles and legal regulations have not evolved at the same pace.

Objective: To evaluate the ethical and legal uncertainties in telemedicine practice in Türkiye and to compare the current regulatory framework with international standards.

Content: The Regulation on the Provision of Remote Health Services (2022) forms the legal basis for telemedicine in Türkiye. However, critical issues such as the scope and documentation of informed consent, verification of patient capacity and digital representation, data ownership, retention periods, and cross-platform data security remain unclear. Lack of physical examination introduces diagnostic uncertainty and shifts liability risks. Additionally, physicians experience increased cognitive load, decision fatigue, and burnout due to continuous digital interaction and documentation demands.

International Comparison: The European GDPR, US HIPAA and UK GMC guidelines provide explicit definitions on data protection, clinical judgment, and telehealth-specific standards of care. Türkiye still largely evaluates liability based on traditional face-to-face medical practice norms.

Conclusion: To ensure ethical safety in telemedicine, consent procedures should be standardized and verifiable, data protection and audit mechanisms must be strengthened, and clinician responsibilities clearly defined. Capacity-building through digital literacy and ethical training is essential for healthcare providers. Updating legal frameworks in alignment with global standards will enhance trust and sustainability in telemedicine services.

Keywords: Telemedicine; Ethics; Legal framework; Informed consent; Data protection; Digital health; Türkiye

Aşı Reddi ve Kararsızlığı (TR)

Doç. Dr. Özgür ERDEM (MD, PhD), SBÜ Hamidiye Tıp Fakültesi, Diyarbakır Gazi Yaşargil Eğitim ve Araştırma Hastanesi, Aile Hekimliği Kliniği

Özet; Aşı reddi ve aşı kararsızlığı, modern toplumlarda bulaşıcı hastalıklarla mücadelede önemli bir tehdit olarak ortaya çıkmıştır. Dünya Sağlık Örgütü (DSÖ), aşı reddini "ulaşılabilir aşı hizmetlerine rağmen bireylerin aşıyı reddetmesi" olarak tanımlamaktadır. Bilimsel temeli olmayan, sosyal medya kaynaklı bilgi kirliliği ve komplo teorileri, toplum bağışıklığını zayıflatmakta ve salgın riskini artırmaktadır. Bu bildiri, aşı karşıtlığının tarihsel kökenlerini, yaygın iddialarını, bilimsel kanıtlarla çürütülmesini ve halk sağlığına etkilerini tartışmaktadır.
Anahtar Kelimeler: Aşı reddi, aşı kararsızlığı, toplum bağışıklığı, halk sağlığı

Giriş: Aşılar, insanlık tarihinin en büyük halk sağlığı başarılarından biridir. Çiçek hastalığının eradikasyonu, tüberküloz, difteri, kızamık gibi hastalıklardaki dramatik düşüşler, aşılama programlarının etkinliğini açıkça göstermektedir. Ancak son yıllarda, özellikle sosyal medya etkisiyle artan aşı reddi ve aşı kararsızlığı, bu kazanımları tehlikeye atmaktadır. Dünya Sağlık Örgütü, aşı reddini "ulaşılabilir aşı hizmetlerine rağmen aşıların yaptırılmaması" olarak tanımlar. Bu tutum, bireysel bir tercih olmanın ötesinde, toplum sağlığını bulaşıcı hastalıklarla tehdit edecek bir riske dönüşmektedir.

Aşı Reddinin Tarihsel Arka Planı ve Wakefield Etkisi: Modern aşı karşıtlığının temelleri, 1998 yılında The Lancet dergisinde yayımlanan ve daha sonra şaibeli olduğu kanıtlanan Dr. Andrew Wakefield'in çalışmasıyla atılmıştır. Sadece 12 çocuk üzerinde yapılan bu taraflı ve çıkar çatışması içeren çalışma, "MMR aşısı otizme neden olur" iddiasını ortaya atmış ve dünya çapında büyük yankı uyandırmıştır. Takip eden yıllarda yapılan geniş örneklemli çalışmalar ise bu iddiayı kesin biçimde çürütmüştür. Madsen ve ark. (2002), Parker ve ark. (2004) ve Taylor ve ark. (2014) tarafından gerçekleştirilen araştırmalar, aşılar ile otizm arasında hiçbir ilişki olmadığını göstermiştir. Diğer taraftan literatürde otizm ve aşı ilişkisini ortaya koyan tek bir bilimsel çalışmaya dahi rastlanmamıştır. Bununla birlikte, Wakefield'in mali çıkar çatışması içinde olduğu ve bilimsel etik ihlallerde bulunduğu belirlenmiş ve hatta İngiltere'de doktorluk yapması yasaklanmıştır.

Türkiyede Aşı Reddi ve Güncel Durum: Türkiye'de aşı reddi eğilimi, 2010'lu yıllardan itibaren dikkat çekici biçimde artmıştır. 2011 yılında sadece 183 olan aşı reddi vakası, 2017

yılında 23.000'in üzerine çıkmıştır. Bu artışın temelinde yanlış dini yorumlar, komplo teorileri, yanlış medya mesajları ve bilimsel bilgi eksikliği yer almaktadır. Aşı reddi; çocukluk çağı bağışıklama oranlarını düşürmekte, kızamık ve boğmaca gibi hastalıkların yeniden görülmesine yol açmaktadır.

Aşı Karşıtı Argümanlar ve Bilimsel Gerçekler: Aşı karşıtları tarafından sıkça dile getirilen iddialar genellikle benzer niteliktedir: aşıların toksik maddeler içerdiği, aşıların otizme veya otoimmün hastalıklara yol açtığı, hayvansal ürünlerin genetik etkiler bıraktığı, ilaç firmalarının ekonomik çıkar amacıyla verileri manipüle ettiği. Bu iddiaların hiçbirinin bilimsel temeli yoktur. Örneğin, aşılarda koruyucu olarak kullanılan thiomersal adlı madde etil civa türevidir ve vücutta birikim yapmaz. DSÖ Aşı Güvenliği Komitesi, thiomersal ile otizm veya diğer nörolojik bozukluklar arasında ilişki olmadığını defalarca belirtmiştir. Benzer biçimde, aşıların domuz veya maymun genleri içerdiği iddiası da bilimsel olarak yanlıştır. Aşı üretiminde kullanılan hücre kültürleri nihai ürün içinde bulunmaz; Türkiye'deki aşılarda stabilizatör olarak sığır jelatini kullanılmaktadır.

Aşı Reddinin Sonuçları ve Toplumsal Etkileri: Aşı reddi yalnızca bireysel bir karar değildir. Toplum bağışıklık eşiği %90'ın altına düştüğünde, bulaşıcı hastalıklar hızla yayılabilir. Henüz aşı yaşı gelmemiş bebekler, bağışıklık sistemi baskılanmış hastalar ve hamileler, aşısız bireylerin oluşturduğu zincirin kurbanı olabilirler. 1970'lerde İngiltere'de boğmaca, 1990'larda Hollanda'da kızamık ve 2015'te ABD Disneyland kızamık salgınları —aşı reddinin somut sonuçlarıdır. UNICEF verilerine göre 2023 yılında 61.070 kızamık vakası ve 13 ölüm bildirilmiştir.

Aşı Reddiyle Mücadele: Bilimsel ve Etik Sorumluluk: Aşı karşıtlığıyla mücadele yalnızca tıbbi değil, sosyokültürel ve etik bir mücadeledir. Toplumu bilgilendirmek, güven inşa etmek, doğru kaynakları yaygınlaştırmak gereklidir. Korku ve ajitasyon temelli propaganda yerine akla ve vicdana dayalı iletişim yöntemleri kullanılmalıdır. "Nefsini ıslah etmeyen, başkasını ıslah edemez." Hekim, önce kendini ikna etmeli, sonra toplumu aydınlatmalıdır.

Sonuç: Aşı reddi ve aşı kararsızlığı, halk sağlığını tehdit eden, bilimsel temelden yoksun bir olgudur. Aşılar, yalnızca bireyleri değil, tüm toplumu korur. Masumiyet karinesi bilimde de geçerlidir: Aşılar zararsız kabul edilir; aksini iddia edenler bunu bilimsel olarak kanıtlamakla

yükümlüdür. Aşılar hayat kurtarır; bu nedenle, bilimsel doğrular ışığında, toplumun her kesiminde aşı bilincinin güçlendirilmesi, hepimizin ortak sorumluluğudur.

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Management of Polypharmacy in Geriatrics

Dr. Rozalin Gül ERDEM UPRAK, İzmir Katip Celebi University, Faculty of Medicine, Department of Family Medicine

The elderly population is progressively increasing both in Turkey and globally. The development of economic and socio-cultural conditions and greater utilization of modern medicine's capabilities are significant factors contributing to this rise in the elderly population. Along with the decrease in the birth rate, the proportion of the elderly population within the total population is also steadily growing.

According to data from the Turkish Statistical Institute, the population aged 65 and over, defined as the elderly population, was 7,550,727 people in 2019. This figure increased by 20.7% over the last five years, reaching 9,112,298 people in 2024. The ratio of the elderly population to the total population rose from 9.1% in 2019 to 10.6% in 2024. Based on these figures, the elderly population is projected to be 13.5% in 2030, 17.9% in 2040, and 27.0% in 2060.

With the increase in the elderly population, clinical presentations prominent in the geriatric population will be observed more frequently. Polypharmacy is one of the most critical of these geriatric presentations.

While polypharmacy has multiple definitions, the most commonly used ones include: the use of five or more medications, the use of more medications than indicated by the clinical condition, and the use of at least one unnecessary medication. Polypharmacy does not always imply inappropriate medication use. As age advances, the required number of medications increases due to the rise in the number of chronic diseases. However, it should be remembered that the use of a high number of medications poses an increased risk of adverse drug reactions (ADRs). All prescription and over-the-counter medications, complementary and alternative products, and nutritional supplements are considered within the scope of polypharmacy.

Physiological changes occur in our bodies with aging, and these changes lead to an increased risk of ADRs. We may observe issues such as reduced intestinal absorption, decreased liver enzyme activity, reduced body fat, muscle, and water ratio leading to impaired drug distribution that can result in toxicity, and impaired renal elimination leading to prolonged drug action durations and increased serum levels.

The causes of polypharmacy can be related to the patient, the caregiver, and healthcare professionals.

- **Patient-related causes** include cognitive impairment, functional limitation, low educational level, and the use of over-the-counter medications.
- **Caregiver-related causes** include giving the elderly numerous different medications for various symptoms , the tendency to use medications based on recommendations from neighbors, friends, and relatives , requesting the re-prescription of previously

prescribed medications , and stocking up on numerous medications as a precaution to be stored at home and consequently used without a physician's recommendation.

- **Healthcare professional-related causes** include incomplete information during the elderly person's history taking , prescribing another medication to treat the side effect of a given drug , prescribing numerous medications for symptomatic treatment that are not vital and could be discontinued , and the inability to clearly and distinctly interpret geriatric syndrome presentations.

Adverse drug reactions constitute very serious, preventable health problems. Due to the exclusion of the geriatric age group from drug study criteria, there is a lack of significant data regarding dosage, treatment duration, and side effects. Nevertheless, in an elderly patient, inappropriate polypharmacy should be considered when acute clinical presentations develop or when symptoms and findings do not align with any known clinical picture.

Various guidelines have been developed both in Turkey and globally to prevent potential inappropriate medication use. Examples of these guidelines include the American Geriatrics Society's Beer's criteria , the European Geriatric Society's STOPP/START criteria , and, in Turkey, the TIME criteria (Turkish Criteria for Inappropriate Medication Use in the Elderly).

To protect our patients from polypharmacy and, consequently, from side effects, there are points that must be considered during prescribing and follow-up:

- When writing a prescription, a list of all medications being used should be given to the patient or caregiver. Prescription, over-the-counter medications, herbal products, vitamins, and nutritional supplements should be written using both generic and trade names.
- The dosage, frequency of use, route of administration, and the indication for the medication should be explained to the patient, their relative, or the caregiver.
- Efforts should be made to reduce the frequency of dosage, and long-acting medications should be preferred if possible.
- Attempts should be made to use medications that can treat 2 or 3 conditions simultaneously.
- During follow-up visits, the medications the patient is using should be compared with the list.
- The patient's diagnoses should be matched with their treatments.
- Non-pharmacological treatment methods should be considered, and lifestyle changes should be encouraged.
- The patient and caregiver should be informed about the possible side effects of the medications and when they should consult a doctor.

Dislipidemi Tedavisinde Güncel Yaklaşımlar (TR)

Prof. Dr. Tahsin ÇELEPKOLU, Dicle Üniversitesi Tıp Fakültesi, Aile Hekimliği AD, Diyarbakır/Türkiye

Dislipidemi, kandaki lipid düzeylerinin anormal olması durumudur. Dislipidemi, tüm Dünya'da kardiyovasküler hastalıkların gelişmesinde diğer metabolik hastalıkların yanında önemli ve bağımsız bir risk faktörüdür. Gelişmiş ve gelişmekte olan ülkelerde ölümlerin başlıca nedeni aterosklerotik kardiyovasküler hastalık (ASKVH)'dır. Dislipidemi ise ASKVH riskini arttıran en önemli önlenebilir risk faktörlerinden birisidir. Dislipidemi ateroskleroz patogenezindeki temel faktördür. Ülkemizde erişkin nüfusun yaklaşık %80'inde, Avrupa ve Kuzey Amerika'da yaşayan her iki yetişkinden birinde dislipidemi mevcuttur. Ailesel geçişli tüm dislipidemilerin toplumdaki görülme sıklığı %5-7 arasında ASKVH riskini arttıran önlenebilir pek çok risk faktörü içinde en önemlisidir.

Aile Sağlığı Merkezleri sağlık taramalarının yapıldığı en önemli ve en kolay ulaşılabilen sağlık merkezleridir. Dislipidemi de neredeyse her zaman asemptomatik seyretmesi ve erken ateroskleroza yol açmasından dolayı erken tanınması ve zamanında önlem alınması sayesinde ASKVH gelişme riskini azaltmak mümkündür Kan lipidleri günümüzde kolay, hızlı, ucuz ve güvenilir biçimde ölçülebilmektedir. Dislipidemi taraması ile gelecekteki ASKVH riskini güvenilir şekilde hesaplamak mümkündür. Taramada; Total-K, TG, HDL-K, LDL-K ve non-HDL-K yer almalıdır. Dislipidemi taramasında rutin dışı parametreler, günlük pratikte yaygın olarak kullanılmazlar. Dislipidemi taraması için açlık kanı tercih edilse de tok olarak da kan verilebilir. Tedavi kararı vermeden önce lipid ölçümleri mutlaka tekrar edilmelidir.

Asemptomatik, ASKVH veya ASKVH risk faktörü bulunmayan kişilerde;

- Yirmi yaşından itibaren 5 yılda bir
- Kırk yaşından itibaren erkeklerde 2 yılda bir
- Elli yaşından itibaren (veya menopoz sonrası) kadınlarda 2 yılda bir defa
- Atmış beş yaşından sonra yılda bir, dislipidemi taraması yapılmalıdır.

Ayrıca yıllık olarak dislipidemi taraması gereken hastalıklar ve risk faktörleri şunlardır:

- ASKVH düşündüren klinik bulgular
- Tip 1 veya Tip 2 DM
- Birinci derece yakınlarda erken (erkeklerde <55 yaş, kadınlarda <65 yaş) ASKVH oykusu
- Birinci derece yakınlarda dislipidemi oykusu
- Hipertansiyon (Gebelik hipertansiyonu dahil)
- Obezite
- Sigara icimi
- KBH [Hesaplanmış Glomerül Filtrasyon Hızı (eGFR) <60 ml/dk)]
- Kronik inflamatuvar hastalıklar (Romatoid artrit, sistemik lupus eritematozis ve psoriazis vb.)
- Genetik dislipidemilere ait klinik bulgular (Ksantom, ksantelasma ve arkus kornea vb)
- HIV enfeksiyonu

Dislipideminin Non-farmakolojik tedavisinde sağlıklı beslenme önerileri (Mikrobesin oranları, Fonksiyonel gıdalar, Bitkisel ürünler: Fitosteroller, Monakolin ve mayalı kırmızı pirinç, diyet lifi, soya, polikozanol ve berberin), alkol ve sigara bırakılması ve fiziksel aktivite ve kilo

kontrolü en önemli yeri tutar. Dislipideminin farmakolojik tedavisinde ise; statinler (atorvastatin, rosuvastatin, simvastatin, pravastatin, fluvastatin, lovastatin) en önemli ve güncel yerini korumaktadır. Statinler dışında dislipidemi tedavisinde Proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitörleri, Safra asit sekestranları (kolesevelam) İntestinal kolesterol emilim inhibitoru (ezetimib), Fibratlar, Niasin ve Omega-3 yağ asitleri de kullanılmaktadır.

Dislipidemi tedavisinde yeni ilacalar ise;

- Mipomersen
- Lomitapid
- Kolesterilester transfer protein inhibitörleri
- Bempedoic asit
- Pradigastat
- Volanesorsen
- Evinacumab
- İnclisiran, sayılabilir.

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The Immune System and Vaccination in Geriatric Individuals

Spec. Dr. Tuğba BODUR

The weakening of the immune system with aging and the resulting immune deficits, which prevent rapid and effective responses to new or previously encountered antigens, are among the negative effects of aging. This aging of the immune system contributes to the development of infectious diseases, cancer, and autoimmune diseases in geriatric individuals. The effects of aging on the immune system lead to dysregulation in the thymus, bone marrow, spleen, and lymph nodes. The bone marrow's ability to self-regenerate decreases the number of T and B lymphocytes. The thymus is the first organ in the body to begin aging. With aging, thymus tissue degenerates, and the number of T lymphocytes decreases. The spleen is a crucial organ for B lymphocyte migration and the immune response following antigen stimulation. Spleen function also deteriorates significantly with age, and antibody production decreases. The increase in CD8 and CD28 T cells disrupts T cell receptor diversity, resulting in a narrow antigen-capturing spectrum. Treg cells are increasing as a defense mechanism for the body to reduce autoimmune diseases. Proinflammatory cytokines such as IL-1a, IL-1b, IL-6, and TNF-a increase with age. This plays a role in the increase of chronic inflammatory diseases. IgM and IgD levels also decrease with age. High PGE2 levels facilitate tumor cell growth and metastasis.

The geriatric population, defined by the World Health Organization (WHO) as the group aged 65 and over, is increasing worldwide. With a weakened immune system in geriatric individuals, the risk of cardiovascular diseases, diabetes, renal failure, infectious diseases, and their associated complications increases. Vaccination in geriatric individuals is crucial for ensuring immunity against vaccine-preventable diseases. In our country, geriatric individuals are vaccinated against pneumococcal, influenza, tetanus-diphtheria-pertussis (whooping cough) as part of the expanded immunization program. Additionally, hepatitis, shingles, meningitis, rabies, RSV, COVID and travel vaccines can be administered when necessary. As primary care physicians, we have an important role to play in regularly administering vaccinations to older adults as a way to promote healthy aging. Studies have shown that vaccination rates among geriatric individuals are not sufficient, both in our country and elsewhere. For the sake of public health, primary care physicians should address the issue of vaccinations during their follow-up visits to address geriatric health management, and due diligence should be taken to raise awareness of vaccinations among geriatric individuals.

Keywords: Geriatrics, immune system, primary care, vaccine, pneumonia

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Periodic Health Examination

Assist. Prof. Dr. Volkan ATASOY, Trabzon University, Faculty of Medicine, Department of Family Medicine, Trabzon, Türkiye

Introduction: Periodic Health Examination (PHE) is defined as a set of tasks designed to determine future disease risk or to diagnose a disease in its asymptomatic early stage (1). A wide definition characterized PHE as regular health visits aimed at preserving health in asymptomatic individuals through comprehensive screening tests, physical examinations, counseling, and health education interventions (2). More than a century after the first official recommendation on PHE, the current approach is being shaped by major regulatory authorities such as the United States Preventive Services Task Force (USPSTF) and Canadian Preventive Health Care Task Force (CTFPHC) along with national guides to produce practical guidance for evidence-based visits. Hereby, PHE visits were the leading reason for seeking medical care in the United States in 2020 (3). This comprehensive presentation covers the essential aspects of PHE as practiced in family medicine. The content is structured to provide healthcare professionals with a thorough understanding of PHE frameworks and practical applications. Grounding this daily practice in an evidence-based foundation is essential.

Application Areas and Methodology: PHE encompasses multiple demographic groups like child health monitoring programs, adolescent and youth health assessments, adult health evaluations, geriatric health monitoring, and pregnancy-related health surveillance. The methodology incorporates patient education and counseling sessions, motivational interviewing techniques, comprehensive screening tests and assessments, immunization schedules and chemoprophylaxis protocols.

Patient Evaluation Protocol: A thorough PHE assessment includes demographic profiling (age, gender, occupation, marital status), lifestyle evaluation (dietary habits, exercise routines), comprehensive medical history review, addiction screening (tobacco, alcohol, substance use), family history assessment for hereditary conditions, physical measurements (BMI, waist circumference, blood pressure), previous test results analysis, and patient expectations and health concerns documentation.

Evidence-Based Practice Guidelines: A national recommendation system for PHE is in place in Türkiye. Turkish Ministry of Health Rating System uncover the "must do" services. A**s**

specified in this guide, screenings classified as strongly recommended and recommended according to the Turkish Ministry of Health Rating System are mandatory. Within the scope of evidence-based medical practice, it is also rational to conduct screenings included in international guidelines, such as those recommended as Grade A and Grade B according to the United States Preventive Services Task Force (USPSTF) Grading System.

