Kongre Başkanı:
Prof. Dr. Zekeriya ÜLGER

AKADEMİK GERİATRİ DERNEĞİ

6. Uluslararası ve 17. AKADEMİK GERİATRİ KONGRESİ

Bildiri Kitabı

16-20 Ekim 2024
La Blanche Otel, BODRUM

EuGMS European Union Geriatric Medicine Society
Fostering geriatric medicine across Europe

International Association of Gerontology and Geriatrics
Founded 1950

IOF International Osteoporosis Foundation

Bilimsel Sekreterya

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Organizasyon Sekreteryası

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Değerli meslektaşlarım ve Geriatri ile ilgilenen tüm sağlık çalışanı arkadaşlarım,

Bu yıl 16-20 Ekim 2024 tarihleri arasında La Blanche Island Otel, Bodrum'da gerçekleştirmeyi planladığımız 6. Uluslararası ve 17. Akademik Geriatri Kongremize sizleri davet etmenin heyecanını yaşıyorum.

Yıllardır sizlerin değerli destekleriyle düzenlediğimiz bu kongreler sadece geriatri alanındaki yeniliklerin değil; aynı zamanda gerek yurt içi gerekse yurtdışından katılan değerli hocaların tecrübelerinin paylaşıldığı, genç meslektaşlarımızın değişik alanlarda yaptıkları çalışmalarının tartışıldığı ve de hekimler arası dostlukların sağlamlaştırıldığı etkinlikler olup her yıl bilimsel ve sosyal açıdan bir şölene dönüşmektedir.

Kongrelerin, bilimsel kazanımlar yanında sosyal birlikteliği de sağlayan ortamlar olduğunu biliyoruz.

Programı hazırlarken birlikte çalıştığımız Kongre Bilimsel Kurulu'na, bizi her yönden destekleyen Akademik Geriatri Derneği Yönetim Kurulu'na ve organizasyonun gerçekleşmesinde emeği geçenlere sonsuz şükranlarımı sunuyorum.

Yaşlı sağlığı ile ilgilenen başta geriatristler olmak üzere, iç hastalıkları uzmanları, aile hekimleri ve uzmanları, nöroloji uzmanları, psikiyatri uzmanları, fizik tedavi uzmanları, hemşireler, fizyoterapistler, ergoterapistler, diyetisyenler, gerontologlar ve sosyal hizmet uzmanları ile huzurevi ve bakımevi, palyatif bakım merkezi çalışanları ve yöneticilerinin kongremize katılımlarından mutluluk duyacağız.

Her sektörden geriatriye hizmet veren pek çok kişiyi bir araya getirerek hem bilimsel hem de sosyal olarak doyurucu bulacağınızı umduğum kongremize hepinizi saygı ve sevgilerimle davet ediyorum.

Bodrum'da görüşmek ümidiyle

Kongre Başkanı

Prof. Dr. Zekeriya Ülger

KONGRE BAŞKANI

Zekeriya Ülger

BİLİMSEL SEKRETERYA

Aslı Tufan Çinçin
Volkan Atmış
Gözde Şengül Ayçiçek
Hacer Doğan Varan

DÜZENLEME KURULU

Dr. Sibel Akın
Dr. Sevgi Aras
Dr. Teslime Atlı
Dr. Volkan Atmış
Gözde Şengül Ayçiçek
Dr. Aslı Tufan Çinçin
Dr. Ülev Deniz Suna Erdinçler
Dr. Meltem Gülhan Halil
Dr. Mehmet Akif Karan
Dr. Gülistan Bahat Öztürk
Dr. Hacer Doğan Varan

BİLİMSEL KURUL

Dr. Fehmi Akçiçek, TR
Dr. Güneş Arık, TR
Dr. Gözde Ayçiçek, TR
Dr. Dilek Aydın, TR
Dr. Remzi Bahşi, TR
Dr. Cafer Balcı, TR
Dr. Tanju Beğer, TR
Dr. Vildan Bütün, TR
Dr. Mustafa Cankurtaran, TR
Dr. Özlem Cengiz,TR
Dr. Serdar Ceylan, TR
Dr. Güzin Çakmak, TR
Dr. Çağatay Çavuşoğlu, TR
Dr. Ahmet Çiğiloğlu, TR
Dr. Aslı Çurgunlu, TR
Dr. Funda Datlı, TR
Dr. Rana Doğrul, TR
Dr. Burcu Doğu, TR
Dr. Hüseyin Doruk, TR
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Dr. Eyüp Efendioğlu,TR
Dr. Tuğba Erdoğan, TR
Dr. Mert Esme, TR
Dr. Sencer Ganidağlı, TR
Dr. Doron Garfinkel, ISRAEL
Dr. Birkan İlhan, TR
Dr. Alfonso Jentoft, SPAIN
Dr. Ateş Kadıoğlu, TR
Dr. Murat Kara, TR
Dr. Özgür Kara, TR
Dr. Berrin Karadağ, TR
Dr. Aslı Kılavuz, TR
Dr. Mustafa Kılıç, TR
Dr. Muhammed Kızılarslanoğlu, TR
Dr. Milta Little, TR
Dr. Naresh Marajhan, TR
Dr. Selim Nalbant, TR
Dr. Graziano Onder, ITALY
Dr. Fannie Onen, FRANCE
Dr. Levent Özçakar, TR
Dr. Firuzan Özer, TR
Dr. Cemile Özsürekçi, TR
Dr. Hande Öztorun, TR
Dr. Ercüment Öztürk, TR
Dr. Zeynel Abidin Öztürk, TR
Dr. Gabriel Prada, ROMANIA
Dr. Bülent Saka, TR
Dr. Fulden Saraç, TR
Dr. Sumru Savaş, TR
Dr. Pınar Soysal, TR
Dr. Rabia Soytaş, TR
Dr. Veysel Suzan, TR
Dr. Sevnaz Şahin, TR
Dr. Pınar Taşar, TR
Dr. İlker Taşçı, TR
Dr. İbrahim Türkbeyler, TR
Dr. Yelda Uçar, TR
Dr. Meltem Uyar, TR
Dr. Pelin Ünsal, TR
Dr. Murat Varlı, TR
Dr. Ahmet Yalçın, TR
Dr. Hakan Yavuzer, TR
Dr. Mehmet Yürüyen, TR

Soyisme göre alfabetik olarak sıralanmıştır.

16 EKİM 2024, ÇARŞAMBA		
	SALON A	**SALON B**
	NUTRİSYON KURSU KAYIT	**YARA BAKIM KURSU**
13:30-15:00	***Kurs Koordinatörleri: Meltem Halil, Mutlu Doğanay***	***Kurs Koordinatörleri: Teslime Atlı, Gözde Şengül Ayçiçek***
13:30-13:50	Malnütrisyonun Önemi ve Değerlendirilmesi ***Cemile Özsürekçi***	Kronik Yara Kavramı ve Yönetimi ***Gözde Şengül Ayçiçek***
13:50-14:10	Beslenme Destek Tedavisinde Temel Prensipler ve Monitorizasyonu ***Cafer Balcı***	Yarada Antiseptik Solüsyonlar ve Topikal Antimikrobiyaller ***Hatice Ayhan***
14.10-14.30	Enteral Beslenme ***Birkan İlhan***	Yara Bakımında Ürün Seçimi ***Pınar Gürün***
14:30-14:50	Parenteral Beslenme ***Osman Abbasoğlu***	Yarada Debridman Uygulamaları ***Arda Çetinkaya***
14.50-15.00	**Tartışma**	**Tartışma**
15:00-15:30	**ARA**	
15:30-15:50	Polimormid Hastada Beslenme ***Güzin Çakmak***	Yarada Negatif Basınçlı Yara Tedavi Uygulamaları ***Arda Çetinkaya***
15:50-16:10	Kanserde Beslenme ***Mutlu Doğanay***	Basınç Yaralanmalarında Evreleme ve Tedavi ***Hatice Ayhan***
16:10-16:30	Sarkopeni ve Sarkopenik Obezitede Beslenme ***Tuğba Erdoğan***	Basınç Yaralanmalarında Nutrisyon ***Mustafa Kemal Kılıç***
16:30-16:50	Enteral ve Parenteral Nütrisyon Alan Hastalarda İlaç Uygulamaları ***Kutay Demirkan***	Basınç Yaralarının Geriatrik Sendromlarla İlişkisi ***Hande Selvi Öztorun***
16:50-17:00	**Tartışma**	**Tartışma**
17:00-17:10	**Öneriler ve Kapanış**	**Öneriler ve Kapanış**
17:10-17:30	**ARA**	
17:30-18:00	**AÇILIŞ OTURUMU** ***Teslime Atlı*** ***Zekeriya Ülger*** Kongre Başkanı ***Prof. Dr. Vedat Bilgin*** Ankara Milletvekili TBMM Sağlık, Aile, Çalışma ve Sosyal İşler Komisyonu Başkanı ***Sunucu: Hacer Doğan Varan***	

17 EKİM 2024, PERŞEMBE		
	SALON A	**SALON B**
08:00-09:00	**SS-01 - SS-10** **SÖZLÜ BİLDİRİ OTURUMU 1** ***Oturum Başkanları: Funda Datlı Yakaryılmaz, Rana Tuna Doğrul***	**SS-11 - SS-20** **SÖZLÜ BİLDİRİ OTURUMU 2** ***Oturum Başkanları: Özge Kayhan Koçak, Yelda Öztürk***
	SALON C	**SALON D**
08:00-09:00	**SS-21 - SS-30** **SÖZLÜ BİLDİRİ OTURUMU 3** ***Oturum Başkanları: Pelin Ünsal, Mert Eşme***	**SS-31 - SS-40** **SÖZLÜ BİLDİRİ OTURUMU 4** ***Oturum Başkanları: Çağatay Çavuşoğlu, Serdar Ceylan***
	SALON A	**SALON B**
09:00-10:30	**PANEL:** Yaşlı Hastada İmmünizasyon ve Enfeksiyon ***Oturum Başkanları: Teslime Atlı, Zekeriya Ülger***	**PANEL:** Yaşlı Hastada Kanıtlarla Diabetes Mellitus Yönetimi ***Oturum Başkanı: Deniz Suna Erdinçler***
	Yaşlı Hastada İmmunizasyon ***Serhat Ünal***	SGLT-2 İnhibitörler ***Sevim Güllü***
	İmmünosenesence ***Berrin Karadağ***	GLP-1 Analogları ***Özgür Demir***
	Yaşlıda Uygun Antibiyotik Seçimi ***Ali Mert***	İnsülin ***İlker Taşçı***
10:30-10:45	**ARA**	
10:45-11:45	**PANEL:** Osteoporoz ***Oturum Başkanları: Mehmet Akif Karan, Birkan İlhan***	**PANEL:** Palyatif Bakım ***Oturum Başkanı: Sibel Akın***
	Osteoporozda Beslenme ve Süplemanlar ***Volkan Atmış***	Palyatif bakım: Ne zaman başlar? Ne zaman biter? ***Hüseyin Doruk***
	Kılavuzlar Eşliğinde Osteoporozda Tedavi ve Takip ***Dilek Gogas Yavuz***	Türkiye'de Palyatif Bakımın Sorunları ***Olgun Deniz***
		Dünyada ve Türkiyede Palyatif Bakım ve Hospis Uygulamaları ***Pınar Tosun Taşar***
11:45-12:45	**UYDU SEMPOZYUMU** Oturum Başkanı: **Teslime Atlı** Rekombinat Herpes Zoster Aşısı **Serhat Ünal**	gsk
12:45-14:00	**ÖĞLE YEMEĞİ**	

17 EKİM 2024, PERŞEMBE		
	SALON A	**SALON B**
14:00-15:00	**AÇIK OTURUM:** Malnütrisyonda Zor Sorular ve Cevapları ***Moderatör: Zekeriya Ülger*** ***Tartışmacılar: Meltem Halil, Bülent Saka, Mutlu Doğanay, Kutay Demirkan, Osman Abbasoğlu***	**PANEL:** Vertigo ***Oturum Başkanları: Sumru Savaş, Özlem Karaaslan Cengiz*** Tanısal Yaklaşım ve Tedavi ***Ayşe Karan***
15:00-15:15	**ARA**	
15:15-16:15	**UYDU SEMPOZYUMU** ***Oturum Başkanı: Gülistan Bahat Öztürk*** Evenity'nin ikili etkisi ile kemik oluşturun, Prolia'nın uzun süreli etkisi ile kemikleri güçlendirin! **Volkan Atmış**	AMGEN
16:15-16:30	**ARA**	
16:30-17:30	**PANEL:** Yaşlıda Ağrı Yönetimi ***Oturum Başkanı: Hüseyin Doruk***	**PANEL:** Geriatride Güncellemeler ***Oturum Başkanları: Berrin Karadağ, Güneş Arık***
	Opioid Kullanımı ***Zeynel Abidin Öztürk***	Son 1 Yıl İçerisinde Geriatride Değişiklikler, Güncellemeler ***Fatih Tufan, Sena Dost***
	Olgularla Girişimsel Tedaviler ***Nurten İnan***	
17:30	**BOARD SINAVI**	**SS-04, SS-92, SS-02, SS-30, SS-39, SS-48, SS-61, SS-62, SS-63, SS-83, SS-84, SS-95** **SEÇİLMİŞ SÖZLÜ BİLDİRİLER** ***Oturum Başkanları: Aslı Tufan Çinçin, Volkan Atmış***

18 EKİM 2024, CUMA		
	SALON A	**SALON B**
08:00-09:00	**SS-41 - SS-95 - SS-50** **SÖZLÜ BİLDİRİ OTURUMU 5** ***Oturum Başkanları: Özlem Karaarslan Cengiz, Saadet Koç***	**SS-51 - SS-60** **SÖZLÜ BİLDİRİ OTURUMU 6** ***Oturum Başkanları: Hande Selvi Öztorun, Serdar Özkök***
	SALON C	**SALON D**
08:00-09:00	**SS-61 - SS-70** **SÖZLÜ BİLDİRİ OTURUMU 7** ***Oturum Başkanları: Olgun Deniz, Bilal Katipoğlu***	**SS-71 - SS-80** **SÖZLÜ BİLDİRİ OTURUMU 8** ***Oturum Başkanları: Cafer Balcı, Remzi Bahşi***
	SALON A	**SALON B**
09:00-10:30	**PANEL:** Disfaji ***Oturum Başkanları: Zekeriya Ülger, Zeynel Abidin Öztürk***	**PANEL:** Yaşlıda Gastrointestinal Problemler ***Oturum Başkanı: Mustafa Cankurtaran***
	Diagnostic Approach to Dysphagia ***Rainer Wirth***	Dirençli Konstipasyon Yönetimi ***Sibel Akın***
	Disfaji Rehabilitasyonu ***Ebru Şansal***	Mikrobiata ve Disbiyozis ***Bülent Saka***
	Sarkopenik Disfaji ***Sibel Eyigör***	Helikobakter Pylori Eradikasyonu, Kime? Nasıl? ***Özge Kayhan Koçak***
10:30-10:45	**ARA**	
10:45-11:45	**AÇIK OTURUM:** Demansta Zor Sorular ve Cevapları ***Moderatör: Murat Varlı***	**PANEL:** Evde Bakım ve Bakımevleri ***Oturum Başkanı: Firuzan Fırat Özer***
	Tartışmacılar: Özlem Erden Aki, Burcu Balam Doğu, Pınar Soysal	Evde Bakımda Sık Karşılaşılan Tıbbi ve Hukuki Problemler ***Sevnaz Şahin***
		Bakımevinde Yaşlı ***Hüseyin Can***
		Yaşam Merkezleri ve Geriatri: Son Durum ***Bilal Katipoğlu***

18 EKİM 2024, CUMA		
	SALON A	**SALON B**
11:45-12:45	**UYDU SEMPOZYUMU** ***Oturum Başkanı: Zekeriya Ülger*** Toplumda ve Kurumda Yaşayan Yaşlıda İnkontinans ve Yaşam Kalitesine Etkisi ***Aslı Tufan Çinçin, Vildan Kandemir***	
12:45-14.00	**ÖĞLE YEMEĞİ**	
14:00-15:00	**PANEL:** Yaşlıda Konuşulamayanlar ***Oturum Başkanları: Alper Döventaş, Funda Datlı Yakaryılmaz***	**PANEL:** Antiaging - Longevity ***Oturum Başkanları: İlker Taşçı, Güzin Çakmak***
	Yaşlıda Erektil Disfonksiyon ***Ateş Kadıoğlu***	Longevity ***Güneş Arık***
	Kadında Genitoüriner Sendrom ***Mertihan Kurdoğlu***	Anti Aging ***Mustafa Cankurtaran***
15:00-15:15	**ARA**	
15:15-16.15	**UYDU SEMPOZYUMU** ***Oturum Başkanı: Aslı Tufan Çinçin*** "Yaşlı Bireylerde Düşme ve Takip" Akıllı Teknoloji ve Yapay Zeka Çözümleri ***Ali Serdar Fak*** Düşme Takip ve Alarm Sistemleri Çözüm Araçları ve Kurumsal Deneyim ***Şevval Karadağ***	
16:15-16:30	**ARA**	
16:30-17:30	**PANEL:** Yaşlıda Sık Karşılaşılan Hukuki Durumlar ***Oturum Başkanları: Mehmet Akif Karan, Pınar Tosun Taşar***	**PANEL:** Yaşlıda Gözden Kaçanlar ***Oturum Başkanları: Selim Nalbant, Sevgi Aras***
	Vasi Tayini / Yaşlı İstismarı / Son Dönem Kararlar ***Av. Akın Balcı***	Ağız Hijyeni ve Diş Kayıpları ***Hatice Miray Uyan***
		Sosyal İzolasyon ve Yalnızlık ***Funda Datlı Yakaryılmaz***
18:00	**AKADEMİK GERİATRİ DERNEĞİ GENEL KURUL TOPLANTISI**	

19 EKİM 2024, CUMARTESİ		
	SALON A	**SALON B**
08:00-09:00	**SS-81 - SS-87** **SÖZLÜ BİLDİRİ OTURUMU 9** ***Oturum Başkanları: Tuğba Erdoğan, Veysel Suzan***	**SS-88 - SS-94** **SÖZLÜ BİLDİRİ OTURUMU 10** ***Oturum Başkanları: Sena Dost, Gülru Avcı***
	SALON A	**SALON B**
09:00-10:45	**PANEL:** Hareket Bozuklukları ***Oturum Başkanları: Aslı Çurgunlu, Sevnaz Şahin***	**PANEL:** Kardiyovasküler Hastalıklara Güncel Kılavuzlar Eşliğinde Yaklaşım ***Oturum Başkanları: Özgür Kara, Mehmet Yürüyen***
	Parkinsona Tanısal Yaklaşım ***Ayşe Bora Tokçaer***	Kalp Yetmezliği ***Nil Özyüncü***
	Olgularla Parkinson Tedavisi ve Yan Etki Yönetimi ***Ayşegül Gündüz***	Atrial Fibrilasyon ***Sevgi Aras***
	Huzursuz Bacak Sendromu ***Seda Kibaroğlu***	Hipertansiyon ***Gülistan Bahat Öztürk***
		İskemik Kardiyovasküler Hastalıklar ***Samim Emet***
10:45-11:00	**ARA**	

19 EKİM 2024, CUMARTESİ		
	SALON A	**SALON B**
11:00-12:45	**PANEL:** Sarkopeni ***Oturum Başkanları: Gülistan Bahat Öztürk, Mustafa Kemal Kılıç***	**PANEL:** Yaşlıda Nöropsikiyatrik Sorunlar ***Oturum Başkanları: Deniz Suna Erdinçler, Burcu Balam Doğu***
	GLIS Criteria ***Marjolein Visser***	Depresyon Tedavisi ***Işın Baral Kulaksızğolu***
	Sarkopenik Obeziteye Tanısal Yaklaşım ve Takip ***M. Cemal Kızılaslanoğlu***	Sağlıklı Karar Verme Yetisinin Değerlendirilmesi ***Özlem Erden Aki***
	Sarkopenide Deneysel Tedaviler ***Serdar Özkök***	Hastam Uyuyamıyor Ne Yapayım? ***Ayşin Noyan***
12:45-14.00	**ÖĞLE YEMEĞİ**	
14.00-15:15	**PANEL:** Kırılganlık ***Oturum Başkanları: Bülent Saka, M. Cemal Kızılarslanoğlu***	**PANEL:** EUGMS ile İşbirlikleri ve Fırsatlar ***Oturum Başkanları: Zekeriya Ülger, Olgun Deniz***
	Kırılganlıkta Çevresel Epigenetik Genetik Faktörler ***Firuzan Fırat Özer***	Early Career Geriatrics İnitiative ***Gülistan Bahat Öztürk***
	İntrinsik Kapasite ve Resilience ***Hacer Doğan Varan***	Cost Programming ***Meltem Koca***
	Kognitif Kırılganlık ***Pınar Soysal***	EAMA ***Sumru Savaş***
15:15-15:30	**ARA**	
15:30-16:30	**PANEL:** Takviyeler ***Oturum Başkanları: Sevgi Aras, İbrahim Halil Türkbeyler***	**PANEL:** Osteoartrit ***Oturum Başkanları: Aslı Tufan Çinçin, Hakan Yavuzer***
	Magnezyum ve Çinko ***Mehmet Yürüyen***	Osteoartritte Takviyeler ***Selim Nalbant***
	Koenzim Q ve Sitikolin ***Gülru Avcı***	Girişimsel Tedaviler ***Murat Kara***
16:30-16:45	**ARA**	
16:45-17:30	**PANEL:** Tamamlayıcı Tıp ***Oturum Başkanları: Özgür Kara, Remzi Bahşi***	**PANEL:** Gerontoloji ***Oturum Başkanı: Teslime Atlı***
	Ozon ve Glutatyon ***Şükran Ülger***	Gerontoloji - Geriatri İşbirliği ***İsmail Tufan***
17:30-18:30	**KAPANIŞ TÖRENİ**	

20 EKİM 2024, PAZAR	
	SALON A
09:00-10:00	**PANEL:** Akılcı İlaç Kullanımı ***Oturum Başkanı: Hacer Doğan Varan***
	Yaşlılarda Akılcı İlaç Kullanımı ***Pelin Ünsal***
	Polifarmasi nasıl önlenebilir? ***Zekeriya Ülger***
10:00-10:30	**ARA**
10:30-11:30	Çok Yönlü Geriatrik Değerlendirme ***Oturum Başkanı: Aslı Tufan Çinçin***
	Bilişsel Değerlendirme Testleri ***Volkan Atmış*** Fonksiyonel Değerlendirme Testleri ***Gözde Şengül Ayçiçek***

17.10.2024		
	Salon A	**Salon B**
08:00-08:05	**SS-01 // POLYPHARMACY-RELATED GERIATRIC SYNDROMES** Sultan Keskin Demircan	
08:05-08:10		**SS-12 // WOUND CHARACTERISTICS AND MORTALITY STATUS OF PATIENTS ADMITTED TO OUR WOUND CARE CENTER OVER THE AGE OF 60** Aysun Şeker
08:10-08:15	**SS-03 // IS A COMPREHENSIVE GERIATRIC ASSESSMENT USEFUL IN OLDER PEOPLE WHO ARE DIAGNOSED WITH A HAEMATOLOGICAL MALIGNANCY?** Nurdan Şentürk Durmuş	**SS-13 // THE RELATIONSHIP BETWEEN THE BURDEN OF ANTICHOLINERGIC DRUGS AND MORTALITY IN PATIENTS HOSPITALIZED IN THE GERIATRICS CLINIC** Pelin Uğuz Hazır
08:15-08:20		**SS-14 // RETROSPECTIVE ANALYSIS OF RELATIONSHIP BETWEEN FRONTAL QRS-T ANGLE AND GERIATRIC SYNDROMES IN THE ELDERLY** Mürsel Karadavut
08:20-08:25		**SS-15 // EVALUATION OF THE RELATIONSHIP BETWEEN PAN-IMMUNE INFLAMMATION VALUE AND SARCOPENIA IN GERIATRIC PATIENTS** Hüseyin Doruk

17.10.2024		
	Salon A	Salon B
08:25-08:30		**SS-16 // RETROSPECTIVE ANALYSIS OF BONE MARROW BIOPSY RESULTS IN PATIENTS AGED 65 AND OVER: EXPERIENCE FROM A TERTIARY CARE HOSPITAL'S PATHOLOGY DEPARTMENT** Betül Gülsüm Yavuz Veizi
08:30-08:35	**SS-07 // PROGNOSTIC FACTORS FOR 30-DAY MORTALITY AFTER HIP FRACTURE IN THE ELDERLY** Mürsel Karadavut	**SS-17 // THE PROGNOSTIC VALUE OF COGNITIVE FUNCTION AND MASKED HYPERTENSION IN LONG-TERM GERIATRIC MORTALITY: AN 8-YEAR STUDY** Okan Turhan
08:35-08:40	**SS-08 // CLINICAL AND DEMOGRAPHIC CHARACTERISTICS OF GERIATRIC FORENSIC TRAUMA CASES ADMITTED TO THE EMERGENCY DEPARTMENT: A SINGLE-CENTER EXPERIENCE** Merve Erat Saşmaz	**SS-18 // COMPARISON OF GNRI, PNI, CONUT WITH MNA-SF TO ASSESS PROGNOSTIC VALUE FOR FALL RISK IN OLDER ADULTS** Deniz Cengiz
08:40-08:45	**SS-09 // PRIMARY PROGRESSIVE APHASIA: A CASE REPORT** Okan Turhan	**SS-19 // THE RELATIONSHIP BETWEEN THE BLOOD UREA NITROGEN/SERUM ALBUMIN RATIO AND GERIATRIC SYNDROMES** Merve Hafızoğlu
08:45-08:50		**SS-20 // THE BURDEN OF GERIATRIC SYNDROMES IN OLDER ONCOLOGY PATIENTS: A SINGLE-CENTER PERSPECTIVE** Betül Gülsüm Yavuz Veizi
08:50-09:00	**Tartışma**	**Tartışma**

17.10.2024		
	Salon C	**Salon D**
08:00-08:05	**SS-21 // INVESTIGATION OF GENERAL CHARACTERISTICS, CLINICAL OUTCOMES OF OLDEST OLD (≥85 YEARS) INTENSIVE CARE UNIT SURVIVORS TRANSFERRED TO A GERIATRICS WARD** Mustafa Hakan Doğan	**SS-31 // RAPIDLY PROGRESSIVE COGNITIVE IMPAIRMENT: CREUTZFELDT-JAKOB DISEASE** Arzu Nevin Dağdemir
08:05-08:10	**SS-22 // DETERMINANTS OF MORTALITY IN GERIATRIC PALLIATIVE CARE PATIENTS WITH PRESSURE INJURIES** Mürsel Karadavut	**SS-32 // FREQUENCY OF OSTEOSARCOPENIA AND ASSOCIATED CLINICAL CONDITIONS IN PATIENTS WITH POSTMENOPAUSAL RHEUMATOID ARTHRITIS** Zuhal Bilgili
08:10-08:15	**SS-23 // FACTORS ASSOCIATED WITH MORTALITY IN THE GERIATRIC POPULATION RECEIVING HOME HEALTH CARE SERVICES THROUGH COMPREHENSIVE GERIATRIC ASSESSMENT** İbrahim Sivrikaya	**SS-33 // LONELINESS IS NOT ONLY A SOCIAL CHALLENGE BUT ALSO AN INDEPENDENT FACTOR RELATED TO PROBABLE SARCOPENIA: EVIDENCE FROM THE SHARE DATASET** Arzu Okyar Baş
08:15-08:20	**SS-24 // THE RELATIONSHIP BETWEEN CARDIAC COMPUTED TOMOGRAPHY ANGIOGRAPHY MEASUREMENTS AND SARCOPENIA IN OLDER ADULTS** Serez İleri Uğurlu	**SS-34 // CHRONIC PRURITUS AND ASSOCIATED FACTORS IN HOSPITALIZED ELDERLY PATIENTS** Mürsel Karadavut
08:20-08:25	**SS-25 // THE RELATIONSHIP BETWEEN ATHEROSCLEROTIC MARKERS DETECTED BY CARDIAC COMPUTED TOMOGRAPHY ANGIOGRAPHY AND COGNITIVE FUNCTION** Nevzat Murat Uğurlu	**SS-35 // EBLOOD CHOLESTEROL LEVELS AND FRAILTY IN OLDER ADULTS: A CROSS-SECTIONAL STUDY** Arzu Okyar Baş

17.10.2024		
	Salon C	**Salon D**
08:25-08:30	**SS-26 // EVALUATION OF SELF-NEGLECT IN OLDER ADULTS AT THE POST- COVID-19 ERA AND ITS RELATIONSHIP WITH GERIATRIC SYNDROMES** Çiğdem Alkaç	**SS-36 // RELATIONSHIP BETWEEN INFLAMMATION MARKER CRP ALBUMIN RATIO AND OBESITY, SARCOPENIA AND SARCOPENIC OBESITY** Arzu Nevin Dağdemir
08:30-08:35	**SS-27 // ASSOCIATION BETWEEN BONE MINERAL DENSITY AND NUTRITIONAL STATUS IN POSTMENOPAUSAL WOMEN; A SINGLE-CENTER, RETROSPECTIVE STUDY** Sibel Cavdar	**SS-37 // THE EFFECT OF FRAILTY AND METABOLIC SYNDROME ON THE 5-YEARS MORTALITY RISK IN THE ELDERLY** Neslihan Doğan
08:35-08:40	**SS-28 // PERIFERAL INFLAMMATORY BIOMARKERS AND GAIT SPEED IN OLDER INDIVIDUALS: A SINGLE CENTER CROSS-SECTIONAL STUDY** Cansu Çıkın Boztuğ	**SS-38 // SARC-F COULD PREDICT OSTEOARTHRITIS IN GERIATRIC OUTPATIENTS: A CROSS-SECTIONAL STUDY FROM A UNIVERSITY HOSPITAL** Yasemin Polat Özer
08:40-08:45	**SS-29 // THE ABILITY OF SMART-COP SCORE TO PREDICT NEED FOR ICU ADMISSION AND MORTALITY IN ELDERS WITH NON-VENTILATOR ASSOCIATED HOSPITAL-ACQUIRED PNEUMONIA** Mustafa Hakan Doğan	
08:45-08:50		**SS-40 // IS CONTROLLING NUTRITIONAL STATUS SCORE A PROGNOSTIC FACTOR FOR ACUTE KIDNEY INJURY ASSOCIATED WITH CARDIAC SURGERY IN OLD PATIENTS- A PILOT STUDY** Zehra Kovuva Öztürk
08:50-09:00	**Tartışma**	**Tartışma**

17.10.2024		
	Salon A	**Salon B**
17:30-17:36	**Board Sınavı**	**SS-04 // CALF CIRCUMFERENCE-TO-BMI RATIO: A NEW AND SUPERIOR ANTHROPOMETRIC INDICATOR FOR DETECTING SARCOPENIC OBESITY IN OLDER ADULT** Nermin Karakurt
17:36-17:42		**SS-92 // THE IMPACT OF ANTICHOLINERGIC BURDEN ON GERIATRIC SYNDROMES: SCREENING IN COMMUNITY-DWELLING OLDER ADULTS** Remzi Bahşi
17:42-17:48		**SS-02 // COMPREHENSIVE GERIATRIC EVALUATION OF PATIENTS WITH HEMATOLOGICAL MALIGNITY AND EXAMINING THE EFFECT OF OTHER SCALES ON MORTALITY** Nurdan Şentürk Durmuş
17:48-17:54		**SS-30 // PERSONALITY MATTERS FOR LIVING WITH FRAILTY: EVIDENCE FROM DATABASE OF SURVEY OF HEALTH, AGEING, AND RETIREMENT IN EUROPE** Arzu Okyar Baş
17:54-18:00		**SS-39 // THE RELATIONSHIP BETWEEN FRAILTY, AUTOPHAGY, AND INFLAMMATION MARKERS IN OLDER ADULTS** Büşra Yürümez
18:06-18:12		**SS-48 // THE INTERNATIONAL VALIDATION STUDY OF "OPTIMAL USE OF ORAL NUTRITIONAL SUPPLEMENTS (ONS) IN MEDICAL NUTRITION THERAPY-KEPAN GUIDELINE** Ezgi Pınar

17.10.2024		
	Salon A	**Salon B**
18:12-18:18	**Board Sınavı**	**SS-61 // THE RELATIONSHIP BETWEEN ULTRASOUND-DERIVED ANTERIOR THIGH MUSCLE THICKNESS AND FRAILTY IN OLDER ADULTS** Esra Çataltepe
18:18-18:24		**SS-62 // DEVELOPMENT OF THICKENER ""KIVAMPRO"" IN PATIENTS WITH OROPHARYNGEAL DYSPHAGIA: TÜBİTAK ENTREPRENEURSHIP PROJECT** Didem Karaduman
18:24-18:30		**SS-63 // THE DIAGNOSTIC PERFORMANCE OF MODIFIED SARC-F VERSIONS FOR SARCOPENIC OBESITY ACCORDING TO THE ESPEN/EASO CRITERIA IN OLDER ADULTS** Elif Gecegelen
18:30-18:36		**SS-83 // A NOVEL VALIDATED PROGNOSTIC INDEX FOR OLDER PATIENTS IN THE EMERGENCY DEPARTMENT: GAZI INDEX** Funda Yıldırım Borazan
18:36-18:42		**SS-84 // ASSOCIATION BETWEEN SARCOPENIA AND RIGHT HEART FUNCTION IN THE GERIATRIC POPULATION: A CROSS-SECTIONAL STUDY** Oğuzcan Gümüşçubuk
18:42-18:48		**SS-95 // IDENTIFICATION OF POTENTIAL INAPPROPRIATE MEDICATION USE AND ITS RELATIONSHIP WITH MORTALITY IN OLDER ADULTS IN NURSING HOMES USING TIME CRITERIA** Yasin Yıldız
		Tartışma

18.10.2024		
	Salon A	**Salon B**
08:00-08:05	**SS-41 // A CASE OF CEREBRAL AMYLOID ANGIOPATHY PRESENTİNG WITH** Cansu Atbaş	**SS-51 // CHALLENGES OF NIRAPARIB IN FRAIL OLDER ADULTS WITH OVARIAN CANCER: CASE REPORT** Mihriban Güngör
08:05-08:10		**SS-52 // FRAILTY AND ASSOCIATED FACTORS IN ELDERLY PATIENTS WITH DEPRESSION** Mürsel Karadavut
08:10-08:15	**SS-43 //AGEISM: WHAT IS THE PERSPECTIVE OF OLDER ADULTS' CAREGIVERS?** Pelin Ünsal	**SS-53 // YOUTH STRUCTURING MODEL FOR ALZHEIMER'S** Sevnaz Şahin
08:15-08:20	**SS-44 // PREVALENCE OF HYPERPOLYPHARMACY AND ITS STRONG ASSOCIATION WITH FRAILTY AND OTHER GERIATRIC SYNDROMES** Emine Aşcı Civelek	**SS-54 // THE DIGITAL GRANDCHILD PROJECT** Sevnaz Şahin
08:20-08:25		**SS-55 // THE FACTORS RELATED TO LOW DIASTOLIC BLOOD PRESSURE (<65 MMHG) IN OLDER ADULTS LIVING WITH HYPERTENSION (≥80 YEARS)** Kübra Uyanıker
08:25-08:30		**SS-56 // FRAILTY SCORE OUTPERFORMS OTHER RISK INDEXES IN PREDICTING 6-MONTH MORTALITY FOR HIP-FRACTURE PATIENTS: PRELIMINARY FINDINGS** Merve Güner

18.10.2024		
	Salon A	Salon B
08:30-08:35		**SS-57 // SYSTEMIC İNFLAMMATORY RESPONSE INDEX(SIRI) AND SYSTEMIC IMMUNE-INFLAMATION INDEX (SII) NEW BIOMARKERS IN FRAIL PATIENTS OVER 80 YEARS OLDER ADULT?** Tuğçe Emiroğlu Gedik
08:35-08:40		**SS-58 // SIX-MONTH MORTALITY AND COMPLICATIONS AFTER PERCUTANEOUS ENDOSCOPIC GASTROSTOMY IN THE ELDERLY** Cemil İnci
08:40-08:45		**SS-59 // A NEW BIOMARKER FOR SARCOPENIA: THE SYSTEMIC IMMUNE-INFLAMMATION INDEX** Esra Çataltepe
08:45-08:50	**SS-50 // CARE FOR CARE PROJECT: DUTCH EXPERIENCE** Özden Güdük	**SS-60 // EXPLORING THE POTENTIAL OF THE SARC-CALF QUESTIONNAIRE AS A PREDICTIVE TOOL FOR FRAILTY** Esra Çataltepe
08:50-09:00	**Tartışma**	**Tartışma**

18.10.2024		
	Salon C	Salon D
08:00-08:05		**SS-71 // PARTIAL RESPONSE TO HCV TREATMENT IN A 95 YEAR OLD PANCYTOPENIC PATIENT** Ela Güven Avcı
08:05-08:10		**SS-72 // VALIDITY AND RELIABILITY OF THE SHORT PORTABLE MENTAL STATUS QUESTIONNAIRE IN TURKISH OLDER ADULTS** Ayşe Dikmeer
08:10-08:15		**SS-73 // FACTORS AFFECTING BONE FRACTURES IN OSTEOPOROSIS PATIENTS** Pelin Değirmenci
08:15-08:20	**SS-64 // RELATION OF COGNITIVE FUNCTIONS WITH SERUM KLOTHO AND FGF23 LEVELS IN OLDER HEMODIALYSIS PATIENTS** Zuhal Bilgili	**SS-74 // ASSOSIATION BETWEEN FRAILTY AND DYSPHAGIA IN HOSPITALIZED PATIENTS IN THE İNTERNAL MEDICINE WARD** Bahar Tekin Çetin
08:20-08:25		**SS-75 // LONG-TERM IMPACTS OF RAMADAN FASTING ON THE ELDERLY** Büşra Haktanıyan
08:25-08:30	**SS-66 // COMPREHENSIVE GERIATRIC ASSESSMENT OF PATIENTS CONSULTED TO THE GERIATRIC DEPARTMENT FOR MALNUTRITION DURING HOSPITALIZATION** Nurdan Şentük Durmuş	**SS-76 // CLINICAL CHARACTERISTICS AND MORTALITY RISK FACTORS IN ELDERLY PATIENTS WİTH CIRRHOSIS: A CROSS-SECTIONAL STUDY** Büşra Haktanıyan

18.10.2024		
	Salon C	**Salon D**
08:30-08:35	**SS-67 // ASSOCIATION BETWEEN BONE MINERAL DENSITY AND NUTRITIONAL STATUS IN POSTMENOPAUSAL WOMEN; A SINGLE-CENTER, RETROSPECTIVE STUDY** Cansu Çıkın Boztuğ	**SS-77 // THE EFFECTIVENESS OF GNRI IN PREDICTING MORTALITY IN ELDERLY PATIENTS** Helin Yesin
08:35-08:40	**SS-68 // PREVALENCE AND RELATED FACTORS OF ULTRASOUND-BASED OSTEOSARCOPENIA IN TURKISH OLDER ADULTS** Zeynep Berire Kurtuluş	**SS-78 // RETROSPECTIVE ANALYSIS OF RELATION BETWEEN SERUM URIC ACID LEVELS AND FUNCTIONAL ASSESMENT IN OLDER SUBJECTS** Emine Aşcı Civelek
08:40-08:45	**SS-69 // A RARE DIFFERENTIAL DIAGNOSIS OF DEPRESSION AND DEMENTIA: LACK OF GLASSES** Murat Pehlivan	**SS-79 // THE PREDICTIVE CAPACITY OF THE TRIGLYCERIDE TO HIGH-DENSITY LIPOPROTEIN RATIO IN THE DIAGNOSIS OF MALNUTRITION** Eda Çeker
08:45-08:50	**SS-70 // IMPORTANCE OF ADVANCE CARE PLANNING IN DEMENTIA: A CASE REPORT** İskender Arda Nacar	**SS-80 // THE GERIATRIC POPULATION'S PERSPECTIVE ON VACCINES: FRIEND OR FOE?** Metin Sökmen
08:50-09:00	**Tartışma**	**Tartışma**

19.10.2024		
	Salon A	**Salon B**
08:00-08:05	**SS-81 // THE RELATIONSHIP BETWEEN SOCIAL COMPONENTS OF FRAILTY AND GERIATRIC SYNDROMES IN COMMUNITY-DWELLING OLDER ADULTS; A CROSS-SECTIONAL PROSPECTIVE STUDY** Cansu Atbaş	**SS-88 // THE RELATIONSHIP BETWEEN SARCOPENIA AND THYROID FUNCTION AND THYROID NODULES** Sibel Akbaş
08:05-08:10	**SS-82 // SUBCUTANEOUS FAT TISSUE IS ASSOCIATED WITH THE INTENSIVE CARE UNIT STAY IN OLDER PATIENTS: PRELIMINARY RESULTS FROM A CROSS-SECTIONAL STUDY** Merve Güner	**SS-89 // IS COLORECTAL CANCER DIFFERENT IN GERIATRIC PATIENTS?** Metin Sökmen
08:10-08:15		**SS-90 // THE EFFECT OF RAMADAN FASTING ON ANTHROPOMETRIC MEASUREMENTS AND INFLAMMATORY BIOMARKERS IN ELDERLY PATIENTS WITH TYPE 2 DIABETES MELLITUS** Mürsel Karadavut
08:15-08:20		**SS-91 // EVALUATION OF GERIATRIC OUTPATIENTS AND FRAILTY IN A CITY HOSPITAL** Damla Ünal Toprak
08:20-08:25	**SS-85 // EXPLORING THE KNOWLEDGE LEVELS AND ATTITUDES OF OLDER ADULTS TOWARDS LGBTQ+ RIGHTS: A DEMOGRAPHIC ANALYSIS** Oğuzhan Gümüşçubuk	

19.10.2024		
	Salon A	**Salon B**
08:25-08:30	**SS-86 // DEMOGRAPHIC AND CLINICAL CHARACTERISTICS OF THE OLDER ADULTS ATTENDING "DAY CARE AND ACTIVE LIVING CENTER" IN AN EARTHQUAKE CITY** Bahar Bektan Kanat	**SS-93 // TSH LEVELS AND MORTALITY IN GERIATRIC PATIENTS** Metin Sökmen
08:30-08:35	**SS-87 // RELATIONSHIPS BETWEEN CAREGIVING READINESS, CAREGIVING BURDEN AND QUALITY OF LIFE ACCORDING TO APIM AMONG CAREGIVERS OF FRAIL OLDER ADULTS** Pınar Gürün	**SS-94 // THE RELATIONSHIP BETWEEN FIB-4 SCORE AND FRAILTY IN THE ELDERLY POPULATION** Helin Yesin
08:35-09:00	**Tartışma**	**Tartışma**

SÖZELBİLDİRİLER

Polypharmacy and Inappropriate Drug Use

SS-01

Publication Hall: A
Publication Start Date: 2024-10-17 08:00:00
Publication End Date: 2024-10-17 08:05:00

POLYPHARMACY-RELATED GERIATRIC SYNDROMES

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Objective: The prevalence of polypharmacy is high in older adults. Geriatric syndromes caused by polypharmacy reduce the quality of life and increase morbidity, hospital admition and hospitalition. Knowing the geriatric syndromes that may be caused by polypharmacy is important for taking precautions and raising awareness. Thus, this study aimed to identify polypharmacy and associated geriatric syndromes.

Methods: Records of patients who visited the Geriatrics Outpatient Clinic at Kastamonu Training and Research Hospital within a 6-month period and underwent a comprehensive geriatric assessment were reviewed retrospectively. Differences were examined between the groups with and without polypharmacy (defined as the use of 5 or more medications) in terms of daily living activities (ADL) according to KATZ, instrumental daily living activities (IADL) according to Lawton-Brody, frailty index (FI) according to Fried, Mini Mental State Examination (MMSE), Yesavage Geriatric Depression Scale (YGDS), gait speed (m/s), presence of urinary incontinence, history and number of falls in the last year, and insomnia.

Results: A total of 461 patients were included in the study. The mean age was 69.97 ± 6.4 years, and 69.12% were female. Polypharmacy was present in 57.3% of the patients. Patients with polypharmacy had significantly higher BMI, YGDS, and FI scores (p=0.04, p=0.02, p <0.01, respectively), and significantly lower gait speed (p=0.02). Insomnia was significantly more common in the polypharmacy group (p=0.01). No significant differences were found between the groups with and without polypharmacy in terms of gender, age, ADL, IADL, MMSE, history of falls, number of falls, urinary incontinence (p=0.25, p=0.74, p=0.56, p=0.17, p=0.08, p=0.08, p=0.39, p=0.05).

Conclusion: The prevalence of polypharmacy was high among community-dweeeling older adults. Depression, obesity, frailty, insomnia, and decreased gait speed may be associated with the polypharmacy. It is necessary to optimize medication use in older patients to prevent them.

Keywords: polypharmacy, frailty index, depression, older adults, gait speed

Table 1. Comparison of patients with polypharmacy and those without

	Total (n=461)	*Polypharmacy (n=284)*	*No polypharmacy (n=177)*	*P value*
Age	69.97±6.4	70.12±6.15	69.92±6.80	0.25
Gender (Female) (%)	319 (69.12)	202 (71.1)	117 (60.10)	0.74
BMI	31.39±6.33	31.87±5.93	30.63±6.94	0.04
ADL	5 (2-6)	5(2-6)	5 (2-6)	0.56
IADL	6.70±1.76	6.58±1.8	6.81±1.76	0.17
Fried Index	2.38±1.23	2.17±1.22	2.51±1.22	<0.01
MMSE	25.15±3.62	24.91±3.72	25.50±3.42	0.08
YGDS	4.04±2.7	4.28±2.81	3.69±2.61	0.02
Gait Speed (m/Sn)	2±0.7	0.75±0.29	0.82±0.30	0.02
Fall History (%)	152 (35.11)	96 (36.10)	56 (33.53)	0.08
Number Of Falls	0 (0-10)	0 (0-10)	0 (0-6)	0.39
Insomnia (%)	199 (66.74)	190 (71.16)	99 (59.63)	0.01
Urinary incontinent (%)	250 (58.13)	164 (61.88)	86 (52.12)	0.05

Abbreviations: BMI: Body mass index, ADL: Activity of Daily Living Scale, IADL: Instrumental Activity of Daily Living Scale, MMSE: Mini Mental State Examination, YGDS: Yesavage Geriatric Depression Scala. P <0.05 is significant

Multidisciplinary Approaches

SS-02

Publication Hall: A
Publication Start Date: 2024-10-17 08:05:00
Publication End Date: 2024-10-17 08:10:00

COMPREHENSIVE GERIATRIC EVALUATION OF PATIENTS WITH HEMATOLOGICAL MALIGNITY AND EXAMINING THE EFFECT OF OTHER SCALES ON MORTALITY

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Background and Purpose: The number of patients diagnosed with haematological malignancies over the age of 65 is increasing due to the ageing population and the characteristics of haematological diseases. These patients should be assessed using a Comprehensive Geriatric Assessment (CGA) before deciding on the treatment to follow. The aim of this study was to evaluate the effect of CGA, geriatric syndromes and other scales on in-hospital and 1-year follow-up mortality in patients with haematological malignancies who had a pre-treatment consultation with the geriatric department.

Materials and Methods: The study included adults aged 65 years and older with a diagnosis of haematological malignancy, who were consulted to the outpatient department of geriatrics at Marmara University Faculty of Medicine between October 2018 and August 2023. Patients' demographics, comorbidities, geriatric syndromes and treatment modalities were collected. All patients were evaluated by a geriatrician for CGA. Hematology-Oncology Frailty (HOF) and Geriatric-8 (G8) scores were calculated for each patient prior to treatment. The hospitalisation status, the duration of hospitalisation, the in-hospital mortality rate and the one-year follow-up mortality rate were recorded.

Results: Of the patients, 42.9% (n=36) were female (mean age 71.0 years). The most common haematological diagnosis was non-Hodgkin's lymphoma (NHL) (28.6%, n=24). The majority of participants (51.2%, n=43) were frail. G8 score identified 77.4% (n:65) of patients as being at risk, and HOF identified nearly half of participants as frail (2.9%, n:36). The majority of the patients (63% (n = 53) of the patients had never been vaccinated with the COVID-19 vaccine. The in-hospital mortality rate was 23.8% (n = 20) and the mortality rate at 1 year follow-up was 33.3% (n = 28). In-hospital mortality was 23.8% (n:20) and mortality at 1 year was 33.3% (n:28). In-hospital mortality was associated with frailty (hazard ratio (HR):41.19, 95% confidence interval (CI): [2.74-618.39]; p=0.007) and the presence of sarcopenia risk (HR:0.08, CI:0.01-0.94, p=0.044). Being male, not having received the COVID-19 vaccination, having a higher HOF score and having a lower albumin level were associated with mortality at 1 year follow-up (p=0.016, p=<0.001, p=0.016, respectively).

Conclusions: In older adults, frailty is associated with prolonged hospital stay, adverse drug reactions and increased mortality. Identifying frail patients with CGA and determining treatment strategies for older adults seems to be very important. Vaccination programmes should be completed in geriatric patients diagnosed with haematological malignancies, as mortality is higher in patients who have not received the COVID-19 vaccine.

Keywords: Frailty, Geriatric Syndromes, Haematological Malignancy, HOF score, Mortality

Table 1. Demographic variables of the participants

	Total n=84 n (%)
Yaş*	71.0 (65-96)
Cinsiyet	
Erkek	48 (57.1)
Kadın	36 (42.9)
Vücut ağırlığı (kg)*	66.6 ± 15.8 (35.0-100.0)
Boy (cm)*	165.0 ± 7.3 (145.0-187.0)
VKİ*	24.9 ± 4.4 (13.2-38.8)
Kronik hastalık sayısı*	3.0 (1-9)
Kullanılan ilaç sayısı*	5.0 (1-8)
DM	24 (28.6)
HT	55 (81.9)
Polifarmasi (≥5 İlaç Sayısı)	
Yok	36 (42.9)
Var	48 (57.1)
GYA Skoru*	18 (6-18)
Fonksiyonellik – GYA	
Bağımlı	15 (17.9)
Yarı Bağımlı	22 (26.1)
Bağımsız	47 (56.0)
EGYA Skoru*	19 (6-24)
Fonksiyonellik – EGYA	
Bağımlı	22 (26.2)
Yarı Bağımlı	19 (22.6)
Bağımsız	43 (51.2)
MNA-SF Skoru*	8.5 (3.0-12.0)
MNA-SF Skoruna Göre Malnütrisyon Durumu	
Malnütre	31 (36.9)
Malnütrisyon Riski	42 (50.0)
Normal	11 (13.1)
SARC-F Skoru *	1.5 (0.0-9.0)
SARC-F Skoru ≥4	42 (50.0)
FRAIL Skoru*	3 (0-5)
Kırılganlık	
Kırılgan	43 (51.2)
Pre-kırılgan	32 (38.1)
Normal	9 (10.7)
G8 Skoru*	9 (2-16)
G8 Skoruna Göre Risk Durumu	
Yüksek riskli	65 (77.4)
Normal	19 (22.6)
HOF Skoru*	3 (0-10)
HOF Skoruna Göre Kırılganlık	
Kırılgan	36 (42.9)
Normal	48 (57.1)
4 metre yürüme hızı (m/sn)*	0.83 (0.11-1.70)
Yürüme hızı	
Yavaş	40 (47.6)
Normal	44 (52.4)
COVID-19 yoluyla olma durumu	21 (25.0)
COVID-19 Aşısı	31 (37.0)
Pnömonisi aşısı durumu	19 (22.6)
Hematolojik Malignite Tanısı	
NHL	24 (28.6)
MM	22 (26.1)
AML	16 (19.0)
MDS	6 (7.1)
KLL	4 (4.8)
ALL	2 (2.4)
MGUS	2 (2.4)
Aralıklılıler	2 (2.4)
Plazmositom	2 (2.4)
HL	1 (1.2)
Primer Myelofibrozis	1 (1.2)
KMML	1 (1.2)
Plazma Hücreli Lösemi	1 (1.2)
Tedavisiz izlem	14 (16.7)
Hemoglobin (g/dL)	9.7±1.9 (6.2-15.4)
Albümün (g/dL)	3.5±0.6 (2.1-5.0)
GFR (Cockgroft Gault) (ml/dk/1.73 m²)	68.5 (9.6-120.0)
25-OH D Vitamini (ng/mL)	15.7 (1.5-67.0)
LDH (U/L)	232.5±370.6 (96-2772)
Hastane İçi Mortalite Durumu	20 (23.8)
1 yıllık takip süresinde Mortalite Durumu	28 (33.3)
Hastane içi yatış süresi (gün)*	27 (3-146)
1 yıllık mortalite süresi (gün)*	365 (22-365)

Not: *Değerler mean±standart sapma ve medyan (minimum-maksimum) olarak ifade edilmiştir.

Table 2. Variables of the in-hospital mortality

	Mortalite yok n=64, n(%)	Mortalite var n=20, n (%)	p değeri
Yaş*	71.0 (65-96)	71.0 (66-92)	0.862
Cinsiyet			
Erkek	37 (57.8)	11 (55.0)	0.824
Kadın	27 (42.2)	9 (45.0)	
Vücut ağırlığı (kg)*	67.0 ± 13.7	65.6 ± 14.1	0.675
Boy (cm)*	164.8 ± 7.6	165.1 ± 6.2	0.268
BKİ*	24.6 ± 4.3	24.0 ± 4.9	0.395
Kullanılığı İlaç Sayısı*	4 (1-7)	5 (1-8)	0.217
Kronik Hastalık			
Yok	4 (6.2)	3 (15.0)	0.217
Var	60 (93.8)	17 (85.0)	
Kronik Hastalık Sayısı*	3 (1-7)	3 (1-9)	0.193
Polifarmasi (≥5 İlaç Sayısı)			
Yok			
Var	28 (43.8)	8 (40.0)	0.767
	36 (56.3)	12 (60.0)	
GYA Skoru*	18 (6-18)	10 (6-18)	0.084
Fonksiyonellik – GYA			
Bağımlı	11 (17.2)	4 (20.0)	0.059
Yarı Bağımlı	13 (20.3)	9 (45.0)	
Bağımsız	40 62.5)	7 (35.0)	
EGYA Skoru*	24 (6-24)	14 (5-24)	0.112
Fonksiyonellik – EGYA			
Bağımlı	16 (25.0)	6 (30.0)	0.051
Yarı Bağımlı	11 (17.2)	8 (40.0)	
Bağımsız	37 (57.8)	6 (30.0)	
MNA-SF Skoru*	**10 (3-12)**	**7 (4-12)**	***0.044***
MNA-SF Skoruna Göre Malnütrisyon Durumu			
Malnütre			
Malnütrisyon Riski	20 (31.2)	11 (55.0)	0.157
Normal	35 (54.7)	7 (35.0)	
	9 (14.1)	2 (10.0)	
SARC-F Skoru *	2 (0-8)	4 (0-9)	0.078
SARC-F Skoru			
Sarkopeni	**28 (43.7)**	**14 (70.0)**	***0.040***
Normal	**36 (56.3)**	**6 (30.0)**	
FRAIL Skoru*	2 (0-5)	3 (0-5)	0.520
Kırılganlık			
Frail	31 (48.4)	12 (60.0)	0.362
Pre-frail	27 (42.2)	5 (25.0)	
Non-frail	6 (9.4)	3 (15.0)	
G8 Skoru*	9.50 (4-16)	8 (2-16)	0.509
G8 Skoruna Göre Risk Durumu			
Yüksek riskli			
Normal	49 (76.6)	16 (80.0)	0.748
	15 (23.4)	4 (20.0)	
HOF Skoru*	3 (0-10)	4 (0-10)	0.577
HOF Skoruna Göre Kırılganlık			
Kırılgan			
Normal	26 (40.6)	10 (50.0)	0.460
	38 (59.4)	10 (50.0)	
4 metre yürüme hızı (m/sn)*	**0.86 (0.11-1.70)**	**0.54 (0.23- 1.10)**	***0.040***
Yürüme hızı			
Yavaş	27 (42.2)	13 (65.0)	0.073
Normal	37 (57.8)	7 (35.0)	
Covid Öyküsü			
Yok	50 (79.4)	13 (85.0)	0.191
Var	14 (20.6)	7 (15.0)	
Covid aşı durumu			
Aşısız	37 (57.8)	16 (80.0)	0.073
Aşılı	27 (42.2)	4 (20.0)	
Pnömoni aşısı durumu			
Yok	47 (73.4)	18 (90.0)	0.099
Var	17 (26.26)	2 (10.0)	
Hemoglobin (g/dL)	**9.6 (6.4-15.4)**	**8.7 (6.2-11.2)**	***0.022***
Albümün (g/dL)	3.6 ± 0.6	3.3 ± 0.6	0.748
GFR Cockgroft Gault(ml/dk/1.73 m 2)	70.5 (9-110)	64.5 (13-107)	0.511
25-OH D Vitamini (ng/mL)	16.5 (1.7-67.0)	12.8 (1.5-43.0)	0.323
LDH (U/L)	213.5 (96-2772)	306.0 (149-947)	0.195

Table 3. Presence of mortality after 1 year of follow-up

	Mortalite yok n=56, n(%)	Mortalite var n=28, n (%)	p değeri
Yaş*	70.0 (65-91)	75.0 (66-96)	0.052
Cinsiyet			
Erkek	34 (60.7)	14 (50.0)	0.350
Kadın	22 (39.3)	14 (50.0)	
Vücut ağırlığı (kg)*	66.9 ± 14.8	66.0 ± 11.6	0.222
Boy (cm)*	164.9 ± 7.9	164.8 ± 6.0	0.119
BKİ*	24.5 ± 4.6	24.3 ± 4.1	0.549
Kullanılığı İlaç Sayısı*	5.0 (1-7)	4.0 (1-8)	0.799
Kronik Hastalık			
Yok	5 (8.9)	2 (7.1)	0.780
Var	51 (91.1)	26 (92.9)	
Kronik Hastalık Sayısı*	3.0 (1-7)	3.0 (1-9)	0.416
Polifarmasi (≥5 İlaç Sayısı)			
Yok			
Var	24 (42.9)	12 (42.9)	0.999
	32 (57.1)	16 (57.1)	
GYA Skoru*	**18.0 (6-18)**	**10.0 (6-18)**	***0.006***
Fonksiyonellik – GYA			
Bağımlı	**6 (10.7)**	**9 (32.1)**	
Yarı Bağımlı	**13 (23.2)**	**9 (32.1)**	***0.015***
Bağımsız	**37 (66.1)**	**10 (35.8)**	
EGYA Skoru*	**24.0 (6-24)**	**14.0 (5-24)**	***0.006***
Fonksiyonellik – EGYA			
Bağımlı	**10 (17.9)**	**12 (42.8)**	
Yarı Bağımlı	**11 (19.6)**	**8 (28.6)**	***0.010***
Bağımsız	**25 (62.5)**	**8 (28.6)**	
MNA-SF Skoru*	10.0 (4-12)	8.0 (3-12)	0.083
MNA-SF Skoruna Göre Malnütrisyon Durumu			
Malnütre			
Malnütrisyon Riski	19 (33.9)	12 (42.9)	0.463
Normal	28 (50.0)	14 (50.0)	
	9 (16.1)	2 (7.1)	
SARC-F Skoru *	**2.0 (0-7)**	**5.0 (0-9)**	***0.009***
SARC-F Skoru			
Sarkopeni	**23 (41.1)**	**19 (67.9)**	***0.021***
Normal	**33 (58.9)**	**9 (32.1)**	
FRAIL Skoru*	2.0 (0-5)	3.0 (0-5)	0.084
Kırılganlık			
Frail	25 (44.6)	18 (64.3)	0.234
Pre-frail	24 (42.9)	8 (28.6)	
Non-frail	7 (12.5)	2 (7.1)	
G8 Skoru*	**10.0 (4-16)**	**8.0 (2-16)**	***0.028***
G8 Skoruna Göre Risk Durumu			
Yüksek riskli			
Normal	40 (71.4)	25 (89.3)	0.065
	16 (28.6)	3 (10.7)	
HOF Skoru*	**2.0 (0-10)**	**5.0 (0-10)**	***0.010***
HOF Skoruna Göre Kırılganlık			
Kırılgan			
Normal	20 (35.7)	16 (57.1)	0.061
	36 (64.3)	12 (42.9)	
4 metre yürüme hızı (m/sn)*	**0.86 (0.11-1.70)**	**0.58 (0.23-1.10)**	**0.024**
Yürüme hızı			
Normal	**25 (62.5)**	**9 (32.1)**	**0.008**
Yavaş	**21 (37.5)**	**19 (67.9)**	
Covid Öyküsü			
Yok	43 (76.8)	20 (71.4)	0.496
Var	13 (23.2)	8 (28.6)	
Covid aşı durumu			
Aşısız	**27 (48.2)**	**26 (92.9)**	***<0.001***
Aşılı	**29 (51.8)**	**2 (7.1)**	
Pnömoni aşısı durumu			
Yok	**38 (67.9)**	**27 (96.4)**	***0.001***
Var	**18 (32.1)**	**1 (3.6)**	
Hemoglobin (g/dL)	9.6 (6.2-15.4)	9.2 (8.5-15.5)	0.362
Albümün (g/dL)	3.7 ± 0.6	3.2 ± 0.7	0.000
GFR Cockgroft Gault(ml/dk/1.73 m 2)	70.5 (10.0-110.0)	61.5 (9.0-110.0)	0.247
25-OH D Vitamini (ng/mL)	14.9 (1.7- 67.0)	18.2 (1.5-42.1)	0.566
LDH (U/L)	**197.5 (96-2772)**	**342.0 (181-1126)**	***<0.001***

Table 4. Multivariate logistic regression analysis of risk factors associated with in-hospital mortality and 1-year follow-up mortality risk

In-hospital Mortality	p-value	HR (95% CI)
Frailty	**0.021**	
Frail: Normal	**0.007**	41.19 (2.74-618.39)
Frail: Prefrail	**0.012**	14.34 (1.81-113.79)
SARC-F score (sarcopenia risk)	**0.044**	1.14 (0.92-1.44)
1-year follow-up mortality	**p-value**	**HR (95% CI)**
Sex: female	**0.018**	0.37 (0.16-0.85)
HOF score	**0.042**	1.14 (1.01-1.30)
Absence of pneumonia vaccine	**0.036**	8.51 (1.15- 63.18)
Absence of COVID-19 vaccine	**0.015**	7.29 (1.47-36.16)
Albumin level (g/dL)	**0.035**	0.48 (0.25- 0.95)

Note: CI: Confidence Interval, HOF: Hematoloji-Onkoloji Fragility, HR: Hazard Ratio, gr/dl: gram/desiliter.

Multidisciplinary Approaches

SS-03

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IS A COMPREHENSIVE GERIATRIC ASSESSMENT USEFUL IN OLDER PEOPLE WHO ARE DIAGNOSED WITH A HAEMATOLOGICAL MALIGNANCY?

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Objective: To demonstrate the effectiveness of comprehensive geriatric assessment (CGA) in patients aged 65 years and older with haematological malignancy and to evaluate its relationship with 1-year mortality.

Method: Patients aged 65 years and older who were followed up at Marmara University Faculty of Medicine Hospital between 1 October 2018 and 10 August 2023 with a diagnosis of haematological malignancy and consulted to the Department of Geriatrics before treatment were included in the study. All participants underwent CGA and the Hematological-Oncological Frailty score was calculated. 1-year mortality status was recorded. This study was designed as a croSS-sectional study and 84 patients were included.

Results: The mean age was 71.0 years (65-96) and 42.9% of the participants were female. According to the CGA, 29.8% of the participants were fit, 36.9% were un-fit and 33.3% were frail. Mortality was observed in 33.3% at one-year follow-up. In multinomial analysis, frail individuals were more older (odds ratio (OR): 0.91, confidence interval (CI): 0.85-0.95, p=0.018) and more dependent based on IADL score (OR: 1.74, CI: 1.27-2.41, p=0.001). Older age (hazard ratio (HR): 1.05, CI: 1.01-1.98, p=0.046), being dependent on IADL (HR: 0.93, CI: 0.87-0.99, p=0.022), slow walking speed (HR: 0.26, CI: 0.70-0.98, p=0.047) and low albumin level (HR: 0.39, CI: 0.18-0.84, p=0.016) were associated with mortality at 1-year follow-up.

Conclusion: Individuals who are frail according to the CGD and have mortality at 1-year follow-up are more older and dependent based on IADL score.

Keywords: comprehensive geriatric assessment, haematological malignancy, older adults

Table 1. Demographic variables of the participants

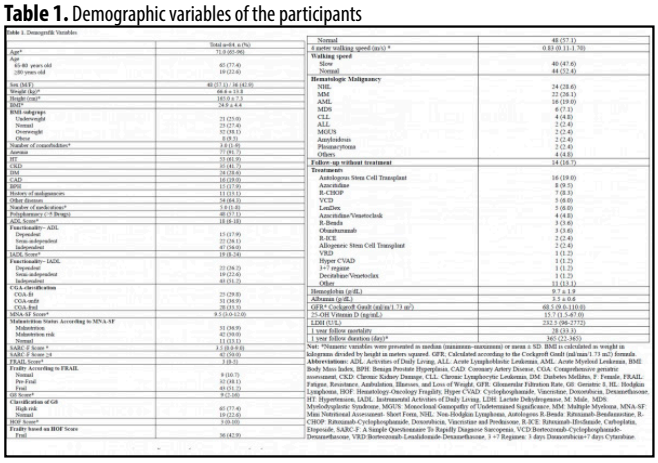

Table 2. Demografik Variables according to comprehensive geriatric assessment classification

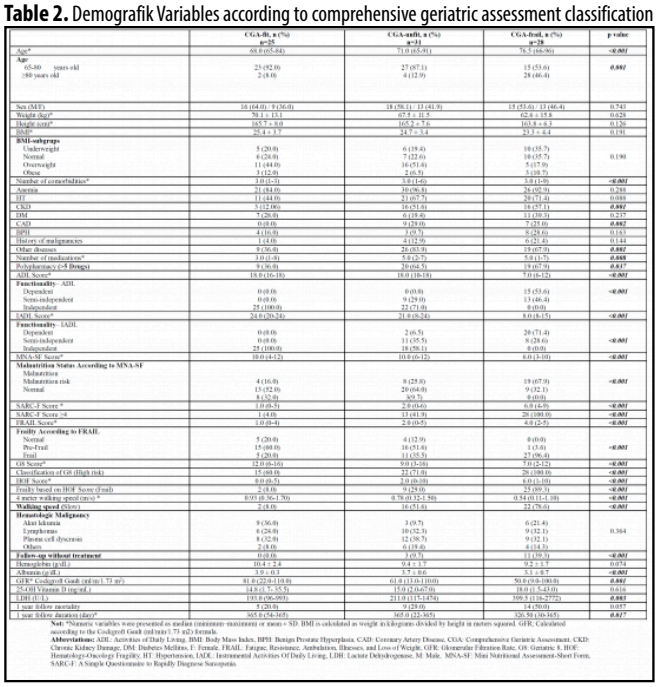

Table 3. Characteristics and laboratory parameters of univariate analysis according to one-year follow up mortality of participants

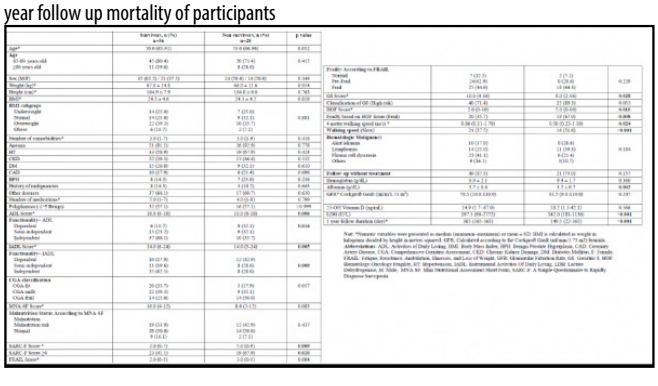

Table 4. Multinomial logistic regression analysis for comprehensive geriatric assessment classification

CAG (fit:frail)	p-value	OR (95% CI)
Age	***0.001***	0.81 (0.71-0.91)
Sex: male	0.417	0.60 (0.17-2.06)
Number of comorbidities	***0.001***	0.21 (0.09-0.52)
ADL score	***0.007***	13.44 (2.04-88.64)
HOF score	0.994	1.00 (0.42-2.37)
Albümin levels	0.421	4.76 (0.11-207.27)
CAG (unfit: frail)	**p-value**	**OR (95% CI)**
Age	***0.018***	0.91 (0.85-0.95)
Sex: male	0.671	0.79 (0.27-2.34)
Number of comorbidities	0.835	1.04 (0.71-1.53)
ADL score	***0.018***	4.35 (1.28-14.73)
HOF score	0.618	1.17 (0.63-2.21)
Albümin levels	0.950	0.93 (0.99-8.73)

Abbreviations: ADL: Activities of Daily Living, HOF: Hematology-Oncology Fragility, OR: Odds Ratio.

Table 5. Cox regression analysis for one-year mortality

Mortality	p-value	HR (95% CI)
Age	***0.046***	1.05 (1.01-1.98)
Sex: female	0.241	0.64 (0.31-1.35)
ADL score	***0.022***	0.91 (0.84-0.99)
4 meter walking speed	***0.047***	0.26 (0.70-0.98)
HOF score,	0.650	1.05 (0.86-1.27)
Albumin levels	***0.016***	0.39 (0.18-0.84)

Abbreviations: ADL: Activities of Daily Living, HOF: Hematology-Oncology Fragility, HR: Hazard ratio.

Sarcopenia

SS-04

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CALF CIRCUMFERENCE-TO-BMI RATIO: A NEW AND SUPERIOR ANTHROPOMETRIC INDICATOR FOR DETECTING SARCOPENIC OBESITY IN OLDER ADULTS

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Objectives: Sarcopenic obesity, characterized by the coexistence of sarcopenia and obesity, poses significant health risks, particularly in older adults. Early detection is critical for implementing preventive measures. This study aimed to evaluate the predictive value of the calf circumference to body mass index ratio (CC/BMI) as an anthropometric indicator for sarcopenic obesity, and to compare its effectiveness with calf circumference adjusted for BMI (subtracting 3, 7, or 12 cm from calf circumference measurements corresponding to BMI categories of 25–29.9, 30–39.9, and ≥40 kg/m², respectively).

Methods: A retrospective analysis was conducted on 575 patients aged 65 years and older from a geriatrics outpatient clinic. Exclusion criteria included having advanced dementia, knee or hip replacement, neurodegenerative diseases, decompensated heart failure or the use of muscle-impacting medications. Participants underwent geriatric assessments which included ultrasound measurements of anterior thigh muscle thickness and anthropometric evaluations. Sarcopenia was defined using the STAR index (anterior thigh muscle thickness/BMI ratio) and low handgrip strength. Patients who had both sarcopenia and a BMI ≥30 kg/m2 were categorized as having sarcopenic obesity. CC/BMI ratio, and calf circumference adjusted for BMI were calculated, and their predictive power for sarcopenic obesity was assessed.

Results: Of the participants, 20.8% (n=120) were sarcopenic, and 10.7% (n=62)had sarcopenic obesity. Significant positive correlations were observed between the CC/BMI ratio and age, as well as with handgrip strength, STAR index, and walking speed. The CC/BMI ratio demonstrated a significantly higher predictive capability for sarcopenic obesity (AUC: 0.823, cutoff ≤1.21, sensitivity: 86.27%, specificity: 67.25%) compared to calf circumference adjusted for BMI (AUC: 0.673, cutoff ≤30 cm, sensitivity: 50.98%, specificity: 75%).

Conclusion: The CC/BMI ratio shows higher sensitivity and predictive value for diagnosing sarcopenic obesity compared to calf circumference adjusted for BMI. It could serve as a practical screening tool for sarcopenic obesity in older adults.

Keywords: sarcopenia; sarcopenic obesity; calf circumference; anthropometric.

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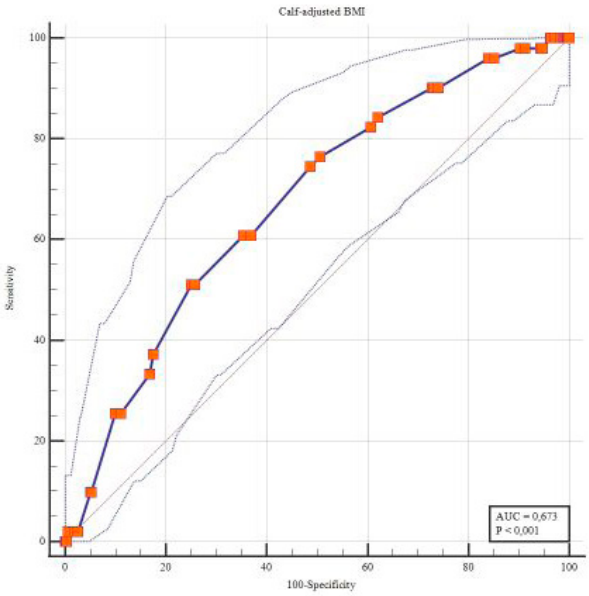

Figure 1: Calf Circumference Adjusted BMI ROC curve

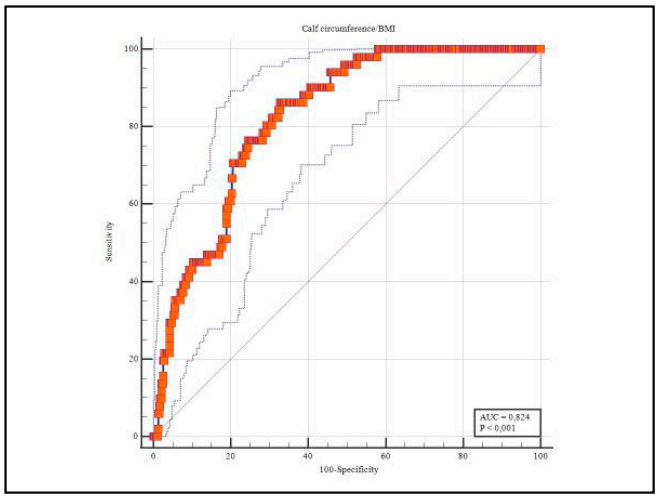

Figure 2. Calf Circumference/BMI ratio ROC curve

Table 2.