Turkish Ministry of Health Rating System:

- Strongly recommended (5 points): High-evidence interventions with proven cost-effectiveness
- Recommended (4 points): Moderate evidence supporting implementation
- Not recommended (3 points): Evidence indicates no significant benefit
- Optional (2 points): Limited evidence requiring individual consideration
- Insufficient evidence (1 point): Unproven interventions not recommended for routine practice

USPSTF Grading System:

- Grade A: Substantial net benefit with high certainty
- Grade B: Moderate net benefit with reasonable certainty
- Grade C: Selective application based on individual circumstances
- Grade D: Recommendation against routine use
- Grade I: Insufficient evidence for recommendation

Regulatory Framework: According to Turkish Family Medicine Practice Regulations Article 4, family physicians are mandated to conduct periodic health examinations and perform age, gender, and disease-specific monitoring and screenings. In addition, as mentioned in the WONCA Tree which is a graphic representation of general family medicine, 6 competencies and 12 attributes are closely linked with PHE practices.

Core Screening Components

Cardiovascular Health: Annual blood pressure monitoring for adults >18 years, cardiovascular risk assessment for specific age groups, individualized aspirin prophylaxis

recommendations, and lipid profile screening every 5 years for high-risk individuals are recommended.

Diabetes Management: Universal screening from age 45, with earlier screening for high-risk groups, comprehensive management including annual complications screening, vaccination protocols for influenza, pneumococcal, and hepatitis B are recommended.

Cancer Screening Protocols:

Breast cancer: Multi-modal approach including mammography and clinical examinations

Colorectal cancer: FOBT and colonoscopy based on age and risk factors

Cervical cancer: Regular Pap smears and HPV testing

Prostate cancer: Individualized PSA testing decisions

Lung cancer: Low-dose CT for high-risk smokers

Skin cancer: ABCDE rule application and UV protection counseling

Special Population Considerations

Osteoporosis Management: Risk factor identification and FRAX assessment, DEXA scanning recommendations, prevention strategies and treatment options are recommended.

Infectious Disease Screening: Bloodborne and sexually transmitted disease testing, Tuberculosis screening for high-risk populations, and comprehensive vaccination programs are recommended.

Lifestyle and Behavioral Health: Tobacco cessation counseling, alcohol consumption assessment, substance use screening and intervention, intimate partner violence screening, and depression screening using validated tools are recommended.

Maternal and Geriatric Health: Comprehensive prenatal care and screening, gestational diabetes management, geriatric assessment protocols, and malnutrition screening in elderly populations are recommended.

Future Expectations for PHE: Updated guidelines spesific to the society in which it would be applied, individualized patient protocols, specialized polyclinics, and telemedicine integration would shape the future of PHE applications. This structured approach to PHE provides family physicians with evidence-based tools for comprehensive preventive healthcare delivery across all patient demographics.

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The Role of Laboratory Tests in the Diagnosis of Anemia

Prof. Dr. Yasemin KILIÇ ÖZTÜRK, University of Health Sciences Izmir Medical Faculty, Family Medicine Department, Tepecik Training and Research Hospital, 1st Palliative Care Center

According to the World Health Organization (WHO), anemia is defined as a hemoglobin concentration below 13 g/dL in men and below 12 g/dL in women. These thresholds are established based on population-based reference ranges in healthy individuals. Despite its clinical relevance, anemia—particularly when mild—is frequently underrecognized in primary care settings. Nonetheless, even subclinical or mild anemia may serve as a harbinger of serious underlying pathology and should not be underestimated.

As of 2016, the global prevalence of anemia among women of reproductive age was estimated by the WHO to be 30.2%, with a reported prevalence of 20.2% in the European region. The organization has set a global target to reduce anemia in this population by 50% by the year 2025 [1]. Iron deficiency, the leading nutritional disorder worldwide, accounts for approximately half of all anemia cases [2], affecting nearly one-third of the global population. Young women aged 18 to 29 constitute a particularly vulnerable subgroup, with iron deficiency rates reported at 17.2% in this demographic [3].

Anemia is recognized as an independent risk factor for increased morbidity and mortality, regardless of sex or age [4]. Its clinical consequences are multifaceted and may significantly impair overall health. These include the development of symptomatic anemia, diminished health-related quality of life [5], reduced physical performance [6], impaired cognitive function [7,8], a higher incidence of psychiatric conditions [9,10], increased susceptibility to infections [6], and hematologic or coagulation abnormalities.

Although most anemia cases are initially detected and managed within primary care, the literature concerning its management in this setting remains limited. Therefore, this presentation aims to outline the role of laboratory tests in the diagnosis, evaluation, and management of anemia.

Although most of them are not available at the primary care centers, some laboratory tests for screening anemia are [11]

- Complete blood count: includes hematocrit, hemoglobin, mean corpuscular volume, mean corpuscular hemoglobin, and mean corpuscular hemoglobin concentration which helps to differentiate the classification of anemia.
- Reticulocyte count: serves as an estimate of bone marrow RBC output.
- Iron profile: includes serum iron, ferritin, and total iron-binding capacity, which help assessing iron stores and utilization.
- Macrocytosis profile: includes vitamin B12, folate, methylmalonic acid, and homocysteine levels, which help assess the causes of macrocytic anemia.
- Hemoglobin electrophoresis: evaluates hemoglobin amino acid chains, aiding in the diagnosis of hemoglobinopathies such as thalassemia or sickle cell disease.
- Peripheral blood smear: provides a microscopic evaluation of RBC morphology, that may help to diagnose structural abnormalities.

- Liver function tests: includes transaminases, total protein, bilirubin, albumin, calcium, and alkaline phosphatase. Additional liver function markers may include lactate dehydrogenase (LDH), γ-glutamyl transferase, and 5'-nucleotidase.
- Serum creatinine: is important to assess the renal function, which is critical to screen anemia secondary to kidney disease.
- Urinalysis: evaluates for the presence of hemoglobinuria or hemosiderinuria, which may indicate intravascular hemolysis.
- Coagulation screening: includes activated partial thromboplastin time, prothrombin time, international normalized ratio, and thrombin time, which assist to evaluate bleeding tendencies.
- Thyroid function tests: include thyroxine and thyroid-stimulating hormone levels, which help evaluate anemia related to thyroid dysfunction.
- Hemolysis profile: includes haptoglobin, LDH, and indirect bilirubin, which help to evaluate RBC destruction.
- Abdominal sonogram: assesses spleen size, which is relevant in cases of hemolytic anemia and hypersplenism.
- Bone marrow analysis: requires a hematology consultation and is used to screen bone marrow function and morphology.
- Inflammatory markers: C-reactive protein and erythrocyte sedimentation rate help to identify anemia related to chronic disease and systemic inflammation.
- Direct antiglobulin test: also known as the Coombs test, detects immune-mediated hemolytic anemia by identifying antibodies bound to RBCs.
- Erythropoietin level: helps to evaluate erythropoiesis in cases of suspected renal anemia or bone marrow failure.
- Genetic testing: can confirm conditions such as hereditary spherocytosis, pyruvate kinase deficiency, or other rare hereditary anemias.
- Soluble transferrin receptor: differentiates between IDA and anemia of chronic disease.
- Vitamin B6 or copper levels: may be considered in atypical or refractory cases of anemia.
- Computed tomography of the abdomen and pelvis: is useful in cases of obscure gastrointestinal bleeding to locate sources of chronic blood loss.
- Capsule endoscopy: enables visualization of the small intestine for detecting occult bleeding.
- Osmotic fragility test: evaluates whether RBCs are more fragile than usual, which may indicate hereditary spherocytosis.
- Parvovirus B19 serology or DNA testing: helps identify transient red cell aplasia, particularly in immunocompromised patients.
- Glucose-6-phosphate dehydrogenase activity test: detects glucose-6-phosphate dehydrogenase deficiency, a common enzymatic cause of hemolytic anemia.
- Lead levels: assesses lead toxicity, which can contribute to anemia through disrupted hemoglobin synthesis, particularly in children.

The discussion will further address the etiological spectrum, risk factors, symptoms, classification of anemia, diagnostic workup, differential diagnoses and criteria for specialist referral.

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Two Lives, One Prescription: Evidence-Based Approach to Antidepressants in Pregnancy

Prof. Dr. Yusuf Cem Kaplan, TERAFAR – İzmir Katip Çelebi University Teratology Information, Research and Training Center, İzmir Atatürk Training and Research Hospital, İzmir, Türkiye

Depression during pregnancy is a common but often under-recognized health condition, affecting up to one in five women. Untreated episodes are linked to substance use, poor prenatal care and increased obstetric complications. Despite these risks, many women discontinue antidepressants due to safety concerns. Understanding both the baseline risks of pregnancy and the magnitude of medication-related risks is essential for balanced counseling. In all pregnancies, regardless of drug exposure, major congenital malformations occur in roughly 3%, and cardiac malformations in about 1%. These figures serve as the baseline when interpreting safety data.

Large-scale studies and meta-analyses show that most SSRIs are not associated with a clinically important rise in major congenital malformations. Relative risk estimates for overall malformations range from 1.10 to 1.27, corresponding to an absolute increase from 3% to about 3.8%. The excess for cardiac malformations is also minimal, with approximately 0.2–0.4% above the baseline of 8%. Persistent pulmonary hypertension of the newborn occurs in about two per thousand births and may double with late-pregnancy SSRI exposure (after 20 weeks), though the absolute risk remains under 1%. Poor neonatal adaptation syndrome affects 10–30% of exposed infants but is usually mild and resolves within two weeks. Other observed effects, such as slightly lower birth weight or earlier delivery, are small and rarely clinically meaningful. Importantly, the increases in these risks may reflect methodological artifacts rather than true medication effects. Several methodological factors support this possibility. Depressed women often undergo more prenatal scans, which may lead to over-detection of small, harmless cardiac malformations. When researchers adjust for illness severity and choose comparable control groups in some studies, the excess risk seems to disappear.

Current evidence supports continuing effective antidepressant therapy during pregnancy rather than abrupt discontinuation since untreated maternal depression can be more harmful than antidepressant use itself. The guiding principle is clear communication, shared decision-making, and continuity of care. Protecting the mother's mental health is inseparable from protecting fetal wellbeing. Each prescription, in reality, serves two lives.

HPV and Cervical Cancer: Recent Advances in Immunization

Assoc. Prof. Dr. Yusuf Haydar ERTEKİN,

Abstract

Cervical cancer (CaCx) remains a critical global public health concern, ranking as the fourth most common cancer in women worldwide, with approximately 660,000 new cases and 350,000 deaths reported annually. This malignancy is overwhelmingly caused by persistent high-risk human papillomavirus (hrHPV) infection. The global burden is highly inequitable, with low- and middle-income countries bearing the majority of cases and mortalities. To combat this, the World Health Organization (WHO) launched the 90-70-90 strategy targeting elimination by 2030: achieving 90% HPV vaccination coverage in girls by age 15, 70% screening coverage in women aged 35 and 45, and 90% treatment coverage for identified precancerous lesions or cancer. Prophylactic HPV vaccines are highly effective primary prevention tools. The current nonavalent vaccine (9vHPV) protects against nine types, covering roughly 90% of cervical cancer causative strains (HPV 16, 18, 31, 33, 45, 52, 58, 6, 11). Routine vaccination is recommended for adolescents (ages 11–12), with catch-up through age 26, based on a flexible dosing schedule (two or three doses). Advances in diagnostics, such as DNA methylation testing and E6/E7 oncoprotein assays, are refining screening triage. Furthermore, emerging therapeutic strategies, including therapeutic vaccines targeting the E6/E7 oncogenes and innovative systemic treatments like Immune Checkpoint Inhibitors (ICIs) and Antibody-Drug Conjugates (ADCs), offer promising avenues for advanced disease management, bringing cervical cancer elimination within reach. (208 words)

Keywords: HPV, Cervical Cancer, Vaccination, Screening, Oncogenesis

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Introduction: A Preventable Global Health Crisis

Cervical cancer represents one of the most profound health inequities globally. It remains the fourth most frequently diagnosed malignancy among women worldwide, resulting in an estimated 660,000 new cases and 350,000 deaths in 2022. This heavy burden is largely concentrated in low- and middle-income countries, where approximately 90% of deaths occur due to inadequate access to preventive and therapeutic care.

The nearly universal cause of cervical cancer is persistent infection by high-risk Human Papillomavirus (hrHPV) types. HPV 16 and 18 alone accounts for about 70% of global cases. Given this clear etiology, cervical cancer is recognized as one of the most preventable malignancies, provided effective interventions are implemented globally.

I. HPV Pathogenesis and Oncogenic Risk Factors

HPV infection is extremely common, with most sexually active adults having been exposed at some point. However, only persistent infection over several years leads to the development of precancerous lesions, known as Cervical Intraepithelial Neoplasia (CIN), which may progress to invasive cancer. For instance, CIN3/CIS lesions carry about a 30% risk of progression to invasive cancer.

Beyond HPV type (e.g., HPV 16/18), several co-factors significantly increase the risk of malignant progression. These include immunocompromised states such as HIV infection; behavioral factors like smoking (increasing squamous cell cervical cancer risk by approximately 1.95 times); long-term use of oral contraceptives (over five years increases risk by 2.2 times in HPV 16/18 positive women); and coinfections like Chlamydia or bacterial vaginosis (dysbiosis). Understanding these interacting factors is essential for holistic prevention and patient risk stratification.

II. Advances in Prophylactic Vaccines and Immunization Strategies

Prophylactic HPV vaccination is the cornerstone of primary prevention. These vaccines utilize virus-like particles (VLPs) formed by the major capsid protein L1, offering high efficacy without carrying viral DNA, ensuring they are non-infectious and non-pathogenic.

Currently licensed vaccines include the Bivalent (2vHPV: 16, 18), Quadrivalent (4vHPV: 6, 11, 16, 18), and the Nonavalent (9vHPV: 6, 11, 16, 18, 31, 33, 45, 52, 58). The 9vHPV vaccine provides protection against the types responsible for approximately 90% of cervical cancer cases globally.

Routine vaccination is recommended for adolescents, ideally at age 11 or 12, beginning as early as age 9. Catch-up vaccination is recommended for all persons through age 26. For adults aged 27 through 45, general catch-up vaccination is not recommended, but shared clinical decision-making is endorsed for individuals at risk of new HPV infection.

The optimal dosing schedule depends on the age of initiation: typically, two doses (6–12 months apart) for those starting before their 15th birthday, and three doses for older adolescents and those with immunocompromising conditions. Real-world data

confirms the substantial impact of these programs, demonstrating significant declines in HPV prevalence and associated precancerous lesions, often exhibiting herd immunity effects in unvaccinated populations. Furthermore, post-treatment vaccination has been shown to reduce the recurrence risk of high-grade lesions after procedures like LEEP.

III. The WHO Strategy and Advances in Secondary Prevention

The global campaign to eliminate cervical cancer is crystallized in the WHO's ambitious 90-70-90 targets set for 2030: 90% of girls fully vaccinated by age 15; 70% of women screened with a high-performance test (e.g., HPV testing) by ages 35 and 45; and 90% of women with precancerous lesions receiving appropriate treatment.

To achieve the screening targets, traditional cytology (Pap testing) is increasingly supplemented or replaced by molecular HPV nucleic acid testing. HPV testing offers higher sensitivity than cytology alone.

Crucial developments focus on refining the triage of HPV-positive women to prevent unnecessary colposcopy referrals. Advances include the use of p16/Ki-67 dual staining cytology, as well as emerging molecular biomarkers like DNA methylation assays and HPV E6/E7 mRNA detection. These advanced techniques enable precise risk stratification, directing only the highest-risk patients toward immediate diagnostic follow-up.

IV. Emerging Therapeutics and Future Directions

For patients with established HPV infection or advanced cervical cancer, treatment landscapes are rapidly evolving.

Therapeutic HPV vaccines are actively being researched to generate targeted T-cell immunity against the viral E6 and E7 oncogenes, aiming to treat existing infections and lesions. Clinical trials, such as those for VGX-3100 (DNA plasmid-based) and Vvax001 (peptide-based), show promise in eliminating HPV-associated high-grade precancerous lesions. Furthermore, gene-editing therapies using tools like CRISPR/Cas9 are being explored to precisely target and remove integrated viral DNA sequences.

In advanced cervical cancer (aCC), highly effective systemic therapies include chemotherapy combined with targeted agents like bevacizumab (a VEGF inhibitor). Immunotherapies, notably Immune Checkpoint Inhibitors (ICIs) such as pembrolizumab, have revolutionized treatment, showing significant efficacy, especially when combined with chemotherapy, for persistent, recurrent, or metastatic disease (p/r/mCC). Additionally, Antibody-Drug Conjugates (ADCs) like Tisotumab Vedotin (TV) represent a new class of highly targeted therapeutics demonstrating significant survival benefits in previously treated r/mCC patients.

The integration of advanced diagnostics and targeted therapies, often leveraging tools like single-cell RNA sequencing and Artificial Intelligence (AI) to identify precise biomarkers and personalized treatment, represents the future of cervical cancer care.

Conclusion

The commitment to eliminate cervical cancer is not just an aspiration, but a tangible goal supported by continuous advancements in immunization, screening, and treatment. By sustaining high vaccination coverage, refining screening strategies through molecular and digital technologies, and expanding access to novel therapeutics, we can ensure that future generations live in a world free from this preventable disease.

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Dietary Supplemen

Spec. Dr. Zeynep Özün ERİNÇ, Urla District Health Directorate

The global market for dietary supplements has exceeded 300 billion USD, and studies in Türkiye show that one in three adults regularly uses supplements. Factors such as an aging population, increased health concerns during the pandemic, and widespread digital marketing have contributed to this growth (1,2). Physicians must stay informed about the rapidly evolving field of dietary supplements and provide accurate information to their patients. This communication should be grounded in evidence-based medicine, applying specific, high-level evidence to patient-centered decisions.

When evaluating supplement use, physicians should prioritize the principle of "first, not harm." Patients may not mention supplement use, as they do not perceive these products as medications. To avoid this oversight, supplement use should always be included in the medical history. If used, dosage, duration, and side effects should be assessed, and the patient should be followed up regularly. This paper discusses dietary supplements supported by strong scientific evidence.

Vitamin D plays a role in preventing respiratory tract infections and in the treatment of osteoporosis. A maintenance dose of 800–2000 IU/day is recommended, while deficiency can be treated with 50,000 IU/week (for 4–6 weeks) or 6000 IU/day. Dose adjustments may be needed for the elderly and those with malabsorption. Co-administration with thiazide diuretics may cause hypercalcemia, while anticonvulsants and glucocorticoids can increase vitamin D metabolism. Clinically, serum 25-hydroxyvitamin D levels should be maintained between 30–50 ng/mL (3).

Omega-3 fatty acids have proven efficacy in treating hypertriglyceridemia and may benefit individuals at high cardiovascular risk. For cardiovascular protection, 1000 mg/day EPA+DHA is recommended; for hypertriglyceridemia, 2000–4000 mg/day. The REDUCE-IT trial demonstrated that 4 g/day of pure EPA significantly reduced cardiovascular events in high-risk patients. Caution is advised in patients with atrial fibrillation and in the perioperative period due to bleeding risk. High-dose use in patients on anticoagulant therapy may increase bleeding risk (4,5).

Probiotics have strain-specific efficacy. Lactobacillus rhamnosus GG and Saccharomyces boulardii are effective for antibiotic-associated diarrhea, Bifidobacterium infantis 35624 for irritable bowel syndrome, and VSL#3 for ulcerative colitis. Typical doses are 1–10 billion CFU/day, taken 2–3 hours after antibiotics. Caution is advised in patients with immunodeficiency, neutropenia, or pancreatitis (6).

Magnesium is effective for migraine prophylaxis and constipation. Recommended doses are 400–600 mg/day for migraines and 150–300 mg/day for constipation. Magnesium citrate is

used for constipation, magnesium glycinate for migraine and sleep quality, and magnesium malate for chronic fatigue. It is contraindicated in patients with renal failure (7).

Zinc plays a key role in immune function and managing the common cold. When started within the first 24 hours of symptoms, 10–25 mg every 2–3 hours (not exceeding 80–100 mg/day) can be effective. Prolonged high-dose use (>50 mg/day) may cause copper deficiency. Gastrointestinal side effects may occur when taken on an empty stomach. It can interact with quinolones, tetracyclines, bisphosphonates, and penicillamine (8).

Whey protein and **casein** can be used for sarcopenia, muscle mass gain, and wound healing. The recommended dose is 20–40 g/day. Taking whey protein within 30–60 minutes post-exercise maximizes muscle protein synthesis, while casein is best taken before sleep. Whey protein isolate is preferable for lactose-intolerant individuals. High doses may cause gastrointestinal discomfort and renal stress in patients with kidney dysfunction (9).

Creatine is used to improve muscle strength, exercise performance, and manage sarcopenia. Loading dose: 20 g/day (divided into 4 doses) for 5–7 days; maintenance dose: 3–5 g/day. Contraindicated in renal failure. It may increase the risk of dehydration and requires caution when used with cyclosporine, NSAIDs, or nephrotoxic drugs (10).

St. John's Wort (Hypericum perforatum) induces CYP3A4 and P-glycoprotein, reducing the efficacy of oral contraceptives, anticoagulants, immunosuppressants, and antidepressants.

Ginkgo biloba increases bleeding risk when used with warfarin, aspirin, or NSAIDs due to its anti-aggregant effect. Quality control remains a major issue in supplements, as undeclared pharmaceutical compounds, heavy metal contamination, and mislabeling are common (11,12).

Physicians should adopt an evidence-based approach to dietary supplements and guide their patients appropriately. It must be remembered that no supplement can replace a healthy diet, regular sleep, and exercise.