Table 2. Correlations of Calf Circumference BMI Ratio

	CC/BMI		CC adjusted for BMI	
	Rho	p	Rho	p
Age	0.095	0.024	-0.118	0.005
Handgrip strength	0.241	<0.001	0.359	<0.001
Usg quadriceps	-0.143	0.001	0.160	<0.001
Usg star index	0.429	<0.001	0.214	<0.001
Gait speed test	0.154	<0.001	0.207	<0.001
Rho: Pearson's Correlations Coefficient				

Table 1. General Characteristics of the Participants According to Sarcopenic Obesity

	Total (n:575)	*With Sarcopenic obesity (n:62)*	*Without Sarcopenic obesity (n:523)*	*p*
Sex, n (%) Female / Male	360 (62.6) / 215 (37.4)	40 (11.1) / 12 (5.6)	320 (88.9) / 203 (94.4)	0.025
Age, mean (SD)	74.09 (5,95)	75.35 (6.51)	73.96 (5.88)	0.193
Height, cm, mean (SD)	157.4 (9.25)	150.98 (7.03)	158.03 (9.21)	<0.001
Weight, kg, mean (SD)	70.83 (13.36)	78.9 (12.58)	70.05 (13.18)	<0.001
BMI, kg/m2, median (min-max)	28 (13.9-46.3)	32.65 (30.1-46.3)	27.5 (13.9-45.9)	<0.001
Waist circumference, cm, mean (SD)	99.01 (12.47)	108.96 (9.68)	98.03 (12.29)	<0.001
Hip circumference, cm, mean (SD)	106.94 (10.18)	115.33 (11.24)	106.13 (9.7)	<0.001
Arm circumference, cm, mean (SD)	28.96 (3.72)	31.54 (3.4)	28.71 (3.66)	<0.001
Calf circumference, cm, mean (SD)	36.08 (3.88)	38 (3.14)	35.89 (3.89)	<0.001
Calf adjusted, cm, mean (SD)	32.49 (3.29)	30.67 (2.73)	32.67 (3.29)	<0.001
Calf-bmi ratio, median (min-max)	1.27 (0.91-2.27)	1.14 (0.92-1.33)	1.29 (0.91-2.27)	<0.001
Calf-weight ratio, median (min-max)	0,51 (0.33-0.79)	0.48 (0.35-0.60)	0.51 (0.33-0.79)	0.003
Handgrip strength, kg, median (min-max)	20.3 (7.1-48)	14.15 (8.1-26.3)	20.9 (7.1-48)	<0.001
Usg quadriceps, mm, mean (SD)	32.86 (7.22)	30.32 (6.96)	33.11 (7.21)	0.019
Usg star index, mean (SD)	1.16 (0.26)	0.88 (0.19)	1.18 (0,25)	<0.001
Gait Speed, m/s, mean (SD)	1.02 (0,29)	0.87 (0.26)	1.03 (0.29)	<0.001
ADL, median (min-max)	6 (4-6)	6 (4-6)	6 (4-6)	0.413
IADL, median (min-max)	8 (1-8)	8 (4-8)	8 (1-8)	0.204
MNA, median (min-max)	13 (3-14)	13 (7-14)	13 (3-14)	0.651
MMSE, median (min-max)	29 (12-30)	28.5 (22-30)	29 (12-30)	0.100
GDS, median (min-max)	1 (0-14)	1.5 (0-10)	1 (0-14)	0.489
Diabetes Mellitus, n (%)	188 (32.7)	20 (10.6)	168 (89.4)	0.353
Hypertension, n (%)	402 (69.9)	46 (11.4)	356 (88.6)	0.002
COPD, n (%)	21 (3.7)	2 (9.5)	19 (90.5)	0.938
CAD, n (%)	122 (21.2)	18 (14.8)	104 (85.2)	0.013

BMI: Body Mass Index, ADL: Activities of Daily Living, IADL: Instrumental Activities of Daily Living, MNA: The Mini Nutritional Assessment, MMSE: Mini-Mental State Examination, GDS: Geriatric Depression Scale, COPD: Chronic Obstructive Pulmonary Disease, CAD: Coronary Artery Disease.

Table 3. Comparison of ROC Curves

	Cut-off	*AUC*	*SE*	*p*	*95% CI*	*Sensitivity*	*Specificity*	*+PV*	*-PV*
Calf-bmi ratio	≤ 1.21	0.823	0.0242	<0,0001	0.789-0.854	86.27	67.25	98	20.8
Calf adjusted	≤ 30	0.673	0.0379	<0,0001	0.632-0.711	50.98	75	16.9	93.9

ROC: Receiver Operating Characteristic, AUC: Area Under The Curve, SE: Standart Error, PV: Positive Predictive

Others

SS-07

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PROGNOSTIC FACTORS FOR 30-DAY MORTALITY AFTER HIP FRACTURE IN THE ELDERLY

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Background: Hip fractures cause serious disability, impair quality of life, increase socioeconomic burden and mortality risk in the elderly. We aimed to identify factors associated with mortality in geriatric patients with hip fractures.

Methods: The data of geriatric patients who were hospitalized due to hip fracture in the orthopedics ward of our tertiary university hospital between January 2013 and January 2024, were retrospectively analyzed. In addition to demographic and clinical data, location and cause of hip fracture, time from fracture to surgery, type of operation, postoperative complications, length of hospital stay and 30-day survival were recorded.

Results: The study included 250 patients aged 60 and over. The median age was 80 (60–110) years and 156 (62.4%) were female. Seventeen patients (6.8%) died within 30 days of traumatic hip fracture. Nonsurviving patients were significantly older and had a higher prevalence of dementia compared to survivors (p=0.021 and p=0.014, respectively). Mortality was lower among patients with femoral neck fractures (p=0.004) and higher among those with pertrochanteric fractures (p<0.001). Nonsurviving patietns had significantly higher levels of blood urea nitrogen and creatinine and a significantly lower lymphocyte count. Based on the multivariate logistic regression analysis, independent risk factors for 30-day mortality included the presence of dementia (increased the odds of mortality by 4.12 times) and pertorchanteric fracture (increased the odds of mortality by 15.87 times).

Conclusion: Hip fracture mortality was higher in patients with dementia, pertorchanteric fractures, and lymphopenia at the time of admission among older people. These patients should be followed closely.

Keywords: Elderly; hip fracture; mortality; prognostic factors; risk factors

Introduction

Hip fractures cause serious disability, impair quality of life, and increase socioeconomic burden and mortality risk. As the global population ages, the annual incidence of hip fracture is expected to rise [1, 2], reaching 2.6 million in 2025 and 6.25 million by 2050 [3].

The mortality rate among older adults with hip fracture is between 14% and 36% within the first year [4]. There are many epidemiological studies on hip fracture in the literature but little research on mortality after hip fracture in the older population of our country. Therefore, we aimed in this study to identify factors associated with mortality in geriatric patients with hip fractures.

Methods

This retrospective cross-sectional study was conducted with older people (age ≥60 years) hospitalized in the orthopedics ward of our tertiary university hospital for hip fracture between January 2013 and January 2024.

Inclusion criteria were being 60 years of age or older, having radiologically diagnosed (by direct radiography and/or computed tomography) intertrochanteric, subtrochanteric, or femoral neck fracture, and being hospitalized in our orthopedics ward for surgery or follow-up. Exclusion criteria were having a history of previous hip fracture, presence of pathological fracture, and declining hospital admission.

The patients' demographic characteristics, chronic diseases, number and types of medications used, bone mineral densitometry values, type of osteoporosis, date of hip fracture, location and cause of hip fracture, fractures at sites other than the hip, date of surgery, time from fracture to surgery, type of operation, ASA score, type of anesthesia (epidural, spinal, general), blood loss and perioperative need for replacement blood products, postoperative complications, length of hospital stay, and 30-day survival were recorded by reviewing hospital electronic records and patient files.

Postoperative complications were categorized as metabolic and surgical. The patients' fracture type was classified as low-energy or high-energy trauma. The burden of comorbid disease was calculated using the modified Charlson Comorbidity Index (mCCI).

Survival was determined based on information obtained from the national death records system, and the patients' postoperative survival time was recorded. In addition, laboratory results from the time of admission for hip fracture.

Statistical Analysis

All data were analyzed using statistical package SPSS version 21.0 (IBM Corp). The Kolmogorov–Smirnov test was used to test whether continuous variables showed a normal distribution. Pairwise comparisons between independent groups were made using the Mann-Whitney U test for nonparametric data and Student's t-test for parametric data. Categorical data were compared using chi-square analysis. A multivariate logistic regression model was created with variables found to be statistically significant in terms of 30-day mortality (model: backward: LR, entry: 0.05, removal: 0.10). P values less than 0.05 were considered statistically significant.

Results

The study included 250 hip fracture patients . Their median age was 80 (range: 60–110) years and 156 (62.4%) were female. Seventeen patients (6.8%) died within 30 days of traumatic hip fracture. Comparisons of demographic characteristics, comorbidities, and cause and location of hip fractures based on 30-day mortality are presented in Table 1. Nonsurviving patients were significantly older and had a higher prevalence of dementia compared to survivors (p=0.021 and p=0.014, respectively). In addition, the median mCCI score was higher among nonsurvivors (p=0.030). There was a statistically significant difference in hip fracture location according to 30-day mortality (p=0.001). Mortality was lower among patients with femoral neck fractures (p=0.004) and higher among those with pertrochanteric fractures (p<0.001). The rate of 30-day mortality was also lower in operated patients than non-operated patients (p=0.008).

Table 1. Distribution of demographic characteristics, comorbidities, and features of hip fracture according to 30-day mortality

	30-day mortality		*p*
	Yes (n=17)	No (n=233)	
Age, median (IQR)	83.0 (80.5 – 86.5)	79.0 (72.0 – 84.0)	0.021
Sex (female), n (%)	11 (64.7)	145 (62.2)	0.839
Comorbidity, n (%)			
HT	8 (47.1)	134 (57.5)	0.401
DM	2 (11.8)	40 (17.2)	0.431
CAD	6 (35.3)	76 (32.6)	0.821
CHF	2 (11.8)	17 (7.3)	0.377
CKD	6 (35.3)	39 (16.7)	0.055
CVD	3 (17.6)	27 (11.6)	0.458
HL	1 (5.9)	6 (2.6)	0.393
Malignancy	2 (11.8)	21 (9.0)	0.478
Thyroid disease	3 (17.6)	20 (8.6)	0.197
Dementia	8 (47.1)	49 (21.0)	0.014
Depression	-	17 (7.3)	0.290
Parkinson's	1 (5.9)	7 (3.0)	0.435
COPD	1 (5.9)	29 (12.4)	0.369
Asthma	1 (5.9)	5 (2.1)	0.348
Number of diseases, median (IQR)	3 (1 – 6)	3 (1 – 4)	0.436
mCCI score, median (IQR)	5 (4 – 6)	4 (4 – 6)	0.030
Number of medications used, median (IQR)	2 (0 – 5)	4 (1 – 6)	0.192
Cause of hip fracture, n (%)			0.488
Low-energy trauma	17 (100.0)	223 (95.7)	
High-energy trauma	-	10 (4.3)	
Location of hip fracture, n (%)			0.001
Femoral neck fracture	5 (29.4)	152 (65.2)	
Pertrochanteric fracture	12 (70.6)	64 (27.5)	
Subtrochanteric fracture	-	17 (7.3)	
Treated surgically, n (%)	14 (82.4)	229 (98.3)	0.008

*HT, Hypertension; DM, Diabetes mellitus; CAD, Coronary artery disease; CHF, Congestive heart failure; CKD, Chronic kidney disease; CVD, Cerebrovascular disease; HL, Hyperlipidemia; COPD, Chronic obstructive pulmonary disease; mCCI, Modified Charlson Comorbidity Index; IQR, Interquartile range

The majority of patients (n=243, 97.2%) underwent surgical treatment for hip fracture. Comparisons of postoperative complications, time to surgery, anesthesia type, and need for red cell transfusion according to 30-day mortality are shown in Table 2. In total, 54 patients (22.2%) developed at least one postoperative medical or surgical complication, with 7 patients developing multiple complications. Postoperative complications were associated with a higher 30-day mortality rate (p<0.001).

Table 2. Distribution of postoperative complications, time to surgery, type of anesthesia, and red cell transfusion according to 30-day mortality among operated patients (n=243)

	30-day mortality		
	Yes (n=14)	*No (n=229)*	*P*
Surgery performed, n (%)			0.299
Hip replacement	14 (100)	195 (85.2)	
Proximal femoral pin	-	23 (10.0)	
Dynamic hip pin	-	11 (4.8)	
Postoperative complication, n (%)	9 (64.3)	46 (20.1)	<0.001
Type of complication, n (%)			0.293
Medical	8 (88.9)	31 (68.9)	
Surgical	-	10 (22.2)	
Medical+Surgical	1 (11.1)	4 (8.9)	
Time to surgery (h), n (%)			0.273
0-12	3 (21.4)	14 (6.1)	
12-24	3 (21.4)	42 (18.3)	
24-36	1 (7.1)	27 (11.8)	
36-48	2 (14.3)	40 (17.5)	
>48	5 (14.3)	106 (46.3)	
Anesthesia received, n (%)			0.799
Spinal	6 (42.9)	109 (47.6)	
Epidural	5 (35.7)	86 (37.6)	
General	3 (21.4)	34 (14.8)	
Postoperative red cell transfusion, n (%)	8	143	0.375

The distribution of medical and surgical complications by 30-day mortality is shown in Figure 1. Acute kidney disease and pulmonary thromboembolism were the most common medical complications, while surgical site infection was the most common surgical complication.

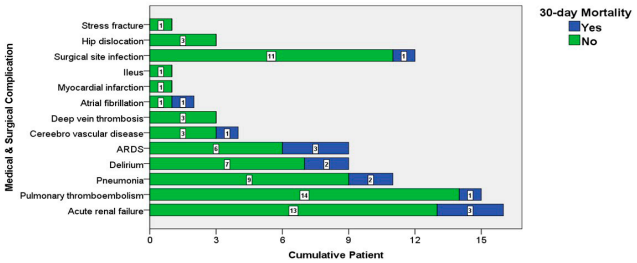

Figure 1. Distribution of medical and surgical complications by 30-day mortality

The relationship between laboratory parameters at hospital admission for hip fracture and 30-day mortality is presented in Table 3. Nonsurviving patietns had significantly higher levels of blood urea nitrogen and creatinine and a significantly lower lymphocyte count.

Table 3. Comparison of laboratory parameters at hospital admission according to 30-day mortality

	30-day mortality		
Laboratory parameters, median (IQR)	***Yes (n=17)***	***No (n=233)***	***p***
Leukocytes (/µL)	10.10 (7.94 – 12.10)	10.10 (8.06 – 12.41)	0.854
Lymphocytes (/µL)	0.89 (0.68 – 1.05)	1.19 (0.86 – 1.68)	0.003
Neutrophils (/µL)	8.34 (6.19 – 10.41)	7.87 (5.83 – 1.68)	0.540
Hb (g/dL)	11.50 (9.80 – 13.75)	12.70 (11.55 – 13.75)	0.102
Hct (%)	35.90 (30.35 – 40.40)	38.40 (34.85 – 41.40)	0.157
PLT (103/µL)	212 (154 – 251)	227 (184 – 290)	0.113
BUN (mg/dL)	26.17 (22.08 – 37.62)	21.5 (16.82 – 28.5)	**0.006**
Creatinine (mg/dL)	1.02 (0.86 – 1.12)	0.83 (0.63 – 1.1)	**0.030**
Na (mEq/L)	139 (137 – 141)	138 (136 – 140)	0.357
K (mEq/L)	4.09 (3.91 – 4.34)	4.14 (3.75 – 4.47)	0.988
AST (IU/L)	21 (16 – 37)	23 (18 – 28.8)	0.793
ALT (IU/L)	12 (11 – 14)	14 (10 – 19)	0.574
Ca (mg/dL)	8.7 (8.3 – 9.2)	8.8 (8.405 – 9.2)	0.541
P (mg/dL)	3.0 (2.4 – 3.3)	3.04 (2.5 – 3.5)	0.590
Mg (mg/dL)	1.71 (1.63 – 2.21)	1.87 (1.7 – 2.04)	0.490
Albumin (g/dL)	3.47 (3.13 – 3.91)	3.645 (3.36 – 3.9325)	0.283
ALP (IU/L)	103 (84 – 138)	86 (68 – 109.25)	0.061
Total protein (g/dL)	6.30 (5.95 – 7.2)	6.85 (6.41 – 7.30)	0.136

Hgb, Hemoglobin; Hct, Hematocrit; PLT, Platelet; BUN, Blood urea nitrogen; Na, Sodium; K, Potassium; AST, Aspartate transaminase; ALT, Alanine transaminase; Ca, Calcium; P, Phosphorus; Mg, Magnesium; ALP, Alkaline phosphatase

The results of multivariate logistic regression analysis of variables found to be statistically significant in terms of 30-day mortality (age, dementia, location of hip fracture, surgical treatment, serum BUN, serum creatinine, and lymphocyte count at hospital admission) are presented in Table 4. Based on this analysis, independent risk factors for 30-mortality included the presence of dementia (increased the odds of mortality by 4.12 times) and pertorchanteric fracture (increased the odds of mortality by 15.87 times). In addition, a 1-unit decrease in lymphocyte count was associated with a 0.2% increase in mortality odds ratio, while undergoing surgical treatment was a protective factor associated with 97.7% lower odds of mortality.

Table 4. Results of multivariate logistic regression of risk factors significant for 30-day mortality

Variables	***B***	***OR***	***95% CI***	***p***
Presence of dementia	1.417	4.124	1.242 – 13.695	0.021
Undergoing surgery	-3.760	0.023	0.003 – 0.172	<0.001
Pertrochanteric fracture	2.765	15.874	3.882 – 64.910	<0.001
Lymphocyte count	0.002	1.002	1.001 – 1.004	0.004

Discussion

The 30-day mortality rate among older patients with hip fracture was 6.8% in our study. In the literature, this rate is reported to vary between 5.4% and 14.3% [5, 6].

The prevalence of dementia among older people with hip fractures varies in previous studies (6.38%-30%) due to factors such as demographics, ethnicity, and genetic background. We determined that 22.8% of the patients in our study had dementia. Dementia contributes to frailty in older patients through malnutrition, infection, and trauma [7, 8]. A recent study showed that 6.4% of older patients with hip fracture were diagnosed with dementia, and the presence of dementia was associated with higher mortality at postoperative 6 and 12 months [8]. In our study, the presence of dementia was shown to increase the odds of mortality by 4.12 times.

Hip fractures are usually treated surgically. In our study, 97.22% of the patients underwent surgery. Surgical repair of a hip fracture is an important step to accelerate the healing process. In contrast, prolonged bed rest in non-operated hip fractures may increase the risk of mortality in older patients. Therefore, it is an expected finding that surgery was an independent protective factor associated with reduced risk of mortality in our study.

The impact of surgical timing on mortality is controversial in hip fractures. A meta-analysis conducted by Moja et al. [9] indicated that delayed surgery was associated with a significant increase in the risk of death and pressure sores. In the present study, the time from trauma to surgery had no effect on 30-day mortality. In our center, early surgery is planned for hip fracture patients if possible. We believe that in cases of delayed surgery in our study, the operation was performed after stabilizing the patient.

In conclusion, hip fracture mortality is high among older people. However, surgical treatment was shown to be associated with lower mortality. In addition, we observed that mortality was higher in patients with dementia, pertorchanteric fractures, and lymphopenia at the time of admission, suggesting that these patients should be followed closely.

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Others

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CLINICAL AND DEMOGRAPHIC CHARACTERISTICS OF GERIATRIC FORENSIC TRAUMA CASES ADMITTED TO THE EMERGENCY DEPARTMENT: A SINGLE-CENTER EXPERIENCE

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Abstract

Objectives: The aim of this study was to determine the demographic and epidemiological characteristics of geriatric forensic trauma patients admitted to our hospital's emergency department and to examine the factors related to forensic incidents, thus contributing to the literature in our country.

Materials and methods: Data from individuals aged 65 and over who were admitted to our hospital's emergency department due to forensic incidents between 2013 and 2023 were retrospectively analyzed. The demographic characteristics of the patients, the date and nature of the forensic incident, the injury regions, final diagnoses of the forensic cases, nature and content of the forensic report, and the manner of presentation to the emergency department were examined from the forensic report records.

Results: During the study period, the number of geriatric patients admitted to the emergency department was 173,080, of which 679 were evaluated as forensic cases. Of the patients, 481 (70.8%) were male. The most common type of incident was falls (37.4%), followed by assaults (18.1%). It was observed that 50% of intoxications were due to carbon monoxide (CO) poisoning. The most frequently injured body region was the head and neck (39.8%), followed by the upper extremities (27.4%) and lower extremities (19%). Forensic incident admissions were most frequent in the summer months of August, July, and June.

Conclusions: Our study found that falls were the most common cause of geriatric forensic trauma. Therefore, detailed evaluations and necessary precautions for elderly individuals at high risk of falling can prevent complications that may develop after falls.

Keywords: Geriatrics, trauma, forensic case, emergency, elderly

Introduction

The older population is growing in Turkiye and worldwide (1). With this growth of the older population, increased participation in active lifestyles (2, 3) and age-related physiological changes such as decreases in perception and attention, visual acuity, and mental and motor activity, as well as postural changes can increase rates of trauma and injury in older adults (4). Epidemiological studies have shown that 23% of all trauma admissions consist of geriatric patients (2).

Trauma is the fourth most common cause of death after heart disease, cancer, and stroke among all age groups (5) and the fifth most common cause of death in the geriatric population (2, 6).

Our aim in this study was to determine the demographic and epidemiological characteristics of geriatric forensic trauma patients admitted to the emergency department of our hospital and to contribute to the literature by examining the factors associated with forensic incidents in our country.

Methods

In this retrospective cross-sectional study, we examined the records of individuals aged 65 and over who presented to the emergency department of the Atatürk University Faculty of Medicine Hospital due to forensic incidents between 2013 and 2023. The patients' demographic characteristics, chronic diseases, and drugs used were obtained from the hospital information system and patient files. The date, nature, and setting of the forensic incident, injury zones, related outcomes diagnosis of the forensic patient, and the nature and content of the forensic report were examined from the forensic records. In addition, we recorded the mode of admission to the emergency department, the consultations requested in the emergency department, the mode of discharge, and lengths of stay in the emergency department and in the hospital if admitted.

Statistical Analysis

The data were analyzed using the SPSS version 21.0 (IBM, USA) program. Categorical descriptive data were expressed as frequency distribution and percentage; continuous variables were expressed as mean, standard deviation, median, and range values. Independent-samples t-test, Fisher's exact test and Pearson chi-square test were used for intergroup comparisons of categorical data, and $p \leq 0.05$ was considered statistically significant.

Permission to conduct the study was obtained from Atatürk University Faculty of Medicine Clinical Research Ethics Committee (date: 07.09.2023, no: 6/11).

Results

Of 173,080 older adults admitted to the emergency department during the study period, 679 were evaluated as forensic cases. These patients had a median age of 71 years (range, 65-107 years) and 481 (70.8%) were male. Their demographic characteristics and chronic diseases are shown in Table 1. The most common chronic comorbidities were hypertension (HT) (n=306; 45.1%) and diabetes mellitus (DM) (n=117; 17.2%). The median number of diseases was 2 (range, 0-12) and the median number of drugs used was 1 (range, 0-6).

Table 1. Demographic characteristics and chronic diseases of older forensic patients

		n	%
Age (years)	65 – 74	466	68.6
	75 – 84	165	24.3
	≥ 85	48	7.1
Sex	Male	481	70.8
	Female	198	29.2
Chronic diseases	HT	306	45.1
	DM	117	17.2
	CHF	34	5.0
	CAD	95	14.0
	CVD	13	1.9
	COPD	58	8.5
	Asthma	11	1.6
	AF	28	4.1
	Depression	40	5.9
	Dementia	19	2.8
	CRF	9	1.3
	Arthritis	3	0.4
	Parkinson	16	2.4

*HT, Hypertension; DM, Diabetes mellitus; CHF, Congestive heart failure; CAD, Coronary artery disease; CVD, Cerebrovascular disease; COPD, Chronic obstructive pulmonary disease; AF, Atrial fibrillation; CRF, Chronic renal failure

Table 2. Distribution of mode and time of admission and incident type of older forensic patients evaluated in the emergency department

		n	%
Mode of admission	Walk-in/personal transportation	331	48.7
	Ambulance service	348	51.3
Incident type	Traffic accident	20	2.9
	Intoxication	12	1.8
	Firearm injury	13	1.9
	Sharp trauma	50	7.4
	Blunt trauma	123	18.1
	Fall	254	37.4
	Electrocution	2	0.3
	Occupational Accident	29	4.3
	Burn	2	0.3
	Suspicious death	4	0.6
	Dog attack	13	1.9
	Other animal attack	73	10.8
	Other	84	12.4
Admission time	00:00-08:00	61	9.0
	08:00-16:00	316	46.5
	16:00-00:00	302	44.5

The distribution of the mode and time of admission and incident type of geriatric forensic case patients evaluated in the emergency department is presented in Table 2. We observed that 51.3% of the patients were brought by ambulance, while the rest were transported by their own means. The most common type of forensic incident was falls (n=254; 37.4%), followed by assault (n=123; 18.1%). Of 20 traffic-related incidents, 8 (40.0%) were driver/occupant and the rest were pedestrian/cyclist (n=12; 60.0%). Of 10 intoxications, 6 (50.0%) occurred as a result of carbon monoxide (CO), 3 (25.0%) as a result of chemical inhalation, and 1 (8.3%) as a result of fungus, food, or drug exposure.

The distribution of forensic case presentations by month is evaluated in Figure 1. These cases presented most commonly in the summer months of August (13.7%), July (12.4%), and June (11.9%). The distribution of injury zones by incident type is shown in Table 3. The most common injury site was the head and neck (n=270; 39.8%), followed by the upper limbs (n=186; 27.4%) and lower limbs (n=129; 19.0%). The most common sites of injury according to incident type were as follows: head and neck in traffic accidents (n=10; 50.0%), lower limbs in firearm injuries (n=8; 61.5%), upper limbs in sharp trauma (n=8; 61.5%), head and neck in assault (n=82; 66.7%), head and neck in falls (n=106; 41.7%), upper limbs in occupational accidents (n=14; 48.3%), upper limbs in dog attacks (n=9; 62.2%), and the thorax in other animal attacks/kicks (n=27; 37.0%). In two patients with burns and electric shock, the limbs were affected.

The distribution of injury type by incident type is presented in Table 4. The most common types of injury were soft tissue trauma (n=251; 36.9%), bone fracture (n=170; 25.0%), and skin/mucosa laceration (n=163; 24.1%). The most common injury types according to incident type were as follows: bone fracture in traffic accidents (n=9; 45.0%), soft tissue trauma in firearm injuries (n=7; 53.8%), skin/mucosa laceration in sharp trauma (n=30; 60.0%), soft tissue trauma in assault (n=50; 40.7%), bone fracture in falls (n=96; 37.8%), skin/mucosa laceration in occupational accidents (n=14; 48.3%), skin/mucosa laceration in dog attacks (n=13; 100%), and soft tissue trauma in other animal attacks/kicks (n=27; 37.0%).

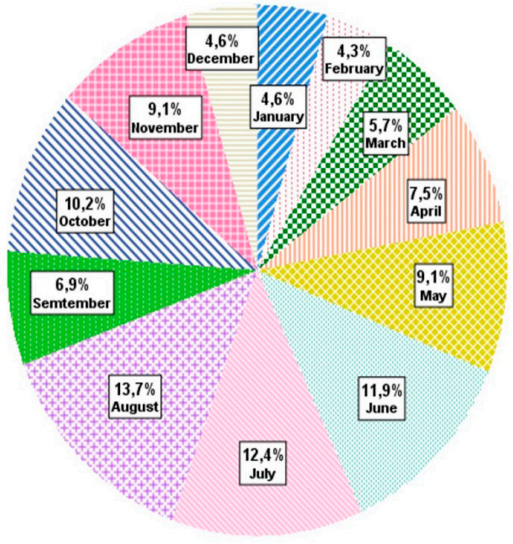

Figure 1. Distribution of geriatric forensic cases by month

Table 3. Distribution of injury zones by incident type

	Head/ neck	*Thorax*	*Abdomen/ pelvis*	*Upper limbs*	*Lower limbs*	*Spine*
Traffic accident	10 (50.0)	4 (20.0)	4 (20.0)	6 (30.0)	1 (5.0)	2 (10.0)
Intoxication	-	-	-	-	-	-
Firearm injury	1 (7.70)	-	2 (15.4)	3 (23.1)	8 (61.5)	-
Sharp trauma	5 (10.0)	3 (6.00)	2 (4.0)	37 (74.0)	9 (18.0)	-
Blunt trauma	82 (66.7)	10 (8.10)	10 (8.10)	22 (17.9)	11 (8.9)	3 (2.4)
Fall	106 (41.7)	57 (22.4)	40 (15.7)	56 (22.0)	59 (23.2)	14 (5.5)
Electrocution	-	-	-	1 (50.0)	1 (50.0)	-
Occupational accident	10 (34.5)	3 (10.3)	-	14 (48.3)	6 (20.7)	-
Burn	-	-	-	2 (100)	-	-
Suspicious death	-	-	-	-	-	-
Dog attack	1 (7.70)	1 (7.70)	-	9 (69.2)	3 (23.1)	-
Other animal attack/kick	23 (31.5)	27 (37.0)	9 (12.3)	9 (12.3)	21 (28.8)	1 (1.4)
Other	32 (38.1)	9 (10.7)	2 (2.40)	27 (32.1)	10 (11.9)	-
TOTAL	270 (39.8)	114 (16.8)	69 (10.2)	186 (27.4)	129 (19.0)	20 (2.9)

Row percentages are given, n (%).

Table 4. Distribution of injury type by incident type

	Soft tissue trauma	*Bone fracture*	*Tendon laceration*	*Skin/ mucosa laceration*	*Intracranial hemorrhage/ contusion*	*Internal organ/ large vessel damage*
Traffic accident	4 (20.0)	9 (45.0)	1 (5.0)	2 (10.0)	2 (10.0)	-
Intoxication	-	-	-	-	-	-
Firearm injury	7 (53.8)	2 (15.4)	-	2 (15.4)	-	2 (15.4)
Sharp trauma	14 (28.0)	9 (18.0)	7 (14.0)	30 (60.0)	1 (2.0)	1 (2.0)
Blunt trauma	50 (40.7)	22 (17.9)	-	28 (22.8)	1 (0.8)	1 (0.8)
Fall	90 (35.4)	96 (37.8)	-	47 (18.5)	2 (0.8)	8 (3.1)
Electrocution	2 (10.0)		-	-	-	-
Occupational accident	11 (37.9)	6 (20.7)	1 (3.4)	12 (41.4)	-	4 (13.8)
Burn	2 (100)	-	-	-	-	-
Suspicious death	-	-	-	-	-	-
Dog attack	-	1 (7.70)	-	13 (100)	-	-
Other	42 (50.0)	7 (8.30)	1 (1.2)	18 (21.4)	1 (1.2)	1 (1.2)
Other animal attack/kick	27 (37.0)	18 (24.7)	2 (2.7)	14 (19.2)	1 (1.4)	2 (2.7)
TOTAL	251 (36.9)	170 (25.0)	12 (1.8)	163 (24.1)	8 (1.2)	19 (2.8)

Row percentages are given, n (%).

The length of stay in the emergency department, treatments/consultations, and outcomes of the forensic cases are presented in Table 5. Only 13 patients (1.9%) had life-threatening injuries at admission, and almost half had injuries that could be treated with simple medical interventions (n=329; 48.5%). The three most frequently consulted clinics were orthopedics, neurosurgery, and thoracic surgery. While 409 patients (60.2%) were discharged as outpatients, 212 patients (31.2%) were hospitalized.

Table 5. Duration of stay in the emergency department, treatments/consultations, and outcomes of forensic cases

		n	*%*
Life-threatening	Yes	13	1.9
	No	475	70.0
	Unspecified	191	28.1
Treatable by simple medical interventions	Yes	329	48.5
	No	142	20.9
	Unspecified	208	30.6
Length of stay in ED	0-1 hour	81	11.9
	1-4 hours	329	48.5
	4-8 hours	105	15.5
	>8 hours	164	24.2
Consultations requested	Orthopedics	163	24
	Neurosurgery	88	13
	Thoracic surgery	87	12.8
	Plastic surgery	29	4.3
	General surgery	24	3.5
	Neurology	11	1.6
	Internal medicine	6	0.9
	Intensive care	3	0.4
	Infectious diseases	1	0.1
Outcome after treatment in ED	Referral to another hospital	4	0.6
	Mortality	4	0.6
	Discharged after refusing treatment	50	7.4
	Hospitalization	212	31.2
	Discharge	409	60.2

Discussion

Falls are one of the most common causes of trauma in the geriatric population. Approximately one-third of older adults fall annually (7, 8). Risk factors contributing to falls include physical and mental disorders such as osteoarthrosis, osteoporosis, visual impairments, polypharmacy, balance and gait disturbances, depression, vertigo, cognitive impairment, diabetes, and sarcopenia (9). The frequency of osteoporosis and sarcopenia is higher in the geriatric population, which increases the likelihood of traumatic fractures. This also leads to a protracted hospitalization and rehabilitation process after injury (10). In studies conducted in the early 2000s, it was observed that the most common cause of injury in seriously injured geriatric patients was falls (50-60%), followed by motor vehicle accidents (pedestrian or driver/occupant) (9-20%) (11, 12). However, recent epidemiological studies on trauma in geriatric patients point to a decline in the rate of injuries due to vehicle accidents and an increase in fall-related injuries (13, 14). Our study is similar to the recent literature, with falls being the most common cause of trauma (37.4%) and traffic accidents being relatively less prevalent (8%). This decline in traffic accidents as an etiology of trauma worldwide and our country may be related to the more careful urban planning and road construction and better implementation of traffic rules. In contrast, the increasing rates of assault are related to social and moral factors and are thus more difficult to regulate. Similar to our study, traffic accidents are decreasing but assault rates are increasing in countries such as South Africa (15). In addition, as livestock farming is common in our country and especially the region where this study was conducted, most blunt traumas occurred in rural areas in relation to animals. In other countries where animal husbandry is common, there is also a high rate of animal-related trauma, similar to the results of our study (16).

Geriatric patients are usually exposed to blunt trauma rather than penetrating trauma (17). Animals such as cattle or horses that can kick, crush, and cause head and face injuries are characteristically the most common cause of blunt trauma. Agricultural workers in particular face the risk of fatal injuries involving the head and body (18). Cattle cause a significant number of trauma-related deaths worldwide. Behavior can be unpredictable even among domesticated animals, and attacks by individuals or the herd are possible. Traumas due to kicking, trampling, goring, and crushing can often cause head or chest injuries. The risk of trauma and trauma-related death is higher among men living in rural areas (19). In our study, the most frequently injured body areas were the head and neck at a rate of 39.8%, consistent with other studies, followed by the upper limbs at a rate of 27.4% and the lower limbs at a rate of 19%. We determined that the head and neck region and upper limbs were most frequently affected in blunt trauma, sharp trauma, falls, dog attacks, and traffic accidents. In animal attacks and kicks, the thoracic region was the most frequently affected area.

Conclusion

The geriatric population is more affected by traumas than people in other age groups, and trauma-related morbidity and mortality is high among older adults. Older patients presenting with trauma should be followed up more closely. In our study, we determined that falls were the most common cause of geriatric traumas. Potential post-fall complications can be prevented by carefully evaluating older adults at high risk of falls and taking the necessary precautions.

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Cognitive Disorders

SS-09

Publication Hall: A
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PRIMARY PROGRESSIVE APHASIA: A CASE REPORT

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Introduction: Primary progressive aphasia (PPA) is a rare neurodegenerative disorder characterised by impairment of language functions. Unlike Alzheimer's disease, memory and other cognitive functions are largely preserved in the early stages of PPA. PPA has three main variants: non-fluent/agrammatic (nfvPPA), semantic (svPPA) and logopenic (lvPPA). This case report presents a 69-year-old man initially diagnosed with Alzheimer's dementia whose clinical course and neuroimaging findings were suggestive of nfvPPA.

Case presentation: The patient, a 69-year-old retired tailor, had exhibited significant language impairment for approximately 20 years, with hesitant and disjointed speech, agrammatism, and difficulty articulating words. Initial cognitive assessments suggested early dementia, leading to a diagnosis of Alzheimer's dementia and treatment with donepezil. However, persistent and worsening language difficulties prompted a reassessment. FDG-PET imaging showed hypometabolism in the bilateral temporal and parietal lobes, particularly left lobe dominance, supporting the diagnosis of nfvPPA.

Discussion: The case highlights the importance of differential diagnosis in neurodegenerative diseases, especially when language deficits are more prominent than memory impairment. PPA should be considered in patients with primary language dysfunction, and ongoing evaluation is essential for accurate diagnosis and appropriate treatment.

Conclusion: This case highlights the complexity of diagnosing PPA and the need for thorough clinical, neuropsychological and neuroimaging assessment. The progression of language impairment and imaging findings were crucial in changing the diagnosis from Alzheimer's dementia to nfvPPA, emphasising the need for vigilance in the assessment of neurodegenerative disorders.

Keywords: Primary Progressive Aphasia, Neurodegenerative Disease, Language Impairment, Cognitive Dysfunction, Cognitive Decline, Geriatrics

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Pressure Sores

SS-12

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WOUND CHARACTERISTICS AND MORTALITY STATUS OF PATIENTS ADMITTED TO OUR WOUND CARE CENTER OVER THE AGE OF 60

Aysun Seker
Kartal Dr. Lütfi Kırdar Cıty Hospıtal

Aim: The objective of this study is to explore the wound characteristics and mortality rates among diabetic patients aged 60 years and older who were admitted to our wound care center.

Methods: A total of 77 diabetic patients aged 60 years or older, who sought treatment at the Wound Care Center of Kartal City Hospital between January 1, 2020, and January 1, 2022, were included in this croSS-sectional study. A comprehensive statistical analysis was conducted, which entailed examining demographic data, comorbidities, micro-macrovascular complications, wound characteristics, wound size, Wagner classification, laboratory results, hospitalization status, treatments administered at our center (hyperbaric therapy, vacuum assisted closure therapy, debridement, amputation), and mortality outcomes.

Results: Out of the 77 patients in the study, 20 were females, with an average age of 59 years. Among the patients studied, 74 had type 2 diabetes while 3 had type 1 diabetes. Sixty-four patients (83%) had a level above 7. Patients had been diagnosed with diabetes for an average of 16 years. We detected neuropathy in 51 (66%) patients, retinopathy in 9 (12%), and nephropathy in 20 (26%). Gender did not play a significant role in the occurrence of microvascular complications. Regarding wound size, most patients (68%) had wounds that exceeded 3 cm. Trauma-induced wounds accounted for 43 cases (56%), pressure ulcers for 29 cases (38%), and burn wounds for 5 cases (6.5%). According to the Wagner classification system, 65 (84%) patients were in stage 3, 10 (13%) in stage 4, and 2 (3%) in stage 2. Debridement was performed on 37 patients (48%), 62 patients (62%) received hyperbaric oxygen therapy, and vacuum assisted closure (VAC) therapy was applied to 78 patients (78%). Among the patients, 29 (37.7%) experienced mortality, and there was no variation in mortality rates across the different Wagner subgroups. Patients with wounds larger than 3 cm2 had a 1.11 (0.41-2.99) times higher mortality risk.

Conclusion: Diabetic foot ulcers pose a significant health concern among older individuals. While literature indicates that Wagner classification and wound size play a significant role in predicting mortality, our findings do not support this assertion. Multidisciplinary care, and the appropriate management of wounds are vital for achieving better treatment outcomes.

Keywords: Older Adults, Dıabetic Foot, Pressure Ulcer, Wound Treatments

Polypharmacy and Inappropriate Drug Use

SS-13

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THE RELATIONSHIP BETWEEN THE BURDEN OF ANTICHOLINERGIC DRUGS AND MORTALITY IN PATIENTS HOSPITALIZED IN THE GERIATRICS CLINIC

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Aim: The proportion of the elderly population is increasing day by day. This situation has necessitated the evaluation of pharmacotherapy by determining anticholinergic drug burden in elderly patients. Thus, it will be possible to predict increasing adverse outcomes, including mortality caused by anticholinergic drugs in the geriatric population. The primary aim of this study is to determine the relationship between anticholinergic drug burden and mortality in geriatric patients, while the secondary aim is to assess the relationship between anticholinergic drug burden and comorbidities.

Materials and Methods: This study was conducted by retrospectively examining the files of 342 patients followed in the inpatient service of the Geriatrics Science Department of Ankara University Faculty of Medicine, Internal Medicine Department, between 01.01.2020 and 31.12.2021. The presence of Drug Burden Index (DBI) scores were investigated from the admission and discharge prescriptions of the patients. Statistical analysis of the data was performed using SPSS 24.0 software. The level of statistical significance was accepted as $p<0.05$.

Results: A total of 342 patients were included in the study. The log-rank test for survival probabilities revealed no statistically significant difference in survival between the discharge DBI score groups ($p=0.11$). Cox regression analysis showed that male gender, advanced age, and a high discharge DBI score were risk factors for mortality, while an increase in albumin levels and having ≥5 medications on the discharge prescription were protective factors against mortality.

Conclusion: Anticholinergic drug use is prevalent in the hospitalized elderly population and is associated with adverse outcomes in terms of mortality and morbidity. Healthcare professionals should be particularly vigilant about anticholinergic side effects when initiating medical treatment for geriatric patients.

Keywords: elderly, anticholinergic drug burden, DBI, mortality

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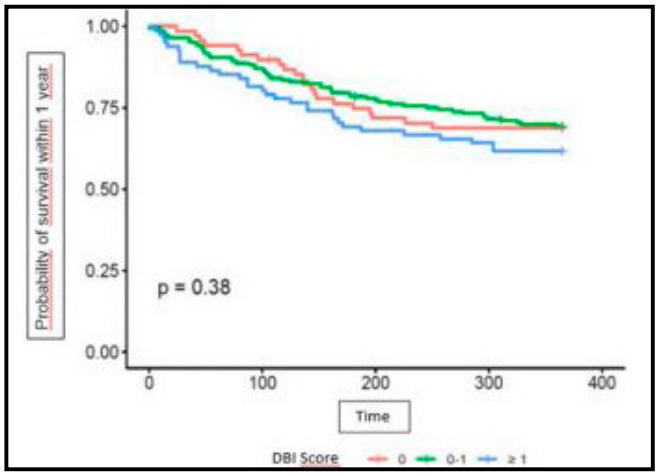

Figure 1. Probability of survival within 1 year

Table 1.

Variable	*B*	*SE*	*Wald*	*df*	*p*	*Exp(B)*
Albumin	-0,104	0,017	37,60	1	0,000	0,901
Hemoglobin	0,020	0,046	0,189	1	0,663	1,020
Age	0,040	0,013	10,11	1	0,01	1,041
Male Gender	0,636	0,203	9,789	1	0,002	1,889
Discharge DBI Score	0,337	0,151	4,990	1	0,025	1,401
Charlson Score	0,056	0,039	2,037	1	0,154	1,057
Number of Medications in Prescription	-0,795	0,262	7,444	1	0,006	0,451

Others

SS-14

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RETROSPECTIVE ANALYSIS OF RELATIONSHIP BETWEEN FRONTAL QRS-T ANGLE AND GERIATRIC SYNDROMES IN THE ELDERLY

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Abstract

Background: QRS-T angle is novel marker of myocardial repolarization and its success in predicting adverse cardiovascular events has been demonstrated in many studies. Early cardiac electrical abnormalities may indicate a risk for developing future geriatric syndromes. In the study, we aimed to examine the relationship between the frontal QRS/T [f(QRS/T)] angle and geriatric syndromes in the elderly.

Methods: The data of patients followed up in the Geriatrics Department of our university between January 2019 and January 2024 were retrospectively analyzed. In addition to demographic, clinical and laboratory data Barthel Basic Activities of Daily Living (BADL), Lawton Instrumental Activities of Daily Living Tests (IADL), Mini Mental State Examination (MMSE), Mini Nutritional Test (MNA), Yesavage Geriatric Depression Scale (YGDS), FRAIL and SARC-F questionnaire and anthropometric measurements were recorded. F(QRS-T) angle was obtained from the automatic reports of the ECG device.

Results: A total of 208 patients were included in the study. The median age of the patients was 70.0 (min–max; 60–89) years and 116 (55.8%) were female. When patients with and without higher f(QRS/T) angle were compared, no difference was found in terms of age and gender. Hypertension (HT), chronic obstructive pulmonary disease (COPD) were more common in patients with increased f(QRS/T) angle (p=0.022 and p=0.003, respectively) and charlson comorbidity index (CCI) was higher (p<0.001). QRS duration was longer (p=0.035) and QT/TQ ratio was higher (p=0.035) in patients with increased f(QRS/T) angle. No difference was found between patients with increased f(ORS-T) angle and those within normal limits in terms of scale results evaluated for geriatric syndromes. Serum potassium levels were lower(p=0.016), leukocyte and neutrophil counts were higher (p=0.004 and p=0.011, respectively) in patients with increased f(ORS-T) angle.

Conclusions: Frontal QRS-T angle is a simple, inexpensive and easily obtainable parameter from surface electrocardiography. Prospective studies with larger sample sizes are needed to examine the relationship between the f(QRS/T) angle and geriatric syndromes.

Keywords: Elderly, geriatric syndrome, QRS/T, f(QRS/T), frontal QRS/T angle

Introduction

Aging is the totality of changes that occur with the advancement of chronological age and increase the probability of death (1). Geriatric syndromes are defined as a group of clinical and symptomatic conditions that occur at advanced age, cannot be defined in a disease category, and have multifactorial risk factors (2). Geriatric syndromes make the individual fragile, cause a decrease in physical and functional capacity, increase in dependency, and increase in the rate of placement in a nursing home, and cause increased mortality and morbidity. They place a great burden on the elderly individual and their caregivers, as well as on the health workload and economies of countries. The frequency and clinical severity of geriatric syndromes increase as age progresses in the geriatric population (3). As in many diseases, early diagnosis and treatment can stop the progression of the clinical course in geriatric syndromes and avoid the negative health consequences they cause. For these reasons, it is important to recognize geriatric syndromes before they appear or in the early stages. For early diagnosis and treatment, markers that can predict geriatric syndromes before they appear or before the symptoms become apparent are needed.

Due to the need for new markers indicating cardiac risk in order to protect against cardiovascular diseases, the term spatial QRS-T angle (sQRS-Ta) has been defined in studies. sQRS-Ta is the value of the angle between the spatial QRS wave vector (ventricular depolarization) and the spatial T wave vector (ventricular repolarization) (4). Deviation of the QRS or T wave axis

from the normal axis for various reasons results in an increase in the QRS-T angle. Studies have shown that an increased QRS-T angle is associated with myocardial scarring and necrosis, and it has been accepted as a new marker of myocardial damage and myocardial repolarization (5, 6). In addition, an increased QRS-T angle has been shown to be associated with left ventricular hypertrophy (7), coronary heart disease (6, 8), ischemic stroke (9), cardiovascular mortality (10), anemia (11), cognitive decline and dementia (12), and all-cause mortality (10, 13). The frontal QRS-T angle [f(QRS/Ta)] is the projection of the spatial QRS/T angle onto the frontal plane. Studies have shown that f(QRS/Ta) correlates well with sQRS/Ta (6). Since the measurement of sQRS/Ta is very complex and requires advanced computer programs, f(QRS/Ta) has begun to attract greater interest.

The number of elderly people and their proportion in society is rapidly increasing in Turkey and the world (14). In parallel with the increasing elderly population, the frequency of geriatric syndromes and the number of elderly patients applying to hospitals due to the negative health consequences they cause are increasing. Early cardiac electrical abnormalities and increased f(QRS/T) angle may indicate the risk of developing future geriatric syndromes and may help identify high-risk populations. This study aimed to investigate the relationship between f(QRS/T) angle and geriatric syndromes in the elderly.

Methods

Our study is a retrospective cross-sectional study conducted among patients aged 60 and over who were followed up and treated between January 2019 and January 2024 in the Geriatrics Department of our hospital, which is a tertiary university hospital. Inclusion criteria:

- ✓ Having applied to our hospital's Geriatrics Department for follow-up and treatment between January 01, 2019 and January 01, 2024
- ✓ The patient's age was determined as being 60 years and over.

Exclusion criteria:

- ✓ Being younger than 60 years of age
- ✓ Having a history of cardiovascular disease in the patient's history
- ✓ Presence of moderate or severe heart valve disease
- ✓ Patient receiving antiarrhythmic treatment
- ✓ Presence of a permanent pacemaker
- ✓ Presence of severe hyperthyroidism (TSH < 0.3 mU/Ml)
- ✓ Patient receiving hyperthyroidism in the patient's history
- ✓ Presence of atrial fibrillation
- ✓ Presence of electrolyte imbalance
- ✓ Presence of active infection
- ✓ Presence of U wave, ST change, T negativity in ECG
- ✓ Patient receiving anti-psychotic treatment.

The demographic characteristics of the patients, chronic diseases, alcohol and cigarette use, medications used and the number of medications were recorded by scanning from hospital electronic records and patient files. The patients' comorbid disease burden was calculated using the Modified Charlson Comorbidity Index (mCCI). Electrocardiographic data of the patients were evaluated from the baseline electrocardiogram (ECG) records. All patients applying to our clinic are regularly subjected to comprehensive geriatric assessment. The results of the screening and assessment tests applied for comprehensive geriatric assessment and anthropometric measurements were recorded. In addition, the laboratory data of the patients were recorded and their relationship with the f (QRS/T) angle was examined.

This study was conducted with the necessary permissions from the Clinical Research Ethics Committee of XXXX University Faculty of Medicine (Decision No: 03 dated 29.03.2024) and all procedures were carried out in accordance with the principles of the Declaration of Helsinki. Informed consent was waived due to the nature of the retrospective study.

Statistical Analysis

All tests were analyzed using the statistical package SPSS, version 21.0 (SPSS Inc, an IBM Company). Kolmogorov Smirnov test was used to control the normal distribution of continuous variables. In two independent group comparisons, Mann Whitney U test was used for variables with non-normal distribution and Student t test was used for variables with normal distribution. Relationships between categorical variables were tested with Chi-square analysis. In order to determine the determinants of QRS-T angle that was not within normal limits, a multivariate logistic regression model was created with statistically significant categorical and durational variables. (Model: Backward: LR. Entry: 0.05 and Removal: 0.10). Statistical significance was accepted as $p<0.05$.

Results

A total of 208 patients were included in our study. The median age of the patients included in the study was 70 (min–max; 60–89) years and 116 (55.8%) were female. The distribution of basic characteristics of the patients according to the normal ORS/T angle in geriatric patients is evaluated in Table 1. When patients with and without f(QRS/T) angle were compared, no difference was found in terms of age and gender. HT and COPD were statistically significantly more common in patients with increased f(QRS/T) angle ($p=0.022$ and $p=0.003$, respectively). Charlson comorbidity index was statistically significantly higher in patients with increased f(QRS/T) angle ($p<0.001$).

Table 1. Distribution of basic characteristics of patients according to whether the ORS-T angle is within normal limits in geriatric patients

	ORS-T angle is within normal limits		
	No=41	***Yes=167***	***p***
Age, median (IQR)	70 (68 – 74)	70 (68 – 74)	0,881
Sex, Women, n (%)	22 (53,7)	94 (56,3)	0,447
Comorbidity, n (%)			
Hypertension	23 (56,1)	61 (36,5)	0,022
Diyabetes mellitus	15 (36,6)	45 (26,9)	0,222
Cerebrovascular disease	2 (4,9)	4 (2,4)	0,395
Chronic obstructive pulmonary disease	9 (22,0)	11 (6,6)	0,003
Dementia	1 (2,4)	1 (0,6)	0,279
Hyperlipidemia	3 (7,3)	20 (12,0)	0,394
Hypothyroidism	3 (7,3)	14 (8,4)	0,559
Chronic renal failure	2 (4,9)	2 (1,2)	0,175
Benign prostatic hypertrophy	6 (14,6)	26 (15,6)	0,550
Urinary incontinence	1 (2,4)	7 (4,2)	0,509
Chronic liver disease	1 (2,4)	4 (2,4)	0,670
Malignity	2 (4,9)	5 (3,0)	0,417
Charlson komorbidity index, median (IQR)	3 (3 – 4)	3 (2 – 3)	<0,001
Number of medications used, median (IQR)	2 (1 – 3,5)	2 (1 – 3)	0,207

The distribution of scales used to evaluate patients with geriatric syndromes according to the ORS-T angle within normal limits in geriatric patients is presented in Table 2. No difference was

found in terms of scale results evaluated for geriatric syndromes between patients with increased f(ORS-T) angle and those within normal limits. Patients with increased f(QRS/T) angle were significantly shorter (p=0.030).

Table 2. Distribution of scales and anthropometric measurements used to evaluate patients for geriatric syndrome according to whether the ORS-T angle is within normal limits in geriatric patients.

	ORS-T angle is within normal limits		
	No=41	***Yes=167***	***p***
Scales assessed for geriatric syndrome, median (IQR)			
Activities of daily living scale	100 (95 – 100)	100 (95 – 100)	0,855
Instrumental activities of daily living scale	8 (7 – 8)	8 (7 – 8)	0,980
Mini Nutritional Assessment	26 (23 – 28)	26 (24 – 28)	0,666
Mini Mental Test	27 (24 – 29)	27 (24 – 27)	0,993
Geriatric depression scale	3 (1 – 6)	3 (1 – 5)	0,793
Frail frailty scale	2 (1 – 3)	2 (0 – 2)	0,209
SARC-F questionnaire	1 (0 – 3)	1 (0 – 2)	0,437
Anthropometric measurements, median (IQR)			
Calf Circumference	38 (35 – 42)	37 (34 – 42)	0,715
Mid-upper Arm Circumference	30 (28 – 32)	30 (28 – 33)	0,333
Height	157 (150 – 167)	160 (154 – 170)	0,030
Weight	79 (67 – 86)	77 (69 – 86)	0,829
Body mass index	30 (27 – 36)	30 (26 – 33)	0,309

The distribution of ECG findings of geriatric patients according to whether the ORS-T angle is within normal limits is evaluated in Table 3. QRS duration was longer (p=0.035) and QT/TQ ratio was higher in patients with increased f(QRS/T) angle (p=0.035).

Table 3. Distribution of ECG findings in geriatric patients according to whether the ORS-T angle is within normal limits.

	ORS-T angle is within normal limits		
	No=41	***Yes=167***	***p***
ECG findings, median (IQR)			
Heart Rate	77 (68 – 89)	72 (64 – 84)	0,096
QRS duration	94 (87 – 108)	90 (84 – 98)	0,035
PR duration	158 (144 – 178)	158 (146 – 174)	0,728
QT duration	380 (360 – 404)	380 (360 – 402)	0,868
QTc duration	407 (398 – 422)	406 (394 – 418)	0,547
QT/TQ ratio	1,03 (0,89 – 1,26)	0,85 (0,73 – 1,04)	<0,001
Tp-e interval	50 (40 – 50)	50 (40 – 54)	0,879
QTd	34 (25 – 45)	38 (28 – 48)	0,522
cQTd	31 (24 – 45)	38 (25 – 48)	0,221

The distribution of biomarkers in geriatric patients according to the ORS-T angle within normal limits is presented in Table 4. In patients with increased F(ORS-T) angle, serum potassium levels were found to be statistically significantly lower (p=0.016), and leukocyte and neutrophil counts were higher (p=0.004 and p=0.011, respectively) (Table 4).

Table 4. Distribution of Biomarkers in Geriatric Patients According to Whether the ORS-T Angle is Within Normal Limits

	ORS-T angle is within normal limits		
	No=41	***Yes=167***	***p***
Biomarkers, median (IQR)			
Glucose	94,5 (83,4 – 122,5)	93,3 (84,4 – 108,3)	0,594
BUN	15,9 (13,4 – 18,0)	15,0 (12,2 – 18,4)	0,188
Creatinine	0,73 (0,64 – 0,92)	0,78 (0,66 – 0,89)	0,857
Sodium	140 (139 – 141)	140 (140 – 142)	0,888
Potassium	4,28 (4,01 – 4,52)	4,44 (4,24 – 4,70)	0,016
Uric Acid	5,2 (4,2 – 5,9)	5,0 (4,2 – 6,0)	0,386
Iron	73 (54 – 92)	75 (57 – 102)	0,344
Aspartate aminotransferase	18 (15 – 21)	17 (8 – 21)	0,799
Alanine aminotransferase	13 (12 – 18)	15 (11 – 21)	0,131
Lactate dehydrogenase	210 (179 – 235)	206 (184 – 236)	0,959
Triglyceride	130 (97 – 161)	135 (103 – 175)	0,492
Total Cholesterol	197 (170 – 228)	202 (173 – 230)	0,681
HDL Cholesterol	48 (42 – 57)	48 (40 – 57)	0,762
LDL Cholesterol	115 (102 – 140)	123 (102 – 143)	0,742
Calcium	9,26 (9,03 – 9,65)	9,38 (9,07 – 9,69)	0,387
Phosphorus	3,17 (2,89 – 3,54)	3,26 (2,94 – 3,56)	0,602
Magnesium	1,91 (1,80 – 1,99)	1,94 (1,81 – 2,07)	0,177
Albumin	4,16 (3,99 – 4,35)	4,19 (3,98 – 4,40)	0,486
Total bilirubin	0,64 (0,43 – 0,84)	0,6 (0,45 – 0,8)	0,789
Direct bilirubin	0,13 (0,1 – 0,19)	0,13 (0,1 – 0,18)	0,959
Alkaline phosphatase	76 (70 – 88)	76 (61 – 93)	0,588
Gamma glutamyl transferase	20 (15 – 31)	21 (16 – 27)	0,732
Sedimentation	8 (5 – 22)	11 (5 – 21)	0,873
Free T4	0,90 (0,76 – 1,03)	0,91 (0,80 – 1,05)	0,238
Thyroid-stimulating hormone	1,47 (0,96 – 2,60)	1,45 (0,94 – 2,34)	0,596
Ferritin	59,3 (32,575– 116,25)	72,4 (34 – 123)	0,997
Folic acid	8,18 (6,33 – 10,955)	8,81(7,1125-10,895)	0,218
Vitamin B12	287 (204,5 – 381)	252 – 321)	0,352
Vitamin D	14,7 (9,505 – 23,52)	17,2 (11,2 – 24,15)	0,397
HbA1C	5,9 (5,6 – 6,5)	5,8 (5,4 – 6,5)	0,326
INR	1,06 (1,00 – 1,13)	1,07 (1,00 – 1,12)	0,867
Leukocyte count	7850 (6690 – 8875)	6870 (5820 – 8170)	0,004
Lymphocyte count	2130 (1725 – 2855)	2220 (1550 – 2720)	0,720
Neutrophil count	4780 (3475 – 5920)	4030 (3110 – 4870)	0,011
Monocyte count	530 (390 – 655)	520 (430 – 640)	0,799
Hemoglobin	14,8 (13,8 – 16,6)	14,5 (13,8 – 15,3)	0,263
Hematocrit	44,6 (41,6 – 48,0)	43,2 (41,5 – 46,2)	0,138
MCV	86,7 (84,5 – 90,2)	87,5 (85,3 – 90,7)	0,359
Trombosit sayısı	255 (206 – 310)	243 (197 – 295)	0,417
MPV	10,0 (9,4 – 10,9)	9,9 (9,4 – 10,6)	0,676

The last row of the logistic regression analysis created with HT, COPD, CCI, height, QRS duration, QT/TQ ratio and serum potassium, leukocyte and neutrophil values, which are significant for the risk factors in geriatric patients with ORS-T angle not within normal limits, is presented in Table 5. A unit increase in Charlson comorbidity index increased the risk of f(ORS-T) angle by 2.652 times, a unit increase in neutrophil count by 1.001 times, and a unit increase in QRS duration by 1.035 times. A unit increase in height decreased the risk of f(ORS-T) angle by 0.950 times.

Table 5. Risk factors for increased f(ORS-T) angle in geriatric patients

Variables	B	OR (%95 confidence interval)	p
CCI	,975	2,652 (1,682 – 4,182)	<0,001
Height	-,052	,950 (0,918 – 0,982)	0,003
Neutrophil count	,000	1,001 (1,000 – 1,001)	0,004
QRS duration	,034	1,035 (1,012 – 1,058)	0,003

Discussion

Geriatric syndromes are commonly seen in older adults and parallel to the increasing elderly population, the frequency of geriatric syndromes and the number of elderly patients admitted to hospitals due to the negative health outcomes they cause are increasing (3). Early diagnosis and treatment are needed to avoid the negative health outcomes caused by geriatric syndromes; and new markers that can predict geriatric syndromes before they develop or progress clinically are needed for early diagnosis and treatment. In our study where a total of 208 elderly patients with a median age of 70 years were included and the relationship between f(QRS/T) angle and geriatric syndromes was examined, 55.8% of the patients were women. Among chronic comorbid diseases, HT and COPD were more common in patients with increased f(QRS/T) angle. CCI was higher in patients with increased f(QRS/T) angle. QRS duration was longer (p=0.035) and QT/TQ ratio was higher in patients with increased f(QRS/T) angle. No relationship was found between the scale results evaluated in terms of geriatric syndromes and the f(QRS/T) angle. It was determined that a one-unit increase in CCI increased by 2.652 times, a one-unit increase in neutrophil count increased by 1.001 times, and a one-unit increase in QRS duration increased by 1.035 times, and that these were independent risk factors that increased the risk of f(ORS-T) angle. To the best of our knowledge, our study is important because it is the first study to examine the relationship between f(QRS/T) angle and geriatric syndromes.

There are studies in the literature reporting that the QRS-T angle changes according to age and gender, that women have smaller basal angles than men, and that the angle widens with age in both genders, while there are also studies reporting that there is no relationship between the QRS-T angle and age and gender (4, 5, 25-27). Giovanardi et al. (15) In a study investigating the effects of age and comorbidities on ECG parameters by including 130,471 patients, it was found that f(QRS-Ta) remained constant until middle age, increased with age after the age of 51.5, but no significant difference was observed between genders. In a study by Aro et al. (16) including 10,713 patients, it was reported that patients with increased f(QRS-T) angle were older and more often male. In the study by Yan-Hong Li et al. (5), age was found to be significantly higher in patients with initial f(QRS/T) values above 90°. In the study presented by Chen et al. (17) in 2018, it was reported that there was no relationship between f(QRS-Ta) and age. As in similar studies, no relationship was found between f(QRS/Ta) and age and gender in our study. The controversial results in the literature regarding f(QRS/Ta) and age and gender may be due to the fact that f(QRS/Ta) increases in the geriatric population compared to the young adult population, but does not change in the geriatric population after a certain age. In addition, since it is a newly defined parameter, the cut-off values for f(QRS/T) have not been precisely defined yet. The normal minimum and maximum reference values vary considerably according to age and gender (4). Different results may be obtained in the relationship between f(QRS/Ta) and age and gender depending on the differences in the cut-off values used to define the increase in f(QRS/Ta) in the studies. Prospective studies with a larger number of patients are needed to determine the most appropriate cut-off point for the increase in f(QRS/Ta) in the elderly.

Studies have shown that f(QRS-Ta) is increased in HT and COPD (5, 18, 19). In our study, similar to the studies in the literature, f(QRS-Ta) was found to be increased in patients with HT and COPD. It has been shown that there are structural changes such as left ventricular hypertrophy (LVH), increased left ventricular mass index (LVMI), pulmonary hypertension (PHT) and functional changes such as decreased left ventricular ejection fraction (LVEF) and increased arrhythmia frequency in HT-COPD (20, 21). In a prospective study conducted by Selvaraj et al. examining the relationship between f(QRS/Ta) and ventricular functions, it was determined that LV hypertrophy caused heterogeneity in ventricular depolarization and repolarization, leading to increased f(QRS/Ta) and was associated with poor cardiac outcomes (22). Sheng Na-Li et al. also found that LVEF was significantly lower in patients with an initial f(QRS/T) value above 90° (23). The increase in f(QRS-Ta) in patients with HT-COPD was attributed to the structural and functional changes caused by HT-COPD in the cardiovascular system, especially the inhomogeneity in ventricular repolarization resulting from electrophysiological changes (24). Old age is defined in many studies as a period when functions become inadequate and mortality increases (25). Many studies have shown that cardiovascular mortality and all-cause mortality increase with an increase in the QRS-T angle (4, 6, 16, 19). mCCI is a scale developed by Charlson et al. (26) to determine 10-year mortality. In our study, mCCI was found to be high in patients with an increased f(QRS-T) angle, supporting previous studies in the literature.

In our study, no relationship was found between f(QRS-Ta) and scale results evaluated in terms of geriatric syndromes. In the study by Mahinrad et al. using the data of the PROSPER study, including 4172 patients, and examining the relationship between QRS-T angle and cognitive decline in the elderly, it was determined that increased QRS-T angle was associated with cognitive decline independent of traditional cardiovascular risk factors (12). Sarcopenia has been shown to be associated with heart failure, atherosclerotic cardiovascular disease, heart valve diseases, atrial fibrillation and cardiac arrhythmias (27). Malnutrition has been shown to be associated with ischemic-non-ischemic heart disease, left ventricular mass loss and heart failure, QT prolongation and bradyarrhythmia, cardiac mortality and increased all-cause mortality (28). The reason why no relationship was found between geriatric syndromes and f(QRS-Ta) in our study may be the small number of patients we had, the cut-off value we took for increased f(QRS-Ta) and the fact that the majority of our patients were fit patients.

There are some limitations of our study that should be noted. Since our study is retrospective, the data were collected from patient records, it was conducted with a small number of patients, the number of patients with geriatric syndromes was small, the cases were from a single center, and the cases were not community-based and only reached the third step. Its strength is that it is the first study to examine the relationship between geriatric syndromes and f(QRS/Ta).

In conclusion, the f(QRS-T) angle is a new marker of myocardial repolarization. Its relationship with various chronic diseases such as HT-COPD and its success in predicting cardiovascular adverse events and all-cause mortality have been shown by numerous studies. Prospective studies with larger sample sizes are needed to determine the most appropriate cut-off point for the increase in f(QRS-T) angle in the elderly and to determine the relationship between f(QRS/T) angle and geriatric syndromes.

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Sarcopenia

SS-15

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EVALUATION OF THE RELATIONSHIP BETWEEN PAN-IMMUNE INFLAMMATION VALUE AND SARCOPENIA IN GERIATRIC PATIENTS

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Objective: Sarcopenia is a geriatric syndrome characterized by progressive loss of skeletal muscle mass. This is a disease in which inflammatory processes play a role in pathogenesis. In recent years, researchers have investigated the role of systemic immune inflammation value (SII) and pan-immune inflammation value (PIIV) as inflammation markers in the diagnosis and prognosis of various inflammatory diseases. However, studies examining the relationship between sarcopenia and PIIV are quite limited. The aim of this study is to evaluate the possible relationship between the presence of sarcopenia and PIIV levels.

Materials-Methods: The study was designed retrospectively. The files of patients over the age of 65 who were evaluated at the Geriatrics Clinic of Başkent University Ankara Hospital between 2020 and 2024 were examined. We obtained the clinicodemographic information of the patients, as well as their right and left-hand grip strength, neutrophil, lymphocyte, monocyte, and platelet counts. Probable sarcopenia was defined as a dominant handgrip strength of less than 28 kg in men and less than 14 kg in women.

Results: A total of 530 patients were included in the study. The median age was 79 years, and 69% were women. 311 (58%) of the patients were sarcopenic. Auditory, neuropsychiatric, and coronary artery disease were more common in sarcopenic patients, otherwise similar diseases. The median age of probable sarcopenic patients was higher (81 vs. 77, p<.05). There was no significant difference between the SII values of probable and non-sarcopenic patients (563 vs. 529, p =.23). On the other hand, PIID was significantly higher in probable sarcopenic patients than in probable non-sarcopenic patients (312 vs. 258, p =.02). In addition, dominant handgrip strength correlated with SII and PIID in sarcopenic patients (r = 0.17, p =.009, and r = 0.13, p =.050, respectively), while non-sarcopenic patients did not (all p >.05).

Conclusion: Both the higher PIID in sarcopenic patients compared to non-sarcopenic patients and the correlation of PIID level with possible sarcopenia severity in sarcopenic patients suggest that PIID can be used in the diagnosis of possible sarcopenia. This hypothesis needs to be tested in future studies.

Keywords: sarcopenia, geriatric assessment, inflammation

Others

SS-16

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RETROSPECTIVE ANALYSIS OF BONE MARROW BIOPSY RESULTS IN PATIENTS AGED 65 AND OVER: EXPERIENCE FROM A TERTIARY CARE HOSPITAL'S PATHOLOGY DEPARTMENT

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Objective: The aim of this study is to analyze the pathological results and preliminary diagnoses of bone marrow biopsies performed in a tertiary care setting between 2019 and 2024. This study seeks to assess the prevalence of various hematological diseases and the correlation between biopsy findings and the accuracy of clinical diagnoses.

Methods: Bone marrow biopsies performed between 2019 and 2024 were restrospectively examined for this study. Pathology reports, demographic data, referring clinics, and preliminary diagnoses were analyzed. Patients were categorized based on biopsy findings, and the diagnostic accuracy and prevalence of diseases were assessed.

Results: A total of 1,821 patients' bone marrow biopsies were analyzed. Of these patients, 1,020 (56.0%) were male, and 801 (44.0%) were female. The mean age of all patients was 74.8 ± 6.9 years, with a minimum age of 65 and a maximum age of 95. The department most frequently ordering a bone marrow biopsy was hematology, with 1,043 (57.3%), followed by medical oncology with 398 (21.8%), and general internal medicine with 132 (7.2%). The most common preliminary diagnoses leading to bone marrow biopsy were multiple myeloma (563 cases, 30.8%), myelodysplastic syndrome (338 cases, 18.5%), chronic myeloproliferative diseases (258 cases, 14.2%), and lymphoma (251 cases, 13.8%). After excluding biopsies with no preliminary diagnosis and insufficient material, 853 patients (52.3%) received a pathological diagnosis of cancer, while 772 patients (47.7%) were not diagnosed with any malignancy. The most frequently diagnosed malignancy was multiple myeloma (261 cases, 34.5%), followed by chronic myeloproliferative diseases (131 cases, 17.0%), lymphoma (149 cases, 19.3%), acute myeloid leukemia (109 cases, 14.1%), and myelodysplastic syndrome (52 cases, 6.7%). There was a significant difference among clinics regarding the concordance between preliminary and pathological diagnoses (p=0.024). Among the cases with concordant diagnoses, multiple myeloma was the most common (251 cases, 40.6%), followed by chronic myeloproliferative diseases (108 cases, 17.5%), lymphoma (79 cases, 12.7%), acute myeloid leukemia (77 cases, 12.5%), and myelodysplastic syndrome (44 cases, 7.1%). Additionally, there was a significant difference among clinics in their ability to diagnose malignancies (p=0.026). The highest rate of malignancy diagnosis was observed in the intensive care unit (63.2%), followed by general internal medicine (51.8%) and nephrology (50.8%).

Conclusion: The findings of this study demonstrate that bone marrow biopsies play a crucial role in diagnosing hematological diseases. Significant differences were observed among clinics in terms of both the concordance of preliminary diagnoses and the establishment of pathological diagnoses. To avoid unnecessary invasive procedures, especially in elderly patients, it is essential to develop more definitive clinical and laboratory algorithms.

Keywords: bone marrow biopsy, pathology, geriatric patients, multiple myeloma, malignancy

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Table 1. Characteristics of the study cohort (n=1821)

Age, mean (min-max)	74.8 (65-95)
Gender, n (%)	
Female	801 (44%)
Male	1020 (56%)
Departments ordering a bone marrow biopsy, n (%)	
Hematology	1043 (57.3%)
Medical Oncology	398 (21.8%)
General Internal Medicine	132 (7.2%)
Nephrology	65 (3.6%)
Geriatrics	18 (1.0%)
Rheumatology	7 (0.4%)
Intensive Care	79 (4.3%)
Surgical Branches	22 (1.2%)
Others*	57 (3.2%)
Preliminary Diagnoses, n (%)	
No preliminary diagnosis	82 (4.5%)
Multiple Myeloma	563 (30.8%)
Myelodysplastic Syndrome	338 (18.5%)
Chronic Myeloproliferative Diseases	258 (14.2%)
Chronic Lymphocytic Leukemia	56 (3.1%)
Lymphoma	251 (13.8%)
Acute Myeloid Leukemia	117 (6.9%)
Amyloidosis	21 (1.2%)
Anemia	71 (3.8%)
Metastasis	64 (3.5%)
Pathological Diagnoses, n (%)	
Insufficient sample	124 (6.8%)
Multiple Myeloma	265 (14.5%)
Myelodysplastic Syndrome	53 (2.9%)
Chronic Myeloproliferative Diseases	135 (7.4%)
Chronic Lymphocytic Leukemia	32 (1.8%)
Diffuse Large B-cell Lymphoma	130 (7.1%)
Follicular Lymphoma	6 (0.3%)
Hodgkin Lymphoma	3 (0.2%)
Hairy Cell Leukemia	5 (0.3%)
Mantle Cell Lymphoma	7 (0.4%)
Acute Myeloid Leukemia	110 (6%)
Acute Lymphoblastic Leukemia	9 (0.5%)
Hypercellular sample	398 (21.8%)
Hypocellular sample	43 (2.4%)
Normocellular sample	469 (25.7%)

*Others: infections, chest diseases, cardiology, physical therapy, and rehabilitation.

Table 2. Concordance Between Preliminary and Pathological Diagnoses by Clinics

Clinic (n, %)	*Discordant (n=1001)*	*Concordant (n=616)*	*p-value*
Hematology	578 (57.8%)	366 (59.4%)	
Medical Oncology	238 (23.8%)	126 (20.5%)	
General Internal Medicine	73 (7.3%)	36 (5.8%)	
Nephrology	31 (3.1%)	30 (4.9%)	0.024
Geriatrics	12 (1.2%)	3 (0.5%)	
Rheumatology	4 (0.4%)	0 (0.0%)	
Intensive Care	32 (3.2%)	36 (5.8%)	
Surgical Branches	13 (1.3%)	6 (1.0%)	
Others	20 (2.0%)	13 (2.1%)	

Table 3. Malignancy Diagnosis by Clinics

Clinic (n, %)	*Nonspecific (n=852)*	*Malignant (n=772)*	*p-value*
Hematology	482 (57.3%)	459 (59.6%)	
Medical Oncology	211 (25.1%)	151 (19.6%)	
General Internal Medicine	52 (6.2%)	56 (7.3%)	
Nephrology	30 (3.6%)	31 (4.0%)	
Geriatrics	9 (1.1%)	6 (0.8%)	0.026
Rheumatology	4 (0.5%)	0 (0.0%)	
Intensive Care	25 (3.0%)	43 (2.7%)	
Surgical Branches	11 (1.3%)	8 (1.0%)	
Others	17 (2.0%)	16 (2.1%)	

Chronic Diseases

SS-17

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THE PROGNOSTIC VALUE OF COGNITIVE FUNCTION AND MASKED HYPERTENSION IN LONG-TERM GERIATRIC MORTALITY: AN 8-YEAR STUDY

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Objective: The long-term prognostic effects of masked hypertension (MHT) in the geriatric population remain uncertain. This study aims to evaluate the 8-year mortality rates of geriatric patients previously diagnosed with MHT or identified as normotensive, and to analyze the prognostic factors influencing mortality.

Materials and Methods: This follow-up study assessed 102 participants aged 65 and older, included in the G-MASH-cog study (2016) and the G-MASH-End organ study (2019), which investigated the relationship between MHT and cognitive functions and the association between MHT and end-organ damage, respectively. Participants were divided into MHT and normotensive groups based on ambulatory blood pressure measurements. Demographic data, cognitive assessments, echocardiographic measurements, and spot urine albumin/creatinine ratios were derived from the index study database. Kaplan-Meier curves were used for survival analysis, and the log-rank test was applied to evaluate differences between groups. Factors influencing mortality were analyzed using a multivariate logistic regression model, applied with a backward method.

Results: Of the 102 patients included, 44 (43.1%) had MHT. In the MHT group, 13 patients (29.5%) died, compared to 10 patients (17%) in the normotensive group. Survival data were available for 96 patients. The median follow-up period was 99 months; however, median survival could not be calculated as 50% of the population had not died. The mean overall survival time was 93.9 ± 1.5 months for the entire population, with no significant difference between the MHT and normotensive groups (93.2 months vs. 94.5 months; p=0.163). There were no significant differences in survival concerning end-organ damage markers such as urinary albuminuria, left ventricular mass in-

dex, and ascending aorta diameter. Multivariate regression analysis included sex, age, smoking status, MHT status, spot urine albuminuria, MMSE (Mini-mental State Examination), qMCI (The Quick Mild Cognitive Impairment), and MoCA (Montreal Cognitive Assessment) scores, which were significant or nearly significant in univariate analyses. Due to correlations among cognitive tests, three separate models were created, each including different cognitive assessments.

In Model 1, male sex (OR:3.598; 95% CI: 1.152-11.235; p=0.028), age (OR:1.129, 95% CI: 1.030-1.238; p=0.009), and baseline MMSE score (OR:0.810; 95% CI: 0.678-0.968; p=0.020) were independently associated with mortality. In Model 2, male sex (OR: 4.144; 95% CI: 1.400-12.268; p=0.01) and baseline qMCI score (OR:0.955; 95% CI: 0.915-0.996; p=0.031) were significant. In Model 3, only male sex (OR:4.553; 95% CI: 1.496-13.859; p=0.008) and age (OR:1.111; 95% CI:1.014-1.216; p=0.024) had significant effects on mortality, while the effect of MoCA was not statistically significant.