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POSTER PRESENTATION

PP-001: Akut Malnütrisyonun Sistemik Yüzü: 1 Yaşında Bir Vaka (TR)

Gamze Erdoganoglu[1], Zeliha Haytoğlu[2]
[1]Adana Şehir Hastanesi Aile Hekimliği Kliniği, Adana, Türkiye
[2]Çukurova Üniversitesi, Tıp Fakültesi. Çocuk Sağlığı ve Hastalıkları AD, Adana. Türkiye

Amaç: Malnütrisyon, özellikle gelişmekte olan ülkelerde bebek ve çocuk ölümlerinin başlıca nedenlerinden biridir. Bu sunumda, malnütrisyon zemininde el ve ayak şişliği ile ağız lezyonları gelişen 1 yaşında bir olgu tartışılacaktır.
Vaka sunumu: 1 yaşında, erkek cinsiyetteki hasta, el ve ayaklarda şişlik, ağız içinde yaralar, iştahsızlık ve huzursuzluk şikayetleriyle başvurmuştur. Annesinin verdiği bilgiye göre, bebek ilk dört ay yalnızca anne sütü almış, sonrasında ise düzensiz ve düşük protein içeren ev yapımı mamalarla ek gıdaya geçilmiştir. Son haftalarda kilo alımının durduğu ve iştahsızlığın arttığı gözlenmiştir. Anne ev hanımı baba inşaat işçisi. Evde 5 çocuk ile beraber yaşıyorlar.
Bulgular: Fizik muayenede hastanın genel durumu letarjik ve huzursuz, kilosu 6400 gram ve boyu 71 cm. Ağırlık-boy oranının %70'in altında olduğu saptanmıştır. El ve ayaklarda belirgin ödem mevcuttur. Ağız içinde aftöz lezyonlar, dilde atrofi, ciltte kuruluk ve çatlaklar da dikkat çekmiştir. Karın bölgesinde hafif distansiyon izlenmiş, hepatomegali saptanmamıştır. Yapılan laboratuvar değerlendirmelerinde hipoalbüminemi, normokrom normositer anemi, hipokalemi ve hafif CRP yüksekliği tespit edilmiştir. Ağız sürüntü örneğinde Candida albicans üremesi saptanmıştır. Tüm bu klinik ve laboratuvar bulgular hastanın Kwashiorkor tipi (ödemli) malnütrisyon geçirdiğini düşündürmüştür.
Hasta, Dünya Sağlık Örgütü'nün şiddetli akut malnütrisyon yönetim protokolüne göre tedaviye alınmıştır. sıvı-elektrolit dengesi dikkatle düzenlenmiştir. Multivitamin, çinko ve potasyum takviyesi başlanmış, ağız lezyonları için topikal antifungal tedavi uygulanmıştır. Enfeksiyon riskine karşı sistemik antibiyotik tedavisi değerlendirilmiştir. Aileye, uygun beslenme konusunda detaylı eğitim verilmiştir.
Tartışma ve Sonuç: Bu vaka, malnütrisyonun sadece büyüme geriliği değil; aynı zamanda bağışıklık sistemi, cilt ve mukoza sağlığı gibi sistemik etkilerle birlikte seyredebileceğini göstermektedir. Özellikle ödem, ağız içi lezyonlar ve yetersiz kilo alımı gibi bulguların birlikte görülmesi, Kwashiorkor açısından uyarıcı olmalıdır. Erken tanı ve uygun tedavi ile komplikasyonlar önlenebilir. Ayrıca, ailelere verilecek beslenme eğitimi ve sosyal destek hizmetleri, hastalığın tekrarlamasını önlemek açısından büyük önem taşımaktadır.
Anahtar Kelimeler: Ağız lezyonu, çocuk beslenmesi, Kwashiorkor, malnütrisyon, ödem

PP-002: Unilateral Coronal Craniosynostosis: A Case of Anterior Synostotic Plagiocephaly

Zeliha Haytoglu[1], Gamze Erdoganoglu[2]
[1]Cukurova University, Department of Pediatrics, Adana, Türkiye
[2]Adana City Training and Research Hospital, Family Medicine Clinic.Adana, Türkiye

Introduction: Craniosynostosis is defined as the premature fusion of one or more cranial sutures, which can result in abnormal skull development and potential neurological or cosmetic complications. Among its subtypes, unilateral coronal synostosis is a non-syndromic form that causes anterior plagiocephaly. Clinically, it presents with flattening of the forehead on the affected side, elevation and narrowing of the eye (known as the Harlequin eye sign), eyebrow asymmetry, nasal deviation, and ear misalignment. Unlike positional plagiocephaly, which is generally benign and self-limiting, synostotic forms require timely surgical intervention to prevent long-term visual, developmental, and psychosocial consequences.
Case Presentation: This case involves a 7-year-old female, born full-term via cesarean section, with no significant perinatal complications. Since infancy, her parents observed a persistent asymmetry in her facial features, particularly involving the forehead and eyes. Her developmental milestones were age-appropriate, and no neurocognitive delay was reported.
Findings and Discussion: Clinical examination revealed left frontal flattening accompanied by right frontal bossing, consistent with compensatory growth. The left eye appeared elevated and smaller, suggesting orbital distortion. Additional findings included asymmetry of the eyebrows, nasal deviation to the right, and anterior displacement of the right ear. Frontal and occipital photographs confirmed marked craniofacial asymmetry. Although a cranial CT scan was not available, the physical findings were strongly suggestive of left unilateral coronal craniosynostosis. This condition, if left untreated, may lead to visual impairment, cranial deformity, and psychosocial stress. Ideally, surgical correction such as fronto-orbital advancement should be performed between 6–12 months of age. However, even in later cases, intervention can offer both functional and cosmetic benefits.
Conclusion: This case illustrates a typical presentation of anterior synostotic plagiocephaly due to unilateral coronal craniosynostosis. Early recognition of cranial asymmetry and differentiation from positional causes is vital for initiating the correct treatment plan and achieving optimal outcomes for the patient.
Keywords: Cranial asymmetry, Craniosynostosis, Pediatric head shape, Plagiocephaly, School-aged child

Figure 1. Frontal view of the patient showing craniofacial asymmetry with occipital flattening and compensatory forehead bossing. Black bar is used to obscure the eyes for privacy.

Figure 1

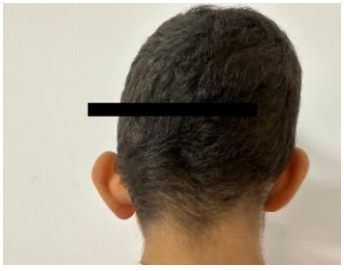

Figure 2

Figure 2. Lateral view of the patient's head illustrating the posterior asymmetry characteristic of plagiocephaly.

PP-003: Mycoplasma pneumoniae Infection Presenting with Rash and Upper Respiratory Tract Symptoms: A Case Report in a 2-Year-Old Child

Gamze Erdoganoglu[1], Zeliha Haytoglu[2]
[1]Adana City Training and Research Hospital, Family Medicine Clinic
[2]Cukurova University, Faculty of Medicine, Department of Pediatrics

Introduction: Mycoplasma pneumoniae is commonly known as a causative agent of atypical pneumonia in school-aged children. However, it may occasionally present in younger children with upper respiratory tract infection (URTI), rash, and systemic symptoms. Since the clinical picture often mimics viral infections, diagnosis may be challenging. In this presentation, we share the case of a 2-year-old girl with M. pneumoniae infection presenting with URTI and maculopapular rash.
Case Presentation: A previously healthy 2-year-old girl presented with a 4-day history of fever, cough, and nasal discharge, followed by the onset of a widespread maculopapular rash starting from the trunk on the last day. Physical examination revealed a subfebrile temperature (38.7°C), nasal mucosal edema, pharyngeal hyperemia, fine crackles on lung auscultation, and non-pruritic rash spread across the body. Laboratory evaluation showed leukocytosis, mild lymphocytosis, and elevated CRP. Mycoplasma pneumoniae IgM serology was positive. Chest X-ray revealed interstitial infiltrates. The patient was started on oral azithromycin and showed significant clinical improvement within three days.
Discussion: Although M. pneumoniae infections are more commonly observed in school-aged children, they may also present with nonspecific and atypical symptoms in younger age groups. When rash, fever, and respiratory symptoms coexist, atypical bacterial pathogens should also be considered alongside viral exanthems. Serological testing can help confirm the diagnosis, allowing for targeted antibiotic treatment and prevention of complications.
Conclusion: M. pneumoniae should be considered in the differential diagnosis of not only lower respiratory tract infections but also URTI with rash in younger children. Awareness of its diverse clinical presentation can support timely diagnosis and appropriate treatment.
Keywords: Mycoplasma pneumoniae, Pediatric rash, Upper respiratory tract infection

Figure 1. Maculopapular rash on the cheek associated with Mycoplasma pneumoniae infection (eyes concealed for privacy)

PP-004: İdrar Yolu Enfeksiyonu Ön Tanısından HPV Pozitifliğine: Koruyucu Hekimlik Bakış Açısı (TR)

Sina Süleyman Ekici, Ayşe Nur Topuz, Zeliha Yelda Özer
Çukurova Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalı, Adana

Amaç:
Serviks kanseri dünyada dördüncü ülkemizde dokuzuncu sırada görülmektedir. Rahim ağzı kanseri HPV(Human Papilloma Virüs) ile ilişkili olan en yaygın hastalıktır. HPV rahim ağzına yerleşerek yıllarca bulgu vermeden kanser öncesi lezyonlardan kansere varana kadar doku değişikliğine neden olarak hayatı tehdit etmektedir. Dünya Sağlık Örgütü tarafından 'önlenebilir ölüm nedeni' olarak tanımlanmaktadır. Bu olguda amaç hastaların semptomlarını yönetirken aynı zamanda kapsamlı yaklaşım ile değerlendirip başvuruyu fırsata çevirmenin birinci basamaktaki önemini vurgulamaktır.
Olgu:
35 yaşında kadın hasta üç gündür idrar yaparken yanma ve halsizlik şikayetleri olduğunu bildirdi. Cinsel yolla bulaşan hastalıkları dışlamak açısından sorgulandığında semptomlarına genital akıntı eşlik etmediği, tek partnerli olduğu ve korunma yöntemi olarak kondom kullandığı öğrenildi. Özgeçmişinde sigara kullanımı 8 paket/yıl ve demir eksikliği anemisi vardı. Ateş 36,2°, kan basıncı 124/78 mmHg, nabız 88 atım/dk/ritmik olarak değerlendirildi. Yapılan fizik muayenesinde; genitoüriner sistem muayenesinde suprapubik hassasiyeti vardı. Diğer sistem muayeneleri doğaldı. Hasta sistit tanısı düşünülerek fosfomisin 3gr 1x1 başlandı. Hastanın halsizlik şikayeti nedeniyle kan ve idrar tetkiki istendi. Periyodik sağlık muayenesi kapsamında HPV testi alındı ve hasta kontrole çağırıldı. Hastanın tetkik sonuçlarında; idrar tahlilinde lökosit 3+, kan tahlilinde Hemoglobin:9 RDW:17,9 Ferritin:2,7 Vitamin b12:174 ölçüldü. Hastanın kontrol randevusunda idrarda yanma şikayetleri geçmişti. Hastaya demir eksikliği anemisi tanısı konularak demir preparatı başlandı, vitamin b12 eksikliği açısından da tedavisi başlandı 3 ay sonra takip randevusu planlandı. HPV tip 18 pozitif gelen hasta ASM'ye davet edilerek sonucu anlatıldı. Eşi ile korunmasız cinsel ilişkide bulunmaması gerektiği belirtildi ve HPV aşıları planlandı. Hastaya Kanser Teşhis Merkezi ile iletişime geçilerek randevu oluşturuldu. Sonraki takiplerinde altı ay ara ile iki kere kolposkopi yapılan hastanın, ikinci kolposkopi sonucu Düşük dereceli skuamöz intraepitelyal lezyon (LSIL) olarak geldiği öğrenildi. Hastanın takipleri yakından izlenmektedir.
Sonuç:
Bu olgu, idrar yaparken yanma şikayeti ile gelen hastanın akut semptomları yönetilirken başvurusunun fırsata çevrilerek koruyucu sağlık hizmeti sunulması, çekirdek yeterliliklerimizden kapsamlı yaklaşıma güzel bir örnektir.

Anahtar Kelimeler: Akut Sistit, Human Papilloma Virüs, Kapsamlı Yaklaşım

PP-005: Early Diagnosis of Neurofibromatosis Type1(NF1) Initiated by a Cafe-au-lait Macule: The Vital Role of Primary Care Physicians

Feride Topcu[1], Çiğdem Akaydın[2]
[1]Denizli Ramazan Çelikkol Family Medicine Center
[2]Denizli Şht Jand. Uzm. Çvş. Burhan Acar Family Medicine Center

Introduction: Neurofibromatosis Type 1 (NF1) is a rare, autosomal dominant, multisystemic genetic disorder. Diagnosis is typically established by the presence of multiple clinical features. However, in this case, early diagnosis was achieved thanks to the vigilance and clinical intuition demonstrated by the family physician in a patient presenting with only a single cutaneous lesion. This report aims to share the diagnostic journey that began with a sole café-au-lait macule and led to the NF1 diagnosis.

Case: A healthy girl infant, aged 6-9 months, was evaluated during a routine check-up and was noted to have a non-elevated, light brown skin lesion, approximately 2×1 cm, located on the left flank region. This finding, clinically suggestive of a café-au-lait macule, was deemed suspicious due to its location and appearance. There was no similar family history. Following a neurological examination in tertiary center, brain MRI, genetic counseling, and other systemic evaluations, the patient was diagnosed with NF1 based on NIH criteria. During follow-up, the patient developed additional café-au-lait macules within 2-3 years.

Conclusion: The patient was referred to a secondary care physician, who then referred her to a tertiary center due to the progression of the skin findings. Following a neurological examination, brain MRI, genetic counseling, and other systemic evaluations, the patient was diagnosed with NF1 based on NIH criteria. NF1 diagnosis typically requires criteria such as ≥ 6 café-au-lait macules, cutaneous neurofibromas, Lisch nodules, and/or a positive family history. However, in this case, the factor that prompted the physician's suspicion while the patient still had only **a single lesion** was the lesion's **localization, color, and the careful attention derived from clinical experience.** This case strongly highlights the **critical role of primary care physicians** and the importance of **clinical intuition** in the early detection of rare diseases. Furthermore, the effective follow-up through the referral chain in such cases ensured an accurate and timely diagnosis. This case, demonstrating that even an apparently innocuous finding like a **single café-au-lait macule** should not be ignored, underscores the value of **early awareness, clinical suspicion, and intuition** in the diagnosis of rare disorders. **Family physicians** can contribute significantly to the diagnostic process not only with systematic knowledge but also with their **observational power and experience**.

Keywords: Café-au-lait, Neurofibromatosis Type 1, Primary Care, Early Diagnosis, Clinical Suspicion

Cafe-au -lait

ORAL PRESENTATION

SS-01: Fonksiyonel Üriner İnkontinansın Prevalansı ve Yaşlı Kadınlarda Ayrıntılı Geriatrik Değerlendirme Parametreleri ile İlişkisi

Elif Meşeci[1], Pınar Soysal[2], İrem Tanrıverdi[2], Satı Betül Beydilli[3], Özge Pasin[4], Andre Hajek[5], Masoud Rahmati[6], Lee Smith[7]

[1]Acıbadem Kozyatağı Hastanesi, Kadın Hastalıkları ve Doğum Kliniği, İstanbul
[2]Bezmialem Vakıf Üniversitesi Hastanesi, Geriatri Ana Bilim Dalı, İstanbul
[3]Bezmialem Vakıf Üniversitesi Hastanesi, İç Hastalıkları Anabilim Dalı, İstanbul
[4]Sağlık Bilimleri Üniversitesi, Biyoistatistik Anabilim Dalı, Hamidiye Tıp Fakültesi,İstanbul
[5]Hamburg Sağlık Ekonomisi Merkezi, Sağlık Ekonomisi ve Sağlık Hizmetleri Araştırmaları Anabilim Dalı, Hamburg-Eppendorf Üniversite Tıp Merkezi,Hamburg, Almanya
[6] CEReSS – Sağlık Hizmeti Araştırmaları ve Yaşam Kalitesi Merkezi, Marsilya Üniversite Hastaneleri (Assistance Publique–Hôpitaux de Marseille), Aix-Marseille Üniversitesi, Marsilya, Fransa.
[7]Anglia Ruskin Üniversitesi, Sağlık Performansı ve İyi Oluş Merkezi, Cambridge, Birleşik Krallık;, Biruni Üniversitesi, Halk Sağlığı Anabilim Dalı, Tıp Fakültesi, İstanbul

Amaç: Bu çalışmanın amacı, fonksiyonel üriner inkontinansın (FÜİ) prevalansını ve diğer inkontinans tipleriyle karşılaştırmalı sıklığını incelemektir. Ayrıca, bu çalışmada FÜİ'nin yaşlı kadınlarda önemli geriatrik değerlendirme parametreleri ile ilişkisi de araştırılmıştır.

Yöntem: Kesitsel olarak planlanan çalışmaya, bir geriatri polikliniğinden 65 yaş üzeri kadınlar dâhil edilmiştir. Üriner inkontinans (Üİ) alt tipleri, katılımcıların International Consultation on Incontinence Questionnaire–Urinary Incontinence Short Form anketine verdikleri yanıtlara göre sınıflandırılmıştır. FÜİ, tuvalete ulaşma veya kullanma konusunda fiziksel ya da bilişsel kısıtlılıklar nedeniyle istemsiz idrar kaçırma olarak tanımlanmıştır. Üİ alt tipleri (sıkışma, fonksiyonel, stres, miks) ile ayrıntılı geriatrik değerlendirme parametreleri arasındaki ilişkiler belirlenmiştir.

Bulgular: Çalışmaya 1628 katılımcı (ortalama yaş 79,6 ± 8,2 yıl) dâhil edilmiştir. Prevalans oranları şu şekilde bulunmuştur: Kontrol grubu (kontinans sorunu olmayan) (%37,2), sıkışma Üİ (%31,9), Stres Üİ (%4,6), FÜİ (%7,6), Sıkışma Üİ + Stres Üİ (%12,3), Sıkışma Üİ + FÜİ (%4,9) ve Stres Üİ + FÜİ (%1,5). Multinominal lojistik regresyon analizinde, Barthel Temel Günlük Yaşam Aktiviteleri skorları tüm Üİ tiplerinde düşük bulunmuştur ($p<0,05$). FÜİ'li hastalarda, diğer Üİ alt tiplerine kıyasla Mini Nütrisyonel Değerlendirme (Mini Nutritional Assessment) skorları, Tinetti denge ve yürüme skorları ile el kavrama kuvveti skorları anlamlı olarak daha düşükken; Timed Up and Go süreleri ve yaş ise daha yüksek bulunmuştur ($p<0,05$).

Sonuç: FÜİ, artmış fonksiyonel bağımlılık, beslenme bozukluğu, azalmış kas gücü ve bozulmuş denge-yürüme fonksiyonları gibi çeşitli geriatrik durumlarla ilişkilidir. Bu nedenle, yaşlı kadınlarda inkontinans değerlendirmesi yapılırken yalnızca Sıkışma Üİ veya Stres Üİ üzerine odaklanmak yerine, FÜİ'nin de farkında olunması önemlidir.

Anahtar Kelimeler: Ayrıntılı geriatrik değerlendirme, Üriner inkontinans, Yaşlı yetişkinler

SS-02: Assessment of Peripheral Arterial Disease Using the Ankle-Brachial Index in Patients With Cardiovascular Disease

Melike Arabacı[1], Tevfık Tanju Yılmazer[1], Ibrahim Susam[2], Kurtulus Ongel[1]
1. İzmir Tepecik Training and Research Hospital, Family Medicine Clinic, İzmir, Turkiye
2. İzmir Tepecik Training and Research Hospital, Department of Cardiology, İzmir, Turkiye

Abstract

Background: Peripheral arterial disease (PAD) is a manifestation of systemic atherosclerosis that significantly contributes to cardiovascular morbidity and mortality. The ankle–brachial index (ABI) is a simple, non-invasive, and cost-effective tool widely used to detect PAD.

Objective: This study aimed to determine the presence of PAD by measuring ABI in patients with established cardiovascular disease or at least one atherothrombotic risk factor.

Methods: Ninety-one patients hospitalized in the Coronary Care Unit of Tepecik Training and Research Hospital were evaluated between April 1 and May 1, 2012. Demographic characteristics, cardiovascular risk factors, and laboratory parameters were recorded. ABI measurements were performed using a portable Doppler ultrasound device. Data were analyzed using SPSS 16.0 with chi-square, ANOVA, and t-tests.

Results: Of the 91 participants, 27.5% were female and 72.5% male, with a mean age of 62.3 ± 14.1 years. The prevalence of PAD, defined as an ABI < 0.90, was 45.05%. Notably, 21.95% of patients with low ABI were previously unaware of any underlying disease.

Conclusion: A significantly higher prevalence of PAD was detected among patients with cardiovascular disease. ABI measurement is an important and practical method for identifying asymptomatic PAD and assessing atherosclerotic burden in clinical practice, especially in patients with cardiovascular risk factors.

Introduction: Peripheral arterial disease (PAD) is a chronic or acute condition affecting arteries that supply blood from the aorta to the peripheral tissues (1). It typically involves vessels other than the coronary, aortic arch, or cerebral arteries. Because it spans a wide age range and carries a high morbidity rate, PAD represents a major public health problem. As PAD is a consequence of systemic atherosclerosis, the risk factors contributing to its development are largely the same as those associated with atherosclerotic disease. Accordingly, the presence of PAD serves as an indicator of atherosclerosis in other vascular territories as well (2). Up to 90% of patients with mild PAD may remain asymptomatic, making diagnosis based solely on clinical findings difficult. The ankle–brachial index (ABI) provides a simple, non-invasive, and cost-effective diagnostic tool for PAD and is widely recognized as the preferred initial screening method (3). Detecting PAD, especially in primary care, is crucial because many cases are subclinical or atypical. Conventional physical examination alone lacks sufficient sensitivity and specificity.
Therefore, the present study aimed to investigate the presence of PAD using ABI measurements in patients with known cardiovascular disease or at least one risk factor for atherothrombosis.

Method: Most clinicians still rely on the history and the presence of classical claudication symptoms as the gold standard for diagnosing peripheral arterial disease (PAD). However, this approach often leads to underdiagnosis, as many PAD patients remain asymptomatic. The ankle–brachial index (ABI) remains the most practical and reliable non-invasive diagnostic tool for PAD. ABI measurement is a simple procedure performed while the patient rests in a supine position (Figure 1). The method involves calculating the ratio of systolic blood pressure in each leg to that in the arms. Systolic pressures are obtained using a portable Doppler ultrasound device, allowing detection of arterial flow signals.

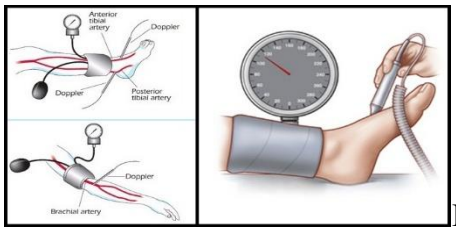

Figure 1. Illustration of arteries used for ABI measurement, including brachial and lower limb arteries, with patient in supine position.

ABI values ≥ 1.30 are considered non-conclusive, values between 0.91–1.30 are normal, 0.90–0.41 indicate mild PAD, and < 0.40 reflect severe PAD. The sensitivity and specificity of ABI for PAD diagnosis are approximately 95% and 99%, respectively (4).

This descriptive, cross-sectional, non-interventional study was conducted between April 1 and May 1, 2012, in the Coronary Care Unit of Tepecik Education and Research Hospital in İzmir, Türkiye. All patients hospitalized during the study period were screened for eligibility. The target was to include all consecutive patients admitted to the unit, given that they represent a population with at least one cardiovascular risk factor.

Exclusion criteria included lack of patient consent, unsuitability for Doppler ultrasonographic examination due to clinical condition, or absence of laboratory data.

A total of 91 patients met the inclusion criteria and were enrolled in the study. Data collection was performed by the same researcher using a structured questionnaire and portable Doppler device to ensure procedural consistency. The questionnaire included:

- Demographic characteristics
- Presence of comorbid diseases associated with PAD
- Family history of cardiovascular or vascular disease
- Smoking and alcohol use
- Current treatment protocols

Relevant laboratory data were also recorded. ABI measurements were performed using a standard sphygmomanometer. Systolic blood pressures of the right and left brachial arteries, as well as the dorsalis pedis and posterior tibial arteries, were measured using a portable Doppler probe instead of a stethoscope. The highest systolic pressures obtained from the lower limbs were divided by the highest systolic pressure from the arms to calculate ABI values for each leg. Data were analyzed using SPSS version 16.0 (SPSS Inc., Chicago, IL, USA). Chi-square, and t-tests were applied to compare group means and assess relationships among categorical variables.

Results:The study included 91 patients, comprising 25 females (27.5%) and 66 males (72.5%). The mean age of participants was 62.3 ± 14.1 years (range: 21–85). Female participants had a mean age of 65.8 ± 14.6 years (range: 35–84), while males had a mean age of 61 ± 13.7 years (range: 21–85). Hypertension, diabetes mellitus, and heart disease were present in 48.4%, 31.9%, and 48.4% of patients, respectively (Table 1). Anthropometric measurements including weight, height, and BMI are summarized in Table 2. ABI results of the study population are presented in Table 3. According to the ABI measurements, 45.05% of patients had values ≤ 0.90, indicating PAD. Notably, 21.95% of patients with low ABI were previously unaware of any underlying disease. Laboratory parameters potentially associated with PAD are summarized in Table 4.

Overall, these findings indicate a high prevalence of PAD in this patient population, particularly among individuals with established cardiovascular disease or at least one cardiovascular risk factor.

Table 1. Sociodemographic characteristics, comorbidities, and risk factors associated with PAD.

Personal data		N	%
Sex	Male	66	72.5
	Female	25	27.5
Age	20-39	6	6.5
	40-59	30	32.9
	60-79	47	51.6
	80≤	8	8.7
Occupation	Retired	33	36.3
	House wife	19	20.9
	Teacher	3	3.2
	Worker	20	21.9
	Misc.	16	17.5
Alcohol consumption	Never	46	50.5
	Actively	14	15.4
	Quit	31	34.1
Cigarette consumption	Never	29	31.9
	Actively	18	19.8
	Quit	44	48.4
Familial coronary disease	Positive	39	42.9
	Negative	52	57.1
Familial peripheric arterial disese	Positive	7	7.7
	Negative	84	92.3

Table 2. Anthropometric measurements of participants (weight, height, BMI) and corresponding p-values.

		Mean	Minimum	Maximum	P
Weight	Male	79.5±12.2	50	116	0.365
	Female	72.9±13.9	56	100	
	Whole group	78.2±12.8	50	116	
Height	Male	170.9±6.3	157	185	0.191
	Female	165.3±8	155	177	
	Whole group	170.2±6.8	155	185	
BMI	Male	27.4±3.5	20.9	37	0.285
	Female	26±3.9	2020	33.8	
	Whole group	27.2±3.6		37	

Table 3. Ankle–brachial index results of the study population.

ABI intervals		Right		Left		Mean	
		N	%	N	%	N	%
1.30≤ABI	Male	13	19.6	11	17	12	18
	Female	0	0	1	4	0	0
	Whole group	13	14.9	12	14	12	15
1.0≤ABI≤1.29	Male	21	31.8	29	44	22	33
	Female	10	40	10	40	9	36
	Whole group	31	35.6	39	45	31	38
0.91≤ABI≤0.99	Male	6	9.09	3	4.5	9	14
	Female	3	12	1	4	4	16
	Whole group	9	10.3	5	5.8	12	15
0.41≤ABI≤0.90	Male	25	37.8	18	27	18	27
	Female	9	36	12	48	8	32
	Whole group	34	39	30	35	27	33
0.40≥ABI	Male	0	0	1	1.5	0	0
	Female	0	0	0	0	0	0
	Whole group	0	0	1	1.1	0	0
Total		87	100	86	100	82	100

Table 4. Mean values of selected biochemical parameters potentially related to PAD.

Parameters	Mean	Minimum	maximum	Reference interval
Blood glucose	131.3±70.2	50	475	74-106 mg/dL
Total Cholesterol	183.9±45.8	95	325	110-199 mg/dL
Trigliserid	154.6±98.7	47	608	30-199 mg/dL
HDL	37.6±11.5	10	66	40-85 mg/dL
LDL	115.4±37.3	49	241	62-129 mg/dL

Discussion: Peripheral arterial disease (PAD) is primarily a manifestation of systemic atherosclerosis, and its presence reflects atherosclerotic involvement in other vascular beds (6). Early detection of PAD is essential, as many patients remain asymptomatic until advanced stages. High ABI values (≥1.3) have been shown to possess high sensitivity and specificity, making them valuable for PAD diagnosis. Patients with ABI ≥1.3 should be carefully evaluated for underlying PAD (3). The prevalence of PAD in the general older population ranges from 20% to 30% (7). A study conducted in Turkey reported a PAD prevalence of 19.8% among older adults (8). In contrast, our study found a PAD prevalence of 45.05%, which is considerably higher. This difference likely reflects the fact that our study population comprised patients with at least one cardiovascular risk factor, highlighting the importance of targeted screening in high-risk populations.

Our findings underscore the utility of ABI measurement as a simple, non-invasive tool for identifying both symptomatic and asymptomatic PAD. Moreover, ABI can serve as an indicator of overall cardiovascular risk, assisting clinicians in risk stratification and management of patients with cardiovascular disease. We also observed significant associations between chronic diseases and PAD. However, due to the potential presence of multiple comorbidities in individual patients, further research is required to clarify the relationship between PAD and other, less apparent risk factors.

In conclusion, this study demonstrates a high prevalence of low ABI among patients with cardiovascular disease and emphasizes the importance of routine ABI screening, particularly in high-risk populations. Early detection of PAD can facilitate timely intervention and improve overall cardiovascular outcomes.

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SS-03: Bir Üniversite Hastanesinde Aile Hekimliği Polikliniğine Başvuran Hastaların Geleneksel ve Tamamlayıcı Tıp Tutumları ve Ortoreksiya Nervoza Düzeyleri ile İlişkisi (TR)

Bahar Ürün Ünal, Sevim Çınar
Selçuk Üniversitesi Tıp Fakültesi Aile Hekimliği Ana Bilim Dalı, Konya

Giriş-Amaç: Ortoreksiya nervoza, bireyin yaşam kalitesini olumsuz etkileyen, sağlıklı beslenmeye yönelik aşırı takıntının olduğu bir yeme bozukluğudur. Geleneksel ve tamamlayıcı tıp (GETAT) uygulamaları ise sağlık arayışında olan kişiler arasında giderek popülerleşmektedir. Çalışmamızın amacı, aile hekimliği polikliniğine başvuran hastalarda ortoreksiya nervoza düzeyleri ile GETAT tutumları arasındaki ilişkiyi incelemektir.

Yöntem: Çalışmaya 15.04.2025-15.07.2025 tarihleri arasında Selçuk Üniversitesi Tıp Fakültesi Aile Hekimliği Polikliniğine başvuran ve çalışmaya katılmaya gönüllü olan 260 hasta dahil edilmiştir. Gönüllülere sosyodemografik veri formu, GETAT tutum ölçeği ve ORTO-11 ölçeği uygulanmıştır. Elde edilen verilerin analizinde SPSS programı kullanılmıştır. Çalışma Selçuk Üniversitesi yerel etik kurulu tarafından onaylanmıştır. (Onay numarası: 2025/196)

Bulgular: Katılımcıların %63,8'i kadın (n = 166), ortalama yaş 32,36 ± 12,4 ve %92,5 oranında lise ve üzeri kademelerden mezundu (n=240). Katılımcıların %76,5'i şehir merkezinde yaşıyordu (n=199), %46,9'u çalışıyordu (n=122) ve %30'u öğrenciydi (n=78). Katılımcıların %23,5'inde en az bir kronik hastalık bulunuyordu (n=61). Katılımcıların %73,5'i (n=165) GETAT bilgi düzeylerinin yeterli olmadığını belirtirtti. Katılımcıların en çok bilgi sahibi olduğu uygulamalar ise %74,2 kupaterapi (n=193), %53,1 hirudoterapi (n=138) ve %51,2 fitoterapiydi (n=133). Katılımcıların %43,5'i daha önce en az bir GETAT uygulamasına başvurduğunu bildirdi (n=113). En sık %28,1 kupaterapi (n=73) ve %17,7 fitoterapi (n=46) uygulamalarına başvurulmuştu. Yapılan analizler sonucunda GETAT uygulamalarına başvuru ile GETAT tutum ölçeği toplam puanı arasında pozitif yönde ($r=0.269$; $p<0.01$); ORTO-11 toplam puanı ile negatif yönde anlamlı korelasyon tespit edilmiştir ($r=-0.143$; $p=0.021$). Ayrıca GETAT tutum ölçeği toplam puanı ile ORTO-11 toplam puanı arasında da negatif yönde anlamlı korelasyon tespit edilmiştir ($r=-0.247$; $p<0.01$).

Tartışma ve Sonuç: Çalışmamız, ortoreksiya nervoza eğilimi arttıkça GETAT uygulamalarına yönelik olumlu tutumun arttığını göstermektedir. Ayrıca GETAT uygulamalarına başvuru ile ORTO-11 toplam puanları arasındaki negatif korelasyon ortoreksiya nervoza eğilimindeki bireylerin daha fazla GETAT uygulamalarına başvurduğunu göstermektedir. Bulgular, sağlıklı beslenme takıntısının bireyleri modern tıp dışı yöntemlere yönlendirebileceğini düşündürmektedir. Bu ilişkiyi daha iyi açıklayacak araştırmalara ihtiyaç duyulmaktadır.

Anahtar Kelimeler: Beslenme, GETAT, Ortoreksiya

SS-04: 50-70 Yaş Arasındaki Bireylerin Kolorektal Kanser Taraması Konusunda Bilgi, Tutum Ve Davranışlarının Değerlendirilmesi (TR)

Bahar Ürün Ünal, Burcu Gök Erdoğan, Emine Nur Onaran Uluırmak
Selçuk Üniversitesi Tıp Fakültesi, Aile Hekimliği Ana Bilim Dalı, Konya

Amaç: Bu çalışma ile 50-70 yaş arasındaki bireyleri çalışmaya dahil ederek kolorektal kanser risk faktörleri, semptomları ve tarama yöntemleri hakkında bilgi ve farkındalık düzeylerini saptamak ve bu konudaki tutum ve davranışlarını etkileyen faktörleri incelemek amaçlanmaktadır.

Yöntem: Selçuk Üniversitesi Tıp Fakültesi Hastanesi Aile Hekimliği polikliniğine herhangi bir sebeple başvuran 50-70 yaş arası bireylere 29 soruluk anket ve 16 soruluk tutum inanç ölçeği formu uygulandı. Randomizasyon yapılmaksızın çalışmaya dahil olma kriterlerine uyan ve gönüllü onam formunu imzalayarak çalışmaya katılmayı kabul eden hastalar çalışmaya dahil edildi. Toplam 600 hasta ile başlatılan çalışmada dahil edilme kriterleri esas alındığında 514 kişi ile anketler yüz yüze görüşme tekniği kullanılarak tamamlandı.

Bulgular: Katılımcıların yaş ortalaması 59.7 ± 6.7 idi ve %58.8'i (n=302) kadındı. Katılımcıların %84.8'i (n=436) KRK'lerin tarama testleri ile önlenebileceğini belirtti. Fakat tarama testlerini bilme oranı %13.6 (n=70) olarak tespit edildi. Katılımcıların KKTTİ ölçekleri puan durumu incelendiğinde ortalama puanın toplamda 56.2 ± 8.4 olduğu tespit edildi. Akrabalarında KRK tanısı olanlarda toplam puan ve duyarlılık algısı alt boyutu ortalama puanı, olmayanlardan anlamlı yüksek saptandı. GGK yaptıranların; KKTTİ ölçeği toplam puanı yaptırmayanlardan yüksek saptandı.

Sonuç: Kolorektal kanser taraması hakkında bilgi düzeyi düşük tespit edilmiştir. Tarama testlerinin erken teşhis için önemi düşünüldüğünde özellikle birinci basamak sağlık hizmeti veren sağlık profesyonellerinin halkı tarama testleri hakkında bilgilendirmesi ve tarama testlerine katılmalarını teşvik etmesi gerekmektedir.

Anahtar Kelimeler: Gaitada gizli kan testi, Kolonoskopi, Kolorektal kanser, Tarama, Tutum inanç ölçeği

SS-05: Asistan hekimlerin Yaşlı Hastalarda Düşme Risk Faktörleri Hakkındaki Bilgi Düzeylerinin Değerlendirilmesi (TR)

Bahar Ürün Ünal, Mustafa Enes Tunçez, Gökçe Tunçez
Selçuk Üniversitesi Tıp Fakültesi, Aile Hekimliği Ana Bilim Dalı, Konya

Amaç: Yaşlı bireylerde düşme ve düşmelere bağlı komplikasyonlar önemli halk sağlığı sorunları arasındadır. Bu çalışmada Selçuk Üniversitesi Tıp Fakültesi'nde eğitim gören Aile Hekimliği, Fizik Tedavi ve Rehabilitasyon, Nöroloji, Ortopedi asistan hekimlerinin yaşlı hastalarda düşme, düşme risk faktörleri ve düşmeye bağlı oluşan sağlık problemleri hakkında bilgi düzeyinin değerlendirilmesi amaçlanmaktadır.

Yöntem: Kesitsel ve tanımlayıcı olan çalışma Ekim 2023 – Haziran 2024 tarihleri arasında Selçuk Üniversitesi Tıp Fakültesi Aile Hekimliği, Fizik Tedavi ve Rehabilitasyon (FTR), Nöroloji, Ortopedi'de çalışan 150 asistan hekimden 148 asistan hekiminde (%98,6) yürütülmüştür. Veriler literatür taranarak araştırmacılar tarafından hazırlanan sosyodemografik özellikleri, düşme, düşme risk faktörleri ve düşmeye bağlı oluşan sağlık problemleri konusunda 19 soru içeren anket formu ile toplanmıştır. Selçuk Üniversitesi Tıp Fakültesi Etik Kurul onayı alınmıştır (karar no:2023/435) (onay tarihi: 26.09.2023).

Bulgular: Araştırmaya katılan 148 asistanın %89,9 (n=133)'si 25-35 yaş, %6,1 (n=9)'ü 30-35 yaş, %4,1 (n=6)'sı 35-51 yaş aralığında olduğu belirlenmiştir. Katılımcıların %62,8 (n=93)'i erkek, %37,2 (n=55)'si kadın olduğu saptanmıştır. Katılımcılardan %36,5 (n=54)'i Aile Hekimliği, %24,3 (n=36)'ü Nöroloji, %18,9 (n=28)'u FTR, %20,3 (n=30)'ü Ortopedi A.B.D.'da eğitim aldığını belirtmiştir. 'Yaşlı bireylerin günün hangi saatinde daha fazla düştüğü' sorusuna Nöroloji asistanlarının bilgi düzeyinde diğer asistanların bilgi düzeyine kıyasla anlamlılık saptanmıştır (p=0.021).

Sonuç: Bu çalışmanın sonucunda asistan hekimlerin çalıştıkları bölümlere göre düşme ve düşme risk faktörleriyle ilgili farklı konularda farklı bilgi düzeyine sahip olduğu görülmüştür. Çalışmamızda düşme risk faktörlerinin bilinirlik düzeylerinin değiştiği görülmüştür. Geriatrik toplumda düşmenin önlenmesi mortalite oranlarını düşürecektir. Düşme ve düşme risk faktörlerinin hekimler tarafından dikkate alınması önemli bir halk sağlığı sorununu çözebilecektir.

Anahtar Kelimeler: Yaşlı, düşme, asistan hekim

SS-06: From Algorithms to Autonomy: The Journey of Artificial Intelligence in Medicine — Facts, Breakthrough Cases, and the Future of Healthcare Innovation

Onur Dika, Jovan Stamboliev
Ss. Cyril and Methodius University – Clinic of Gynecology and Obstetrics, Skopje

Background: Artificial intelligence (AI) has emerged as one of the most transformative forces in modern medicine. Although the first medical AI systems were developed in the 1970s, limited computational power, insufficient data, and low clinical trust hindered their widespread adoption. In recent years, advances in deep learning, big data, and computational capacity have transformed AI from an experimental tool into clinically validated systems, now effectively used in diagnostics, treatment planning, and patient monitoring.

Objective: The aim of this presentation is to provide a comprehensive, evidence-based overview of the historical evolution of AI in medicine, its current applications, groundbreaking case examples, and future perspectives.

Methods: A literature review was conducted covering the years 1972–2025, including analyses from MEDLINE, PubMed, WHO reports, and leading AI-healthcare research studies. Selection criteria included clinically validated AI systems with proven diagnostic or therapeutic impact.

Results: The adoption of AI in medicine has accelerated dramatically in the past decade. Notable applications include:
• Medical Imaging: DeepMind's retinal disease detection system achieved diagnostic accuracy comparable to expert ophthalmologists.
• Oncology: AI-assisted mammography reduced false-positive rates by up to 9.4% in multi-center trials.
• Clinical Documentation: Natural Language Processing (NLP)-based systems have decreased physicians' documentation workload by 30–50%.
• Personalized Medicine: AI-driven genomic analysis plays a crucial role in selecting targeted cancer therapies.
However, challenges persist, including data bias, algorithmic transparency, ethical concerns, and regulatory barriers.

Conclusion: AI in medicine has evolved from rule-based expert systems to deep learning–driven clinical tools that are increasingly integrated into diagnostic and decision-making processes. The future points toward autonomous, real-time, and predictive healthcare systems. Yet, sustained progress requires interdisciplinary collaboration, ethical governance, and active physician engagement to ensure that AI strengthens — rather than replaces — the human dimension of medicine.

Keywords: Artificial intelligence, healthcare innovation, digital health, machine learning, clinical decision support

SS-07: Characteristics of stroke patients before and during the COVID-19 pandemic in the Tetova region, North Macedonia

Naim Skenderi[1], Vesna Velikj Stefanovska[2], Beti Zafirova Ivanovska[2], Arta Hiseni Skenderi[3], Nevzat Elezi[3]
[1]Mediterranean and Black Sea Programme in Intervention Epidemiology Training (MediPIET), European Centre for Disease Prevention and Control (ECDC), Stockholm, Sweden
[2]Ss. Cyril and Methodius University in Skopje, North Macedonia
[3]University of Tetova, North Macedonia

Background: The COVID-19 pandemic disrupted healthcare systems and influenced care-seeking behavior, potentially affecting hospital admissions for noncommunicable diseases, including stroke. We aimed to assess and compare characteristics of hospitalized stroke patients in the Tetova region of North Macedonia before and during the COVID-19 pandemic.

Methods: We analyzed clinical and administrative data on stroke patients admitted to Tetovo Clinical Hospital from 2017 to 2022. We categorized the data into pre-pandemic (2017–2019) and pandemic (2020–2022) periods. We examined distributions by age group (<65, 65–74, 75+ years), sex, and stroke type (ischemic or haemorrhagic). We used Fisher's exact test to assess differences and calculated the mean and standard deviation of length of hospital stay. We also recorded the number of patients tested for SARS-CoV-2 using RT-PCR.

Results: We included 1,417 stroke patients: 852 before and 565 during the pandemic. The most affected age group was 75+ years, comprising 46.7% of cases before and 54.3% during the pandemic. Age (p=0.091) and sex distribution (57% vs. 56% male; p=0.7) were similar. The proportion of patients admitted with ischemic stroke decreased from 85% to 78% during the pandemic (p=0.003). The average hospital stay decreased from 5.9 ± 2.8 to 4.7 ± 2.5 days. Of the patients admitted during the pandemic, 30 were tested for SARS-CoV-2; 14 tested positive.