Conclusion: This study demonstrates that MHT, previously shown to cause end-organ damage, does not significantly affect survival in the geriatric population. However, the significant impact of MMSE and qMCI scores on mortality suggests that cognitive functions should be considered a prognostic indicator in the geriatric population. These findings may necessitate a reassessment of strategies in managing hypertension in older adults.

Keywords: Masked Hypertension, Cognition, Geriatric, Mortality, Prognosis, End Organ Damage

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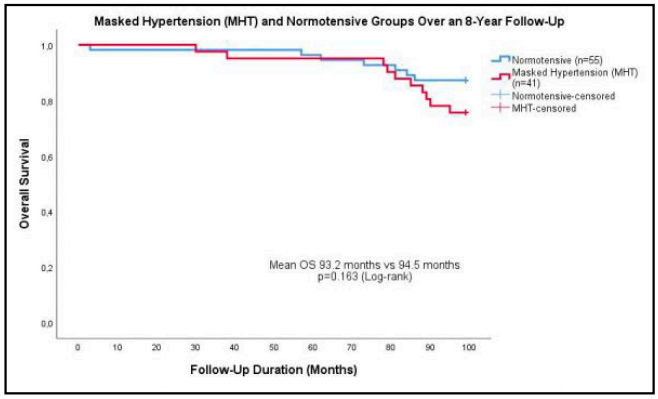

Figure 1. 'Masked Hypertension (MHT) and Normotensive Groups Over an 8-Year Follow-Up'

Comparison of Demographic, Clinical, and Laboratory Characteristics According to Patient Groups

Baseline Characteristic	*Total (n = 102)*	*Masked Hypertension (n = 44)*	*Normal (n = 58)*	*p-value*
Age	71.92 ± 5.72	72.89 ± 5.53	71.19 ± 5.79	.13
Sex (Male)	42 (41.2%)	19 (43.2%)	23 (39.7%)	.72
Sex (Female)	60 (58.8%)	25 (56.8%)	35 (60.3%)	
Smokers	16 (15.7%)	6 (13.6%)	10 (17.2%)	.47
Alcohol	12 (11.8%)	5 (11.4%)	7 (12.1%)	.91
Diabetes Mellitus	22 (21.6%)	22 (21.6%)	10 (22.7%)	.80
Hyperlipidaemia	22 (21.6%)	10 (22.7%)	12 (20.7%)	.80
Urine Alb/Creatinine Ratio (mg/day)	8.12 (2–137)	9.61 (2–123)	7.12 (2–137)	.021
Left Ventricular Mass Index (g/m2)	86 (60–127)	91 (63–121)	83.5 (60–127)	.017
Ascending Aorta (cm)	3.53 ± 0.39	3.56 ± 0.39	3.51 ± 0.39	.55
MMSE	29 (18-30)	28 (18-30	29 (18-30)	.01
qMCI	44.7 ± 14.5	41.4 ± 12.9	47.2 ± 15.2	.046
MoCA	17.6 ± 5.73	16.43 ± 5.64	47.2 ± 15.2	.071

Model 1. (using MMSE): Variable(s) entered on step 1: Gender, MHT status, Age, smoking status, MMSE score, spot urine albumin levels.

Variable	*Estimated Relative Risk (Exp(B))*	*95% Confidence Interval*	*p-value (Sig.)*
Gender	3.598	1.152 - 11.235	0.028
Age	1.129	1.030 - 1.238	0.009
Smoking status	3.060	0.855 - 10.947	0.086
Baseline MMSE score	0.810	0.678 - 0.968	0.020

Model 2. (using qMCI): Variable(s) entered on step 1: Gender, MHT status, Age, smoking status, qMCI score, spot urine albumin levels

Variable	*Estimated Relative Risk (Exp(B))*	*95% Confidence Interval*	*p-value (Sig.)*
Gender	4.144	1.400 - 12.268	0.010
Age	1.096	1.000 - 1.201	0.050
Baseline qMCI score	0.955	0.915 - 0.996	0.031

Model 3. (using MoCA): Variable(s) entered on step 1: Gender, MHT status, Age, smoking status, MoCA score, spot urine albumin levels

Variable	*Estimated Relative Risk (Exp(B))*	*95% Confidence Interval*	*p-value (Sig.)*
Gender	4.553	1.496 - 13.859	0.008
Age	1.111	1.014 - 1.216	0.024
Baseline MoCA score	0.916	0.833 - 1.008	0.073

Nutrition

SS-18

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COMPARISON OF GNRI, PNI, CONUT WITH MNA-SF TO ASSESS PROGNOSTIC VALUE FOR FALL RISK IN OLDER ADULTS

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Rationale: Nutritional status in older adults is a reflection of general health and appears to play a vital role in the musculoskeletal system, bone density, fall risk, postural stability, and mobility, as well as other systemic outcomes. Malnutrition is known to lead to the loss of independence and prolonged length of hospital with subsequent mortality increase (1,2). Hence, it is crucial to have a timely diagnosis of malnutrition and a prompt initiation of proper nutritional care for older adults. There are several indications that nutritional assessment tools were used for estimation including cancer, sarcopenia, and postoperative follow-up, yet their utility in predicting falls is unclear (3,4). We aimed to investigate the three nutritional indexes; PNI (Prognostic Nutritional Index), GNRI (Geriatric Nutritional Index), and CONUT (Controlling nutritional status), and their association with the MNA-SF (Mini nutritional assessment short form) to evaluate their relationship with fall risk.

Method: The present study evaluated the data of all patients above ≥65 years old who were admitted to the outpatient clinic of Hacettepe University Hospital, Division of Geriatric Medicine between January 1, 2022, to January 31, 2024. Patients with active infectious diseases and incomplete anthropometric and laboratory measurements were excluded. Demographic and clinical parameters were collected from the hospital information system. A total of 952 individuals were enrolled. PNI measured the nutritional and immune status of the patient by summing the serum albumin and total lymphocyte counts (10×serum albumin [g/dL]) +(0.005×lymphocytes/μL). CONUT index improved over PNI by including cholesterol levels (total cholesterol, total lymphocyte, and serum albumin level scoring). At the same time, GNRI is calculated by combining albumin and adjusted body weight (GNRI=1.489 × serum albumin (g/l) + 41.7 × (present weight/ideal body weight). Ideal body weight was determined with the Lorentz formula by gender.

Results: Malnutrition prevalence according to MNA-SF value of ≤7 was 5.6% (n=53); 12.3%(n=117) with GNRI, a cut-off value of ≥ 98; and 4.9% (n=47) with PNI cut-off value of ≤36.97. CONUT score was not found to be statistically significant for predicting fall risk (p=0.171), whereas MNA-SF, GNRI, and PNI were shown to have a significant association (p<0.001). In logistic regression analysis, three models with MNA-SF, PNI, and GNRI were created to detect the independent correlates of fall risk. MNA-SF, PNI, and GNRI were independently associated with fall risk (OR, 0.84; p<0.001; OR,0.95; p = 0.0036; OR, 0,96; p =0.039 respectively).

Conclusion: The results of this retrospective cohort indicated that MNA-SF, GNRI, and PNI assessment scores can predict fall risk in older adults. To the best of our knowledge, this is the first study that portrays a such relation, nevertheless, there were several limitations regarding the monocentric retrospective design, so findings may not be applicable to the general population. Secondly, the CONUT score may be affected by the lipid-lowering drugs yet this was not taken into account in the majority of the studies as well due to medication adherence uncertainty. Variations in cut-off values based on age and population need to be addressed in future large multi-centric prospective trials (5,6).

Keywords: Malnutrition, GNRI, PNI, CONUT, MNA-SF, Fall Risk, Older Adults

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Receiver operating characteristics (ROC) curve demonstrating the accuracy of the predictive value of MNA-SF, GNRI and PNI in determining fall risk.

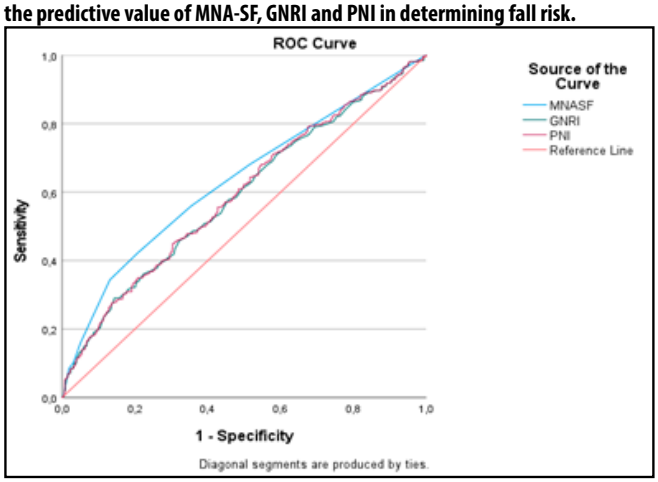

Table 2. Multivariate regression analysis explanation

Model 1 was adjusted for age, sex, CFS, HGS(right), number of medication used, Yesavage Depresion Scale, Four meter gait speed and MNA-SF.
Model 2 was adjusted for age, sex, CFS, HGS(right), number of medication used, Yesavage Depresion Scale, Four meter gait speed and PNI.
Model 3 was adjusted for age, sex, CFS, HGS(right), number of medication used, Yesavage Depresion Scale, Four meter gait speed and GNRI.

Table 1. Demographic Characteristics of Participants According to Fall Status

Parameters	*Non-Fallers 632 (66.4%)*	*Fallers 320 (33.4%)*	*p value*
Age, median (IQR)	73.0 (69-78)	74.0 (69 -74)	0.021
Sex, female, n (%)	407 (64.4%)	224 (70.0%)	0.127
BMI (kg/m2) median (IQR)	28.7 (25.6-32.03)	28.9 (25.5-33.3)	0.257
MNA-SF median (IQR)	13 (12-14)	12 (10-14)	<0.001
GNRI, median (IQR)	106.4 (103.4-108.8)	105.1 (101.1-107.8)	<0.001
Malnutrition and malnutrition risk according to GNRI,n (%)	56 (8.9%)	61 (6.4%)	<0.001
PNI, median (IQR)	43.6 (41.6-45.1)	42.7 (40.0-44.4)	<0.001
Malnutrition according to PNI (cutoff <36.97) n (%)	20 (3.2%)	27 (8.4%)	<0.001
CONUT, median (IQR)	1 (0-2)	1 (0-2)	0.171
Malnutrition according to CONUT (cut-off ≥2), n (%)	175 (27.7%)	106 (37.7%)	0.084
SARC-F mean (IQR)	1 (0-2)	3 (1-5)	<0.001
Handgrip strenght(right) kg, mean (IQR)	20.3 (15.6-26)	17.9 (14-22.3)	<0.001
Timed up and go (TUG) m/s, mean (IQR)	9.43 (7.7-12.3)	11 (8.2-14.9)	<0.001
4 m gait speed, m/s, mean (IQR)	4.0 (3.4-5.1)	4.7 (3.7-6.1)	<0.001
Sit-to-stand test (STST), s, median (IQR)	12.8 (10.5-15.7)	14 (11.5-17.6)	<0.001
Number of medications, mean (IQR)	6 (4-9)	7 (5-10)	0.005
Clinical Frailty Scale, median (IQR)	3 (3-4)	4 (3-5)	<0.001

Table 2. Multivariate Logistic Regression Analysis of The Independent Factors Associated with Fall Risk

	Variables	*OR (95% C.I.)*	*p value*
Model 1	MNA-SF	0.84 (0.78-0.91)	<0.001
	Yesavage Depression Scale	1.07 (1.01-1.12)	0.011
Model 2	PNI	0.95 (0.91-0.99)	0.036
	Yesavage Depression Scale	1.09 (1.04-1.15)	<0.001
	HGS(right)	0.96 (0.93-0.99)	0.045
Model 3	GNRI	0.96 (0.94-0.99)	0.039
	Yesavage Depression Scale	1.09 (1.04-1.15)	<0.001
	HGS(right)	0.96 (0.93-1.00)	0.048

Table 3. Receiver operating characteristics (ROC) curve demonstrating the accuracy of the predictive value of MNA-SF, GNRI and PNI in determining fall risk.

Variable	*AUC (95% C.I.)*	*p value*
MNA-SF	633 (0.595-0.672)	< 0.001
PNI	590 (0.551-0.672)	< 0.001
GNRI	593 (0.555-0.632)	< 0.001

Others

SS-19

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THE RELATIONSHIP BETWEEN THE BLOOD UREA NITROGEN/SERUM ALBUMIN RATIO AND GERIATRIC SYNDROMES

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Objective: The relationship between the blood urea nitrogen/serum albumin (BUN/Alb) ratio and mortality in older adults is known. In addition, many studies have reported that an increased BUN/Alb ratio can be used as a significant predictor in determining prognosis after severe pneumonia, sepsis, myocardial infarction, or cardiovascular surgery. In this study, we aimed to examine the relationship between the BUN/Alb ratio and comprehensive geriatric assessment (CGA) parameters.

Material-Method: Participants who underwent CGA in the geriatric outpatient clinic between May 2024 and August 2024 were included in the study. Within the scope of CGA, the participants' Katz activities of daily living (ADL), Lawton-Brody Instrumental ADL (IADL), and Clinical Frailty Scale (CFS) were evaluated, and the SARC-f test, mini-nutritional assessment test, and 5-times sit-to-stand test were applied. The relationship between the results and the BUN/Alb ratio was examined.

Results: The mean age of the 105 participants was 72±6 years, and 60% were female. BUN/Alb ratio was significantly correlated with age, Katz ADL, Lawton-Brody IADL, CFS score, SARC-f test score, and 5-times sit-to-stand test results ($p=0.002$, $r=0.302$; $p=0.002$, $r=-0.302$; $p<0.001$, $r=-0.431$; $p<0.001$, $r=0.457$; $p=0.001$, $r=0.316$; $p<0.001$, $r=0.380$, respectively). In ROC analyses, significant results were obtained with ADL dependency, IADL dependency, presence of frailty, presence of probable sarcopenia, prolonged 5-times sit-to-stand test, and BUN/Alb ratio (respectively; AUC: 0.627, $p=0.027$, 95% CI: 0.51-0.73; AUC: 0.747, $p<0.001$, 95% CI: 0.64-0.85; AUC: 0.729, $p<0.001$, 95% CI: 0.63-0.827; AUC: 0.80, $p<0.001$, 95% CI: 0.70-0.90; AUC: 0.718, $p<0.001$, 95% CI: 0.61-0.82).

Conclusion: The BUN/Alb ratio may be a marker of geriatric syndromes such as functional dependency, frailty, and sarcopenia. However, larger randomized studies need to support this data.

Keywords: Blood urea nitrogen/albumin ratio, comprehensive geriatric assessment, geriatric syndromes

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Others

SS-20

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THE BURDEN OF GERIATRIC SYNDROMES IN OLDER ONCOLOGY PATIENTS: A SINGLE-CENTER PERSPECTIVE

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Objective: Cancer is a major health problem, especially in the elderly. The aging process not only increases the risk of developing cancer, but also complicates the overall health of patients. Geriatric syndromes, which are common in older adults, can negatively affect both treatment outcomes and quality of life. The aim of this study is to determine the prevalence and diversity of geriatric syndromes in older cancer patients, differentiated by cancer type.

Methods: This croSS-sectional study included patients who visited a geriatric oncology center between March 2024 and July 2024. Demographic data such as age, gender, education level and marital status were collected along with medical information such as oncologic diagnoses, metastatic status and chronic diseases. Geriatric syndromes such as incontinence, polypharmacy, depression, sleep disorders, falls, malnutrition, cognitive impairment and pain were assessed using validated scales and structured questionnaires.

Results: A total of 257 patients were enrolled in the study, of whom 139 (54.1%) were female. The mean age of participants was 72.8 ± 6.02 years, and 160 (62.3%) had five years or less of formal education. Regarding oncologic malignancies, 80 (31.1%) had gastrointestinal malignancies, 82 (31.9%) had breast cancer, 31 (12.1%) had cancer of the respiratory tract, 39 (15.2%) had cancer of the genitourinary system, 14 (5.4%) had gynecologic cancer, and 11 (4.3%) had other cancers. The analysis of geriatric syndromes revealed that 89 (33.5%) patients suffered from urinary incontinence, 82 (31.9%) from polypharmacy, 108 (42%) from depression, 86 (33.5%) from sleep disorders, 27 (10.5%) from falls, 108 (42%) from malnutrition, 44 (17.1%) from cognitive impairment and 101 (38.5%) from pain. Malnutrition, falls and pain were significantly more common in patients with metastases. Specific malignancies showed that incontinence was more common in gynecologic malignancies, depression in breast cancer, falls in malignancies of the respiratory system, and malnutrition in malignancies of the gastrointestinal tract and respiratory system. Conversely, polypharmacy was less common in gastrointestinal malignancies and malnutrition was less common in breast and genitourinary malignancies.

Conclusion: This study shows a high prevalence of geriatric syndromes in elderly cancer patients, although the prevalence varies between cancer types. Malnutrition, falls and pain were significantly more common in patients with metastases. In addition, certain geriatric syndromes were found to be more common in certain types of cancer. These findings emphasize the importance of including the assessment of geriatric syndromes in the comprehensive evaluation of older cancer patients. The identification and management of these syndromes are critical to improving treatment outcomes and quality of life for these patients. Therefore, a multidisciplinary approach to the assessment and treatment planning of geriatric oncology patients, which includes consideration of geriatric syndromes, is critical to improving clinical outcomes and the efficiency of healthcare services. Understanding and addressing the specific needs of older cancer patients is critical to the success of oncology treatments.

Keywords: Geriatric Syndromes, Geriatric Oncology, Geriatric Assessment, Malnutrition, Metastatic Cancer

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Table 1. Basic characteristics of the subjects

Variables	*Total (n=257)*	*Local (n=120)*	*Metastatic (n=137)*	*p*
Age, years, mean (SD)	72.86 (± 6.02)	72.9 (± 5.9)	72.8 (± 6.0)	0.793
Education, ≤ 5 years, n (%)	160 (62.3)	76 (63.9)	84 (60.6)	0.598
Gender, female, n (%)	139 (54.1)	69 (58.0)	70 (50.4)	0.223
Marital status, married, n(%)	184 (71.6)	82 (68.9)	101 (73.7)	0.551
Drug count, median (min-max)	3 (0-13)	3 (0-12)	3 (0-13)	0.151
Chronic diseases				
Hypertension, n (%)	150 (58.4)	72 (60.5)	78 (56.9)	0.563
Cardiovascular disease, n (%)	62 (24.1)	26 (21.8)	36 (26.3)	0.409
Stroke, n (%)	9 (3.5)	6 (5.0)	3 (1.2)	0.217
Diabetes mellitus, n (%)	90 (35.0)	53 (44.5)	37 (27.0)	0.003
COPD, n (%	19 (7.4)	10 (8.4)	9 (6.6)	0.577
Malignancy				
Gastrointestinal system, n (%)	80 (31.1)	34 (28.6)	46 (33.6)	
Breast, n (%)	82 (31.9)	49 (41.2)	33 (24.1)	
Respiratory system, n (%)	31 (12.1)	14 (11.8)	17 (12.4)	
Genitourinary system, n (%)	39 (15.2)	13 (10.9)	33 (24.1)	0.001
Gynecologic, n (%)	14 (5.4)	2 (1.2)	12 (8.8)	
Others, n (%)	11 (4.3)	8 (6.7)	3 (2.2)	
Geriatric syndromes				
Urinary incontinence, n (%)	89 (34.6)	37 (31.1)	52 (37.2)	0.303
Polypharmacy, n (%)	82 (31.9)	39 (32.8)	43 (31.4)	0.813
Depression, n (%)	108 (42.0)	53 (44.5)	55 (40.1)	0.478
Sleep Disorder, n (%)	86 (33.5)	42 (35.5)	44 (32.1)	0.591
Fall, n (%)	27 (10.5)	17 (14.3)	10 (7.3)	0.070
Malnutrition, n (%)	108 (42.0)	39 (37.1)	66 (48.5)	0.012
Cognitive impairment, n (%)	44 (17.1)	13 (10.9)	31 (22.6)	0.013
Pain, n (%)	101 (38.5)	38 (31.9)	63 (44.2)	0.049
Geriatric syndrome count, median (min-max)	2 (0-8)	2 (0-8)	2 (0-7)	0.222

Others

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INVESTIGATION OF GENERAL CHARACTERISTICS, CLINICAL OUTCOMES OF OLDEST OLD (≥85 YEARS) INTENSIVE CARE UNIT SURVIVORS TRANSFERRED TO A GERIATRICS WARD

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Background/Aim: This study aimed to investigate the general characteristics of the oldest patients followed up in a geriatrics ward after surviving the intensive care unit (ICU) and their hospital and long-term clinical outcomes.

Materials and Methods: The study was planned as a retrospective and observational cohort. The patients aged ≥85 years and followed up in the Internal Medicine ICU of our hospital between August 20, 2020, and August 20, 2023, transferred to the geriatrics ward, and met the inclusion criteria were included in the study. ICU and ward follow-ups of all patients were examined in detail using the electronic hospital record files, and their final status discharged alive from the hospital was learned by a phone interview.

Results: Of the patients included in the study (n=101), 64.4% were female, and the median age was 88 (85-98) years (median follow-up period 114 [11-822] days). At the end of the follow-up period, 79.20% of the patients had died. After long-term follow-up from ICU hospitalization, the median survival time was 114 days (95% CI: 68-160). When the independent factors associated with death during the follow-up period were examined, ICU-LOS (OR: 1.166 p=0.038), NRS-2002 score (OR: 2.963 p=0.0001), and mobilization status (OR: 5.414 p=0.007) were found to be independent related parameters.

Conclusion: This study showed that patients over 85 years of age who survived ICU stay have high mortality in long-term follow-up and may have a survival time of approximately four months from ICU admission in survival analyses.

Keywords: Older age; Intensive care; Malnutrition; hospital mortality; mobilization

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Pressure Sores

SS-22

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DETERMINANTS OF MORTALITY IN GERIATRIC PALLIATIVE CARE PATIENTS WITH PRESSURE INJURIES

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Abstract

Background: Our study aimed to determine the factors associated with mortality in geriatric palliative care patients with pressure injuries (PI).

Methods: This prospective observational study included patients with PI who were hospitalized in the palliative care. The patients' demographic characteristics, chronic diseases, number of diseases were recorded. For each patient The Barthel Index (BI), Mini Nutritional Assessment (MNA) was also calculated. Full Patients with pressure injury were staged according to the Braden scale, Norton scale, and European Pressure Ulcer Advisory Panel.

Results: A total of 92 patients who were treated in the palliative care unit and had PI during the study period were evaluated. Their mean age was 74 years and 53.3% were male. Mortality occurred in 42 patients (45.7%) during the hospital follow-up period, of which 14 patients (15.2%) died within the first 30 days. In the adjusted Cox proportional hazard analysis, thrombocytopenia, anemia, elevated CRP, and elevated procalcitonin were significantly associated with increased mortality. Single or widowed, DM and thrombocytopenia were found to be independent risk factors for mortality, while receiving antibiotics therapy was found to be a protective factor.

Conclusion: The presence of DM, thrombocytopenia were identified as independent risk factors for mortality in patients hospitalized for PI in the palliative care unit

Introduction

Palliative care patients are exposed to various factors that lead to deterioration of physiological function and autonomy during the course of their disease [1]. These people often become bedridden at the end of life due to required positioning and sedative

treatment, all of which lead to an increase in pressure injuries (PI) [2].

In addition, xeroderma, malnutrition, and end-stage disease also contribute to the development of PI [1]. PI can cause many complications such as pain, depression, and infection. The presence of these complications leads to further deterioration of health, prolonged healing and hospital stays, increased health expenditures, and early mortality [3].

The incidence of PI among hospital inpatients varies between 4% and 38%; the rate of mortality associated with PI depends on existing comorbidities, especially in older patients, and can be up to 68% [4]. The most important predictors of PI are neurodegenerative conditions such as dementia and stroke, and other chronic diseases such as cardiovascular disease and diabetes mellitus (DM) [5, 6].

Assessing risk factors to predict the prognosis of patients with PI will play a key role in selecting an appropriate treatment and care strategy [7-9].Therefore, our study aimed to determine the factors associated with mortality in geriatric patients with PI receiving palliative care.

Materials and Methods

This prospective observational study included patients with PI who were hospitalized in the palliative care unit of a tertiary university hospital between January 1, 2021 and June 1, 2024. Inclusion criteria were being a geriatric patient, being admitted for PI, and staying in the unit for 24 hours or more.

The patients' demographic characteristics, chronic diseases, number of diseases, medications used, where the patients were before admission to palliative care, their height, weight, and body mass index (BMI) at admission to palliative care, mode of nutrition intake, and presence of urinary incontinence and urinary catheter were recorded.

The Barthel Index (BI) was also calculated at the time of hospital admission [10].

The nutritional status of the patients was evaluated using the Full Mini Nutritional Assessment (MNA) [11]. Patients with PI were staged according to the Braden scale, Norton scale, and European Pressure Ulcer Advisory Panel (EPUAP).

Blood, urine, superficial scrape samples, and especially deep tissue samples obtained from wounds that underwent surgical debridement were obtained for culture upon admission to the unit. Biomarker results obtained on the first day of hospitalization, PI location, treatments received while hospitalized, length of hospital stay, and outcome were recorded.

Statistical analysis

Descriptive statistics are presented as median and range for nonparametric continuous data. Categorical data were presented as frequency and percentage and were compared using the chi-square test. The Mann-Whitney U test was used to evaluate differences in score values. A probability (p) value of less than 0.05 was considered statistically significant. Additional adjusted curves were plotted for risk factors associated with mortality. Cox proportional hazards analysis with and without adjustments for age and sex was used to determine the hazard ratio for mortality in individuals with PI. A multivariate Cox regression model was created with variables found to be significant in the adjusted Cox proportional hazards analysis: being single/widowed, comorbid DM, antibiotic use, hospital onset of PI, thrombocytopenia, anemia, C-reactive protein (CRP) elevation, and procalcitonin elevation. To estimate mortality risk, a survival curve was first obtained by the Kaplan-Meier method. Cut-off values for biomarkers were obtained from the literature [12]. ROC analysis was performed to determine cut-off points for biomarkers if not included in the literature. The cut-off value with the highest sensitivity, specificity, and diagnostic power were determined using the Youden J index. To identify independent factors associated with mortality in our patient group, all predictive variables with a p-value of <0.005 were entered into the proportional hazards model. All statistical analyses were performed using SPSS 21.0.

Approval to conduct the study was obtained from the Atatürk University Faculty of Medicine Clinical Research Ethics Committee (date: 17/12/2020, meeting no: 10, decision no: 21).

Results

A total of 92 patients were evaluated. Their mean age was 74 (65 – 99) years and 49 (53.3%) were male. The mean length of hospital stay was 41 (2 – 550) days. Sixty-five patients (70.7%) had a single PI and 27 patients (29.3%) had PI at multiple sites. The most common site was the sacrum (n=88, 95.4%). The distribution of PI locations is presented in Figure 1.

Mortality occurred in 42 patients (45.7%) during the hospital follow-up period, of which 14 patients (15.2%) died within the first 30 days. The sociodemographic and clinical characteristics of the patients with and without 30-day mortality are presented in Table 1. In the adjusted Cox proportional hazard analysis, being single or widowed and having DM increased the risk of mortality, while antibiotic use and in-hospital onset of PI reduced the risk (Table 1). In addition, 40 (43.5%) of the patients had PI infection, and polymicrobial infection was detected in 19 patients (19.6%). The most frequently isolated microorganisms were *Klebsiella pneumonia* (n=15, 16.3%), *Pseudomonas aeruginosa* (n=8, 8.6%), and *Escherichia coli* (n=7, 7.6%).

Risk scores and biomarker levels at admission in patients with and without 30-day mortality are presented in Table 2. In the adjusted Cox proportional hazard analysis, thrombocytopenia, anemia, elevated CRP, and elevated procalcitonin were significantly associated with increased mortality. Receiving antibiotic treatment was an independent protective factor for mortality. The Cox proportional hazard analysis model for mortality in patients with PI is presented in Table 3 (Figure 2).

Discussion

In a study of geriatric patients hospitalized for PI, the mortality rate was shown to be 15.2% [13]. A 2019 meta-analysis by Song et al.[14] showed that mortality was twice as high in patients with PI compared to those without. In a study including 684 patients admitted to a geriatric unit, during 12 weeks of follow-up the prevalence of PI was found to be 15.5% and the mortality rate was 66% [12]. In our sample of 92 geriatric patients with PI treated in a palliative care unit, 45.7% died during hospital follow-up and 15.2% died within the first 30 days of admission to palliative care. Being single or widowed, having DM, and the presence of thrombocytopenia were identified as independent risk factors associated with increased mortality.

The prevalence of DM has steadily increased in recent decades. Sensory loss in diabetic neuropathy is a risk factor for diabetic foot and PI. Diabetic neuropathy can also lead to Charcot foot, which causes bone destruction, deformity, and infection [15]. With longer duration of DM, there is increased glycosylation in the vessel walls, leading to impaired perfusion of the skin and local ischemia. Most diabetic patients develop vascular complications that lead to damage in the target organs [16]. In the present study, the presence of DM was an independent risk factor associated with a 7.48-fold increase in mortality.

In the literature, higher mortality has been reported in nursing homes residents with PI due to immobilization, incontinence, and higher comorbidity [17]. In our study, there was no difference in mortality according to the patients' location before ad-

mission to the palliative care unit, which we attribute to the low number of patients coming from nursing homes. However, being single or widowed was found to be an independent risk factor for higher mortality, which may be related to a lack of social support.

Thrombocytopenia is an important laboratory marker of a severe systemic response secondary to infectious diseases such as sepsis. This marker can be considered a negative acute phase indicator, and has been identified as an independent mortality marker in multivariate analysis. In addition, it was revealed that platelet counts can be used as a prognostic factor to predict mortality among community-dwelling older people, regardless of the presence of PI [18]. In our study, thrombocytopenia was an independent factor that increased the risk of mortality by 5.64-fold.

In our study, 43.5% of the patients had infected PI, and polymicrobial infections were detected in 19.6% of those patients. It was reported in the literature that mortality is 3.8 times higher in patients with multiple microorganisms in PI cultures [19]. However, this had no effect on mortality in our study. This difference was explained by the high rate of antibiotic use among our patients.

In conclusion, DM, marital status and thrombocytopenia were identified as independent risk factors for mortality in patients hospitalized for PI in the palliative care unit. These risk factors should be considered to develop an effective care plan to prevent negative outcomes and unnecessary hospitalizations and readmissions.

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Table 1. Comparison of patient characteristics and comorbidities according to 30-day mortality

	30-day mortality		*Unadjusted hazard ratio (95% CI)*	*p value*	*Adjusted hazard ratio (95% CI)a*	*p value*
	Yes (n=14)	*No (n=78)*				
Age (years), median (range)	71 (66 - 92)	75 (65 - 99)	0.97 (0.92 - 1.04)	0.519	0.98 (0.91 - 1.03)	0.353b
Gender, n (%), Female	9 (64,3)	34 (43,6)	2.28 (0.76 - 6.80)	0.140	2.49 (0.82 - 7.35)	0.104c
Body mass index, n (%), ≥ 25 kg/m²	6 (42.9)	22 (28.2)	1.77 (0.61 - 5.12)	0.290	1.40 (0.45 - 4.32)	0.550
Marital status, n (%)						
Married (reference)	3 (21.4)	48 (61.5)				
Single/Widowed	11 (76.6)	30 (38.5)	5.64 (1.56 - 20.30)	0.008	6.60 (1.69 - 25.63)	0.006
Place of residence, n (%)						
Home (reference)	13 (92.9)	74 (94.9)				
Nursing home	1 (7.1)	4 (5.1)	0.94 (0.12 - 7.13)	0.954	1.33 (0.17 - 10.60)	0.784
Where PI occurred, n (%)						
Home (reference)	10 (71.4)	25 (32.1)				
Nursing home	-	5 (6.4)	0.01	0.987	0.01	0.981
Hospital	4 (28.6)	48 (61.5)	0.20 (0.06 - 0.65)	0.008	0.17 (0.05 - 0.57)	0.004
Comorbidities, n (%)						
HT	11 (78.6)	39 (50.0)	3.18 (0.88 - 11.42)	0.076	2.86 (0.78 - 10.43)	0.110
DM	9 (64.3)	19 (24.4)	5.44 (1.81 - 16.29	0.002	5.03 (1.66 - 15.23)	0.004
COPD	4 (28.6)	11 (14.1)	2.50 (0.78 - 8.02)	0.122	2.22 (0.69 - 7.17)	0.182
CKD	2 (14.3)	4 (5.1)	3.10 (0.68 - 14.03)	0.141	3.24 (0.69 - 15.14)	0.135
CVD	3 (21.4)	36 (46.2)	0.35 (0.99 - 1.27)	0.114	0.32 (0.08 - 1.19)	0.090
Dementia	5 (35.7)	32 (41.0)	0.72 (0.24 - 2.15)	0.557	0.73 (0.24 - 2.21)	0.586
Parkinson's	2 (14.3)	7 (9.0)	1.33 (0.29 - 5.96)	0.706	1.61 (0.35 - 7.44)	0.536
Postoperative immobilization	2 (14.3)	10 (12.8)	1.01 (0.22 - 4.51)	0.993	0.92 (0.20 - 4.23)	0.923
Malignancy	1 (7.1)	20 (25.6)	0.23 (0.03 - 1.82)	0.167	0.23 (0.03 - 1.76)	0.157
Mode of nutrition, n (%)						
Parenteral	3 (21.4)	10 (12.8)	1.53 (0.42 - 5.53)	0.509	2.20 (0.56 - 8.53)	0.254
Oral	13 (92.9)	51 (65.4)	6.61 (0.86 - 50.64)	0.069	6.00 (0.72 - 49.40)	0.096
PEG tube	-	23 (29.5)	0.29 (0.01 - 4.19)	0.163	0.17 (0.02 - 1.35)	0.095
Infectious disease, n (%)						
Bloodstream infection	2 (14.3)	7 (9.0)	1.63 (0.36 - 7.32)	0.519	1.94 (0.42 - 8.93)	0.392
Urinary tract infection	6 (42.9)	19 (24.4)	2.15 (0.74 - 6.20)	0.156	2.44 (0.83 - 7.17)	0.104
PI infection	4 (28.6)	36 (46.2)	0.45 (0.14 - 1.46)	0.187	0.53 (0.16 - 1.71)	0.284
Polymicrobial PI infection	4 (28.6)	14 (17.9)	1.62 (0.50 - 5.20)	0.495	1.64 (0.51 - 5.27)	0.400
Treatments received, n (%)						
Surgical debridement	1 (7.1)	19 (24.4)	0.23 (0.03 - 1.79)	0.161	0.26 (0.03 - 2.02)	0.199
Negative pressure wound dressing	1 (7.1)	21 (26.9)	0.19 (0.02 - 1.48)	0.113	0.21 (0.03 - 1.67)	0.142
Antibiotic therapy	12 (85.7)	77 (98.7)	0.09 (0.01 - 0.42)	0.002	0.05 (0.02 - 0.44)	0.004
Red cell transfusion	8 (57.1)	50 (64.1)	0.59 (0.20 - 1.73)	0.340	0.66 (0.22 - 1.97)	0.465

*HT, Hypertension; DM, Diabetes mellitus; COPD, Chronic obstructive pulmonary disease; CKD, Chronic kidney disease; CVD, Cerebrovascular disease; PEG, Percutaneous endoscopic gastrostomy, PI: pressure injury, CI: Confidence interval
[a]Adjusted for age and sex
[b]Adjusted for sex
[c]Adjusted for age

Table 2. Risk scores and biomarkers levels at admission according to 30-day mortality

	30-day mortality		Unadjusted hazard ratio (95% CI)	p value	Adjusted hazard ratio* (95% CI)	p value
	Yes (n=14)	No (n=78)				
Biomarker, n (%)						
Hypoalbuminemia (albumin <2.5 g/dL)	7 (50.0)	30 (38.5)	1.55 (0.54 - 4.44)	0.407	1.52 (0.53 - 4.36)	0.428
Creatinine >1.2 mg/dL	12 (14.0)	5 (35.7)	2.84 (0.95 - 8.50)	0.061	2.36 (0.76 - 7.26)	0.134
Anemia (Hg <12 g/dL)	13 (92.9)	51 (65.4)	6.52 (0.85 - 50.07)	0.071	8.77 (1.12 - 67.31)	0.038
Neutrophilia (neutrophils >11×10³/µL)	5 (35.7)	18 (23.1)	2.10 (0.67 - 6.04)	0.210	2.56 (0.82 - 8.00)	0.105
Lymphopenia (lymphocytes <1.5×10³/µL)	11 (78.6)	49 (62.8)	2.35 (0.64 - 8.77)	0.192	2.63 (0.71 - 9.72)	0.145
Thrombocytopenia (platelets <150×10³/µL)	5 (35.7)	9 (11.5)	3.42 (1.14 - 10.24)	0.028	3.81 (1.26 - 11.55)	0.018
CRP >79.75 mg/dL	12 (85.7)	41 (52.6)	4.41 (0.98 - 19.73)	0.052	4.89 (1.07 - 22.16)	0.040
PCT >0.32 (ng/mL)	11 (78.6)	34 (43.6)	4.20 (1.16 - 15.09)	0.028	4.69 (1.25 - 17.53)	0.022
Risk scores, n (%)						
MNA score ≤7 (malnourished)	9 (64.3)	65 (83.3)	0.41 (0.13 - 1.23)	0.114	0.53 (0.17 - 1.69)	0.289
Braden score ≤12 (high-risk group)	10 (71.4)	47 (60.3)	1.50 (0.47 - 4.80)	0.490	1.96 (0.59 - 6.46)	0.266
Barthel index <40 (very dependent)	13 (92.9)	72 (92.3)	1.05 (0.14 - 8.09)	0.961	1.43 (0.18 - 11.34)	0.732
Norton score <10 (very high risk)	8 (57.1)	53 (67.9)	0.63 (0.22 - 1.83)	0.403	0.77 (0.26 - 2.29)	0.644
EPUAP PI stage, n (%)						
Stage 2 (reference)	8 (57.1)	28 (35.9)				
Stage 3	3 (21.4)	15 (19.2)	0.77 (0.20 - 2.96)	0.712	0.64 (0.16 - 2.49)	0.644
Stage 4	3 (21.4)	35 (44.9)	0.30 (0.81 - 1.15)	0.081	0.31 (0.08 - 1.18)	0.087

Hg: Hemoglobin, CRP, C-reactive protein; PCT, Procalcitonin, MNA: Mini Nutritional Assessment, EPUAP: European Pressure Ulcer Advisory Panel, PI: Pressure injury, CI: Confidence interval
*Adjusted for age and sex

Table 3. Cox proportional hazard analysis model for mortality in patients with pressure injury

Variable	Hazard ratio (95% CI)	p value
Marital status: single/widowed	9.305 (1.305 – 45.261)	0.006
Where PI occurred: Hospital	0.200 (0.045 – 0.895)	0.155
Presence of DM	7.476 (1.657 – 33.724)	0.009
Treatments received: Antibiotic therapy	0.010 (0.001 – 0.250)	0.005
Anemia (Hg < 12 g/dL)	8.031 (0.834 – 77.353)	0.071
CRP > 79.75 mg/dL	2.085 (0.386 – 11.252)	0.393
Presence of thrombocytopenia	5.641 (1.259 – 25.265)	0.024
PCT > 0.32 (ng/mL)	11.253 (1.173 – 107.959)	0.056

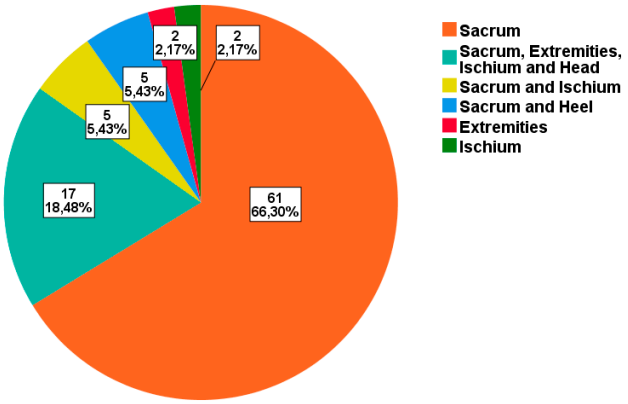

Figure 1. Distribution of pressure injury sites

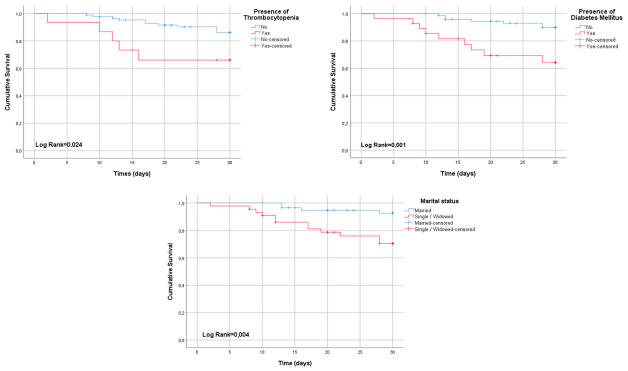

Figure 2. Kaplan-Meier survival curves according to mortality predictors for individuals with pressure injury

Others

SS-23

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FACTORS ASSOCIATED WITH MORTALITY IN THE GERIATRIC POPULATION RECEIVING HOME HEALTH CARE SERVICES THROUGH COMPREHENSIVE GERIATRIC ASSESSMENT

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Objective: The study examined the factors associated with mortality in the geriatric population receiving home health care services through geriatric assessment.