Conclusion: Stroke hospitalizations declined during the pandemic. Among admitted patients, the ratio of ischemic to haemorrhagic stroke decreased during the pandemic, reflecting a shift in stroke type distribution. These trends may have been influenced by changes in healthcare access or admission practices. Limited SARS-CoV-2 testing restricted interpretation of co-infection impact. Strengthening surveillance and ensuring continuity of stroke care during public health emergencies remains essential.

Keywords: Pandemic impact, Hospitalization trends, Noncommunicable disease surveillance

SS-08: Yeni Tanı Metabolik Sendrom: Olgu Sunumu (TR)

Serhat Erdoğmuş, Tuğçe Selenay Ergen, Esra Meltem Koç
İzmir Katip Çelebi Üniversitesi Tıp Fakültesi, Anabilim Dalı

Amaç: Aile Hekimliği polikliniğinde yeni tanı alan metabolik sendrom hastasına yaklaşım ve hastanın yönetimi ile ilgili güncel literatürün sunulması amaçlanmıştır.

Olgu: 58 yaş erkek hasta polikliniğimize halsizlik, yorgunluk, son 3 aydır ağızda kuruluk hissi, sık idrara çıkma şikayetleri ile başvurdu. Özgeçmişinde kronik hastalık öyküsü olmayan olgunun sigara/alkol kullanımı, operasyon yoktu. Allerji öyküsü saptanmadı. Soygeçmişinde babasında hipertansiyon tanısı mevcuttu.
Fizik muayenede; Kan basıncı: Sağ kol 130/85 mmHg, Sol kol:135/80 mmHg, nabız: 75 atım/dk ve ritmik, vücut sıcaklığı: 36,5 °C, solunum sayısı: 16/dk, antropometrik ölçümler: boy: 175 cm, bel çevresi: 109 cm, vücut ağırlığı: 91 kg, VKİ: 29 kg/m² idi. Sistemik muayenesinde patolojik bulgu saptanmadı. En son 1 yıl önce tetkik yaptıran hastadan kan tahlilleri alındı. EKG'sinde ve TİT'de patolojik bulgu saptanmadı. İdrar Albümin/Kreatinin: 9,7 mg/g'dı. Anamnez, fizik muayene ve laboratuvar sonuçlarına (Tablo 1 ve Tablo 2) göre Tip 2 DM, hiperlipidemi ve metabolik sendrom tanıları alan olguya Rosuvastatin 5 mg 1x1, Metformin 1000 mg 2x1 tedavisi başlandı.
Hiperlipidemi, diyabet için yaşam tarzı değişiklikleri önerildi. Hastaya karbonhidrat ağırlıklı beslenme yerine düşük glisemik indeksli gıdalar, tam tahıllı besinler, yağsız protein kaynakları ve liften zengin besinler tüketmesi, doymuş yağlardan uzak durması gerektiği anlatılarak profesyonel destek için diyetisyene yönlendirildi. Hastanın egzersiz ve diyet önerilerini kapsayan yaşam tarzı değişikliklerine devamı önerildi. %5-10 kg kaybı önerildi. Haftada en az 150 dk ve en az 3 gün tempolu yürüyüş gibi orta şiddette aerobik egzersiz önerildi. Hasta 1 ay sonra statin tedavisi ve yan etkileri açısından kontrole çağrıldı. Diyabet tedavi yanıtı ve glisemik kontrol açısından 3 ay sonra kontrole çağırıldı. Hastaya evde kan şekeri takibi önerildi. Diyabet komplikasyonları açısından ilgili branşlardan randevuları oluşturuldu.

Tartışma ve Sonuç: Metabolik sendrom ile birlikte seyreden T2DM olgularında erken tanı, risk faktörlerinin bütüncül yönetimi ve düzenli takip, mortalite ve morbiditenin azaltılmasında kritik öneme sahiptir. Bu tür hastalarda multidisipliner yaklaşım, komplikasyonların önlenmesinde anahtar rol oynamaktadır.

Anahtar Kelimeler: Metabolik sendrom, aile hekimliği, bütüncül yaklaşım

Hemogram sonucu

Tablo 1: Hemogram sonucu

PARAMETRE	SONUÇ	BİRİM	NORMAL DEĞERLER
WBC	6.22	10^9/L	4-10
HGB	14.7	g/dL	11-15
HCT	39.2	%	35-47
RDW	12.8	%	11-15
PLT	340	10^9/L	150-400
RBC	4.20	10^{12}/L	3.5-5
MCV	92.4	fL	80-94

Tablo 2: Biyokimya sonuçları

Tablo 2: Biyokimya Sonuçları			
PARAMETRE	**SONUÇ**	**BİRİM**	**NORMAL DEĞERLER**
AKŞ	**133**	mg/dL	70-105
HbA1C	**6.9**	%	4.5-5.7
BUN	18	mg/dL	8-21
eGFR	91	ml/dak/1.73m^2	
Kreatinin	0.8	mg/dL	0.5-1.1
Na	138	mmol/L	135-146
K	4.4	mmol/L	3.5-5.5
Mg	1.9	mg/dL	1.8-2.6
Ca	10.3	mg/dL	8.5-10.5
ALT	31	U/L	0-35
AST	26	U/L	0-35
Total Kolesterol	**240**	mg/dL	130-200
HDL Kolesterol	**55**	mg/Dl	50-80
Non-HDL Kol.	**190**	mg/dL	<130
LDL Kolesterol	**141**	mg/dL	70-100
Trigliserid	**230**	mg/dL	50-150
Serum Demir (Fe)	140	ug/dL	60-170
TDBK	180	ug/dL	150-450
Ferritin	40	ug/dL	11-300
Vitamin B12	390	ng/dL	120-500
Folat	6.1	ug/dL	4-19
Kreatin Kinaz (CK)	98 U/L	39 - 308 U/L	Kreatin Kinaz (CK)
TSH	2.1	mU/L	0.35-5.30
Serbest T4	0.98	ng/dL	0.54-1.24
CRP	2	mg/L	0-5

SS-09: A Newly Diagnosed Case of Metabolic Syndrome in a Family Health Center: Case Report

Göksu TEHCİ DELATİOGLU[1], Fatma Sümeyra YALCİN[1], Serhat ERDOGMUS[1]
[1]Izmir Kâtip Çelebi University Faculty of Medicine, Department of Family Medicine

Introduction: Metabolic syndrome is defined as the coexistence of abdominal obesity, hyperglycemia, hypertension, elevated triglycerides, and low HDL cholesterol levels, developing on the basis of insulin resistance.

Case Presentation: A 44-year-old female patient with no known chronic disease presented with complaints of fatigue and weakness for the last five months, and dry mouth, persistent hunger, and postprandial sleepiness for the last three months. The patient reported frequent urination during the day and at night, without dysuria or pain. Her medical history revealed gestational diabetes mellitus. She denied smoking or alcohol use. Her waist circumference was 94 cm. A detailed medical history was obtained. Her last blood tests were one year ago. Regarding cancer screening, she had a Pap smear one year earlier. She was advised to perform monthly breast self-examinations between the 3rd–5th days of menstruation, to undergo annual clinical breast examinations, and biennial mammography. Her latest mammography (external center): BIRADS 1 (normal findings). She was sexually active and using an intrauterine device (IUD) for contraception. Vaccination history: Influenza vaccine administered; tetanus vaccination completed with 5 doses; HPV (Gardasil) vaccine completed with 3 doses.

Laboratory results: Fasting blood glucose: 133 mg/dL, HbA1c: 6.9%, Total cholesterol: 240 mg/dL, HDL: 55 mg/dL, LDL: 141 mg/dL, Triglycerides: 240 mg/dL

Diagnoses: Diabetes Mellitus (DM), Hyperlipidemia, and Metabolic Syndrome.

Treatment:

- For **LDL: 141 mg/dL**, *Rosuvastatin 5 mg once daily* (Colnar 5 mg) was prescribed.
- For **HbA1c: 6.9%**, *Metformin 1000 mg twice daily* (Glifor 1000 mg) was initiated, with stepwise dose escalation explained.
- Due to **iron deficiency**, *Ferrous sulfate 100 mg once daily* (Ferro Sanol Duodenal) was started, to be taken on an empty stomach in the morning.
- The patient was advised on lifestyle modifications for diabetes and hyperlipidemia, including adopting a low-glycemic index diet, consuming whole grains, lean proteins, and fiber-rich foods, and avoiding saturated fats. She was referred to a dietitian for professional nutritional counseling. Weight loss of 10% of body weight was recommended. Advised to perform moderate-intensity aerobic exercise (e.g., brisk walking) for at least 150 minutes per week, spread over ≥3 days. Follow-up visits were scheduled: 1 month later for statin therapy and side effects, and 3 months later for glycemic control evaluation. Home blood glucose monitoring was recommended. The patient was referred to ophthalmology for diabetic retinopathy screening. Peripheral neuropathy was not reported, but future assessments were planned. The patient was informed about diabetes complications, foot care, and preventive measures for diabetic foot.

Discussion: Metabolic syndrome is an important risk factor for diabetes, hypertension, and cardiovascular diseases. The primary care (family medicine) setting is the most effective level for early diagnosis and prevention. Routine evaluation of waist circumference, blood pressure, blood glucose, and lipid levels enables early detection of the syndrome. Lifestyle modifications (diet, exercise, weight management, smoking cessation) can be initiated effectively in primary care. Early intervention can prevent the development of type 2 diabetes and cardiovascular diseases, reducing healthcare costs. Moreover, education and awareness activities conducted in primary care contribute significantly to improving overall community health.

Keywords: Insulin Resistance, Metabolic Syndrome, Obesity

SS-10: Yara bakımda evde bakım ve palyatif bakımın entegrasyonunun önemi: Olgu sunumu (TR)

Fatma Sümeyra Yalçın[1], Hasan Öztin[2], Göksu Tehçi Delatioğlu[1], Serhat Erdoğmuş[1]
[1]İzmir Katip Çelebi Üniversitesi Tıp Fakültesi, Anabilim Dalı
[2]İzmir Atatürk Eğitim ve Araştırma Hastanesi Hatay Ek Bina Palyatif Bakım Servisi

Amaç: Halsizlik, beslenmede azalma, genel durumda bozulma, kuyruk sokumunda yara şikayetleriyle başvuran 72 yaşında kadın hastanın sunulması amaçlanmıştır.
Olgu: Son birkaç haftadır halsizlik, iştahsızlık, beslenmede azalma nedeniyle yakınları tarafından evde sağlığa başvurulan hastanın yaklaşık 2 ay önce volvulus nedeniyle opere olduğu, yoğun bakım yatış sonrası pnömoni nedeniyle bir süre göğüs hastalıkları servisinde takip edildiği, yaklaşık 1 aylık hastane takip sürecinden sonra, eve foley sonda ile taburcu edildiği, yoğun bakım yatışı sonrası sakral bölgede yara oluştuğu öğrenildi. Yara pansumanı yakınları tarafından haftada birkaç kez yapılan hastanın son 3 ayda yaklaşık 3-4 kg kilo kaybettiği öğrenildi. Sakral bölgede düzensiz sınırlı, akıntılı, kötü kokulu, yer yer sarı fibrinli görünümde, yaklaşık 10x4 cm boyutunda evre 3 basınç yarası saptandı (Braden skoru:10). NRS-2003 skoru: 3 saptandı. Laboratuar değerleri: Hb: 9,8 g/dL, Hct: %29, MCV: 75 fL, RDW: %16,3, Albümin: 26 g/L, serum demir: 19 µg/dL, TDBK: 453 µg/dL saptandı. İYE tanısıyla siprofloksasin 500 mg 2x1 başlandı, idrar sondası değiştirildi. Hastanın oral alımını desteklemek amacıyla diyabetik oral beslenme ürünü başlandı (25-35 kkal/kg/gün). Yara iyileşmesini destelemek için arginin (7 gr), glutamin (7 gr), HMB (ß-hidroksi-ß-metilbutirat)(1,5 gr) içeren bir ürün 2x1 dozunda başlandı. Basınç yarası pansumanları yapılarak palyatif bakım servisinde yer organizasyonu yapılarak servise yatışı yapıldı. Servis takipleri sonrası hastanın yarası %90 oranında iyileşti. Haliyle serviste takip edilmektedir.
Tartışma ve Sonuç: Aile hekimleri öncelikle birinci basamak olmak üzere sağlık sisteminin her aşamasında görev yapmaktadırlar. Evde bakım hizmetleri ile palyatif bakım birimlerinin organize çalışması sonrası alınabilecek pozitif sonuçlara iyi bir örnek olan vakamız birinci basamakta hastanın koordinasyonunun iyi yapıldığının göstergesidir.
Anahtar Kelimeler: Yara bakım, aile hekimliği, evde sağlık, palyatif bakım

Basınç_yarası_tedavi_öncesi

Tedavi_sonrası_basınç_yarasının_durumu

Basıç_yarası_VAC_uygulama_sonrası_ilk_görüntü

SS-11: Climate Change Impacts on Primary Health Care: A 2020–2025 Thematic Review

Spec. Dr. Nafiye Ebru Terzi, MD. Küçükçekmece No. 18 Family Health Center, Istanbul, Türkiye

Abstract

Climate change has emerged as a global crisis that directly and indirectly shapes population health and places increasing pressure on primary health care systems. This study aims to synthesize systematic reviews published between 2020 and 2025 that examine the relationship between climate change and primary health care, providing a thematic overview of current evidence, shared findings, and existing gaps in the literature. Eighteen systematic reviews identified through a comprehensive PubMed search were analyzed using qualitative content analysis. Findings were grouped into four major themes based on conceptual patterns: adaptive capacity and health system response, climate-sensitive infectious diseases, air pollution and respiratory health, and mental health impacts.

Across themes, most studies focused on system-level preparedness, risk recognition, monitoring mechanisms, and policy integration, revealing substantial limitations in these areas. Reviews addressing climate-sensitive infectious diseases highlighted shifts in the geographic distribution of arboviruses, waterborne pathogens, and zoonotic diseases in parallel with climatic variability. Studies on air pollution emphasized the effects of $PM_{2.5}$ exposure and pollutants such as NO_2 and SO_2 on maternal, fetal, and respiratory health, demonstrating that environmental inequities disproportionately affect low- and middle-income countries. Reviews focusing on mental health underscored the layered psychosocial risks faced by vulnerable groups—including women, children, and socioeconomically disadvantaged communities—due to extreme weather events, environmental uncertainty, and structural stressors.

The thematic synthesis also revealed notable regional imbalances: evidence is primarily concentrated in Africa and Europe, while regions such as the Middle East and South Asia remain underrepresented. Moreover, structured intervention models and practical frameworks tailored specifically to primary care settings were found to be scarce. There is limited research on integrating environmental data into family medicine workflows, and few studies have assessed health workers' knowledge, readiness, and adaptive capacities.

Overall, this study provides a comprehensive thematic evaluation of systematic reviews addressing the intersection of climate change and primary health care. The findings highlight three key priorities for strengthening climate resilience at the primary care level: (1) developing and regularly updating local and regional risk profiles, (2) integrating environmental health data into decision-making processes, and (3) reinforcing preventive, early-detection, and risk-communication strategies for high-risk populations. By synthesizing recent evidence into a structured thematic framework, this study offers an original contribution to the literature and presents a useful reference for policymakers, family physicians, and primary health care administrators seeking to enhance climate adaptation across health systems.

Keywords: *Climate Change; Primary Health Care; Public Health*

SS-12: Degenerative Rheumatic Diseases Among the Elderly - Epidemiology

Maja Boskovic[1], Nada Boskovic[2]
[1]Health Care Center Nis, Serbia
[2]Faculty of Medicine, University of Nis, Serbia

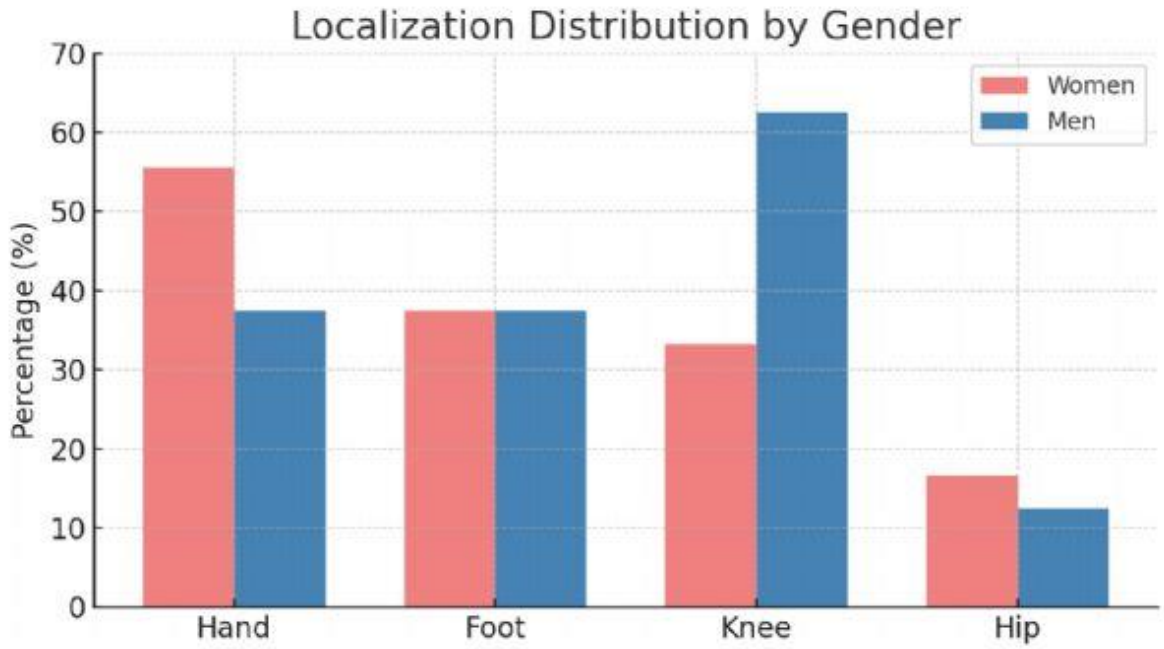
Aims: This study aimed to evaluate the prevalence of degenerative rheumatic diseases in elderly patients over 65 years old of the Health Care Centre in Nis.

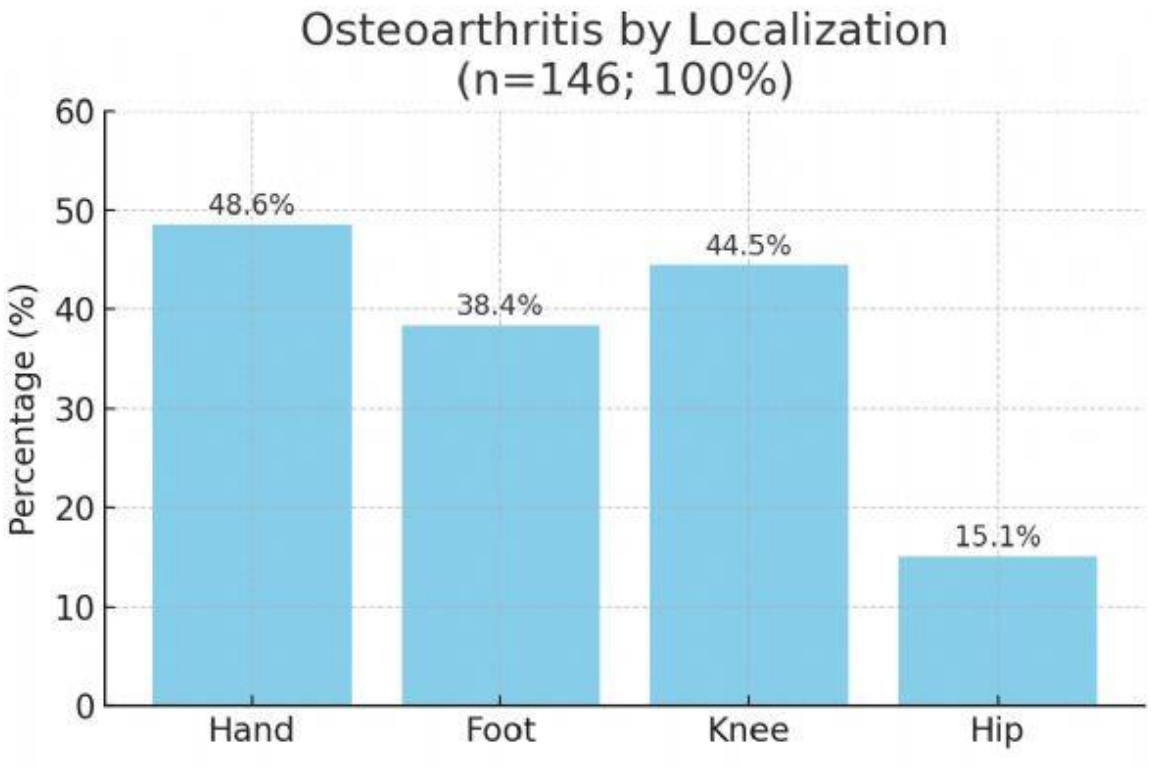
Methods: The analysis included 150 patients older than 65 with active health insurance.

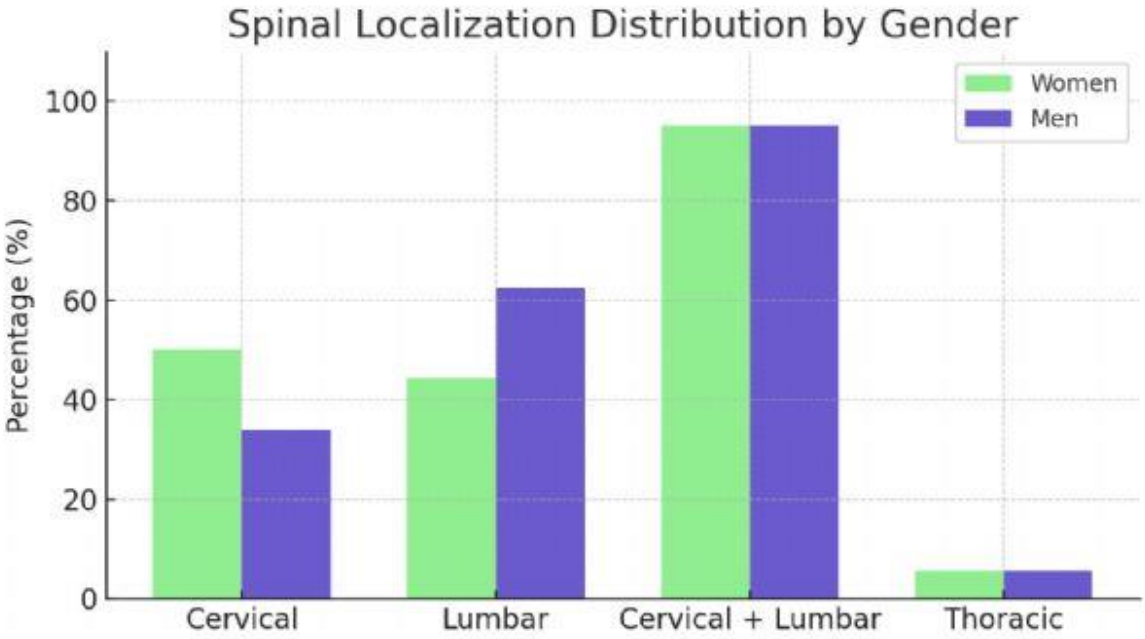
Results: Among all the patients, the greatest percentage is of those with degenerative diseases of joints and spinal joints. Among the female patients, the most frequent are the degenerative diseases of hand joints 55%, foot joints 38,8%, knee 33,3% and hip-joint 16,6%. Among the male patients, the most frequent are the degenerative diseases of knee 62%, followed by hand and foot joints 37,5% and hip-joints 12,5%. As far as spinal degenerative diseases are concerned, the most frequent are those found on the cervical and lumbar part of spine.

Conclusion: Degenerative rheumatic diseases primarily affect specific joints, unlike inflammatory rheumatic diseases, which involve systemic manifestations. These conditions represent a significant healthcare challenge due to the reduction in joint mobility and function, especially when major joints are affected, which can lead to severe structural damage and disability.

Keywords: degenerative rheumatic diseases, elderly, epidemiology, prevalence




Osteoarthritis by Localization
(n=146; 100%)
Percentage (%)
0
10
20
30
40
50
60
48.6%
38.4%
44.5%
15.1%
Hand
Foot
Knee
Hip


Spinal Localization Distribution by Gender
Women
Men
Percentage (%)
0
20
40
60
80
100
Cervical
Lumbar
Cervical + Lumbar
Thoracic

SS-13: Parasitic Infections in Children with Chronic Abdominal Pain: A Retrospective Study from a Pediatric Outpatient Clinic

Zeliha Haytoglu[1], Gamze Erdoganoglu[2]
[1]Cukurova University, Department of Pediatrics, Adana, Türkiye
[2]Adana City Training and Research Hospital, Family Medicine Clinic, Adana, Türkiye

Introduction: Chronic abdominal pain (CAP) is a frequent complaint in pediatric outpatient clinics and may have functional or organic causes. Parasitic infections remain a significant and often overlooked etiology, especially in developing countries. Early identification and treatment can prevent unnecessary investigations and prolonged discomfort.

Materials and Methods: This retrospective study evaluated children aged 5 to 15 years who presented to a pediatric outpatient clinic with CAP between January 2021 and December 2023. CAP was defined as abdominal pain persisting for more than two months without evidence of acute pathology. Stool samples (up to 3 per patient) were examined microscopically for parasites and tested using antigen detection assays (especially for Giardia lamblia). Clinical features including symptom duration, stool characteristics, weight loss, appetite changes, and eosinophilia were recorded.

Results: A total of 162 patients were included (median age 9.1 years; 87 females, 75 males). Parasitic infections were identified in 39 cases (24.1%). The most common parasites were Giardia lamblia (n=22, 13.6%), Entamoeba histolytica/dispar (n=9, 5.6%), and Blastocystis hominis (n=8, 4.9%). Among infected patients:Weight loss was reported in 64.1% (n=25) vs. 31.6% in non-infected ($p<0.01$). Mucous stools in 71.8% vs. 28.3% ($p<0.001$). Appetite loss in 59% vs. 26% ($p<0.01$). Eosinophilia (>500/mm³) in 38.5% vs. 8.2% ($p<0.01$). Post-treatment follow-up showed symptom resolution in 89.7% of parasitized children.

Discussion: Parasitic infections are a significant, treatable cause of CAP. Routine stool studies, including antigen tests, should be considered in endemic regions. Clinical markers such as weight loss, eosinophilia, and mucous stools may help guide testing.

Conclusion: Parasitic infections were detected in nearly one-fourth of children with CAP. Incorporating parasitological evaluation in the diagnostic work-up can facilitate targeted therapy and reduce the burden of unnecessary investigations.

Keywords: Blastocystis hominis, Chronic abdominal pain, Entamoeba histolytica, Giardia intestinalis, Parasitic infections

Table 1.Demographic and Clinical Summary of Children with Chronic Abdominal Pain and Parasitic Infections

Parameter	Value
Total patients evaluated	162
Median age (years)	9.1
Gender (F/M)	87/75
Patients with parasitic infection	39 (24.1%)
Giardia lamblia	22 (13.6%)
Entamoeba histolytica/dispar	9 (5.6%)
Blastocystis hominis	8 (4.9%)
Weight loss in infected (%)	64.1%
Weight loss in non-infected (%)	31.6% ($p<0.01$)
Mucous stools in infected (%)	71.8%
Mucous stools in non-infected (%)	28.3% ($p<0.001$)
Appetite loss in nfected (%)	59%
Appetite loss in non-infected (%)	26% ($p<0.01$)
Eosinophilia in infected (%)	38.5%
Eosinophilia in non-infected (%)	8.2% ($p<0.01$)
Symptom resolution after treatment in infected (%)	89.7%

SS-14: Differential Diagnosis of Complicated and Uncomplicated Infections in Children with Frequent Upper Respiratory Tract Infections and Family Approaches

Gamze Erdoganoglu[1], Zeliha Haytoğlu[2]
[1]Adana City Training and Research Hospital, Family Medicine Clinic
[2]Cukurova University, Faculty of Medicine, Department of Pediatrics

Aim: Upper respiratory tract infections (URTIs) are among the most common reasons for pediatric outpatient visits. During the preschool years, experiencing 8–10 episodes annually may be considered physiologically normal. However, in some children, infections may occur more frequently and follow a complicated course. This study aims to evaluate the underlying causes and family approaches by classifying children who present with frequent URTIs into complicated and uncomplicated groups.
Materials and Methods: A total of 830 children who presented with frequent URTI complaints between 2022 and 2024 were retrospectively reviewed. Based on clinical course, laboratory findings, and comorbidities, children were classified as "complicated" (n = 166) or "uncomplicated" (n = 664). Risk factors and the use of complementary products by families were also assessed.
Results: In the uncomplicated group, no pathology was found in 60% of cases, while 36% had a history of atopy. In the complicated group, primary immunodeficiency (most commonly selective IgA deficiency) was identified in 50%, and chronic diseases (such as cystic fibrosis and congenital heart disease) in 40%. Daycare attendance and passive smoking exposure were common in both groups. Notably, 51% of families reported using complementary products such as vitamin C, zinc, and echinacea.
Discussion: Findings indicate that most children presenting with frequent URTIs are healthy, with high infection exposure being a key factor. In children with complicated infections, underlying immune deficiencies and chronic diseases play a significant role. Many families use supplements without medical guidance, although the efficacy of such products lacks evidence. This highlights the need to improve family health literacy.
Conclusion: The majority of children with frequent URTIs are otherwise healthy and experience high environmental exposure. However, children with a history of complications should be carefully evaluated for immune deficiencies and chronic illnesses. Unnecessary testing should be avoided, and families should receive evidence-based guidance.
Keywords: Complicated URTI, Immune system evaluation, Preventive healthcare services. Upper respiratory tract infection

Table 1. Underlying Causes and Risk Factors in Children with Frequent URTIs

Underlying Cause / Risk Factor	Uncomplicated URTI (n = 664)	Complicated URTI (n = 166)
No pathology detected (Healthy)	400 (60%)	16 (10%)
Allergy / Atopic constitution (e.g., allergic rhinitis, asthma)	240 (36%)	0 (0%)
Primary immunodeficiency (PID	4 (<1%)	83 (50%)
Secondary immunodeficiency	0	5 (3%)
Chronic diseases (e.g., CF, congenital heart disease)	5 (1%)	66 (40%)
Adenoid hypertrophy	10 (1.5%)	20 (12%)
Gastroesophageal reflux	12 (1.8%)	8 (5%)
Daycare / School attendance	450 (68%)	80 (48%)
Passive smoke exposure	400 (60%)	67 (40%)
Nutritional problems (malnutrition, anemia)	33 (5%)	25 (15%)

SS-15: Examination of The Knowledge Levels And Attitudes of Family Physicians and Family Health Care Workers About Herpes Zoster Vaccines: Izmir Example

Berat Yılmaz, Hüseyin Can
İzmir Katip Celebi University, Faculty of Medicine, Department of Family Medicine

Aim: This study aimed to investigate the knowledge levels and attitudes of family physicians and family health workers working in the province of Izmir regarding herpes zoster vaccines.

Methods: A total of 305 family physicians and 301 family health workers working in the province of Izmir were included in our cross-sectional study. At the beginning of the survey, participants were informed about the study and gave their consent online. As the data collection tool, a 33-item questionnaire titled "Exemination of the Knowledge Levels and Attitudes of Family Health Workers About Herpes Zoster Vaccines", developed by the researchers in line with the relevant literature, was administered online. The study commenced after obtaining approval from the ethics committee and securing the necessary permissions from the Izmir Provincial Health Directorate.

Results: Of the 606 participants in our study, 190 (31.4%) were male and 416 (68.6%) were female. The mean age was 43.74 ± 10.096 years. Participants were evaluated based on the number of correct responses they provided to the knowledge-based questions in the "Exemination of the Knowledge Levels and Attitudes of Family Physicians and Family Health Workers About Herpes Zoster Vaccines." Statistically significant differences in knowledge levels were observed according to gender, profession, age, duration of work in family medicine practice, workplace setting, history of herpes zoster infection, and participation in training related to zoster vaccines. However, no significant difference was found between knowledge level and overall duration of professional experience.

Conclusion: Increasing adult vaccination rates plays a key role in achieving healthy aging by preventing infectious diseases and reducing their associated complications, particularly in conjunction with childhood vaccines that lose efficacy with age. In our study, healthcare professionals were found to have low levels of knowledge and unfavorable attitudes regarding the herpes zoster vaccine. Specifically, critical information such as vaccine types, indications, administration intervals, target age groups, contraindications, and efficacy rates was often

incomplete or inaccurately known. The majority of primary care providers participating in our study reported that they do not routinely recommend herpes zoster vaccines to their patients. Another notable finding was the low proportion of participants who were aware of the recombinant zoster vaccine. This insufficient knowledge and negative attitude constitute a significant barrier to the widespread implementation of herpes zoster vaccination in the general population.

Keywords: Herpes zoster, shingles, knowledge level, primary care

SS-16: Factors Affecting Pneumococcal and Influenza Vaccination Prevalence Among the Elderly Population in Turkiye

Ilgin Timarci[1], Kaan Sozmen[1], Huseyin Can[2]
[1]Izmir Katip Celebi University Faculty of Medicine, Department of Public Health, Izmir
[2]Izmir Katip Celebi University Faculty of Medicine, Department of Family Medicine, Izmir

Introduction: In Turkiye, the percentage of the population aged 65 and over increased from 8.0% in 2014 to 10.6% in 2024. The World Health Organization recommends pneumococcal and influenza vaccination for the elderly population. This study aimed to determine the sociodemographic factors affecting pneumococcal and influenza vaccination status among the population aged 65 and over in Turkiye.
Methods: This cross-sectional study utilized the dataset from the 2023 Turkiye Elderly Profile Survey conducted by the Turkish Statistical Institute across Turkiye. Information collected from 11,657 individuals aged 65 and over was used as the research sample. Possible factors affecting pneumococcal and influenza vaccination status were evaluated using binary group analyses and multiple logistic regression analysis.
Results: The influenza and pneumococcal vaccination prevalences among participants were determined to be 19.4% (n=2266) and 3.6% (n=420), respectively (Table 1). In the logistic regression analysis, factors positively affecting influenza and pneumococcal vaccination status were as follows being in the 70-75 age group, having a university degree or higher education level, having social insurance, visited a dentist in the last year, being fully independent on the Lawton scale, preferring family medicine at the first visit. Other factors positively affecting influenza vaccination status were found to be having a chronic disease, being ex-smoker, and being in the top income group (Tables 2 and 3).
Conclusion: This study demonstrates that influenza and pneumococcal vaccination coverage is low among individuals aged 65 and older. Vaccination prevalence is higher among individuals with chronic diseases. This difference may be attributable to routine vaccination recommendations during clinical follow-ups and more frequent contact with the healthcare system. Consequently, a primary care-focused immunization strategy has the potential to reduce preventable morbidity and mortality by increasing vaccination coverage among the elderly.
Keywords: Geriatrics, Immunization, Primary health care

Table 1. Descriptive Characteristics of Participants

Variables	*n*	%	Variables	*n*	%
Gender			**Social Insurance**		
Male	5232	44.9%	Yes	10046	86.2%
Female	6425	55.1%	No	1611	13.8%
Age (years)			**Home Care Support**		
65-70	4412	37.8%	Yes	279	2.4%
70-75	3108	26.7%	No	11378	97.6%
≥75	4137	35.5%	**Influenza Vaccination**		
Education			Yes	2266	19.4%
High school or lower	10732	92.1%	No	9391	80.6%
University or higher	925	7.9%	**Pneumococcal Vaccination**		
Marital Status			Yes	420	3.6%
Married	7490	64.3%	No	11237	96.4%
Widowed	3704	31.8%	**Chronic Disease**		
Divorced	326	2.8%	Yes	9184	78.8%
Other/Single	137	1.2%	No	2473	21.2%
Working Status			**Katz ADL**		
Working	1298	11.1%	Dependent	2649	22.7%
Not working	5865	50.3%	Independent	9008	77.3%
Retired	4494	38.6%	**Lawton IADL**		
Household Size			Dependent	8162	70.0%
<5	10465	89.8%	Independent	3495	30.0%
≥5	1192	10.2%	**Region**		
BMI			West	4813	41.3%
Normal/Underweight	3751	32.2%	South	1247	10.7%
Overweight/Obese	7906	67.8%	Middle	1807	15.5%
Smoking			North	1851	15.9%
Yes	1545	13.3%	East	1939	16.6%
Ex-smoker	2479	21.3%	**Health Institution (First Admission)**		
No	7633	65.5%	University	277	2.4%
Alcohol			City hospital	291	2.5%
Yes	1327	11.4%	Public hospital	5464	46.9%
No	10330	88.6%	Private hospital	509	4.4%
			Family doctor	5116	43.9%

ADL: Activities of Daily Living, IADL: Instrumental Activities of Daily Living, BMI: Body Mass Index

Table 2. Results of the Logistic Regression Analysis of Factors Affecting Influenza Vaccination Status in the Elderly Population

		%95 Confidence Interval		
	Odds Ratio	Lower bound	Upper Bound	p
Influenza Vaccination				
Age (years)				
65-70	Ref.			
70-75	1.44	1.28	1.62	<0.001
≥75	1.44	1.28	1.62	<0.001
Chronic Disease				
No	Ref.			
Yes	1.60	1.40	1.82	<0.001
Alcohol				
No	Ref.			
Yes	1.53	1.32	1.77	<0.001
Social Insurance				
No	Ref.			
Yes	1.70	1.41	2.04	<0.001
Lawton IADL				
Dependent	Ref.			
Independent	1.31	1.18	1.46	<0.001
Smoking				
Yes	Ref.			
Ex-user	1.45	1.23	1.70	<0.001
No	1.02	0.88	1.19	0.771
Household Size				
≥5	Ref.			
<5	1.37	1.14	1.64	0.001
Visited a dentist in the last year				
No	Ref.			
Yes	1.15	1.04	1.28	0.008
Education				
High school or lower	Ref.			
University or higher	1.59	1.35	1.87	<0.001
Health Institution (First Admission)				
Public hospital	Ref.			
University	1.03	0.76	1.40	0.857
City hospital	1.22	0.91	1.63	0.190
Private hospital	1.20	0.96	1.50	0.105
Family doctor	1.20	1.09	1.33	<0.001
Region				
East	Ref.			
West	1.35	1.15	1.59	<0.001
South	1.67	1.37	2.04	<0.001
Middle	1.55	1.29	1.86	<0.001
North	1.12	0.93	1.36	0.242
Wealth quintiles				
1st	Ref.			
5th	1.25	1.06	1.47	0.009
Pseudo R^2=0.051				

IADL: Instrumental Activities of Daily Living

Table 3. Results of the Logistic Regression Analysis of Factors Affecting Pneumococcal Vaccination Status in the Elderly Population

		%95 Confidence Interval		
Pneumococcal Vaccination	**Odds Ratio**	**Lower bound**	**Upper Bound**	***p***
Age (years)				
65-70	Ref.			
70-75	1.58	1.23	2.03	<0.001
≥75	1.60	1.25	2.05	<0.001
Alcohol				
No	Ref.			
Yes	1.54	1.19	2.00	0.001
Social Insurance				
No	Ref.			
Yes	1.60	1.08	2.36	0.019
Lawton IADL				
Dependent	Ref.			
Independent	1.37	1.10	1.70	0.004
Visited a dentist in the last year				
No	Ref.			
Yes	1.33	1.08	1.64	0.008
Education				
High school or lower	Ref.			
University or higher	1.88	1.42	2.50	<0.001
Health Institution (First Admission)				
Public hospital	Ref.			
University	1.26	0.70	2.28	0.439
City hospital	1.11	0.59	2.07	0.755
Private hospital	1.28	0.83	1.98	0.267
Family doctor	1.30	1.05	1.61	0.016
Region				
East	Ref.			
West	1.99	1.37	2.89	<0.001
South	1.61	1.02	2.56	0.042
Middle	1.89	1.25	2.85	0.003
North	1.14	0.72	1.79	0.577
Pseudo R^2=0.04				

IADL: Instrumental Activities of Daily Living

SS-17: Obez Yaşlı Hastalarda Bozulmuş Nütrisyon Sıklığı ve İlişkili Faktörler (TR)

İrem Tanrıverdi[1], Pınar Soysal[1], Kerem Palotöz[2], Özge Pasin[3]
[1]Bezmialem Vakıf Üniversitesi Hastanesi Geriatri Ana Bilim Dalı
[2]Bezmialem Vakıf Üniversitesi Tıp Fakültesi
[3]Sağlık Bilimleri Üniversitesi Hamidiye Tıp Fakültesi Biyoistatistik Ana Bilim Dalı

Giriş: Bu çalışmanın amacı, yaşlı hastalarda bozulmuş nütrisyon ve obezitenin birlikte görülme durumunu ve bununla ilişkili faktörleri araştırmaktır.
Yöntem: Gözlemsel, kesitsel olarak planlanan bu çalışmaya, kapsamlı geriatrik değerlendirme uygulanan 1931 hasta dâhil edilmiştir. Vücut Kitle İndeksi (VKİ) >=30 olan hastalar obez olarak kabul edilmiştir. Hastaların beslenme durumu açısından, Mini Nütrisyonel Değerlendirme (MNA) skorunun 23,5 ve üzerinde olması "iyi beslenmiş", 23,5'in altında olması ise "bozulmuş nütrisyonel durum: malnütrisyon ya da malnütrisyon riski" olarak sınıflandırılmıştır.
Bulgular: Ortalama yaşı 79,78 ± 7,1 yıl olan 1931 hastanın 765'i (%39,6) obezdi. Katılımcıların 839'u (%43,5) iyi beslenmiş, 1092'sinde (%56,5) ise bozulmuş nütrisyon vardı. Obez yaşlı hastaların %47,2'sinde bozulmuş nutrisyonel durum saptandı. Obez yaşlılarda ileri yaş, kadın cinsiyet, diabetes mellitus, konjestif kalp yetmezliği, Parkinson hastalığı, osteoartrit, düşme, inkontinans, dinapeni (azalmış kas gücü varlığı) ve demans bozulmuş nutrisyonu olanlarda iyi beslenmiş olanlara göre daha fazlaydı ($p<0,05$). Ayrıca, glomerüler filtrasyon hızı, hbA1c, serum glukoz, hemoglobin ve B12 vitamini düzeyleri gruplar arasında anlamlı farklılık gösterdi ($p<0,05$). Lojistik regresyon analizinde yaş, cinsiyet ve gruplar arasındaki anlamlı farklılık gösteren komorbit hastalıklar için yapılan düzeltmelerin ardından; bozulmuş nütrisyonel durumu olan obez hastalarda fonksiyonelliği gösteren Barthel Günlük Yaşam Aktiviteleri İndeksi ve Lawton ve Brody Enstrümental Günlük Yaşam Aktiviteleri Ölçeği skorları ile denge-yürüme fonksiyonlarını gösteren Tinetti Performans skorları daha düşük bulundu ($p<0,05$). Buna karşılık, düşme sıklığı ve Geriatrik Depresyon Ölçeği-15 skorları ise daha yüksek saptandı ($p<0,05$).
Tartışma: Yaşlı hastalarda obezite ve bozulmuş nütrisyonel durumun birlikte görülmesi yaygındır. Obez yaşlı hastaların yaklaşık yarısında bozulmuş nütrisyonel durum mevcuttur. Bozulmuş nütrisyonel durum, azalmış fonksiyonel kapasite, denge ve yürüme bozukluğu, düşmeler ve depresif ruh hali ile ilişkilidir. Bu nedenle, yaşlı obez hastalarda beslenme durumunun taranması önerilmektedir.
Anahtar Kelimeler: Obezite, Bozulmuş nütrisyonel durum, Yetersiz beslenme, Yaşlı yetişkinler, Malnütrisyon riski