Methods: This retrospective cohort study included 302 patients aged 65 and older who received home based healthcare services from the Izmir Private Gazi Hospital Home Health Care Unit between December 1, 2022, and June 30, 2023. All patients who received services during the specified date range were included in the study.

The dependent variable of the study was the mortality status of the patient under follow-up. Patients were followed up and the mortality status of the patients was determined from the PROBEL HBYS electronic records on June 30, 2024.

The independent variables of the study were patient's age, gender, presence and number of chronic diseases, number of medications used by the patient, dependency status in daily living activities, and nutritional status. Data on independent variables were obtained from patient information forms filled out manually at the bedside and from the Hospital Information Management System records.

Descriptive statistical methods (number, percentage, min-max values, mean, standard deviation) were used in evaluating the data obtained in the study. The Chi-square test and Mann-Whitney U tests were used to examine the relationships between the death and independent variables. The SPSS (Statistical Package for Social Sciences) for Windows 25.0 program was used for analyses.

Results: The mean age of the study group was 81.33±8.48 (Range:55-104) and 69.5% women. 50% of the participants had hypertension, 20.9% had diabetes, 16.9% had coronary heart disease or heart failure and 37.4% were using more than

two medicines. 57.5% were either immobile or needed help for mobilization and 30% had urinary incontinence.

During the follow-up 100 patients died (33.1%). Mortality rate was higher in men (50.0%) compared to women (27.1%), p<0.01), in people with cancer (83.3%) compared without cancer (32.0%, p<0.01). Mortality was positively associated with polypharmacy, immobility and urinary incontinence (p<0.01 for all).

The age and scores of MND, GYA and EGYA were also significantly associated with mortality in the study (p=0.02, p=0.01, p=0.02, 0.01 respectively).

Conclusion: Age, sex, polypharmacy, immobility and urinary incontinence, nutritional status, GYA and EGYA were associated with mortality in the study group. Home based care for elderly patients should include geriatric assessment to manage conditions for prevention of death.

Keywords: "geriatric assessment", "home health care", "mortality"

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Table 1. Araştırma grubunda hastalık öyküsü ve geriatrik değerlendirme özelliklerine göre ölme durumu

	Number of deaths	*ÖlPercentage of deathsen Yüzdesi*	
Gender	***Number***	***%***	***p***
Male	45	50	<0.001
Female	55	27,1	
Neurologic Disease			
No	81	32,3	0,10
Yes	19	45,2	
Heart Disease			
No	82	33,9	0,85
Yes	18	35,3	
Cancer			
No	90	32	<0,001
Yes	10	83,3	
Hypertension			
No	50	35	0,77
Yes	50	33,3	
Diabetes			
No	76	33	0,45
Yes	24	38,1	
Polypharmacy(more than five)			
No	51	28,3	<0,01
Yes	49	43,4	
Depression			
No	76	33	0,45
Yes	21	43,8	
Mobility			
İmmobile	25	45,5	<0,001
Need support	40	42,6	
Mobile	24	21,8	
Urinary Incontinence			
No	52	29,1	<0,01
Yes	36	46,8	
Nutrition			
PEG/NG	2	18,2	0,21
Oral	90	34,9	
Caregiver			
No	25	28,7	0,17
Yes	68	37,2	

Sarcopenia

SS-24

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THE RELATIONSHIP BETWEEN CARDIAC COMPUTED TOMOGRAPHY ANGIOGRAPHY MEASUREMENTS AND SARCOPENIA IN OLDER ADULTS

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Rationale: Sarcopenia is a geriatric syndrome characterized by progressive and generalized loss of skeletal muscle mass and strength with a risk of adverse outcomes. Previous studies have provided limited data on the relationship between sarcopenia and cardiac muscle. This study aims to evaluate the relationship between Cardiac Computed Tomography Angiography (CCTA) parameters and sarcopenia.

Method: Older adults who underwent CCTA scan between 1 March 2023 and 1 June 2024 in a university hospital were included. Demographic characteristics, comphensive geriatric assessments and physical performance tests of the patients were evaluated. Morbidity burden ofpatients were evaluated with Charlson Comorbidity Index (CCI). Sarcopenia was assessed via muscle strength (handgrip strength (HGS)) and muscle mass (bioelectrical impedance analysis (BIA)). Cardiac CT parameters that were included in the analyzes were Agatston score, left ventricular mass (LVM), pericardial fat volume (PFV), plaque burden, calcified plaque volume, calcified plaque mass, cardiac output (CO), aortic valve calcification and Coronary artery disease-reporting and data system (CAD-RADS). LVM and PF were adjusted by the square of height (h^2). Sarcopenia was defined according to low HGS (male <32 kg, female <22 kg) and a low fat free mass index (FFMI) (for male <17 kg/m^2, female <15 kg/m^2).

Results: A total of 119 patients were included in the study. The mean age of the patients was 71.28±4.47 years, and 58.8% (n=70) were female. Twenty-four (20.2%) older adults had sarcopenia. There was no difference between sarcopenic and non-sarcopenic groups in terms of CCI score and the frequency of hipertansiyon, diabetes mellitus, coronary artery disease, hyperlipidemia. Patients with sarcopenia were older, had a lower body mass index (BMI),LVM, LVM/h2, PFV, PFV/h2and CO. In the logistic regression analyses after adjusting for age, sex, smoking and CCI, sarcopenia was associated with LVM/h2, PFV/h2 (Table 1) and CAD-RADS score >0. Moreover, in the linear regression analyses, FFMI was also associated with LVM/h2 and PF/h2.

Conclusions: Our results revealed a relationship between CCTA measurements and sarcopenia. Further studies are needed to understand the effects of sarcopenia on heart muscle.

Keywords: 'Sarcopenia'

Table 1. Logistic Regression Analyses of the Independent Factors Associated with Sarcopenia (OR: Odds Ratio, h2: height x height (meter2))

	Sarcopenia	
	OR (95%CI)	***P value***
Model 1: Left Ventricule Mass/h^2	0.903 (0.838 - 0.973)	0.007
Model 2: Pericardial Fat Volume/h^2	0.946 (0.915 - 0.978)	0.001
Model 3: CAD-RADS > 0	3.938 (1.055 – 14.706)	0.041

Table 2. Lineer Regression Analyses of the Independent Factors Associated with FFMI (h2: height x height (meter2))

	FFMI	
	β (95%CI)	***P value***
Model 1: Left Ventricule Mass/h^2	0.084 (0.047 - 0.121)	<0.001
Model 2: Pericardial Fat Volume/h^2	0.047 (0.031 - 0.063)	<0.001

Cognitive Disorders

SS-25

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THE RELATIONSHIP BETWEEN ATHEROSCLEROTIC MARKERS DETECTED BY CARDIAC COMPUTED TOMOGRAPHY ANGIOGRAPHY AND COGNITIVE FUNCTION

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Rationale: Previous studies have shown that various indicators of vascular burden can influence cognitive impairment (CI). This study aims to evaluate the relationship between CI and radiological indicators of coronary artery disease (CAD) in Community-dwelling Older Adults.

Method: The study involved older outpatients who had undergone coronary computed tomography angiography (CCTA) and had not been previously diagnosed with dementia. Cognitive assessment was performed using the Mini-Mental State Examination (MMSE), Quick Mild Cognitive Impairment Test (Q-mci) and Digit Span Tests. The diagnosis of CI was determined based on comprehensive clinical assessment and Q-mci test scores using previously defined cut-offs for older Turkish adults. The included radiological parameters measured from CCTA were coronary artery calcium score (CACS), p value presenting the total amount of coronary plaque burden (CPB), calcific plaque volume (CPV), calcific plaque mass (CPM), aortic valve calcification (AVC), and high-risk plaque(HRP).

Results: A total of 118 patients were included in the study. Eleven patients were identified with cognitive impairment according to the cut-offs of Turkish version of the Q-mci test (≤42). The mean age was 71.1 ± 4.3 years. Seventy (59.3%) individ-

uals were female. Patients with CI were significantly older (73.9 ± 5.4 vs 70.9 ± 4.1 years), more dependent, more frail and had a lower educational level. Patients with CI had significantly higher CACS [median (IQR) 212.5 (58.9-893.4) vs 40.9 (2.6-315.3), p=0.065], higher AVC values [median (IQR) 27.2 (17.8-94.6) vs 0.0 (0.0-43.7), p=0.011], CPV [median (IQR) 211.1 (76.9-775.4) vs 52.9 (5.5-278.4), p=0.050], and higher CPB (p=0.010). Moreover, even categorized for higher risk (CACS > 1000 and CPB >3), patients with CI had higher cardiovascular risk markers (p<0.05). In the logistic regression analyses after adjusting for age, sex, education status, smoking, low density lipoprotein, HbA1c, body mass index and blood pressure, CI was associated with high CACS and CPB (Table 1). Additionally, in the linear regression analyses for Q-mci total score and backward digit span test,after adjusted for same confounders, CPB >3 was related to lower scores (Table 2- Table 3).

Conclusion: To the best of our knowledge, this is the first study revealing the relationship between CPB and both CI and congitive test performances. The results are important because they give evidence regarding the impact of vascular disease on cognitive function.

Keywords: Cognitive Dysfunction, Coronary Artery Disease

Table 1. Logistic Regression Analyses of The Independent Factors Associated with Cognitive Impairment (OR:Odds Ratio, CACS:Coronary Artery Calcium Score)

	Cognitive Impairment	
	OR (%95 CI)	*p value*
Model 1:High Plaque Burden Category	232.166 (6.203-8689.237)	0.003
Model 2:High CACS Category	28.926(1.402-802.814)	0.047

Table 2. Lineer Regression Analyses of The Independent Factors Associated with Q-mci Total Score (CPB: Cardiac Plaque Burden, Q-mci: Quick Mild Cognitive Impairment Test)

	Q-mci Total Score	
	β(%95 CI)	*p value*
Model 1: CPB>3	-8.210(-15.388 - -1.032)	0.025

Table 3. Lineer Regression Analyses of The Independent Factors Associated with Backward Digit Span Test (CPB: Cardiac Plaque Burden)

	Backward Digit Span test	
	β(%95CI)	*p value*
Model 1: CPB>3	-1.107 (-1.817 - -0.397)	0.003

Neglect and Abuse

SS-26

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EVALUATION OF SELF-NEGLECT IN OLDER ADULTS AT THE POST- COVID-19 ERA AND ITS RELATIONSHIP WITH GERIATRIC SYNDROMES

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Aim: We aimed to screen self-neglect in older adults before and after the COVID-19 pandemic, to evaluate the effect of the pandemic on the frequency of self-neglect, and to evaluate the relationship between self-neglect and geriatric syndromes and quality of life at this study.

Methods: The older adults ≥ 65 years old and without dementia who applied to a single-center geriatric outpatient clinic between December 2023 and May 2024 were included in the study. We performed self-neglect screening for the pre- and post-pandemic era with the Istanbul Medical School Elder Self-Neglect questionnaire (1). Additionally, the Euro-Quality of Life 5D-3L (EQ-5D) scales (2) were performed for quality of life and also comprehensive geriatric assessment data of patients were evaluated.

Results: A total of 104 patients, with a mean age of 76.8 ± 5.9 and 70% female, were included in the study. Self-neglect was detected in 19 patients (18.3%) in the post-pandemic period. The older adults with self-neglect were more frail, more dependent, more depressed, had higher risk of sarcopenia, also had more common polypharmacia and urinary incontinence (all of p<0.05). Also quality of life was found to be more impaired in the self-neglect group (p<0.001). In multivariate Cox regression analysis, being dependent and having a high risk of sarcopenia were associated with self-neglect in the post-COVID period (OR:0.15; CI:0.03-0.83; p=0.030 ve OR:1.45; CI:1.01-2.09; p=0.048, respectively.)

Conclusion: Self-neglect in older adults is an important part of comprehensive geriatric assessment and should be screened with validated methods. As it is significantly related with other geriatric syndromes, it suggests that interventions in geriatric syndromes can prevent self-neglect.

Keywords: COVID-19, geriatric syndromes, older adults, self neglect

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Table 1. Analysis of participants' parameters based on the presence of post COVID-19 self neglect

Variables	*Absence of post COVID-19 self neglect, Total n= 85, n (%)*	*Presence of post COVID-19 self neglect, Total n= 19, n (%)*	*P value*
Age*	76.3 ± 5.7	78.8 ± 6.4	0.090
Sex			0.465
Female	24 (28.2)	7 (36.8)	
Male	61 (71.8)	12 (63.2)	
Number of chronic diseases*	3.0 (1-16)	4.0 (2-7)	0.126
Number of medications*	7.0 (1-18)	8.0 (5-15)	0.009
Polypharmacy	61 (71.8)	19 (100.0)	0.001
Positive COVID-19 history	27 (31.8)	7 (36.8)	0.672
BMI*	27.58 ± 5.05	28.53 ± 4.24	0.447
Vaccination with Biontech+Sinovac	69 (81.2)	12(63.2)	0.124
Vaccination for Pnomonia	68 (80.0)	14 (73.7)	0.551
Functionality-ADL			0.060
Independent	84 (98.8)	17 (89.5)	
Partial dependent	1 (1.2)	2 (10.5)	
Dependent	0 (0.0)	0 (0.0)	
Functionality-IADL			<0.001
Independent	74 (87.1)	6 (31.6)	
Partial dependent	11 (12.9)	13 (68.4)	
Dependent	0 (0.0)	0 (0.0)	
Frailty			<0.001
Normal	17 (20.0)	0 (0.0)	
Pre-frail	48 (56.5)	5 (26.3)	
Frail	20 (23.5)	14 (73.7)	
SARC-F score*	2.0 (0-8)	5.0 (0-8)	<0.001
Sarcopenia- SARC-F			<0.001
Normal	71 (83.5)	6 (31.6)	
Probable sarcopenia	14 (16.5)	13 (68.4)	
Walking speed (m/s) *	0.85 ± 0.13	0.75 ± 0.18	0.012
Walking speed (m/s)			0.001
Normal	70 (82.4)	8 (10.3)	
Slow walking	15 (17.6)	11 (42.3)	
Malnutrition- MNA-SF			0.769
Normal	65 (76.5)	13 (68.4)	
Risk of malnutrition	17 (20.0)	5 (26.3)	
Malnutrition	3 (3.5)	1 (5.3)	
Depression-2 Question Screening For Depression			0.013
Non depressed	69 (81.2)	10 (52.6)	
Depression	16 (18.8)	9 (47.4)	
EQ-5D VAS*	60.0 (20-100)	60.0 (30-100)	0.557
EQ-5D Index Score*	0.78 ± 0.15	0.60 ± 0.08	<0.001
Pain	45 (52.9)	13 (68.4)	0.214
Urinary incontinancy	30 (35.3)	12 (63.2)	0.026
Insomnia	35 (41.2)	11 (57.9)	0.186
History of falling in 1 year	23 (27.1)	8 (42.1)	0.206
Fear of falling	32 (37.6)	13 (68.4)	0.014

Table 2. Multivariate regression analysis of risk factors associated with post-covid self neglect (Model 1: adjusted by sex, age, and and functionality -IADL; Model 2: adds SARC-F score to Model 1; Model 3: adds EQ-5D-VAS to Model 2.)

Variables	*Model 1*	*Model 1*	*Model 2*	*Model 2*	*Model 3*	*Model 3*
	OR (CI)	*p value*	*OR (CI)*	*p value*	*OR (CI)*	*p value*
Age	0.96 (0.86-1.08)	0.519	0.94 (0.83-1.06)	0.272	0.94 (0.83-1.06)	0.283
Sex:female	0.81 (0.23-2.87)	0.742	1.00 (0.28-3.63)	0.999	0.99 (0.27-3.62)	0.989
Functionality-IADL (Partial dependent: Independent)	0.05 (0.01-0.22)	<0.001	0.15 (0.03-0.83)	0.030	0.15 (0.03-0.83)	0.030
SARC-F score			1.45 (1.01-2.09)	0.046	1.45 (1.01-2.09)	0.048
EQ-5D-VAS					1.01 (0.97-1.03)	0.888

Nutrition

SS-27

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ASSOCIATION BETWEEN BONE MINERAL DENSITY AND NUTRITIONAL STATUS IN POSTMENOPAUSAL WOMEN; A SINGLE-CENTER, RETROSPECTIVE STUDY

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Objective: We investigated the relationship between nutritional status and bone mineral density (BMD) in Turkish postmenopausal women.

Material and Methods: We retrospectively examined the medical records of 69 postmenopausal women who attended an endocrinology outpatient clinic between January 2014 and December 2017. Bone mineral density (BMD) was measured by dual-energy X-ray absorptiometry. Nutrition status evaluated by the Geriatric Nutritional Risk Index (GNRI) and the Prognostic Nutritional Index (PNI).

Results: Osteoporosis was present in 63.4% of all patients. 42% and 21.7% of the patients were identified as having nutritional risk by PNI and GNRI, respectively. There was only a statistically significant difference in the mean femoral neck BMD value between the normal nutrition group and the nutritional risk group only based on the PNI (p=0.02). There was no statistically significant difference in the GNRI and PNI score according to presence of osteoporosis (p>0.05 and p>0.05, respectively). The correlation analysis found no correlation between the GNRI and lumbar BMD, femoral neck BMD. Furthermore, there was no correlation between the PNI and lumbar BMD, femoral neck BMD.

Conclusion: This study showed that nutritional status, represented by the PNI, was associated with femoral neck BMD in Turkish postmenopausal women.

Keywords: Osteoporosis, Geriatric Nutritional Risk Index, Prognostic Nutritional Index

Gerontology

SS-28

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PERIFERAL INFLAMMATORY BIOMARKERS AND GAIT SPEED IN OLDER INDIVIDUALS: A SINGLE CENTER CROSS-SECTIONAL STUDY

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Background: In older adults, gait speed has been described as the 'sixth vital sign' because it is a core indicator of health and function in aging and disease.A few studies have explored the association between infammatory markers and gait impairment in older adults with inconclusive results. The aim of this study is to determine whether periferal inflammatory markers a positive predictor for gait impairments and may represent a risk factor for slow gait speed

Methods:A total of 634 geriatric patients were enrolled in the study. All participants undervent a comprehensive geriatric assesments via Clinical Frailty Status(CFS), Malnutrition Short Form(MNA-SF) and physical performance tests. Patients were described as slow 4m gait speed (≥0,8 m/s) and normal 4m gait speed (<0,8 m/s). Calculations were conducted for Pan-immune inflammation value(PIV): [Neutrophil count x Platelet count x Monocyte count] / Lymphocyte count, systemic immune-inflammation index (SII): [Neutrophil count x Platelet count] / Lymphocyte count, (neutrophile /lymphocyte ratio (NLR): Neutrophil count / Lymphocyte count, and monocyte/lymphocyte ratio (MLR): Monocyte count / Lymphocyte count. The C-reactive protein (CRP) values were also assessed.

Results: The median (IQR) age of participants was 73(69-78) and 63.6% (n=403) were female.Patients were divided into two groups (normal gait speed and slow gait speed) and n=452(71.3%) and n=182(28.7%) patients in each group,respectively. Median age, neutrophile count, and PIV was higher in slower gait speed group (p<0.005). It was observed that the participants in the group with slow 4m gait speed were more frail and malnourished(p<0.005).

Neutrophil count and PIV were found to be associated with 4m gait speed status in logistic regression analysis, independently of age, sex, malnutrition, and frailty, but not associated with other peripheral inflammation markers.

Conclusion: This is the first study revealing the relationship between peripheral inflammation markers and 4m gait speed status. PIV may be seen as a novel peripheral composite biomarker reflecting inflammation associated with slow gait speed.

Keywords: Pan-immune inflammation value; gait speed; inflammation; systemic immune-inflammation index

Table1. Logistic regression analysis of the independent factors associated with 4m gait speed performance status (Logistic regression analysis adjusted for age, sex,malnutrition status and frailty)

		4m gait speed	
		OR (95%CI)	*P value*
Model 1	Neutrophile count	1.184(1.048-1.339)	0.007
Model 2	Pan-immune inflammation value(PIV)	1.001(1.000-1.002)	0.037
Model 3	Neutrophile lymphocyte ratio(NLR)	1.130(0.926-1.377)	0.229
Model 4	Systemic immune-inflammation index (SII)	1.000(1.000-1.001)	0.387

Others

SS-29

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THE ABILITY OF SMART-COP SCORE TO PREDICT NEED FOR ICU ADMISSION AND MORTALITY IN ELDERS WITH NON-VENTILATOR ASSOCIATED HOSPITAL-ACQUIRED PNEUMONIA

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Aim: To evaluate the ability of SMART-COP score to predict the need for intensive care unit (ICU) admission and mortality among patients with non-ventilator associated hospital-acquired pneumonia (NV-HAP) and to compare ICU-hospitalized patients with those followed-up in the clinic, as well as the patients who survived with those who died in the ICU, in terms of clinical and laboratory parameters.

Methods: A total of 203 patients (age >65 years) who were diagnosed with NV-HAP while staying in the geriatric clinic were enrolled in this retrospective observational study. Patient information was retrieved from hospital files.

Results: In a total of 203 patients with NV-HAP, the rate of ICU admission was 77.3% and the rate of mortality was 40.9%. The SMART-COP score was significantly higher in those admitted to the ICU and those died in the ICU (ICU non-survivors). The rate of ICU mortality was 52.9%. The SMART-COP score had significantly poor to moderate ability to predict the need for ICU admission (AUC=0.583) and both in-hospital mortality (AUC=0.633) and ICU mortality (AUC=0.617) with low sensitivity. The regression analysis revealed that one unit increase in SMART-COP score resulted in 1.2-fold increase in both the hospital and ICU mortality (p<0.05 for both) and 1.1-fold increase in ICU admission (p=0.154).

Conclusion: SMART-COP score has poor to moderate ability to predict the need for ICU admission, in-hospital mortality and ICU mortality, and one unit increase in the SMART-COP score significantly increases the risk of both hospital and ICU mortality.

Keywords: Intensive care unit, non-ventilator-associated hospital-acquired pneumonia, mortality, older patient, SMART-COP

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Frailty

SS-30

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PERSONALITY MATTERS FOR LIVING WITH FRAILTY: EVIDENCE FROM DATABASE OF SURVEY OF HEALTH, AGEING, AND RETIREMENT IN EUROPE

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Aim: Frailty is a geriatric syndrome characterized by decreased physiological reserve and endurance to physical and psychological stressors. Besides physiological factors, social components may also play a role in the concept of frailty. Since there is limited evidence on the relationship between personality traits and frailty, we aimed to evaluate the association of the basic five personalities with frailty.

Methods: The Data from countries that participated in wave 8 of the Survey of Health, Ageing, and Retirement in Europe (SHARE) project was used. A 38-parameter frailty index (FI score) created from the SHARE database was used for frailty assessment. Personality traits were evaluated via the '10-Item big five' tool, which assessed extraversion, agreeableness, conscientiousness, neuroticism, and openness.

Results: A total of 8655 participants were included. The mean age± SD was 66.7 ± 9.3 years and; 56.7 % (n=4905) were female. Participants were divided into robust and living with frailty (FI score ≥0.20) groups, and there were 6434 (74.3%) and 2221 (25.7%) participants in each group, respectively. In the living with frailty groups, while participants were less likely to have extraversion, agreeableness, conscientiousness and openness, patients were more likely to have neuroticism (p<0.001) (Table 1). Both in the logistic and linear regression analyses, personality traits were associated with frailty independently of age and sex(p<0.001). (Table 2 and 3)

Conclusion: Our results revealed that personality traits are related to frailty, defined via a cumulative deficit model-based frailty index. While having a personality with extraversion, agreeableness, conscientiousness, and openness seems to protect against frailty, neuroticism increases the risk of frailty.

Keywords: Frailty, Personality, Survey of Health, Ageing and Retirement in Europe (SHARE)

References

SHARE-ERIC (2024). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 8. Release version: 9.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w8.900

Table 1

Table 1. Characteristics of the participants according to frailty status

	Robust (FI score<0.20) n=6434 (74.3%)	Living with frailty (FI score ≥0.20) n=2221 (25.7%)	P value
Age mean± STD	65.2 ±8.8	71.3 ±9.5	<0.001
Female sex, n (%)	3466 (53.9)	1439 (64.8)	<0.001
Physical inactivity, n (%)	366 (5.7)	697 (31.4)	<0.001
Hypertension, n (%)	2396 (37.2)	1595 (71.8)	<0.001
Diabetes mellitus , n (%)	584 (9.1)	589 (26.5)	<0.001
Stroke history, n (%)	112 (1.7)	247 (11.1)	<0.001
Chronic pulmonary disease, n (%)	174 (2.7)	243 (10.9)	<0.001
Coronary artery disease, n (%)	492 (7.6)	675 (30.4)	<0.001
Depression, n (%)	1892 (29.4)	1506 (67.8)	<0.001
Malignancy, n (%)	240 (3.7)	219 (9.9)	<0.001
Osteoporosis, n (%)	33 (0.5)	93 (4.2)	<0.001
Polypharmacy, n (%)			<0.001
Body mass index, mean± STD	27.4 ±4.4	29.5 ±5.7	<0.001
HGS, mean± STD	33.7 ±10.7	26.1 ±10.2	<0.001
Weight lost, n (%)	872 (13.6)	590 (26.6)	<0.001
Number of limitations with activities of daily living, mean ± STD	0.01 ±0.13	0.62 ±1.12	<0.001
Number of limitations with instrumental activities of daily living, mean± STD	0.05 ±0.25	1.22 ±1.95	<0.001
Extraversion, mean ± SD	3.69± 0.90	3.58± 0.89	<0.001
Agreeableness, mean ± SD	3.74± 0.73	3.66± 0.75	<0.001
Conscientiousness,mean ± SD	4.08± 0.57	3.93± 0.68	<0.001
Neuroticism, mean ± SD	2.75± 0.93	3.19± 0.92	<0.001
Openness ,mean ± SD	3.49± 0.90	3.37± 0.90	<0.001

Table 2.

Table 2- Linear Regression Analysis of the independent factors associated with frailty.

		Clinical Frailty Scale Score	
		β (95%CI)	p value
Model 1	Age	0.014 (0.013 - 0.015)	<0.001
	Female sex	0.078 (0.063 - 0.093)	<0.001
	Extraversion	-0.031 (-0.039 - -0.023)	<0.001
Model 2	Age	0.014 (0.014 - 0.015)	<0.001
	Female sex	0.078 (0.064 - 0.093)	<0.001
	Agreeableness	-0.046 (-0.056 - -0.036)	<0.001
Model 3	Age	0.014 (0.013 - 0.015)	<0.001
	Female sex	0.083 (0.068 - 0.098)	<0.001
	Conscientiousness	-0.087 (-0.099 - -0.075)	<0.001
Model 4	Age	0.014 (0.013 - 0.015)	<0.001
	Female sex	0.060 (0.045- 0.074)	<0.001
	Neuroticism	0.095 (0.087 - 0.102)	<0.001
Model 5	Age	0.014 (0.013 - 0.015)	<0.001
	Female sex	0.077 (0.062 - 0.092)	<0.001
	Openness	-0.023 (-0.031 - -0.015)	<0.001

Table 3.

Table 3 - Logistic Regression Analysis of the independent factors associated with frailty (FI score ≥0.20)

		Frailty		
		Odds Ratio	95%CI	p-value
Model 1	Age	1.07	1.06 - 1.08	<0.001
	Female sex	1.72	1.55 - 1.91	<0.001
	Extraversion	0.87	0.83 - 0.93	<0.001
Model 2	Age	1.07	1.07 - 1.08	<0.001
	Female sex	1.73	1.56 - 1.92	<0.001
	Agreeableness	0.82	0.76 - 0.88	<0.001
Model 3	Age	1.07	1.07- 1.08	<0.001
	Female sex	1.79	1.61 - 1.99	<0.001
	Conscientiousness	0.62	0.57 - 0.67	<0.001
Model 4	Age	1.08	1.07 - 1.08	<0.001
	Female sex	1.59	1.43 - 1.77	<0.001
	Neuroticism	1.71	1.61 - 1.81	<0.001
Model 5	Age	1.07	1.06 - 1.08	<0.001
	Female sex	1.72	1.55 - 1.91	<0.001
	Openness	0.87	0.82 - 0.92	<0.001

Cognitive Disorders

SS-31

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RAPIDLY PROGRESSIVE COGNITIVE IMPAIRMENT: CREUTZFELDT-JAKOB DISEASE

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Creutzfeldt-Jacob disease (CJD) is a rare, difficult-to-diagnose, neurodegenerative prion disease with a mortality rate of 100%, occurring in one in a million people per year(1).Here we present an 81-year-old male patient with known coronary artery disease, chronic obstructive pulmonary disease, diabetes and hypertension who presented to the geriatrics outpatient clinic with complaints of behavioural changes, amnesia, sleep disturbance, aggression and paranoia for the last 1 month. There was no infarction, haemorrhage or mass on brain MRI at an external centre and no response to quetiapine 200 mg, olanzapine 10 mg, mirtazapine 15 mg treatments initiated by psychiatry and neurology departments. On physical examination, he was disorientated and agitated. Haemogram, biochemistry, thyroid functions and acute phase reactant tests were normal. ECG revealed newly diagnosed atrial flatter. The patient was admitted to geriatrics ward for further investigation and treatment . Atrial flatter treatment was organised.Brain imaging and electroencephalography (EEG) were requested. Haloperidol drip was started for the patient whose agitation and aggression increased in the follow-up, but no response was obtained. Intamuscular haloperidol was administered for the safety of both the patient and healthcare workers. He was evaluated as delirium by psychiatry and antipsychotic and antidepressant treatments were discontinued. EEG revealed generalised epileptiform abnormalities on the basis of moderate to severe slowing of cerebral bioelectric activity. Antiepileptic treatment was started. The patient, whose consciousness tended to sleep, whose need for 02 developed and whose general condition deteriorated, was re-evaluated by neurology and transferred to the general intensive care unit with a prediagnosis of encephalitis. The patient who was intubated in intensive care unit had myoclonic seizures during follow-up. Cranial MRI showed nonspecific diffuse hyperintensities in the parietooccipital region and frontal cortex. The patient was consulted to neurology with the prediagnoses of autoimmune encephalitis and Creutzfeldt-Jakob disease and lumbar puncture was recommended. No cell was observed in CSF analysis and protein was normal. CSF culture was negative, HSV, Lyme, VDRL, CMV were negative in CSF. In CSF analysis, limbic panel was negative but 14.4.3 protein was positive. The patient was diagnosed as probable Creutzfeldt-Jakob Disease with clinical, EEG, imaging and CSF findings. The patient, whose myoclonic seizures continued, whose culture results showed growth and whose treatment was followed up by infectious diseases, developed cardiac arrest on the 64th day of intensive care unit hospitalisation and died. 80% to 95% of human prion diseases are sporadic CJD (2). After the first symptoms including psychiatric symptoms, cognitive functions deteriorate and a rapidly progressive dementia picture is observed. Myoclonus frequently accompanies in the later stages of the disease(3). The average age of onset of the disease is between 57 and 62 years; however, cases have also been described in people older than 80 years (4). Clinical presentation may be varied and vague, which makes the diagnosis difficult. In our 81-year-old patient with multiple comorbidities, we wanted to emphasise that this rare and fatal disease should be considered in the differential diagnosis of rapidly progressive cognitive impairment.

Keywords: dementia, delirium, prion, CJD

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Sarcopenia

SS-32

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FREQUENCY OF OSTEOSARCOPENIA AND ASSOCIATED CLINICAL CONDITIONS IN PATIENTS WITH POSTMENOPAUSAL RHEUMATOID ARTHRITIS

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Introduction: Since both osteoporosis and sarcopenia are frequently observed in patients with rheumatoid arthritis, osteosarcopenia is also expected to be increased in this patient group. There are a limited number of studies in the literature evaluating osteosarcopenia in RA patients. This study investigated the prevelance of osteosarcopenia, defined as the co-occurence of osteoporosis and sarcopenia, in patients with postmenopausal rheumatoid arthritis. It also aimed to examine the relationship between osteosarcopenia, and associated clinical factors

Methods: Postmenopausal patients who applied to the Rheumatology Outpatient Clinic were included in the study. Sarcopenia was defined according to the recommendations of the European Working Group on Sarcopenia in the Elderly (EWGSOP2). Muscle strength was measured using a dynamometer through handgrip force. Muscle mass was determined using a Bioelectrical Impedance Analysis (BIA-MC-780MA). Osteoporosis was determined according to the definition of the World Health Organization based on Dual-Energy X-Ray Absorptiometry (DXA) measurement results. According to this definition, a DXA T score of -1 and below was defined as osteopenia, and a T score of -2.5 and below was defined as osteoporosis. The combination of sarcopenia and osteoporosis was defined as osteosarcopenia. As a measure of functionality, mod-

ified version of Katz activities of daily living (ADL) and Lawton instrumental activities of daily living (IADL) were assessed.

Results: We included 58 patients (mean age = 68.6± 6.4 years) in the analysis; of these, 44.8% were robust (no sarcopenia, no osteoporosis and 20.7%, 8.6%, and 25.9% had osteoporosis alone, sarcopenia alone, and osteosarcopenia, respectively. The osteosarcopenic group had lower IADL score compared to the robust group (p=0.031). The duration of steroid use was longer in the osteosarcopenic group compared to the robust group (p =0.012). Body mass index was significantly lower in osteosarcopenic patients than in robust subjects (p<0.001).

Conclusions: The co-occurrence of osteoporosis and sarcopenia (osteosarcopenia) increases the frequency of adverse clinical outcomes such as falls, fractures, and disabilities. Patients with rheumatoid arthritis are a patient group with a high probability of osteosarcopenia due to both the inflammation caused by the disease and the medications used. As, we observed that the duration of steroid use in the osteosarcopenic group was longer than the others. In addition, we observed a high frequency of osteosarcopenia in rheumatoid arthritis patients of 25.9%. However, studies and awareness on this subject are insufficient. Screening for osteosarcopenia in RA patients at an early stage before poor outcomes develop may be important.

Keywords: sarcopenia,osteosarcopenia,osteoporosis,romatoid arthritis

Table 1. Characteristics of rheumatoid arthritis patiens with sarcopenia,with osteoporosis and with osteosarcopenia

Variables	*Osteosarkopenia*	*Sarcopenia (+) Osteoporosis (-)*	*Osteoporosis(+) Sarcopenia(-)*	*Sarkopenia (-) Osteoporosis (-)*	*p value*
	n = 15 (25.9 %)	n = 5 (20.7 %)	n = 12 (20.7 %)	n =26 (44.8 %)	
Age	69.3 ± 9.1	71.8 ± 8.9	67.5 ± 6.3	68.2 ± 4	0.625
BMI (kg/m2)	27 ± 3.7	26.3 ± 5.7	31.3 ± 4,6	33.1 ± 4.3	<000.1
Menopause Age	44.2 ± 5.4	52.3 ± 2.5	38.8 ± 19.9	43.9 ± 6.1	0.257
Number of Additional Diseases	2.9 ± 1.1	2.4 ± 1.3	2.4 ± 1.2	2.6 ± 1.1	0.679
Duration of illness	14 (5-17,5)	6 (2,5-10)	6 (3-16)	5 (3-10)	0,439
Number of Drugs	5.5 ± 1.6	5 ± 1.8	5.8 ± 2.9	5.9 ± 2.3	0.824
DAS-28 Score	2.3 ± 0.8	3.1 ± 1.7	2.2 ± 0.7	2 ± 0.6	0.220
Duration of Steroid Use	11.7 ± 8.2	7 ± 3	5.8 ± 5.6	4.3 ± 3.2	0.012
Use of Biological Agents	4 (28.6%)	1 (20 %)	2 (16.7 %)	4 (15.4 %)	0.781
Diabetes Mellitus	6 (40 %)	0	2 (16.7 %)	6 (23.1 %)	0,223
MNA	12 ± 1.9	12 ± 1.8	11.3 ± 1.9	12.7 ± 1.7	0.183
Falls	4 (26.7%)	1 (20 %)	3 (25 %)	2 (7,7 %)	0,372
Lawton-IADL	10.8 ± 4	10.8 ± 4.8	12.3 ± 3.9	13.9 ± 2.2	0.031
Katz Index	11.5 ± 1.3	11.6 ± 0.5	11.8 ± 0.5	12 ± 0	0.264
Serum 25(OH)D (nmol/L)	28,5 (24,8-34,3)	25,2 (22,8-41,8)	33,3 (26,6-44,5)	21,7 (14,7-37,4)	0,267
Hb (g/dL)	12.4 ± 1.8	12.6 ± 1.2	12.7 ± 0.8	13.2 ± 1	0,272
B12 (ng/dL)	379.7 ± 97.7	771.6 ± 697.2	481.2 ± 295.7	424.7 ± 355.4	0.171

Sarcopenia

SS-33

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LONELINESS IS NOT ONLY A SOCIAL CHALLENGE BUT ALSO AN INDEPENDENT FACTOR RELATED TO PROBABLE SARCOPENIA: EVIDENCE FROM THE SHARE DATASET

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Aim: Probable sarcopenia, defined as low handgrip strength, is an important geriatric syndrome related to various adverse outcomes. Although loneliness may seem just a social issue, recent evidence has revealed that it is a risk factor for adverse psychosocial and physical outcomes in older adults. This study aimed to evaluate the relationship between probable sarcopenia and loneliness in older Europeans.

Methods: The Data from countries that participated in wave 8 of the Survey of Health, Ageing, and Retirement in Europe (SHARE) project was used. Loneliness was assessed using the short version of the Revised University of California at Los Angeles Loneliness Scale (R-UCLA), which was previously designed and validated for the SHARE dataset. Probable sarcopenia was evaluated via grip strength, and cutoffs of < 27 kg and <16 kg for men and women were used. Demographic characteristics (i.e., age, sex, chronic illnesses, number of drugs, body mass index (BMI)), recent weight loss, physical inactivity and independence in living activities were also evaluated.

Results: A total of 41.034 participants were enrolled in the study. The mean age (IQR) of participants was 69.5 ± 9.1 years and; 56.4 % (n=23156) were female. Participants were divided into non-sarcopenia and probable sarcopenia groups, and there were 38004 (92.6%) and 3030 (7.4%) participants in each group, respectively. In the probable sarcopenia group, participants were older, more functionally dependent, and less physically active, had more chronic diseases and polypharmacy, had lower BMIs and had higher R-UCLA values, indicating a greater sense of loneliness (p<0.05) (Table 1). In the logistic regression analyses for the factors related to probable sarcopenia, loneliness was associated with probable sarcopenia independent of many confounders (e.i., age, sex, physical inactivity, presence of hypertension, diabetes mellitus, stroke history, chronic pulmonary disease, coronary artery disease, depression, osteoporosis, polypharmacy BMI, number of limitations with basic and instrumental activities of daily living and weight lost). (OR: 1.29 , 95%Cl: 1.23 - 1.35, p<0.001)(Table 2)

Conclusion: With the biggest sample size currently available in the literature, our results have revealed that loneliness is associated with probable sarcopenia in older adults, even if adjusted for many well-established confounders. Further studies evaluating the relationship between confirmed sarcopenia and loneliness are also warranted

Keywords: Sarcopenia, Loneliness, Survey of Health, Ageing and Retirement in Europe (SHARE)

References

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Table 1. Demographical characteristics of the participants according to handgrip strength

	Non-sarcopenia N=38004(92.6%)	Probable sarcopenia N=3030 (7.4%)	Pvalue
Age, median (IQR)	68.9 ± 8.7	77.8 ± 9.4	<0.001
Female, n (%)	21477 (56.5%)	1679 (55.6)	0.240
Physical inactivity, n (%)	3099 (8.2%)	964 (31.8%)	<0.001
Hypertension, n (%)	16896 (44.5%)	1652 (53.5%)	<0.001
Diabetes mellitus , n (%)	5140 (13.5%)	667 (22.0%)	<0.001
Stroke history, n (%)	1286 (3.4%)	244 (8.1%)	<0.001
Chronic pulmonary disease, n (%)	2227 (5.9%)	273 (9.0 %)	<0.001
Coronary artery disease, n (%)	1023 (13.1)	184 (18.7)	<0.001
Depression, n (%)	14399 (37.9%)	1482 (48.9)	<0.001
Malignancy, n (%)	1913 (5.0%)	174 (5.7%)	0.092
Osteoporosis, n (%)	511 (1.3 %)	137 (4.5%)	<0.001
Polypharmacy, n (%)	8197 (27.7%)	1378 (49.4 %)	<0.001
Body mass index, median (IQR)	27.2 ± 4.68	26.7 ± 4.96	<0.001
HGS, median (IQR)	33.40 ± 10.50	16.50 ± 5.60	<0.001
Weight lost, n (%)	7609 (20.0%)	801 (26.5 %)	<0.001
Number of limitations with activities of daily living,mean ± STD	0.14 ± 0.57	0.70 ± 1.37	<0.001
Number of limitations with instrumental activities of daily living, mean± STD	0.29 ± 0.98	1.65 ± 2.39	<0.001
R-UCLA Loneliness scale, mean ± STD	3.84 ± 1.29	4.55 ± 1.73	<0.001

Table 2 - Logistic Regression Analysis of the independent factors associated with probable sarcopenia

	Probable sarcopenia		
	Odds Ratio	95%CI	p-value
Age	1.07	(1.06- 1.08)	**<0.001**
Female sex	0.94	(0.80 - 1.11)	0.517
Physical inactivity	1.98	(1.64 - 2.40)	**<0.001**
Hypertension	0.83	(0.67 - 0.98)	**0.035**
Diabetes mellitus	1.44	(1.19 - 1.84)	**<0.001**
Stroke history	1.06	(0.79 - 1.43)	0.664
Chronic pulmonary disease	0.84	(0.61 - 1.14)	0.280
Coronary artery disease	0.93	(0.77 - 1.14)	0.517
Depression	0.97	(0.82 – 1.15)	0.773
Osteoporosis	1.83	(1.20 - 2.78)	**0.005**
Polypharmacy	1.39	(1.16 - 1.65)	**<0.001**
Body mass index	0.98	(0.96 – 1.00)	0.051
Number of limitations with activities of daily living	0.99	(0.90 - 1.09)	0.883
Number of limitations with instrumental activities of daily living	1.23	(1.16 - 1.31)	**<0.001**
R-UCLA Loneliness scale	1.29	(1.23 - 1.35)	**<0.001**
Weight lost	0.83	(0.69 - 1.01)	0.071

Others

SS-34

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CHRONIC PRURITUS AND ASSOCIATED FACTORS IN HOSPITALIZED ELDERLY PATIENTS

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Background: Pruritus is the most common dermatological symptom in the elderly that can manifest due to a spectrum of etiologies including dermatological, systemic, psychological, mixed, and idiopathic causes. The number of studies examining chronic pruritus in the elderly is limited in the literature. This study aimed to evaluate the etiology, clinical features, treatment and associated factors including pharmacotherapy and comorbidities of chronic pruritus in hospitalized elderly patients.

Methods: This croSS-sectional study included patients aged ≥ 65 years who received inpatient treatment at our University's Internal Medicine Clinics between 2022-2024 and had pruritus. Besides demographic, clinical and laboratory data, the causes, localization, duration, severity of pruritus and treatment information were recorded. Pruritus lasting <6 weeks was considered acute, and lasting ≥ 6 weeks was considered chronic pruritus. The severity of pruritus was measured with numerical and verbal rating scales. Patients were grouped according to whether the pruritus was acute or chronic.

Results: 421 patients included in the study and 215 (51.1%) were female. The ages of the patients were between 65-96 years and 109 (25.9%) were ≥ 80 years, with a median of 74 (IQR; 69-80). Chronic pruritus was significantly frequent in patients ≥80 years (p=0.013). 409 (97.1%) of the patients had at least one systemic comorbidity. The most common systemic comorbidities were hypertension (n= 299, 71.0%), diabetes mellitus (n=195, 46.3%), malignancy (n=172, 40.9%), and coronary artery disease (n=160, 38.0%). Chronic pruritus was significantly frequent in those on dialysis and those with chronic kidney disease, hyperlipidemia, and symptomatic anemia (p= 0.009; p= 0.027; p= 0.036; p= 0.031, respectively). It was found that the number of medications used was higher in patients with chronic pruritus (p=0.008). When the patients were evaluated in terms of the causes of pruritus, the most common cause of pruritus was dermatological (n=383, 91.0%). The most common dermatological cause was xerosis (n=301, 71.5%). Chronic pruritus was found to be more frequent in stasis dermatitis (p=0.033). It was found that in patients with chronic pruritus, pruritus was more generalized (p=0.001), continued day and night (p=0.001), verbal rating scale was more severe (p=0.030) and numeric rating scale was higher (p=0.007).

Conclusions: The incidence of chronic pruritus increases with age, and in patients with chronic pruritus, itching appears to be more generalized and more severe. Pruritus is a symptom that significantly impacts the quality of life in the elderly and requires a holistic clinical approach.

Keywords: Elderly, pruritus, itch, chronic, etiology

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Frailty

SS-35

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BLOOD CHOLESTEROL LEVELS AND FRAILTY IN OLDER ADULTS: A CROSS-SECTIONAL STUDY

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Aim: Previous studies revealed that blood cholesterol levels, particularly Low-Density Lipoprotein (LDL), were associated with mortality and malnutrition among older adults. Since there is scant data regarding the association between blood cholesterol levels and frailty, we aimed to evaluate the relationship between blood cholesterols and frailty in geriatric outpatients who were not under statin treatment.

Method: A total of 955 older adults admitted to our outpatient clinic were enrolled in the study. All participants underwent a comprehensive geriatric assessment. Frailty was defined as Clinical Frailty Score (CFS) ≥ 5. Serum blood parameters, namely Low-Density Lipoprotein (LDL), Triglycerides, Total Cholesterol, Very-Low-Density Lipoprotein (VLDL), High-Density Lipoprotein (HDL), and Non-HDL were included in the analysis. Nutrition status of the patients was evaluated via Mini-Nutritional Assessment Short Form (MNA-sf) and a score < 8 was described as malnutrition.

Results: The median (IQR) age was 73 (69-78) and 68.3% (n=667) were female. Patients living with frailty were older and more frequently had malnutrition and chronic diseases ($p<0.05$) (Table 1). The median LDL, Triglycerides, Total Cholesterol, HDL, and Non-HDL levels were significantly lower in the patients living with frailty ($p<0.05$). In the logistic regression analysis, lower LDL, Total Cholesterol, HDL, and Non-HDL levels were significantly associated with frailty independently of confounders (Table 2).

Conclusion: To the best of our knowledge, this is the first study revealing that, regardless of many confounders including malnutrition, lower levels of LDL, HDL, Total Cholesterol, and Non-HDL were associated with frailty in community-dwelling older adults who were not under statin treatment.

Keywords: Frailty, Low-Density Lipoprotein (LDL), Clinical Frailty Score (CFS)

Table 1. Demographic Characteristics, Comorbidities and Cholesterol Parameters of the Participants According to Frailty Status

	Patients living without frailty n= 707 (74.0%)	Patients living with frailty n= 248 (26.0%)	P value
Age, median (IQR)	72 (68-76)	78(73-84)	**<0.001**
Female sex, n (%)	477 (67.5%)	178 (71.8%)	0.209
Hypertension, n (%)	492 (69.5%)	186 (75.0%)	0.100
Diabetes Mellitus, n (%)	257 (36.3%)	94 (37.9%)	0.652
Cardiovascular Diseases, n (%)	122 (17.3%)	55 (22.3%)	0.081
Coronary Artery Bypass Graft, n (%)	37 (5.2%)	23 (9.3%)	**0.024**
Congestive Heart Failure, n (%)	18 (2.5%)	35 (14.1%)	**<0.001**
Atrial Fibrillation, n (%)	30 (4.2%)	47 (19.0%)	**<0.001**
Chronic Renal diseases, n (%)	26 (3.7%)	18 (7.3%)	**0.020**
Chronic Obstructive Pulmonary Disease, n (%)	30 (4.2%)	26 (10.5%)	**<0.001**
Cerebrovascular Diseases, n (%)	25 (3.5%)	25 (10.1%)	**<0.001**
Mild Cognitive Impairment, n (%)	27 (3.8%)	17 (6.9%)	**0.048**
Dementia, n (%)	26 (3.7%)	76 (30.9%)	**<0.001**
MNA-SF score, median (IQR)	14 (12-14)	11 (9-12)	**<0.001**
Malnutrition (MNA-sf <8), n (%)	22 (3.1%)	37 (15.5%)	**<0.001**
Triglyceride, median (IQR)	113 (86-158.5)	105 (85-139)	**0.022**
Total Cholesterol, median (IQR)	208 (175.5-239.5)	196 (159-223)	**<0.001**
HDL, mg/dl, median (IQR)	57 (48-68)	54 (44-63)	**<0.001**
LDL, mg/dl, median (IQR)	134 (111-156)	123 (99-145)	**<0.001**
VLDL, mg/dl, median (IQR)	23 (17-32)	21 (17-28)	0.098
Non-HDL, mg/dl, median (IQR)	149 (121-175)	135 (108-167)	**0.001**

Table 2. Logistic Regression Analysis of the Independent Factors Related to Frailty

		OR (95%CI)	p-value
Model 1	Sex	1.82(1.08-3.06)	0.024
	Age	1.13(1.10-1.17)	<0.001
	Cerebrovascular Diseases	2.08(0.96-4.49)	0.061
	Dementia	10.85(6.08-19.36)	<0.001
	Hand Grip Strength	0.98(0.95-1.02)	0.502
	Coronary Artery Bypass Graft	2.01(0.96-4.19)	0.062
	Malnutrition (MNA-sf <8)	2.25(1.02-4.96)	0.044
	Chronic Obstructive Pulmonary Disease	1.55(0.74-3.26)	0.244
	Atrial Fibrillation	2.27(1.17-4.40)	0.015
	Congestive Heart Failure	2.24(0.97-5.18)	0.058
	LDL	0.99(0.98-0.99)	0.009
Model 2	Sex	1.70(1.01-2.85)	0.045
	Age	1.14(1.10-1.17)	<0.001
	Cerebrovascular Diseases	2.25(1.04-4.86)	0.039
	Dementia	10.14(5.73-17.96)	<0.001
	Hand Grip Strength	0.98(0.95-1.02)	0.470
	Coronary Artery Bypass Graft	2.31(1.09-4.89)	0.028
	Malnutrition (MNA-sf <8)	2.47(1.14-5.37)	0.022
	Chronic Obstructive Pulmonary Disease	1.68(0.80-3.52)	0.170
	Atrial Fibrillation	2.41(1.25-4.67)	0.009
	Congestive Heart Failure	2.51(1.09-5.79)	0.030
	Triglyceride	1.00(0.99-1.00)	0.941
Model 3	Sex	2.09(1.25-3.49)	0.005
	Age	1.14(1.10-1.18)	<0.001
	Cerebrovascular Diseases	2.61(1.19-5.70)	0.016
	Dementia	12.93(7.08-23.61)	<0.001
	Hand Grip Strength	0.99(0.96-1.02)	0.697
	Coronary Artery Bypass Graft	2.19(1.02-4.68)	0.043
	Malnutrition (MNA-sf <8)	2.36(1.05-5.29)	0.036
	Chronic Obstructive Pulmonary Disease	1.33(0.61-2.88)	0.466
	Atrial Fibrillation	2.35(1.19-4.61)	0.013
	Congestive Heart Failure	1.89(0.77-4.58)	0.159
	Total Cholesterol	0.99(0.98-0.99)	0.002
Model 4	Sex	1.76(1.04-2.98)	0.035
	Age	1.13(1.10-1.17)	<0.001
	Cerebrovascular Diseases	2.23(1.04-4.76)	0.038
	Dementia	10.23(5.78-18.11)	<0.001
	Hand Grip Strength	0.98(0.95-1.01)	0.382
	Coronary Artery Bypass Graft	2.17(1.03-4.53)	0.039
	Malnutrition (MNA-sf <8)	2.35(1.07-5.15)	0.032
	Chronic Obstructive Pulmonary Disease	1.59(0.75-3.33)	0.220
	Atrial Fibrillation	2.31(1.19-4.51)	0.014
	Congestive Heart Failure	2.06(0.86-4.89)	0.101
	HDL	0.98(0.97-0.99)	0.031
Model 5	Sex	1.12(0.569-2.22)	0.734
	Age	1.11(1.07-1.16)	<0.001
	Cerebrovascular Diseases	2.17(0.84-5.56)	0.106
	Dementia	17.52(7.09-43.28)	<0.001
	Hand Grip Strength	0.89(0.85-0.94)	<0.001
	Coronary Artery Bypass Graft	2.34(0.91-6.01)	0.076
	Malnutrition (MNA-sf <8)	2.31(0.79-6.74)	0.125
	Chronic Obstructive Pulmonary Disease	1.26(0.45-3.52)	0.653
	Atrial Fibrillation	3.02(1.31-6.94)	0.009
	Congestive Heart Failure	0.88(0.28-2.74)	0.837
	Non-HDL	0.99(0.98-0.99)	0.021

Sarcopenia

SS-36

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RELATIONSHIP BETWEEN INFLAMMATION MARKER CRP ALBUMIN RATIO AND OBESITY, SARCOPENIA AND SARCOPENIC OBESITY

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Background/Aim: Sarcopenic obesity (SO) is a syndrome that changes with the combined dissociation of body fat and muscle loss, more important in geriatric age groups (1).The incidence of sarcopenic obesity is rapidly increasing due to the aging of the worldwide population and the current obesity epidemic. (2). The pathogenesis of sarcopenic obesity is complex, multifactorial and comprehensively elucidated. Low-grade treatment has an important role in the pathogenesis of sarcopenia, obesity and sarcopenic obesity (3). Inflammatory changes such as white adipose tissue, macrophages, inflammatory T lymphocytes promote the secretion of proinflammatory cytokines that facilitate the breakdown not only in adipose tissue but also in muscle tissue. In the chronic period, CRP increases while albumin decreases, so the CRP/albumin ratio (CAR) may be a more sensitive determinant than CRP or albumin levels analyzed separately (4,5). The increase in high CAR level is associated with inflammatory burden, poor prognosis and mortality (6).The relationship between inflammatory marker CAR levels in obesity and sarcopenic obesity has not been evaluated so far.

Methods: This croSS-sectional retrospective study included 249 patients aged 65 years and over who applied to our geriatric clinic. Patients with infection, rheumatic disease, and active malignancy were excluded. Katz Index of Activities of Daily Living (ADL), Lawton Instrumental Activities of Daily Living Scale (IADL),, mini-nutrition assessment short form (MNA-SF), geriatric depression scale (GDS), mental status examination (MMSE) tests were applied to the patients. We defined SO according to the definition and diagnostic criteria of ESPEN (European Society of Clinical Nutrition and Metabolism) and EASO (European Association for the Study of Obesity). We used chi-square and one-way ANOVA tests for inter-group evaluation.

Results: We included 249 patients in our study, 43 (%13) obese patients, 51 (%20.5) sarcopenic patients, 55 (%22.1) sarcopenic obese (SO) patients and 100 (%40.29) healthy controls. There were more women than men in both groups; However, there was no significant difference between the gender distributions between the groups. The age of the SO group was higher, hypertension and diabetes were more common. We found that cognitive test scores, daily life activities and nutrition scores were worse than the SO groups. We found that the albumin level of the SO group was significantly lower (p= 0.005). The CAR level was in the highest obesity classes in all three group comparisons (p=0.015). In the determination of obesity, the AUC value was .550 (p= .301) in the evaluation with the ROC curve. No significant relationship was detected.

Conclusion: Sarcopenia and obesity are different conditions, but they share common pathophysiology and risks such as lifestyle, maturation, inflammatory cytokines, reactive oxygen species production and endocrine changes. In our study, we found high CAR levels in the obesity group, but not in the sarcopenia and SO groups.This supported the role of inflammation in obesity pathology, but the lack of a significant relationship between CAR levels and sarcopenia and sarcopenic obesity suggested that obesity and other accompanying diseases are more prominent in inflammation than sarcopenia. Additional research is needed on this subject.

Keywords: sarcopenia, obesity, sarcopenic obesity, CRP, albumin, CRP/albumin, inflammation

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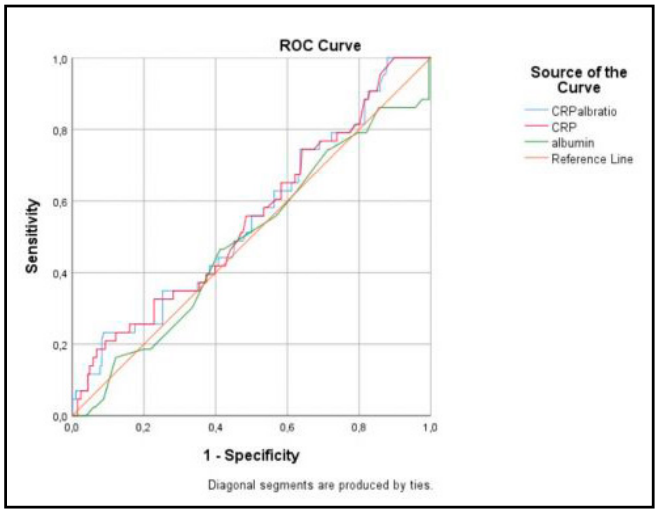

Figure 1

Area Under the Curve

Test Result Variable(s)	Area	Std. Error[a]	Asymptotic Sig.[b]	Asymptotic 95% Confidence Interval	
				Lower Bound	Upper Bound
CRPalbratio	,550	,048	,301	,456	,645
CRP	,553	,048	,279	,458	,647
albumin	,491	,049	,850	,394	,587

The test result variable(s): CRPalbratio, CRP, albumin has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

Figure 2

Table 1						
Parameter	*Normal*	*Obesity*	*Sarcopenia*	*SO*	*All*	*p*
n (%)	100(40.2)	43(17.3)	51(20.5)	55(22.1)	249(100)	
Age (median± SD)	75.01±6. 82[d]	76.72±7.10	77.8±5.47	79.44±7.13[a]	76.86±6.8 7	.001
Female n (%)	71(28.5)	24(9.6)	44 (17.7)	47 (18.9)	186 (74.7)	.001
CRP (mg/L)	4 (0.20- 25.20)	4.70 (0.80- 34.30)	5.30 (0.10- 37.90)	3.50 (0.10- 31.10)	4.10 (0.10- 37.90)	.057
Albumin (g/L)	4.20 (3.40 -4.80)[d]	4.20 (3.60- 4.60)	4.10 (2.98- 4.80)	3.90 (3.60- 4.90)[a]	4.20 (2.98- 4.90)	.005
CRP/ Albumin ratio (mean) (min- max)	1.42 (.04- 6.81)[b]	2.56 (.19- 14.29)[a]	2.47 (.02- 10.83)	1.79 (1.09- 8.89)	1.91 (.02- 14.29)	.015

Frailty

SS-37

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THE EFFECT OF FRAILTY AND METABOLIC SYNDROME ON THE 5-YEARS MORTALITY RISK IN THE ELDERLY

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Objectives: We aimed to investigate the role of metabolic syndrome in the relationship between frailty and mortality in older adults.

Methods: This prospective longitudinal follow-up study included 1100 outpatients aged ≥60 years. Participants were followed for five years (13.2% died). MetS status was determined using the National Cholesterol Education Program Third Adult Treatment Panel criteria. Frailty was evaluated with the FRAIL scale consisting of five components as Fatigue, Resistance, Ambulation, Illness and Loss of weight. This research examined the association between frailty and metabolic syndrome and their impact on death.

Results: 1100 patients aged 60 and older adults were included in the study. Frail group had a significantly higher mean age (73.13±7.75) compared to non-frail (70.20±6.23) and pre-frail (70.86±6.73) groups (p < 0.001). While women were the majority in all three groups, the proportion of women in the frail group (76.9%) was significantly higher than in non-frail (53.8%) and pre-frail (73.4%) groups (p < 0.001). Metabolic syndrome was more prevalent in pre-frail and frail groups compared to those who were non-frail. (Non-frail: %59.1, Pre-frail: %71, Frail: %70.2) (p = 0.010). Cognitive impairment, depressive mood, malnutrition, ADL and IADL were observed more frequently in both the frail group and non-survivor patients, and p-values for all variables were statistically significant. Mortality rate for the whole sample was 13.2% and, as expected, the frail group has a significantly higher mortality rate (%23.4) compared to the other two groups (Non-frail: %5.3, Pre-frail: %10.2) (p < 0.001). Cox proportional hazard model for the risk of five-year mortality the frail group were associated with a greater risk of death, adjusted for age, sex, and metabolic syndromes (HR:4.44, 95% CI=2.19-9.02, p<0.001).

Conclusion: Frailty have a more significant role in explaining the relationship between MetS and all-cause mortality.

Keywords: Frailty scale, metabolic syndrome, mortality, frailty

Table 1. Demographic and clinical characteristics of the sample by Frailty groups

Variables	*Total (n=1100)*	*Non-frail (n=171)*	*Pre-frail (n=617)*	*Frail (n=312)*	*p-value*
Age (year)	71.57±7.09	70.20±6.23	70.86±6.73	73.13±7.75	<0.001
Women (%)	785 (71.4)	92 (53.8)	453 (73.4)	240 (76.9)	<0.001
Weight (kg)	76.16±15.45	76.30±12.93	76.35±14.79	75.69±17.90	0.674
Height (cm)	156.92±8.88	160.33±9.23	157.10±8.45	154.62±8.87	<0.001
BMI (kg/cm2)	31.02±6.40	29.78±5.13	31.00±6.07	31.74±6.40	0.015
MetS(Present)	758 (68.9)	101 (59.1)	438 (71)	219 (70.2)	0.010
Mean waist circumference (cm)	104.54±13.33	103.28±11.02	104.50±13.15	105.31±14.73	0.256
HDL level (mg/dL)	50.37±13.1	48.81±11.73	50.92±13.47	50.14±13.04	0.195
TG level (mg/dL)	163.89±86.03	165.75±77.37	164.75±85.39	161.89±91.84	0.306
SBP (mmHg)	131.52±17.88	132.48±17.51	131.97±17.89	161.89±91.84	0.488
DBP (mmHg)	78.19±11.67	80.18±12.35	78.30±11.07	76.77±12.31	0.035
FBG (mg/dL)	128.07±56.60	120.23±38.63	129.57±60.93	129.40±55.79	0.780
Cognitive impairment (yes)	236 (21.5)	24 (14)	105 (17)	107 (34.3)	<0.001
Depressive mood (yes)	447 (40.6)	23 (13.5)	230 (37.3)	194 (62.2)	<0.001
Malnutrition	129 (11.7)	4 (2.3)	43 (7)	82 (26.3)	<0.001
ADL (dependent)	226 (20.5)	11 (6.4)	103 (16.7)	112 (35.9)	<0.001
IADL (dependent)	281 (25.5)	13 (7.6)	141 (22.9)	127 (40.7)	<0.001
Number of diseases	2.46±1.43	1.78±1.18	2.43±1.34	2.91±1.56	<0.001
Mortality (%)	145 (13.2)	9 (5.3)	63 (10.2)	73 (23.4)	<0.001

BMI: Body Mass Index, MetS: Metabolic Syndrome, HDL: High density lipoprotein; TG: Triglyserides; SBP: Systolic blood pressure; DBP: Diastolic blood pressure; FBP: Fasting blood glucose; ADL: Activities of Daily Living; IADL: Instrumental Activities of Daily Living

Table 2. Demographic and clinical characteristics of the patients according to the survival

	Non-survivor (n=145)	*Survivor (n=955)*	*p-value*
Age	76.87±7.42	70.76±6.68	<0.001
Men	70 (22.8)	245 (77.8)	<0.001
Metabolic syndrome (present)	93 (64.1)	665 (69.6)	0.183
Mean waist circumference(cm)	102.02±99.39	104.92±12.84	0.021
HDL level (mg/dL)	46.87±11.96	50.90±13.19	<0.001
TG level (mg/dL)	151.43±89.73	165.76±85.35	0.013
SBP (mmHg)	129.21±19.34	131.81±17.68	0.228
DBP (mmHg)	78.41±13.39	78.15±11.44	0.920
FBG (mg/dL)	134.06±72.98	127.15±53.67	0.258
BMI (kg/cm2)	28.94±6.83	31.32±6.28	<0.001
Non-frail	9 (5.2)	162 (94.8)	
Pre-frail	63 (10.2)	554 (89.8)	
Frail	73 (23.4)	239 (76.6)	<0.001
Cognitive impairment (yes)	55 (73.9)	156 (26.1)	<0.001
Depressive mood (yes)	72 (16.1)	375 (83.9)	0.018
Malnutrition	38 (29.5)	91 (70.5)	<0.001
ADL (dependent)	42 (18.6)	184 (81.4)	0.007
IADL (dependent)	49 (17.4)	232 (82.6)	0.015

Table 3. Cox proportional hazard model fort the risk of five-year mortality, unadjusted and adjusted for co-variables

		Crude			Adjusted	
Variables	*HR*	*95% CI*	*p-value*	*HR*	*95% CI*	*p-value*
Age	1.11	1.09-1.14	<0.001	1.09	1.06-1.11	<0.001
Sex	2.41	1.74-3.35	<0.001	2.32	1.64-3.28	<0.001
Metabolic syndrome	1.19	0.85-1.67	0.305	0.84	0.59-1.21	0.845
Non-frail	Reference	Reference	Reference	Reference	Reference	Reference
Pre-frail	2.09	1.04-4.21	0.038	2.13	1.05-4.29	0.034
Frail	5.31	2.65-10.63	<0.001	4.44	2.19-9.02	<0.001

Sarcopenia

SS-38

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Publication End Date: 2024-10-17 08:40:00

SARC-F COULD PREDICT OSTEOARTHRITIS IN GERIATRIC OUTPATIENTS: A CROSS-SECTIONAL STUDY FROM A UNIVERSITY HOSPITAL

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Background/Aim: Knee osteoarthritis (OA) is one of the most common degenerative diseases causing disability in older adults. The SARC-F has been shown to be a predictor of clinically significant outcomes such as sarcopenia, hospitalization, deficits in instrumental activities of daily living(1). We aimed to examine whether SARC-F can predict osteoarthritis in geriatric outpatients.

Methods: A total of 120 outpatients with obesity, 99 of whom had OA were included in the study. All participants underwent a comprehensive geriatric assessment. SARC-F scale was also performed on all patients. OA presence was determined by two experts using bilateral standing knee radiographs and the Kellgren-Lawrence (KL) grade (0-4). Grades 3 and above were considered as OA. Joint cartilage structure was also assessed using ultrasonography.

Results: The mean age of the study population was 72.4±5.7 years and 75.0% of them were female. The median SARC-F score was 2.0 [2.0]. No difference was observed between two groups in sex and handgrip strength. However, patients with OA were significantly older than patients without OA (P=0.006). In patients with OA, the median SARC-F was 2.0 [3.0], and in patients without OA it was 0.0 [1.0] (p<0.001). In regression analysis, it was found that SARC-F was significantly associated with OA regardless of age, sex, body mass index and handgrip strength (OR:2.1, 95% CI:1.3-3.5, and p=0.004). The cut off value of SARC-F to predict OA was defined as 2. In ROC analysis, SARC-F could predict OA (AUC:0.787, 95% CI:0.689-0.884, and p<0.001)

Conclusion: To the best of our knowledge, this is the first study to reveal the relationship between SARC-F and knee OA. In our study, we have shown that SARC-F may be a predictor for knee OA. SARC-F can be preferred when predicting OA as well as sarcopenia in the geriatric population because it is a quick and practical method. Further randomized controlled studies are needed to confirm these results.

Keywords: Comprehensive geriatric assessment, Older Adults, Osteoarthritis, SARC-F

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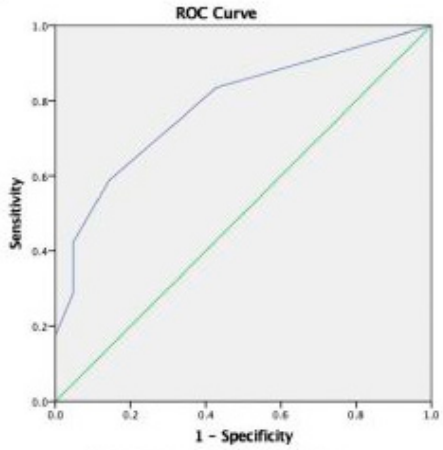
Table 1. The baseline characteristics of the study population according to presence of osteoarthritis

	with OA n=99	without OA n=21	p
Age, in years	73.0 ±5.5	69.3±5.5	0.006
Sex, Female	77 (77.8)	13 (61.9)	0.17
BMI, kg/m²	35.4±4.5	32.7±3.1	0.003
HGS, kg	18.7±6.3	21.3±10.6	0.30
SARC-F	2.0 [3.0]	0.0 [1.0]	<0.001

Figure 1. ROC Curve of SARC-F prediction of osteoarthritis (AUC:0.787, 95% CI:0.689-0.884, and p<0.001)



Frailty

SS-39

Publication Hall: D
Publication Start Date: 2024-10-17 08:40:00
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THE RELATIONSHIP BETWEEN FRAILTY, AUTOPHAGY, AND INFLAMMATION MARKERS IN OLDER ADULTS

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Introduction: Frailty increases with aging as many comorbidities and also known to be related to mortality. Autophagy, defined as a cellular recycling mechanism, plays a role in maintaining cellular homeostasis in response to intracellular and ex-

tracellular stressors. Autophagy contributes to cellular quality control by enhancing lysosomal degradation of misfolded, aged proteins and damaged organelles. Inflammaging is a considerable mechanism in the pathophysiology of both frailty and autophagy. Clarifying the possible relationship between autophagy-inflammaging and frailty is important for future studies.

Methods: Participants who applied to the geriatrics clinic in August-October 2023 and met the inclusion criteria were included. All participants were grouped according to their frailty status as frail or non-frail. The comprehensive geriatric assessment was applied to all participants, and hand grip strength, walking speed, activity levels, and routine laboratory results were assessed. Blood samples for Beclin1, HMGB1, IL-6, and CRP were collected under favorable conditions, stored at -80°C, and measured according to the procedure of each kit.

Results: A hundred and ninety-three participants, 107 (55.4%) of whom were women, were included. The mean age of participants was 73.8 years, and 105 (54.4%) were frail. Hand grip strength, walking speed, and daily activity levels were significantly different between frail and non-frail participants ($p<0.05$). CRP levels were higher in frails ($p<0.001$). Mean Beclin1 levels were lower (3.58 ± 2.08 vs 4.71 ± 3.01, $p=0.002$), and mean HMGB1 levels were higher (2589.1 ± 1156.0 vs 1631.2 ± 636.7, $p<0.001$) in frail group. IL-6 levels were higher in non-frail participants compared to frail participants (1.76 ± 1.47 vs 1.01 ± 0.70, $p<0.001$). There was a positive correlation between FRAIL scores and Beclin1 levels ($p=0.16$; r:-0.174) and a negative correlation between FRAIL scores and HMGB1 levels ($p<0.001$; r:0.334).

Discussion: Considering the role of frailty in clinical decision-making and determining the prognosis of diseases, it is critical to reveal the complex underlying pathophysiological mechanisms. The results of the current study indicate that Beclin1, defined as a peripheral biomarker of autophagy, plays a vital role in defining frailty in older people. To our knowledge, this is the first study in the literature that elucidates this relationship. Revealing the possible relationship between autophagy-inflammaging and frailty may help the development of new approaches to prevent frailty.

Keywords: frail, older people, autophagy, biomarker, geriatric syndrome, inflammaging

Nutrition

SS-40

Publication Hall: D
Publication Start Date: 2024-10-17 08:45:00
Publication End Date: 2024-10-17 08:50:00

IS CONTROLLING NUTRITIONAL STATUS SCORE A PROGNOSTIC FACTOR FOR ACUTE KIDNEY INJURY ASSOCIATED WITH CARDIAC SURGERY IN OLD PATIENTS- A PILOT STUDY

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Aim: In aging populations, the number of patients who need cardiac surgery in advanced ages are rapidly increasing. Also old patients are at more risk for postoperative complications.

The aim of this pilot study is to describe the relationship between malnutrition and acute kidney injury (AKI) associated with cardiac surgery.

Materials and method: The population of this study consisted of 23 patients who underwent open cardiac surgery in a university hospital between January 2023-January 2024. None of the patients had chronic kidney diseases before and patients who had perioperative causes of acute kidney injury (arrest, contrast use...etc) were excluded from the study. Demographical and clinical parameters were recorded from hospital data retrospectively. The Controlling Nutritional Status (CONUT) score was retrospectively calculated for nutritional assesment. Kidney Disease: Improving Global Outcomes (KDIGO) criteria was used for the diagnosis of acute kidney injury.