SS-18: Aile Hekimliği Uzmanlık Öğrencilerinin Sigara Bırakma Danışmanlığına İlişkin Bilgi Düzeyleri: Bir Eğitim Programının Etkisi (TR)

Ayşe Nur Topuz[1], Zeliha Yelda Özer[1], Hatice Kurdak[1], Bahadır Ergün[1], Ayşe Turan[2], Sevgi Özcan[1]
[1]Çukurova Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalı, Adana
[2]Seyhan Devlet Hastanesi, Adana

Amaç: Hastaları tütün kullanımı açısından taramak ve sigara içen tüm bireylere kısa süreli sigara bırakma müdahalesi sağlamak, maliyet etkinliği en yüksek klinik önleyici hizmetler arasındadır. Aile hekimlerinin tütün ve tütün ürünlerini bırakmaya yönelik yöntemleri bilmeleri, uygulamak üzere eğitim almaları önemlidir. Ancak ülkemizde Sağlık Bakanlığı'nın düzenlediği eğitim programlarına aile hekimliği araştırma görevlilerinin katılmalarında kısıtlılık yaşanmaktadır. Bu noktadan yola çıkılarak yapılandırılmış uzmanlık eğitimi programı içerisinde sigara bırakmaya yönelik kısa bir eğitim planlanmıştır. Bu çalışmanın amacı, bu kısa eğitimin, uzmanlık öğrencilerinin sigara bırakma danışmanlığına ilişkin bilgi düzeyine etkisini değerlendirmektir.
Gereç-Yöntem: Tek grup ön test-son test desenli araştırmaya, Çukurova Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalında uzmanlık eğitimine devam eden 66 araştırma görevlisi katıldı. Katılımcılara yapılandırılmış uzmanlık eğitim programı içerisinde Bakanlığın eğitimlerinde görev alan bir Göğüs Hastalıkları uzmanı tarafından üç saatlik teorik bir eğitim verildi. Eğitim öncesinde ve sonrasında katılımcıların sigara bırakma danışmanlığına ilişkin bilgi düzeylerini değerlendiren bir anket uygulandı.
Bulgular: Çalışmaya katılanların yaş ortalaması 31,68±7,31 olup, %56,1'i kadındı. Sigara kullanım oranı %18,2, eski kullanıcı oranı %4,5 idi. Katılımcıların sadece %10,6'sı daha önce sigara bırakma polikliniği deneyimi olduğunu ifade etti. Sigara bırakma danışmanlığı konusundaki bilgi düzeyini "biraz " şeklinde tanımlayanların oranı %69,7, "yeterli düzeyde " diyenlerin oranı ise %7,6 olarak saptandı. Buna karşın, katılımcıların %95,5'i sigara bırakma danışmanlığı eğitimi almak istediğini bildirdi. Eğitim öncesi ve sonrası bilgi düzeyini ölçmek amacıyla yapılan ön test-son test karşılaştırmasında, eğitim sonrası bilgi puanlarında istatistiksel olarak anlamlı bir artış gözlendi (ön test ortalaması=10,70±3,19; son test ortalaması=13,87±2,71; $t(60) = -6,203$; $p<0,001$).
Sonuç: Üç saatlik kısa bir eğitim programının uzmanlık öğrencilerinin bilgi düzeyini arttırmada etkili olduğu görüldü. Bu teorik eğitimin sigara bırakma polikniklerinde yapılacak rotasyonlarla desteklenmesi ve bu girişimlerin uzun dönem etkilerinin değerlendirilmesi önerilebilir.
Anahtar Kelimeler: Aile hekimliği, sigara bırakma, uzmanlık eğitimi, tütün kontrolü

SS-19: The Effectiveness of Acupuncture in the Management of Chronic Low Back Pain: A Theoretical Meta-Analysis Review

Duygu İlke Yıldırım, Kamile Marakoğlu
Department of Family Medicine, Selcuk University Medical Faculty, Konya, Turkiye.

Background: Chronic low back pain (CLBP) is a widespread condition affecting quality of life and productivity[1]. While conventional pharmacologic treatments often have limited efficacy and carry side effects, acupuncture has emerged as a complementary therapy with increasing clinical interest[2].
Objective: This study aims to evaluate the effectiveness of acupuncture in the treatment of chronic low back pain by theoretically reviewing and synthesizing data from recent meta-analyses and randomized controlled trials (RCTs)[3].
Methods: A systematic review of existing meta-analyses published between 2010 and 2024 was conducted using PubMed, Cochrane Library, and Scopus[4]. Only English-language studies involving adult populations, with chronic low back pain (>=3 months duration) and using acupuncture as a primary intervention, were included[5].
Results: Across multiple high-quality meta-analyses, acupuncture showed statistically significant improvements in pain intensity (measured by VAS or NPRS) and functional capacity (measured by ODI or RMDQ) compared to sham acupuncture and conventional care[6]. Most studies reported moderate to large effect sizes, especially in the short and medium term[7]. Adverse effects were rare and generally mild[8].
Conclusion: The theoretical meta-analysis suggests that acupuncture is a safe and effective intervention for managing chronic low back pain3. Future research should focus on identifying optimal treatment protocols, frequency, and long-term outcomes7.
Keywords: Acupuncture, Chronic low back pain, Meta-analysis, Complementary medicine, Pain management

Table 1

Study	Year	Number of RCTs	Main Findings
Vickers et al.	2012	29	Demonstrated that acupuncture produced statistically significant improvements in both pain relief and functional outcomes compared to sham acupuncture and no treatment. The authors concluded that the effects could not be solely explained by placebo[34].
Yuan et al.	2016	25	Reported moderate-quality evidence supporting the efficacy of acupuncture in pain reduction and disability improvement, particularly when used in conjunction with standard medical care (e.g., physiotherapy or medication)[35].
Zheng et al.	2021	33	Found consistent short-term benefits of acupuncture in reducing Visual Analog Scale (VAS) scores and improving Oswestry Disability Index (ODI) outcomes. Improvements were most evident within the first 3 months post-treatment[36].
Chou et al.	2023	17	Focused on broader health system outcomes and highlighted that acupuncture was linked to reduced opioid consumption, improved patient satisfaction, and lower treatment discontinuation rates[37].

SS-20: Nutritional Composition of Government Nursing Home Meals in North Macedonia (2014–2023): A Focus on Macronutrients and Salt Intake

Jansun Bukovetz[1], Martina Markova Juzevska[2], Marija Andonovska[3], Marjan Veljanovski[2], Zorica Ivanovska[2], Emilija Bogoevska[2], Marije Gjetaj Jakovski[4], Biljana Dzikovska[4], Arta Alili Ramadani[5], Blerta Shahini Azizi[5], Petar Ohanesjan[6], Igor Spiroski[7]
[1]Institute of Public Health of the Republic of North Macedonia, Department of Nutrition, Skopje, North Macedonia
[2]Center of Public Health of Bitola, Department of Hygiene, Bitola, Republic of North Macedonia
[3]Faculty of Dental Medicine, Ss. Cyril and Methodius University in Skopje, Skopje, Republic of North Macedonia
[4]Center of Public Health of Skopje, Department of Hygiene, Skopje, Republic of North Macedonia
[5]Center of Public Health of Kumanovo, Department of Hygiene, Kumanovo, Republic of North Macedonia
[6]Center of Public Health of Prilep, Department of Hygiene, Prilep, Republic of North Macedonia
[7]Faculty of Medicine, Ss. Cyril and Methodius University in Skopje, Skopje, Republic of North Macedonia

Objectives: Proper nutrition is essential for the health and functional capacity of institutionalized elderly populations. This study aimed to examine the nutritional quality of nursing home meals from 2014 to 2023 in North Macedonia.
Methods: As part of the National Annual Public Health Program, Centers of Public Health analyzed the macronutrient composition of menus provided to older adults, seniors, and disabled individuals in four government nursing homes located in Skopje, Bitola, Kumanovo, and Prilep, using digital nutritional assessment tools. The Institute of Public Health collected and analyzed the national data.
Results: The mean daily energy intake across facilities was 2063.7 kcal (range: 2012.8–2147.2 kcal), consistent with national recommendations for individuals with sedentary physical activity. Macronutrient distribution averaged 15.9% of energy from protein (82.3 g/day), 32.0% from fats (73.4 g/day), and 49.6% from carbohydrates (255.7 g/day), aligning with national guidelines. However, saturated fats accounted for 31.7% of total fat (23.3 g/day) and monosaccharides for 26.3% of total carbohydrates (67.2 g/day), both substantially exceeding the recommended maximum of 10% of total energy intake. Daily intake of fruits, vegetables, and legumes averaged 383.8 g, slightly below the World Health Organization (WHO) minimum recommendation of 400 g/day. Sodium intake, expressed as salt (NaCl), averaged 9.5 g/day—nearly twice the WHO upper limit of 5 g/day.
Conclusion: Although total energy and macronutrient intake generally meet recommended levels, nursing home meals in North Macedonia exhibit significant deviations from international dietary guidelines regarding saturated fat, monosaccharides, fruit and vegetable intake, and sodium levels. These nutritional imbalances pose potential long-term health risks for this vulnerable population. Ongoing monitoring using unified, modern assessment tools, alongside targeted dietary interventions, is crucial to improve institutional nutrition and promote healthy aging.

Keywords: macronutrients, NaCl, nursing home, nutritional quality

SS-21: Erişkin Popülasyonunda Glomerülonefrit Spektrumu ve Klinik Özellikler: Tek Merkezli 8 Yıllık Deneyim (TR)

Leyla KOÇ[1], Rukiye Kübra Kaynar[2]

[1] RTEÜ Eğitim ve Araştırma Hastanesi, İç Hastalıkları Ana Bilim Dalı, Nefroloji, Rize

[2] KTÜ Tıp Fakültesi, İç Hastalıkları Ana Bilim Dalı, Nefroloji Bilim Dalı, Trabzon

Amaç: Bu çalışmanın amacı, 2002-2010 yılları arasında erişkin hastalardan alınan doğal böbrek biyopsilerinde saptanan glomerülonefrit (GN) spektrumunu, biyopsi endikasyonlarını ve temel klinik özellikleri tanımlamaktır.

Yöntem: Bu retrospektif çalışmada, Karadeniz Teknik Üniversitesi Farabi Hastanesi'nde takip edilen erişkin hastaların klinik, laboratuvar ve histopatolojik verileri incelendi. Ultrason eşliğinde yapılan böbrek biyopsileri ışık mikroskopisi ve immünfloresan yöntemleri ile değerlendirildi; örnek yeterliliği ve komplikasyonlar kaydedildi. Histopatolojik tanılar primer ve sekonder glomerülonefritler ile diğer nefropatiler şeklinde sınıflandırıldı ve hastaların prognozu izlendi. Tüm tanılar ISN/RPS kriterlerine göre raporlandı ve çalışma etik kurul onayı ile yürütüldü.

Bulgular: Çalışmaya dahil edilen 113 hastanın %67,2'si erkekti ve yaş ortalaması 43,9±15,4 yıl olarak bulundu. Biyopsi endikasyonları en sık nefrotik sendrom (%43,4), nefrotik düzeyde olmayan proteinüri (%22,1), akut nefritik sendrom (%14,1), nefrotik düzeyde proteinüri (%13,3) ve açıklanamayan akut böbrek hasarı (%7,1) idi. Histopatolojik incelemelerde olguların %64,6'sı primer GN, %12,4'ü sekonder GN, %23'ü ise diğer patolojiler olarak sınıflandırıldı. Primer GN alt tipleri arasında FSGS, membranöz nefropati, membranoproliferatif GN ve IgA nefropatisi en sık görülenlerdi. Daha az sıklıkla mezangioproliferatif GN, minimal değişiklik hastalığı, post-streptokoksik GN, kronik GN, kresentik GN ve fokal proliferatif GN saptandı. Sekonder GN olguları ise amiloidoz, diyabetik nefropati, lupus nefriti ve myelom böbreği idi. Biyopsi sonrası komplikasyon oranı %7,1 olup, majör komplikasyon gözlenmedi.

Sonuç: Çalışma sonuçları, bölgemizde GN spektrumunda FSGS, membranöz nefropati, membranoproliferatif GN ve IgA nefropatisinin en sık görülen tipler olduğunu ortaya koymuştur. Biyopsi endikasyonları arasında nefrotik sendrom öne çıkmaktadır. Bu bulgular, merkezimizdeki GN epidemiyolojisine dair güncel bir perspektif sunmakta ve hasta yönetiminde tanısal yaklaşımların standardizasyonu ile proteinüri ve kan basıncı kontrolünün önemini vurgulamaktadır.

Tablo 1. Hastaların demografik, klinik ve renal biyopsi özellikleri

Değişken	**n = 113**	**%**
Yaş (yıl, ort±SS)	43.99±15.40	
Erkek	76	67.2
Kadın	37	32.8
Biyopsi endikasyonları		
Nefrotik sendrom	49	43.4
Nefrotik düzeyde olmayan proteinüri	25	22.1
Akut nefritik sendrom (fokal+diffüz)	16	14.1
Nefrotik düzeyde proteinüri	15	13.3
Açıklanamayan akut böbrek yetmezliği	8	7.1
Histopatoloji (majör gruplar)		
Primer GN	73	64.6
Sekonder GN	14	12.4
Diğer*	26	23.0
Primer GN alt tipleri		
FSGS	16	14.2
Membranöz nefropati (MGN)	16	14.2
Membranoproliferatif GN (MPGN)	10	8.8
IgA nefropatisi (IgAN)	9	8.0
Mezangioproliferatif GN (MezPGN)	9	8.0
Minimal değişiklik hastalığı (MDH)	4	3.5
Post-streptokoksik GN (PSGN)	4	3.5
Kronik GN (KrGN)	2	1.8
Kresentik GN	2	1.8
Fokal proliferatif GN	1	0.9
Sekonder GN alt tipleri		
Amiloidoz	7	6.2
Diyabetik nefropati	4	3.5
Lupus nefriti	2	1.8
Myelom böbreği	1	0.9

*Diğer: TİH, vasküler nefropatiler, YGS/SDBH, sınıflandırılamayan olgular.

SS-22: Kronik Hemodiyaliz Hastalarında Kırılganlığın Belirleyicileri: Malnütrisyon, İnflamasyon, Depresyon, Uyku Kalitesi ve Kognitif Disfonksiyon (TR)

Leyla Koç, Ekrem Kara
RTEÜ Eğitim ve Araştırma Hastanesi, İç Hastalıkları Ana Bilim Dalı, Nefroloji, Rize

Amaç: Kronik hemodiyaliz (HD) hastalarında kırılganlık (frailty) ile demografik, klinik, laboratuvar parametreleri, beslenme, uyku kalitesi, depresyon ve bilişsel fonksiyonların ilişkisini multifaktöriyel olarak değerlendirmeyi amaçladık.
Materyal-Metod: Kronik HD tedavisi alan toplam 57 hastanın katıldığı bu kesitsel çalışmaya, klinik olarak stabil 18 yaş üstü erişkin hastalar dahil edildi. Akut hastalık, major kardiyovasküler olay, aktif enfeksiyon ve malignite gibi durumlar dışlama kriterleri olarak belirlendi. Kırılganlık durumu "Frail Kırılganlık Ölçeği (FKÖ)" ile değerlendirildi. FKÖ skoruna göre hastalar üç gruba ayrıldı: 0 puan "Frail Değil" (n=13), 1-2 puan "Pre-Frail" (n=17) ve ≥3 puan "Frail" (n=27). Beslenme durumu Malnutrisyon-İnflamasyon Skoru (MIS), uyku kalitesi Pittsburgh Uyku Kalitesi İndeksi (PUKİ), depresyon düzeyi Beck Depresyon Ölçeği (BDÖ) ve bilişsel fonksiyonlar Mini Mental Durum Testi (MMSE) ile değerlendirildi. Demografik, klinik, laboratuvar parametreleri ve anket sonuçları karşılaştırıldı. MIS puanının yüksekliği malnütrisyon göstergesi, PUKİ ≥5 kötü uyku kalitesi, BDÖ ≥ 10 olması anlamlı depresif semptomlar, MMSE <10 ise ağır kognitif disfonksiyon olarak kabul edildi. Gruplar arası farklar Kruskal-Wallis testiyle, kırılganlık skoru ile değişkenler arası ilişkiler Spearman korelasyon analiziyle incelendi.
Bulgular: Tüm hastaların ortalama yaşı 64±13,3 yıl (Kadın/Erkek: 21/36), %38,6'sında diyabet mevcuttu. Sadece 13 hastada (%22,8) kırılganlık (frailty) skoru normal saptandı. Ortalama FKÖ skoru: 2,02±1,57, MIS: 7,3±4,6, PUKİ: 7,1±3,7 ve BDÖ: 11,6±8,8 puan olarak bulundu (Tablo 1). Gruplar arası karşılaştırmada (Tablo 2), Frail grupta yaş anlamlı derecede yüksek (p=0,020), diyabet prevalansı daha fazlaydı (p=0,041). Ayrıca Frail grupta prediyaliz üre, kreatinin, albümin ve potasyum düzeyleri anlamlı olarak daha düşük; ferritin ve CRP düzeyleri ise yüksek belirlendi (p<0,05). Anket sonuçlarında, Frail grupta MIS, PUKİ ve BDÖ'nün daha yüksek; MMSE skorunun ise daha düşük olduğu görüldü (p<0,05). Korelasyon analizi (Tablo 3), Frail skoru ile yaş, ferritin, CRP, MIS, PUKİ ve BDÖ arasında pozitif; üre, kreatinin, albümin, hemoglobin ve MMSE arasında ise negatif korelasyon olduğunu ortaya koydu.
Sonuç: Kronik HD hastalarında kırılganlık (frailty) sık karşılaşılan ve klinik açıdan önemli bir durumdur. Kırılganlık; ileri yaş, diyabet varlığı, malnütrisyon, inflamasyon, anemi, depresif belirtiler, uyku kalitesinde bozulma ve bilişsel fonksiyonlarda gerileme gibi çok sayıda patofizyolojik süreçle ilişkilidir. Bu çok boyutlu etkileşim, kırılgan HD hastalarının değerlendirilmesinde bütüncül bir yaklaşımın benimsenmesi ve frailty taramasının erken dönemde rutin klinik uygulamalara entegre edilmesi gerekliliğini vurgulamaktadır.

Anahtar kelimeler: Hemodiyaliz, kırılganlık (frailty), malnurisyon, depresyon, kognitif disfonksiyon, uyku kalitesi

Tablo 1. Tüm hastaların demografik, klinik, laboratuvar ve anket sonuçları

Parametre	**Tüm Hastalar (n= 57)**
Demografik	
Yaş (yıl)	64 ± 13,3
Cinsiyet (Kadın/Erkek)	21/36
Diyaliz yaşı (ay)	63,1 ± 77,9
Diyabet (n, %)	22 (%38,6)
Eğitim düzeyi (Okur yazar değil/İlkokul/ Ortaokul/Lise/Üniversite)	9 / 24 / 9 / 10 / 5
Gelir düzeyi (Düşük/Orta/Yüksek)	8 / 42 / 7
Antropometrik Ölçümler ve İnterdiyalitik Kilo Alımı	
Kuru ağırlık (kg)	72,4 ± 16,1
VKİ (kg/m^2)	26 ± 5,7
Ultrafiltrasyon (ml)	2615,7 ± 954
Hemodiyaliz Yeterliliği ve Damar Yolu	
spKt/V	1,36 ± 0,17
URR (%)	70,2 ± 6,6
Damar Yolu (Kateter / AVF / AVG)	25 / 31 / 1
Laboratuvar (Prediyaliz)	
Üre (mg/dL)	122,5 ± 44,1
Kreatinin (mg/dL)	7,6 ± 3
Ürik asit (mmol/L)	5,6 ± 1,2
Hemoglobin (g/dL)	11,2 ± 1,5
Albumin (g/L)	3,7 ± 0,4
Sodyum (mmol/L)	138 ± 3,1
Potasyum (meq/L)	4,9 ± 0,7
Kalsiyum (mg/dL)	8,7 ± 1,1
Fosfor (mg/dL)	5,6 ± 1,8
Parathormon (pg/mL)	481,7 ± 417,6
Transferrin Saturasyonu (%)	24,6 ± 11,6
Ferritin (ng/mL)	346,4 ± 289,7
Total Kolesterol (mmol/L)	166,3 ± 43,9
LDL (mmol/L)	99,5 ± 39,3
Trigliserid (mmol/L)	159,2 ± 113,3
CRP (mg/dL)	17,4 ± 19,2
Anket Sonuçları	
Malnutrisyon İnflamasyon Skoru (MIS)	7,3 ± 4,6 (1-18)
Pittsburgh Uyku Kalitesi İndeksi (PUKİ)	7,1 ± 3,7 (1-15)
Mini Mental Durum Testi (MMSE)	23,4 ± 5,7 (9-30)
Beck Depresyon Ölçeği (BDÖ)	11,6 ± 8,8 (0-57)
Frail Kırılganlık Ölçeği (FKÖ)	2,02 ± 1,57 (0-5)

Sonuçlar ortalama ± standart sapma olarak verilmiştir.

Tablo 2. Kırılganlık (Frailty) gruplarının demografik, klinik, laboratuvar ve anket sonuçları

Parametre	Frail Değil (n= 13)	Pre-Frail (n= 17)	Frail (n= 27)	P değeri
Demografik				
Yaş (yıl)	53,9±12,7	64,8±15,8	68,4±16,6	***0,020***
Cinsiyet (Kadın/Erkek)	3/10	6/11	12/15	0,418
Diyaliz yaşı (ay)	67,6±88,2	52±52,4	68,1±87,6	0,929
Diyabet (n, %)	4 (%30,7)	5 (%29,4)	13 (%48,1)	***0,041***
Eğitim düzeyi (Okur yazar değil/İlkokul/ Ortaokul/Lise/Üniversite)	0/7/0/4/2	3/7/2/3/2	6/10/7/3/1	0,206
Gelir düzeyi (Düşük/Orta/Yüksek)	1/10/2	0/15/2	7/17/3	0,162
Antropometrik Ölçümler ve İnterdiyalitik Kilo Alımı				
Kuru ağırlık (kg)	74,5±17,7	74±18,4	72,4±16,1	0,715
VKİ (kg/m^2)	26,1±6,3	26±6,3	25,9±5,4	
Ultrafiltrasyon (ml)	3107±1047	2464±844	2474±926	0,109
Hemodiyaliz Yeterliliği ve Damar Yolu				
spKt/V	1,33±0,13	1,37±0,15	1,37±0,19	0,772
URR (%)	69,2±4,9	70,3±6,3	70,6±7,5	0,761
Damar Yolu (Kateter / AVF / AVG)	6/7/0	6/11/0	13/13/1	0,726
Laboratuvar (Prediyaliz)				
Üre (mg/dL)	145,1±32,1	123,5±49,4	111±42,6	***0,049***
Kreatinin (mg/dL)	9,8±1,7	7,6±3,8	6,6±2,4	***0,004***
Ürik asit (mmol/L)	6,3±1,3	5,6±1,1	5,4±1,1	0,127
Hemoglobin (g/dL)	11,7±1,2	11,5±1,4	10,8±1,6	0,149
Albumin (g/L)	3,9±0,4	3,6±0,3	3,5±0,3	***0,019***
Sodyum (mmol/L)	138,3±2,4	138,8±1,5	137,1±4	0,267
Potasyum (meq/L)	5,2±0,8	5,2±0,6	4,6±0,6	***0,009***
Kalsiyum (mg/dL)	8,5±2,2	8,8±0,4	8,8±0,5	0,281
Fosfor (mg/dL)	5,9±1,4	6±2,4	5,1±1,4	0,156
Parathormon (pg/mL)	582,1±478,6	630,5±475	339,6±301	0,086
Transferrin Saturasyonu (%)	22,4±6,6	28,8±12,6	22,9±11,4	0,262
Ferritin (ng/mL)	274,2±184,4	177,2±158,6	487,7±328	***0,002***
Total Kolesterol (mmol/L)	163,1±33,4	166,3±30,2	167,8±56	0,936
LDL (mmol/L)	96,3±30	94,9±23,2	104±50,5	0,927
Trigliserid (mmol/L)	135,3±68,4	166,3±30,2	167,8±55	0,336
CRP (mg/dL)	10,5±10,4	11,4±13,5	24,5±23,1	***0,009***
Anket Sonuçları				
Malnutrisyon İnflamasyon Skoru (MIS)	4,3±2,8	5,7±3,4	9,8±4,7	***<0,001***
Pittsburgh Uyku Kalitesi İndeksi (PUKİ)	4,0±2,0	7,8±3,1	8,1±4,1	***0,003***
Mini Mental Durum Testi (MMSE)	26,6±3,4	24,0±6,1	21,6±5,8	***0,040***
Beck DepresyonÖlçeği (BDÖ)	6,0±4,4	10,6±5,6	15±10,5	***0,001***
Frail Kırılganlık Ölçeği (FKÖ)	0	1,24±0,43	3,48±0,75	***<0,001***

Sonuçlar ortalama ± standart sapma olarak verilmiştir. Gruplar arası karşılaştırma için Kruskal Wallis testi uygulanmıştır. Frail Kırılganlık Ölçeğine göre 0 puan: Frail değil, 1-2 puan: Pre-frail, ≥3 puan: Frail olarak kabul edilmiştir.

Tablo 3. Frail kırılganlık ölçeği skoru ile korelasyon gösteren parametreler

Parametre	**R değeri**	**P değeri**
Yaş	0,394	***0,002***
Üre	-0,315	***0,017***
Kreatinin	-0,482	***<0,001***
Potasyum	-0,355	***0,007***
Fosfor	-0,303	***0,022***
Albümin	-0,322	***0,015***
Hemoglobin	-0,304	***0,022***
Ferritin	0,396	***0,002***
CRP	0,346	***0,008***
Malnutrisyon İnflamasyon Skoru (MIS)	0,531	***<0,001***
Pittsburgh Uyku Kalitesi İndeksi (PUKİ)	0,370	***0,005***
Mini Mental Durum Testi (MMSE)	-0,395	***0,002***
Beck Depresyon Ölçeği (BDÖ)	0,452	***<0,001***

Spearman korelasyon testi kullanılmıştır.

SS-23: Kronik Hastalıkları Olan Olguda Anemi Yönetimi: Olgu Sunumu

Tuğçe Selenay Ergen
İzmir Katip Çelebi Üniversitesi Tıp Fakültesi, Anabilim Dalı

Giriş: Aile hekimliği; kronik hastalık tanısı olan hastaların yeni semptom gelişmesi durumunda ilk başvuru merkezi olmaktadır. Hastaların bütüncül değerlendirilmesi birinci basamağın en önemli ilkelerindendir. Olgu sunumunda kronik hastalık tanıları olan hastada tespit edilen aneminin yönetiminin sunulması amaçlanmıştır.
Olgu: 49 yaşında kadın hasta giderek artan halsizlik, saç dökülmesi ve ciltte kuruluk yakınmaları ile Eğitim Aile Sağlığı Merkezimize başvurdu. Tip 2 DM ve hiperlipidemi tanıları olan, sigara ve alkol kullanmadığını belirten hasta Metformin 1000 mg 2x1 kullanıyordu. Soy geçmişinde baba DM + (85 yaş, ex) ve anne HT + (74 yaş, ex) öyküsü mevcuttu. Hastanın vitalleri stabildi ve fizik muayenesinde patolojik bulgu saptanmadı. İstenen tahlillerinde Hbg: 11,1 g/dL, MCV: 76,4 fL, AKŞ: 109 mg/dl, HbA1c: %6,2, HDL: 55 mg/dL, LDL: 141 mg/dL, TG: 230 mg/dL, Fe: 40 ug/dL, TDBK: 410 ug/dL, ferritin: 8 ug/dL, vitamin B12: 180 ng/dL olarak saptandı (Tablo 1). Transferrin sat: %9,75, Mentzer indeksi: 18,1 olan hastaya demir eksikliği anemisi ve vitamin B12 eksikliği tanısı konularak demir II sülfat oral tb 100 mg 2x1 ve oral vitamin B12 tedavisi başlandı. Hiperlipidemi için tedavi kullanmayan hastaya Rosuvastatin 5 mg 1x1 başlandı. Diyeti tekrar düzenlendi. Kanser taramaları, erişkin bağışıklama ve periyodik sağlık muayenesi kapsamında danışmanlık verildi.
Tartışma ve Sonuç: Aile hekimliğinde takipli olan kronik hastalığı bulunan kişilerin periyodik sağlık muayenesi rehberine göre yılda 1 kez kontrole çağırılması ve rutin tetkiklerinin yapılması akut meydana gelen yeni hastalıkların tanısının konulması ve erken tedavisinin başlanması için önemli bir adımdır.

Anahtar Kelimeler: aile hekimliği, kronik hastalıklar, anemi

LABORATUVAR

HEMOGRAM

PARAMETRE	SONUÇ	BİRİM	NORMAL DEĞERLER
WBC	6.22	10^3/L	4-10
HGB	11.1	g/dL	11-15
HCT	34.2	%	35-47
RDW	12.8	%	11-15
PLT	340	10^3/L	150-400
RBC	4.20	10^{12}/L	3.5-5
MCV	76.4	fL	80-94

- Transferrin sat:%9.75
- Mentzer indeksi:18.1
- Tam İdrar Tahlili:Olağan
- EKG:Olağan

BİYOKİMYA-HORMON

PARAMETRE	SONUÇ	BİRİM	NORMAL DEĞERLER
AKŞ	109	mg/dL	70-105
HbA1C	6.2	%	4.5-5.7
BUN	18	mg/dL	8-21
eGFR	91	ml/dak/1.73m²	>90
Kreatinin	0.8	mg/dL	0.5-1.1
Na	138	mmol/L	135-146
K	4.4	mmol/L	3.5-5.5
Mg	1.9	mg/dL	1.8-2.6
Ca	10.3	mg/dL	8.5-10.5
ALT	31	U/L	0-35
AST	26	U/L	0-35
Total Kolesterol	240	mg/dL	130-200
HDL Kolesterol	55	mg/Dl	50-80
Non-HDL Kol	190	mg/dL	<130
LDL Kolesterol	141	mg/dL	70-100
Trigliserid	230	mg/dL	50-150
Serum Demir (Fe)	40	ug/dL	60-170
TDBK	410	ug/dL	150-430
Ferritin	8	ug/dL	11-300
Vitamin B12	180	ng/dL	120-500
Folat	6.1	ug/dL	4-19
Kreatin Kinaz (CK)	98 U/L	39 - 308 U/L	Kreatin Kinaz (CK)
TSH	2.1	mU/L	0.35-5.50
Serbest T4	0.98	ng/dL	0.54-1.24
CRP	2	mg/L	0-5

SS-24: Aile Hekimliği Asistanlarının Geleneksel ve Tamamlayıcı Tıp (GETAT) Hakkındaki Farkındalıklarının Ölçülmesi (TR)

Edanur Arslan Gökçek, Bahar Ürün Ünal
Selçuk Üniversitesi Tıp Fakültesi, Aile Hekimliği Ana Bilim Dalı, Konya

Amaç: Bu çalışmanın amacı, aile hekimliği asistanlarının GETAT hakkındaki farkındalıklarını ölçmek ve bununla birlikte aile hekimliği uzmanlık eğitiminde GETAT'ın yerini görmektir. Yöntemler: Selçuk Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalı'nda uzmanlık eğitimi alan 50 asistan hekim çalışmaya dahil edildi. 12 sorudan oluşan sosyodemografik veri formu ve 10 sorudan oluşan Geleneksel ve Tamamlayıcı Tıp Sağlık İnanış Anketi soruları asistan hekimlere yöneltildi.

Bulgular: Çalışmaya katılanların yaş ortalaması 31,9'du. Katılımcıların %54'ü kadın, %46'sı erkekti. GETAT yöntemleri hakkında yeterince bilgili hissedenlerin oranı %20'ydi. Bugüne kadar GETAT yöntemlerinden birini önerme oranı %50'ydi. GETAT konusundaki bilgi kaynağı en fazla oranda (%58) eğitim sunumları ve katıldıkları dersleriydi.

Sonuçlar: Hekimlerin GETAT hakkında yeterli bilgiye sahip olmaları, hastalara yaklaşımları ve hastalarının tedavi planlarını çizerken her yönden bir değerlendirme sağlamalarına yardımcı olacaktır. Aile hekimi uzmanlık eğitiminde bu konuya yeterince yer verilmesi hekimlerin hastaya ve hastalığa bütüncül yaklaşımını artıracaktır.

Anahtar Kelimeler: Aile hekimliği asistanları, farkındalık, GETAT, GETAT uygulamaları

SS-25: Carotid Disease – From Classical to Endovascular Management: Our Experience

Aleksandar Vulić, MD,
General and Vascular Surgeon, Clinical Centre of Montenegro, Podgorica, Montenegro

Abstract

Carotid artery disease remains a significant cause of ischemic stroke worldwide. Over the past decades, treatment strategies have evolved from classical open surgical procedures, such as carotid endarterectomy (CEA), to less invasive endovascular techniques, primarily carotid artery stenting (CAS). This study presents our institutional experience in the management of carotid stenosis, comparing outcomes, indications, and complications associated with both approaches. We analyzed a cohort of patients treated over the past several years, assessing perioperative morbidity and mortality, long-term patency rates, and neurologic outcomes.

Our results underscore the importance of individualized patient selection, multidisciplinary evaluation, and the role of modern imaging in determining the optimal therapeutic strategy. The shift towards endovascular treatment in selected high-risk patients demonstrates promising results, though classical surgery remains the gold standard in many cases.

This paper contributes to the ongoing discussion on best practices in the treatment of carotid disease and highlights the need for continued evaluation of outcomes in real-world settings.

SS-26: Holoprosencephaly: Etiology, Classification And Our Experience

Milena Roganović, MD
Neurosurgeon, Clinical centre of Montenegro, Podgorica/Montenegro

Holoprosencephaly (HPE) is rare congenital malformation of the brain resulting from incomplete cleavage of the prosencephalon during early embryogenesis. It present with a wide spectrum of structural brain anomalies and craniofacial abnormalities, ranging from mild to lethal form.
HPE is commonly associated with genetic mutations (e.g., SHH, ZIC2, SIX3) and chromosomal abnormalities, particularly trisomy 13.
Enviromental risk factor such as maternal diabetes and teratogenic exposures have also been implicated.
This presentation reviews the etiology, classification, clinical features, and diagnostic methods of HPE, with emphasis on prenatal imaging and genetic analysis. We also present our case of male neonate diagnosed postnatally with semilobar holoprosencephaly and associated facial anomalies, confirmed postnatally through MRI.
The patient recived multidisciplinary supportive care, neurosurgical operation- implantation of VP schunt because of hydrocephalus, seizure management and feeding support.
Holoprosencephaly remains a challenging condiction in both diagnostic and management, and outcomes depende on the severity of the brain malformation and associated systemic anomalies. Early diagnosis and genetic counseling are critical for parental decision- making and comprehensive care planning.
Key words: holoprosencephaly, chromosomal abnormalities, hydrocephalus

SS-27: Osteoporosis Awareness Among Premenopausal And Postmenopausal Women Applying to a Family Medicine Unit

Muhammed Bilal HAFIZOĞLU, Kamile MARAKOĞLU, Hazime Büşra ORMAN
Selçuk Üniversitesi Tıp Fakültesi, Aile Hekimliği Ana Bilim Dalı, Konya

Objective: This study amed to evaluate osteoporosis awareness and determine the level of awareness among premenopausal and postmenopausal women aged 40–65 who appled to a family medicine unit.

Materals and Methods: A total of 531 women who applied to the Konya Selçuklu 42.26.193 Family Health Center (FHC) for any reason were included in the study. Participants were intervewed face-to-face using a questionnare consisting of 54 questions covering sociodemographic informaton and the Osteoporosis Awareness Scale (OAS).

Results: The mean age of participants was 50.41 ± 7.69 (range: 40–65) years. Of the women, 49.7% (n=264) were premenopausal and 50.3% (n=267) were postmenopausal. The median age was 43 (40–56) in premenopausal and 57 (41–65) in postmenopausal women. The mean total OAS score was 52.8 ± 17.0. The median OAS score was 54 in premenopausal and 48 in postmenopausal women. In postmenopausal women, the frequency of being over 50 years old (92.8%, n=231), having primary education or lower (60.9%, n=227), being a housewife (54.6%, n=245), having a chronic disease (69.8%, n=173), and using medication regularly (70.2%, n=172) were significantly higher. Postmenopausal women had significantly higher median values for age (57), BMI (31), number of pregnances (4), and number of births (3). The frequency of engaging in physical activites other than walking was significantly higher among premenopausal women (p=0.046). Regarding the Osteoporosis Awareness Scale, premenopausal women had significantly higher scores in bone physiology, exercise, and total OAS scores ($p < 0.001$, $p = 0.034$, and $p = 0.023$, respectively). Women with normal or overweight BMI had significantly higher scores in bone physiology, preventive behaviors, exercise, characteristics of osteoporosis, and total OAS scores ($p < 0.001$, $p = 0.006$, $p < 0.001$, $p < 0.001$, and $p < 0.001$, respectively).

Conclusion: The study revealed that participants had a low level of osteoporosis awareness. Primary healthcare professionals play a key role in increasing awareness and guiding individuals toward necessary preventive tests. Preventive measures against osteoporosis, which may manifest with fractures during the postmenopausal period, should begin early in life. Maintaning bone health requres a balanced det, suffcent physcal actvty, and adequate calcum and vitamin D supplementation.

Keywords: Awareness, Osteoporosis, Postmenopausal, Premenopausal

SS-28: Assessment of the Relationship Between Gastroesophageal Reflux Disease and Sleep Quality in Physicians

Kübra Nur ZEYTUN, Kamile MARAKOĞLU
Selçuk Üniversitesi Tıp Fakültesi, Aile Hekimliği Ana Bilim Dalı, Konya

Objective: Gastroesophageal reflux disease (GERD) is one of the most common gastrointestinal disorders, negatively affecting patients' quality of life and leading to esophagitis and other complications. Resident physicians, who are chronically exposed to factors such as heavy workload, frequent night shifts, long training periods, poor dietary habits, psychological stress, anxiety, and sleep disturbances, are considered at increased risk for GERD. This study aimed to determine the prevalence of GERD among physicians and to evaluate its relationship with sleep quality.

Materials and Methods: The study included 446 out of 557 research assistant physicians working at Selçuk University Faculty of Medicine Hospital between 2024 and 2025. Participants completed a sociodemographic data form, the Reflux Disease Questionnaire (RDQ), and the Pittsburgh Sleep Quality Index (PSQI); body composition was measured using bioelectrical impedance analysis. Data were analyzed with SPSS 25.0 software.

Results: The mean age of participants was 28.82 ± 3.59 years; 56.1% were female and 43.9% male. The prevalence of GERD was 42.6%, while poor sleep quality was observed in 55.8% of participants. GERD was significantly associated with being married, cohabiting with a spouse, consumption of spicy foods, eating before sleep, obesity, and low physical activity. Physicians with poor sleep quality had significantly higher rates of GERD ($p<0.001$).

Logistic regression analysis identified independent predictors of GERD as being married (OR=1.84, p=0.002), living with a spouse (OR=2.22, p=0.002), physical inactivity (OR=2.83, p=0.002), spicy food consumption (OR=3.95, $p<0.001$).

Conclusion: Occupational stress factors such as long shifts, irregular work schedules, and high workload play a significant role in GERD development among physicians. Regular screening programs for early GERD detection and improving working conditions to support sleep health are strongly recommended.

Keywords: Gastroesophageal Reflux Disease, Physicians, Sleep Quality

SS-29: A Pediatric Herpes Zoster Case with Trigeminal Nerve Involvement Presenting to a Primary Care Center

Şeyma Ünüvar, Kerem Gökçen, Hüseyin Elbi, Fatih Özcan

Manisa Celal Bayar University, Faculty of Medicine, Department of Family Medicine

Introduction: Varicella-zoster virus (VZV) is a DNA virus belonging to the *alpha-herpesvirus* subfamily of the human herpesvirus family. Following primary infection, VZV remains latent in the dorsal root ganglia and may reactivate later in life, leading to herpes zoster (HZ). HZ typically manifests with clusters of vesicular lesions on an erythematous base, distributed along the dermatome corresponding to the affected nerve (1). Herpes zoster ophthalmicus (HZO) is a rare condition resulting from reactivation of the virus in the ophthalmic branch of the trigeminal ganglion (2). HZO accounts for approximately 10–20% of all herpes zoster cases, and ocular involvement has been reported in 20–85% of these cases. The presence of lesions on the tip of the nose indicates nasociliary nerve involvement and is considered a strong predictor of ocular involvement (1). Although the widespread use of varicella vaccination has significantly reduced the number of herpes zoster cases presenting to emergency departments in developed countries, the disease has not been completely eliminated (3). In this report, we present a pediatric herpes zoster case with trigeminal nerve involvement who presented to a primary care center with a complaint of rash around the eye.

Case Presentation: A 9-year-old girl with no known medical history and complete childhood vaccinations presented to the family health center with complaints of itching and redness around her right eyelid that had begun two days prior. Her medical history revealed a visit to the seaside three days before symptom onset. No history of immunodeficiency, trauma, surgical intervention, or other predisposing factors was noted. The patient had no prior history of herpes simplex infection or similar dermatologic conditions, and no family members or close contacts had similar symptoms.

Systemic review revealed no fever, fatigue, or ocular burning sensation. Physical examination showed vesicular lesions on the right eyelid, with full range of extraocular movements. Similar vesicular lesions were also observed on the forehead and nasal area. Neurological and systemic examination findings were normal.

Based on clinical findings, the patient was provisionally diagnosed with herpes zoster ophthalmicus and referred to the pediatric emergency department for further evaluation and treatment. Consultations were obtained from the ophthalmology and dermatology departments. Ophthalmologic examination revealed no pathological findings, while the dermatology department recommended hospitalization. Antiviral and antibacterial therapy was initiated, and the patient was monitored for three days. Throughout hospitalization, her general condition remained stable, and no systemic complications developed. She was discharged with outpatient follow-up recommendations.

Discussion: Herpes zoster infection is rarely observed before the age of 10 (4). In this case, herpes zoster was diagnosed in a 9-year-old child. Conditions that increase the risk of herpes

zoster include impaired cellular immunity, malignancy, immunosuppressive therapy, and a history of surgical operations (4). No such predisposing factors were identified in this patient.

It has been demonstrated that acyclovir therapy significantly reduces the incidence of severe late ocular inflammatory complications associated with HZO, decreasing from approximately 50–60% to 20–30% (5). Early recognition of herpes zoster in primary care facilitates prompt initiation of antiviral therapy, which shortens disease duration and decreases the risk of complications.

Early diagnosis of the disease is of critical importance in reducing morbidity both at the individual and community level.