Results: The median age of study population (6 female, 17 male) was 71(IQR=7) years. Fifteen of the patients (65.2%) had AKI associated with open cardiac surgery. The median CONUT scores in AKI group and normal kidney function group were 1(IQR=1) and 2(IQR=1) respectively. CRP values were 6.3mg/dl (IQR=10.4) and 1.2mg/dl (IQR=21.15) and were not significantly different between these groups. There were no differences of sex, hypertension, smoking, acetylsalicylic acid usage between AKI group and normal kidney function group. Diabetes were more frequent in AKI group (p=0,039) and total cholesterol was higher in AKI group (p=0,019).

The prevelance of AKI asscociated to surgery between malnutrition group versus normal nutritional group was not statistically different (p=0,179).

Conclusion: Although malnutirition is an important risk factor for postoperative complications in old population, our pilot study did not show the relation between nutritional status and AKI associated with cardiac surgery. The number of our study group is an important limiting factor for definite result. As AKI is an important postoperative complication especially in geriatric age, we think larger study populations are needed for investigating the role of malnutrition in AKI associated with cardiac surgery.

Keywords: Acute Kidney Injury, Cardiac Surgery, Aged

Cognitive Disorders

SS-41

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Publication End Date: 2024-10-18 08:05:00

A CASE OF CEREBRAL AMYLOID ANGIOPATHY PRESENTİNG WITH BEHAVIORAL AND PERSONALITY CHANGES

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Abstract: Cerebral amyloid angiopathy (CAA) is a progressive disease that causes amyloid beta-peptide deposits, most commonly affecting cerebral and leptomeningeal medium and small size arteries, rarely capillaries and veins.[1]The clinical manifestations are wide-ranging and may include cerebral hemorrhage, stroke, personality changes, dementia, transient neurologic symptoms, and inflammatory encephalopathy contributing to cognitive impairment.[2]We present a case of CAA-associated vascular dementia that started with behavioral disturbances and

personality changes and progressed to dementia. We emphasize that CAA should be considered in the differential diagnosis of older adults with new psychiatric symptoms

Introduction: Cerebral small vessel disease is a general term for intracranial vascular disease based on many different pathologic processes. It can present with many different neuroimaging and clinical presentations, and CAA is one of the pathologic variants of this disease.[3] Clinical findings are affected by the vascular structure involved and the distribution of the lesion.

Case: 68y, male, high school graduate with hypertension and benign prostatic hyperplasia had behavioral changes that started 4 years ago. While he previously had a calm and kind personality, his personality changed with an increase in aggression. Inability to maintain attention, perseverative behaviors and apathy were noticed in daily activities. Within 3-4 years, difficulty in making decisions and making plans began. There is no acalculia and no significant deterioration in sense of direction. During the follow-up period, he became dependent first in instrumental and then in basic activities of daily living. There was a mid-stage dementia clinic.

All hemo-biochemical values were normal. Neurological examination was normal except for decreased walking speed. Mini mental state assessment was 25/30. The quick -Mild cognitive impairment screen was 46/100. Foreground executive function, verbal fluency and working memory were impaired.

Brain MRI showed lesions in the periventricular white matter with lacunes in favor of chronic small vessel ischemic disease, ventricular system enlargement, and multiple hemorrhagic foci compatible with amyloid angiopathy. Brain PET showed FDG uptake within physiologic limits.

Discussion: With vascular changes, diffuse microhemorrhages, microinfarctions, hypoperfusion are observed in the brain and cause neuronal damage as a result of white matter hypoxia.[4]The gold standard diagnosis is made by tissue sampling, but probable or posible CAA can be diagnosed with the Boston criteria. Deposition of amyloid β protein in the cerebral vasculature leads to a combination of hemorrhagic and ischemic complications. CAA causes global cognitive decline and deficits in perceptual speed, episodic and semantic memory. Among neuropsychiatric symptoms, hallucinations, agitation, depression, anxiety, disinhibition can be seen in association with CAA. [6]Currently, there are no agreed guidelines for the treatment of CAA and there is no specific treatment for the disease. Given that it can lead to both ischemic and hemorrhagic events, it is often difficult to decide for or against anticoagulant therapy. Therefore, treatment should be customized for the patient.[7]

Conclusion: We emphasize that CAA should be considered in the differential diagnosis of elderly patients with new psychiatric symptoms such as behavioral problems or personality changes.

Keywords: Cerebral amyloid angiopathy, personality changes, dementia

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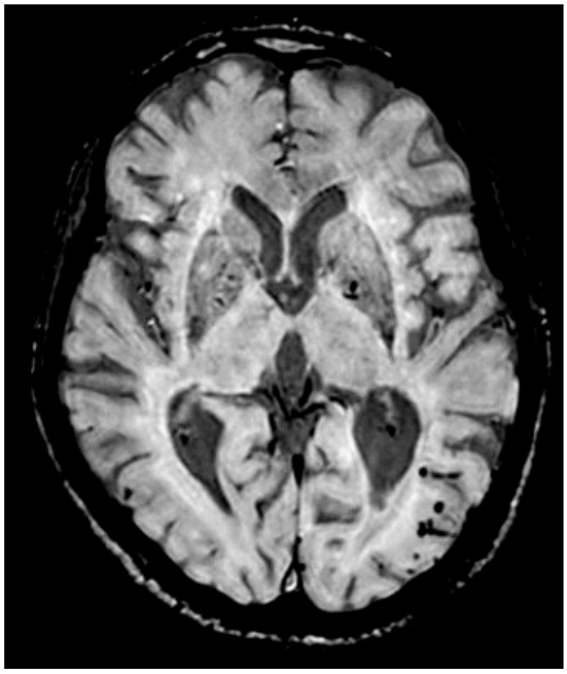

Figure 1. SWI sequences :Alarge number of microbleed foci are observed in both cerebral hemispheres,including the left thalamic region,with clustering mainly in the left parieto-occipital area,is suggestive of cerebral amyloid angiopathy.

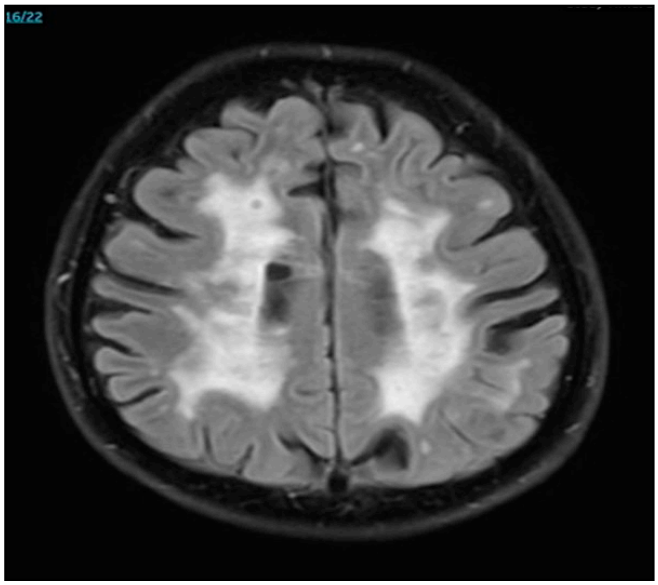

Figure 2. Description of the Figure: T2/FLAIR sequences:Multiple lesions in the infra supra tentorial compartment, accompanied by lacunae showing confluence in the periventricular white matter, centrum semiovale, evaluated in favor of chronic small vessel ischemic disease

Neglect and Abuse

SS-43

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AGEISM: WHAT IS THE PERSPECTIVE OF OLDER ADULTS' CAREGIVERS?

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Introduction: Ageism is the discrimination against older people because of negative and inaccurate stereotypes. The aim of this study was to identify the factors associated with age discrimination levels for caregivers of older adults.

Methods: Sociodemographic characteristics of the caregivers were collected and age discrimination was evaluated using the Fraboni Ageism Scale (FAS) that has three sub scales: stereotypes, discrimination and avoidance.

Results: A total of 108 patients were enrolled. Mean age of caregivers was 59.5±3.14 and 60.2% (n=71) were female. Mean score of total FAS was 66.41 ± 0.84, sterotypes was 38.41 ± 0.60, discrimination was 20.12 ± 0.36 and avoidance was 7.87 ± 0.17.

Caregivers whose years of education under 12 years had higher FAS total and discrimination scores (p=0.049, p:=0.016; respectively).

In the case the caregiver was the child, discrimination scores were lower than when the caregiver was patients' spouse, distant relative, or a nurse (p=0.04).

Discrimination scores were lower for caregivers who were employed (p=0.020) and whose years of education is 12 years and higher (p=0.016).

Avoidance scores were lower for caregivers 50 years and older (p=0.006) and for caregivers when there is another person who supports the care (p=0.009).

Conclusion: Years of education, age, degree of relationship, employement status and caregiver support were significant variables for determining the attitudes of geriatric patients' caregivers towards age-based discrimination.

Keywords: ageism, discrimination, Fraboni Scale of Ageism

Table 1. Demographics and clinical characteristics of study

	Total		Stereotypes		Discrimination		Avoidence	
	Mean ± SD	p	Mean ± SD	p	Mean ± SD	p	Mean ± SD	p
Age <50 age ≥ 50 age	66.40 ± 10.58 66.42 ± 7.98	0.990	36.67 ± 7.01 39.0 ± 6.19	0.278	20.32 ± 5.30 19.96 ± 2.35	0.625	8.4 ± 10.58 7.45 ± 1.75	**0.006**
Gender (Female)	66.88 ± 9.64	0.495	38.47 ± 6.43	0.889	20.45 ± 4.62	0.272	7.95 ± 1.76	0.548
Relationship Degree Child Spouse Distant relatives or nurse	 65.25 ± 8.81 69.27 ± 8.45 69.0 ± 9.93	 0.117	 37.91 ± 6.88 39.28 ± 5.49 39.62 ±5.49	 0.459	 19.52 ± 2.5 21.42 ± 1.9 21.51 ± 6.46	 **0.04**	 7.81 ± 1.89 7.86 ± 1.61 8.57 ± 2.63	 0.597
Marital Status Married Single/Widow	 67.59 ± 9.57 64.75 ± 8.39	 0.098	 39.27 ± 6.77 37.2 ± 6.14	 0.092	 20.39 ±4.48 19.75 ± 2.96	 0.387	 7.92 ± 1.87 7.79 ± 1.89	 0.709
Education <12 years ≥12 years	 68.16± 9.28 64.83 ±8.85	 **0.049**	 39 ± 6.64 37.88 ±6.51	 0.361	 21.03 ± 4.86 19.3 ± 2.59	 **0.016**	 8.12 ± 1.91 7.64 ± 1.82	 0.166
Employment Status Employed Retired Not employed	 64.83 ±9.26 66.15± 7.41 69.19 ±10.59	 0.116	 37.08± 6.77 39.2 ± 6.16 39.48± 6.57	 0.188	 19.52± 2.72 19.53± 2.33 21.8± 6.12	 **0.020**	 8.22± 2.01 7.41±1.95 7.9± 1.42	 0.127
Caregivers time Full time Part time	 67.82 ±7.83 65.7 ± 9.7	 0.208	 39.74± 6.21 37.65± 6.5	 0.084	 20.26± 2.41 20.11 ± 4.72	 0.848	 7.82 ±1.97 7.92± 1.82	 0.766
Is there another person who supports the care? Yes No	 65.41±8.86 66.77± 9.31	 0.484	 38.29± 7.14 38.45± 6.39	 0.903	 20.0 ±2.68 20.17± 4.28	 0.835	 7.12 ±1.6 8.13 ± 1.89	 **0.009**

Polypharmacy and Inappropriate Drug Use

SS-44

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PREVALENCE OF HYPERPOLYPHARMACY AND ITS STRONG ASSOCIATION WITH FRAILTY AND OTHER GERIATRIC SYNDROMES

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Introduction: Hyperpolypharmacy is a common problem in the older adult population and is associated with several adverse outcomes. Here we aimed to determine the hyperpolypharmacy prevalence and to investigate its association with other clinical characteristics and geriatric syndromes.

Methods: This retrospective, croSS-sectional study included older adults ≥60 years who applied to a tertiary outpatient clinic between November 2012 and May 2024. We defined hyperpolypharmacy as using ≥10 medications and performed comprehensive geriatric assessment. We performed univariate and multivariate analyses to identify factors independently associated with hyperpolypharmacy.

Results: A total of 1185 patients were included in the study (Mean age = 75± 6.95; 68.9% were women). Hyperpolypharmacy prevalence was 15%. Participants with hyperpolypharmacy were older and had higher prevalence of frailty, undernutrition, depressive mood, urinary incontinence, limitations in basic and instrumental activities in daily living, probable sarcopenia, and low usual gait speed. Among these parameters, frailty was the only variable indepemdently associated with hyperpolypharmacy (Odds Ratio (OR)=2.66; 95% Confidence Interval (CI)=1.51-4.66).

Conclusions: Our findings highlight the significant burden of hyperpolypharmacy and its strong association with frailty among older adults. Although a cause-effect relationship cannot be claimed, regular medication review, proper deprescription practices, and optimization of drug lists would potentially prevent frailty in older adults

Keywords: frailty, polypharmacy, hyperpolypharmacy

Polypharmacy and Inappropriate Drug Use

SS-45

Publication Hall: SS-45
Publication Start Date: 2024-10-18 08:20:00
Publication End Date: 2024-10-18 08:25:00

IDENTIFICATION OF POTENTIAL INAPPROPRIATE MEDICATION USE AND ITS RELATIONSHIP WITH MORTALITY IN OLDER ADULTS IN NURSING HOMES USING TIME CRITERIA

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Objective: This study aimed to evaluate the Turkish Inappropriate Medication Use in the Elderly (TIME) Criteria and potential inappropriate medication use (PIM) in older adults aged 65 and over living in nursing homes, to investigate the relationship between PIM and geriatric syndromes, and to assess their association with six-month mortality.

Methods: Voluntary participants aged 65 years and over living in three nursing home centres in Istanbul enrolled in study between 1 December 2023 and 30 May 2024. Comprehensive geriatric assessments (CGA) were carried out and the presence of PIM identified in accordance with the TIME criteria by two geriatricians.

Results: We included 165 older adults in the study (mean age 84.6±7.9,71.5%female). The median number of comorbidities was 6(2-14). Most participants (n=134,81.6%) had dementia. Almost all residents (n=159,96.3%) were pre-frail/frail, more than 80% were dependent/semi-dependent and malnourished/ at risk of malnutrition. Polypharmacy was found in 93% of patients (n:154) and hyperpolypharmacy in 51% (n:85). All participants had PIM,with the TIMEtoSTART criteria being observed in 93.3% of participants (n:154) and the TIMEtoSTOP criteria in 91.5% of participants (n:151)(Table1).

Neuroleptics use for hypnotic purpose (n=83,50.3%) and proton pump inhibitor (PPI) use for multiple drug indications (n=78,47.3%) were the most prevalent PIM based on TIMEtoSTOP criteria.The most three common PIM according to TIMEtoSTART were lack of treatment of Alzheimer disease (not starting Acetylcholinesterase inhibitors for mild-moderate Alzheimer's disease (%49.1%,n:81) and not starting Memantine for moderate-severe Alzheimer's disease (53.3%,n:88) and not initiating of oral nutritional supplements in older adults who are malnourished or at risk of malnutrition (47.9%,n:79)(Table 2).

The Evaluation of factors influencing TIMEtoSTOP and TIMEtoSTART criteria showed a significant association between TIMEtoSTOP criteria and polypharmacy (p<0.001). In patients with geriatric syndromes,univariate analysis identified several factors significantly correlated with the TIMEtoSTART criteria, including frailty (p=0.001), functional dependence (p=0.001), malnutrition (p=0.001), risk of sarcopenia(p=0.011), and incontinence (p=0.030) (Table 3). Furthermore, in the multivariate analysis assessing factors associated with TIMEtoSTART, which was adjusted for age, sex, malnutrition, dementia, and frailty showed that frailty increased the risk of TIMEtoSTART criteria by approximately 36-fold(Table 4).

The mortality rate was 15.1% (n=25) in the six-month follow-up of nursing home residents.In univariate analysis, non-survivors were more frail (p=0.002), dependent (p=<0.001), at risk of sarcopenia (p=0.027) and malnourished (p=0.017), had a history of incontinence (p=0.046), fear of falling (p:0.016), pressure ulcers (p:0.001) and had more TIMEtoSTOP criteria (p:0.041) (Tablo 5).

In the multivariate Cox analysis for mortality, which was adjusted for age, gender, frailty and TIMEtoSTOP criteria, we found that frailty was associated with an approximately threefold increase in the risk of mortality in Model 1 (HR: 2.85,95% CI:1.45–5.61; p=0.002) and in Model 2, fear of falling and dysphagia risk increased mortality by approximately 4-fold (Fear of falling:HR:3.61,95% CI:1.07–12.18; Dysphagia risk: HR:3.85,95%CI:1.49–9.99) (Table 6).

Conclusion: Polypharmacy and PIM are common among older adults who have lived in nursing home and geriatric syndromes, especially frailty, have an impact on mortality and TIME-to-START criteria.

Keywords: Keywords: Comprehensive Geriatric Assessment, Nursing Homes, Older Adults, TIME Criteria

Tablo 1

≥ 85 years old	89 (53.9)	Enteral + Parenteral
Marital Status		
Single	70 (42.4)	
Married	24 (14.5)	
Widowed	71 (43.0)	Pain Status
Education		
Illiterate	6 (3.6)	
Primary Education	56 (33.9)	
Elementary Education	15 (9.1)	
Second Education	52 (31.5)	
Higher Education	36 (21.8)	Incontinence
Smoking		
Smoker	7 (4.2)	
Former Smoker	38 (23.0)	Insomnia
BMI (kg/cm²) *	23.2 ± 3.8	4 m/s walking speed
Classification of BMI		
Underweight	14 (8.5)	
Normal	110 (66.7)	
Overweight	31 (18.8)	Walking speed
Obese	10 (6.1)	Slow (<0.8 m/sn)
	6 (2-14)	
Number of Comorbities*		Pressure Ulcer
Comorbidities		History of Falling (in t
Dementia		
HT	134 (81.20)	
Cataract	87 (52.70)	
Depression	46 (27.90)	
Others	46 (27.90)	Fear of Falling
		Covid Vaccination stat
		No Vaccination
		Vaccinated
Number of drugs *	10 (2-19)	Hospitilization
Polypharmacy status		
Polypharmacy (>5)	154 (93.3)	Number of Hospitaliza
Hyperpolypharmacy (>10)		
Yes	85 (51.5)	Length of Hospitalizati
FRAIL score*	4 (0-5)	Number of PIM †
Frailty (based on FRAIL scale)		
Normal	6 (3.6)	
Pre-frail	19 (11.5)	
Frail	140 (84.8)	TIME to STOP
SARC-F score	7 (0-10)	TIME to START
Risk of Sarcopenia (based on SARC-F score)		
Risk of Sarcopenia	14 (85.5)	SBP
Fuctionality –ADL		
Independent	26 (15.8)	
Semi independent	38 (23.0)	
Dependent	101 (61.2)	DBP
Fuctionality – IADL		
Independent	5 (3.0)	
Semi independent	23 (13.9)	
Dependent	137 (83.0)	Heart rate
Malnutrition Status (based on MNA-SF score)	32 (19.4)	
Normal	80 (48.5)	

Tablo 3-4

Table 3.Univariate analysis of factors affecting TIME to STOP and TIME to START criteria

	TIME to STOP n=150. n (%)	p value	TIME to START n=154. n (%)	p value
Age*	84.5 ± 8.0	0.471	85.2 ± 9.0	0.623
Age groups				
65-74 years old	20 (13.3)		16 (10.4)	
75-84 years old	51 (34.0)	0.685	51 (33.1)	
≥ 85 years old	79 (52.7)		87 (56.5)	**0.004**
Sex				
Male	41 (27.3)		42 (27.3)	
Female	109 (72.7)	0.368	112 (72.7)	0.279
Dementia	122(81.3)	0.900	128(83.1)	0.0**34**
FRAIL score*	4 (0-5)	0.177	4 (0-5)	**0.002**'
Frailty				
Normal	6 (4.0)		3 (1.9)	
Pre-frail	18 (12.0)		16 (10.4)	
Frail	126 (84.0)	0.584	135 (87.7)	**0.001**
SARC-F group				
Normal	24 (16.0)		19 (12.3)	
Risk of Sarcopenia	126 (84.0)	0.131	135 (87.7)	**0.011**
Fuctionality- ADL				
Independent	26 (17.3)		20 (13.0)	
Semi independent	35 (23.3)		35 (22.7)	
Dependent	89 (59.4)	0.195	99 (64.3)	**0.001**
Fuctionality – IADL				
Independent	5 (3.3)		4 (2.6)	
Semi independent	23 (15.3)		19 (12.3)	
Dependent	122 (81.4)	0.217	131 (85.1)	**0.032**
Malnutrition Status				
Normal	31 (20.7)		24 (15.6)	
Malnutrition risk	73 (48.7)		78 (50.6)	
Malnutrition	46 (30.6)	0.327	52 (33.8)	0.001
Number of drugs *	10 (4-19)	**<0.001**	10 (2-19)	0.723
Polypharmacy status				
Polypharmacy (>5)	147 (98.0)	**<0.001**	142 (92.8)	0.718
Hyperpolypharmacy (>10)				
Yes	85 (56.7)	**<0.001**	81 (52.6)	0.418
Incontinence	131 (87.3)	0.698	138 (89.6)	**0.030**
Mortality	20 (13.3)	0.055	25 (16.2)	0.219
Hosptalization	37 (24.7)	0.865	39 (25.3)	0.733

Notes: ADL: Activities of Daily Living;IADL : Instrumental Activities of Daily Living; MNA-SF:Mini Nutritional Assesment- Short Form; TIME: Turkish Inappropriate Medication use in the Elderly *Numeric variables were presented as median (minimum-maximum) or mean±SD.

Table 4. Multivarate analysis of factors affecting TIME to START criteria

	Model 1	
	HR (CI)	p value
Age	1.125 (1.00-1.27)	0.051
Frailty	35.95(1.29-1002.11)	0.035
Dementia	2.53 (0.39-16.50)	0.333
Sex	0.18(0.02-1.97)	0.158
Malnutrition	6.34 (0.55-72.89)	0.139

Tablo 6

Table 6. Cox regression model for mortality

	Model 1		Model 2	
	HR (CI)	p value	HR (CI)	p value
Age	1.01 (0.95-1.06)	853	1.01 (0.95-1.06)	0.709
Sex (male:female)	0.74 (0.30-1.83)	0.516	0.74 (0.30-1.83)	141
TIMEto STOP	0.47 (0.17-1.28)	0.137	0.47 (0.17-1.28)	159
FRAIL	2.85 (1.45-5.61)	**0.002**	1.93(0,86-4,34)	0.110
Fear of falling			3,61(1,07-12,18)	0.0**39**
Dysphagia			3,85(1,49-9,99)	0.00**6**

Notes. Model 1: adjusted by sex, age, and TIME to STOP (based on TIME criteria) and Frailty; Model 2: adds fear of falling and Dysphagia to Model 1; HR: Hazard Ratio, TIME: Turkish Inappropriate Medication use in the Elderly, CI: Confidence Interval

Tablo 2

Tablo 5

Table 5. Characteristics of participants and univariate analysis of survivors and nonsurvivors.

	Survivors n=140, n (%)	Non-survivors n=25, n (%)	p value		Survivors n=140, n (%)	Non-survivors n=25, n (%)	p value
Age*	84.3 ± 7.8	85.2 ± 9.0	623	Number of drugs *	10 (2-19)	8 (2-15)	180
Sex							
Male	40 (28.6)	7 (28.0)		Polypharmacy status			
Female	100 (71.4)	18 (72.0)	0.953	Polypharmacy (>5)	133 (95.0)	21 (84.0)	0.395
Smoking							
Never Smoker	102 (72.9)	18 (72.0)					
Smoker	7 (5.0)	0 (0.0)	0.457				
Former Smoker	31 (22.1)	7 (28.0)		Pain Status	35 (25.0)	5 (20.0)	776
BMI (kg/cm²) *	23.4 ± 3.7	21.9 ± 4.1	0.022'	Incontinence	120 (85.7)	25 (100.0)	0.046'
Number of Comorbities*	6 (2-14)	6 (2-10)	180	Insomnia	39 (27.9)	9 (36.0)	557
Comorbidities				Walking speed Slow (<0.8 m/sn)	44 (68.8)	5 (100.0)	0.311
CHF	15 (10.70)	7 (28.0)	0.019'				
Dementia	111 (79.3)	23(92.0)	0.171	Pressure Ulcer	13 (9.30)	9 (36.0)	0.001'
FRAIL score*	3 (0-5)	4 (3-5)	0.002'	History of Falling (in the last 1 year)	42 (30.0)	8 (32.0)	847
Frailty							
Normal	6 (4.3)	0 (0.0)					
Pre-frail	19 (13.6)	0 (0.0)					
Frail	115 (82.1)	25 (100.0)	0.072	Fear of Falling	85 (60.7)	22 (88.0)	0.016'
SARC-F group							
Normal	24 (17.1)	0 (0.0)					
Risk of Sarcopenia	116 (82.9)	25 (100.0)	0.027'	Covid Vaccination status No Vaccination	25 (17.9)	17 (68.0)	<0.001'
Fuctionality- ADL							
Independent	26 (18.6)	0 (0.0)					
Semi independent	37 (26.4)	1 (4.0)		Hospitalization			
Dependent	77 (55.0)	24 (96.0)	<0.001'	Yes	27 (19.3)	14 (56.0)	<0.001'
Fuctionality – IADL							
Independent	5 (3.6)	0 (0.0)					
Semi independent	23 (16.4)	0 (0.0)					
Dependent	112 (80.0)	25 (100.0)	0.047'	TIME to STOP	130 (92.9)	20 (80.0)	55
Malnutrition Status							
Normal	30 (21.4)	2 (8.0)					
Malnutrition risk	71 (50.7)	9 (36.0)					
Malnutrition	39 (27.9)	14 (56.0)	0.017'	TIME to START	129 (92.1)	25 (100.0)	219
Dysphagia (EAT-10> 3)							
Normal	96 (68.6)	7 (28.0)					
Risk of Dysphagia	44 (31.4)	18 (72.0)	<0.001'	SBP	120 (100-180)	120 (100-140)	661
Feeding Methods							
Oral	110 (78.6)	10 (40.0)					
NG	2 (1.4)	5 (20.0)					
PEG	27 (19.3)	10 (40.0)					
Enteral + Parenteral	1 (0.7)	0 (0.0)	<0.001'	DBP	70 (56-100)	70 (57-100)	468
				Heart rate	75 (61-138)	79 (65-112)	118

Notes: ADL: Activities of Daily Living; BMI: Body Mass Index; BPH:Benign Prostatic Hyperplasia; CAD: Coronary Artery Disease; CHF: Congestive Heart Failure; CKD: Chronic Kidney Disease; COPD: Chronic Obstructive Pulmonary Disease; DBP:Diastolic Blood Pressure ; DM: Diabetes Mellitus; HT: Hypertension; IADL : Instrumental Activities of Daily Living; MNA-SF:Mini Nutritional Assesment- Short Form;NG:Nasagastric tube; PEG: Percutaneous Enteroscopic Gastrostomy; PIM: Potential Inappropriate Medications; SBP:Systolic Blood Pressure ; TIME: Turkish Inappropriate Medication use in the Elderly. *Numeric variables were presented as median (minimum-maximum) or mean±SD. †PIM was determined based on TIME criteria.

Nutrition

SS-48

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THE INTERNATIONAL VALIDATION STUDY OF "OPTIMAL USE OF ORAL NUTRITIONAL SUPPLEMENTS (ONS) IN MEDICAL NUTRITION THERAPY-KEPAN GUIDELINE"

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Rationale: Early detection and treatment of malnutrition could reduce morbidity and mortality. Therefore, nutritional therapy should be considered as a part of medical treatment, and all patients should be evaluated in terms of their nutritional status. (1) A report that is short, clear and having clear-cut recommendations that will guide the primary health care professionals in indications, choice, practical application, follow-up and stopping ONS would facilitate the application and success of medical nutrition therapy

In this context, the Turkish Society for Enteral and Parenteral Nutrition(KEPAN) published a guide in 2022 regarding the clinical use of Oral Nutritional Supplements(ONS). This guide consists of 22 questions,recommendations, and comments.(1). The details that perform basis to those Recommendations are given in their Commentary sections and we have more than 361 References on which these Recommendations are built.

As the report was prepared nationally, an international Delphi validation study involving 22 academicians across the World has been performed (represented countries are: Brasil, Canada, Germany, Holland, Hong Kong, Italy, Japan, Poland, Portugal, Spain, Sweden, Taiwan). We suggest that this report may have a significant impact in ideal use of ONS in the context of medical nutrition therapy while managing the clinicians' everyday patients.

Methods: The study was performed between February 2023-March 2024. Delphi rounds were conducted by 22 experts. They were asked to indicate to what extent they agreed or disagreed with each criterion.We used a five-point Likert scale from 1(strongly disagree) to 5(strongly agree) and an online software program(SurveyMonkey®) to grade the level of agreement. Criteria with a median value of 4-5 and a 25th centile value of 4-5 were accepted,and criteria with a median value<4 were rejected. Those with a median value of 4-5 but a 25th centile value<4 were retained, to be assessed in the following round. Whether there is any additional comments, they will be given anonymously as experts' opinion in the fulltext. The initial list of Delphi criteria comprised 22 criterion.

Results: After the 1st Delphi round; of 22 criteria, 17 were accepted(Table-1). At some points, experts' disagreements and contributions led to improvements and minor changes in the 5 remaining criteria that were left to the 2nd round. Finally, all criteria were accepted.

Conclusion: We developed the international validation study, based on a Delphi process in order to provide clinicians a useful, practical guide for the optimal use of ONS and promote it in their daily practice.

Keywords: oral nutritional supplement, ONS

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Table 1.

Analysis of the 1st Delphi Round

	Question	Median	25th centile	IQR	Pass/Fail
1	In which situations should the use of oral nutritional supplements be considered?	5.0	5.0	.00	Pass
2	How should ONS be stored? How long should the opened products be consumed?	4.0	4.0	1.00	Pass
3	How many times a day and at what times of the day should ONS be used?	4.0	4.0	1.00	Pass
4*	How should problems with taste and flavor be managed in the use of oral nutritional supplements?	5.0	3.75	1.00	Fail
5	How and how often should patients using ONS be monitored for nutritional adequacy?	4.0	4.0	1.50	Pass
6	When should these products be discontinued in patients using ONS?	4.0	4.0	0.50	Pass
7	Should routine vitamin or trace element supplementation be given to patients on ONS?	4.5	4.0	1.0	Pass
8	Which patients should be planned for ONS at discharge?	5.0	4.0	1.0	Pass
9	How should the use of ONS be managed in diabetic patients?	4.0	4.0	1.0	Pass
10	What are the points to be considered when using ONS in patients with concomitant diseases?	5.0	4.0	1.0	Pass
11*	What are the points to be considered when using ONS in patients with chronic kidney disease?	4.0	3.75	1.50	Fail
12*	What are the points to be considered when using ONS in patients with chronic liver disease?	4.0	3.0	1.0	Fail
13	What are the points to be considered when using ONS in patients with chronic heart failure?	4.0	4.0	1.0	Pass
14	What are the points to be considered when using ONS in patients with chronic obstructive pulmonary disease?	4.0	4.0	1.0	Pass
15	What are the points to be considered when using ONS in patients with neurological disease?	4.0	4.0	1.0	Pass
16	What are the points to be considered when using ONS in patients with pressure sores?	4.5	4.0	1.0	Pass
17	What are the points to be considered in the use of ONS in patients with suspected swallowing disorder?	5.0	4.0	1.0	Pass
18	In which situations and how should thickening products be used?	4.0	4.0	1.0	Pass
19*	Are there differences in the use of ONS in older individuals who need nutritional therapy?	4.0	3.75	1.5	Fail
20	What is the place of special products in the use of ONS in cancer patients?	4.0	4.0	.00	Pass
21*	Should the use of ONS be recommended to older patients undergoing surgical treatment for hip fracture?	4.0	3.0	2.0	Fail
22	What are the common problems in using ONS?	4.0	4.0	1.0	Pass

*: Questions that remained to the 2nd Delphi round

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Maintenance Models

SS-50

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CARE FOR CARE PROJECT: DUTCH EXPERIENCE

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The aim of the study is to share information about the care models learned during the visit to the Netherlands as part of the Erasmus+ project 'Care for Care Project' aiming to enhance cultural sensitivity in aged care services between Türkiye and the Netherlands. This will help healthcare professionals migrating from Türkiye to the Netherlands integrate better and provide high-quality services to Dutch patients and aged individuals seeking treatment in Türkiye. Visits were conducted to different care centers in Netherlands between April 21st and 25th, 2024.

Herbergier Almelo, is a care model that has no example of application in Türkiye. This type of care focuses on protecting and increasing the independence of aged individuals living in an institution by considering their individuality. While meeting the needs of the person, it also allows the person to socialize and to be kept under social and health supervision that is not too strict.

Hofkamp ZorgAccent Almelo reveals the differences in practice between the two countries in institutional care. In the Netherlands, people in institutional care have more freedom. Visiting hours are more flexible, and the standards and rules to be followed are less strict. In Türkiye, the Ministry of Family and Social Services has strict expectations from care institutions.

Within the scope of the Participate in Healthcare activity, home care practices in the Netherlands were observed. Compared to Türkiye, the scope of the services provided in the Netherlands is wider and as a result of the assessment of the health status of the individual, services can be provided to every individual in need of care. In Türkiye, public services are limited to sick individuals with high dependency levels. Private services are shaped according to the individual's demand and ability to pay.

During the visit to the Technologie & Zorg Academie (TZA), we analyzed the technologies used in the field of care. The technological products developed can be categorized into two different categories. In the first category, there are products that aim to monitor health outcomes or support health services, such as GPS tracking wristwatches, thermoses that measure the amount of fluid intake by the patient and warn in case of low intake, and medication monitoring devices. In the second category, there are products that appeal to the human aspects and emotions of the individual in need of care, increasing their comfort, such as a pillow that provides emotional support and breathes, VR glasses that help reduce the patient's fear and anxiety during procedures, and a pillow that gives the sound of the sea and seagulls.

We also visited a family medicine center. Unlike Türkiye, family medicine is compulsory in the Netherlands, and it is not possible to apply directly to a hospital without a referral from a family doctor. The family physician is responsible for the health services of all individuals of all ages registered with them. They work in coordination with home health teams in the follow-up of aged individuals.

In conclusion, there are differences between countries in terms of the scope, delivery, and financing of care. This difference should be taken into account especially in the mobility of healthcare workers and patients/aged individuals, and service provision should be shaped according to needs.

Keywords: Aging, Care, Culture, Health, Model.

Frailty

SS-52

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FRAILTY AND ASSOCIATED FACTORS IN ELDERLY PATIENTS WITH DEPRESSION

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Background: Depression is the most common psychiatric disorder in the elderly and is associated with increased morbidity and mortality. Treatment of depression in the elderly can be more difficult than in younger patients; resistance to treatment, high recurrence rates, and chronicity of depression can be seen. Treatment difficulties and negative health outcomes in geriatric depression are particularly seen in frail elderly patients. This study aimed to investigate the factors affecting frailty in elderly patients with depression.

Methods: In this prospective croSS-sectional study, patients aged ≥ 65 years with depression who applied to the outpatient clinics of the Geriatric Medicine Department of our University were included. Besides demographic, clinical and laboratory data, frailty risk factors were recorded. Anthropometric measurements and comprehensive geriatric assessments of the participants were performed. Frailty was assessed using the FRAIL questionnaire, and depression was assessed using the Geriatric Depression Scale Short Form (GDS-SF).

Results: A total of 64 patients with a median age of 69 (min–max; 65–87) and 40 (62.5%) female were included in the study. Seven (10.9%) of the patients were assessed as robust, 30 (45.9%) as pre-frail and 27 (42.2%) as frail. No statistically significant relationship was found between frailty and age, gender, education status, occupation, area of residence and income level. Visual problems (p=0.032) and fear of falling (p=0.013) were more common in frail elderly patients. Patients without frailty had higher life satisfaction (p=0.028) and felt younger (p=0.007). When the laboratory data of the patients were evaluated according to frailty status, it was found that prealbumin levels were higher in robust patients (p=0.032). SARC-F score was found to increase with increasing frailty level (p=0.001).

Conclusion: Early diagnosis and treatment of frailty in elderly patients with depression positively affects the patient's quality of life, independence and functionality, and the negative course of comorbid diseases, especially depression, can be prevented.

Keywords: Elderly, depression, frailty

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Innovative Approaches

SS-53

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YOUTH STRUCTURING MODEL FOR ALZHEIMER'S

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The Youth Structuring Model for Alzheimer's was established on October 27, 2020 under the umbrella of the Young Volunteers of the Izmir Branch of the Alzheimer's Association of Turkey under the chairmanship of İdil Seçil and Zeynep İlaslan. The Youth Structuring Model for Alzheimer's is a social responsibility group that started with eight people and three teams and reached seventy people and five teams. It was established with the belief that high school students can make a difference and awareness in the world. The Youth for Alzheimer's group aims to reach larger audiences through social media and to draw attention to the association's work on Alzheimer's, to support patients and their relatives with Alzheimer's while maintaining active participation in these areas. In the future, it aims to keep the innovative and active structure, create more projects, and spread the idea of Youth for Alzheimer's.

As Youth for Alzheimer's, many planned activities have been carried out to raise awareness of both the community and the community and to make the voices of individuals with Alzheimer's heard. Thanks to these activities, the community's contact with individuals has increased and the target audience has continued to grow. The first event of the Youth for Alzheimer's group was held on September 25, 2021, during the march from Göztepe to Gündoğdu Square, the voices of patients and their relatives were voiced with banners. In addition, with this walk, 762 thousand steps were taken together and these steps were donated to the Alzheimer's Association of Turkey. One of the most striking activities of Youth for Alzheimer's is the gathering in front of Konak Pier and a walk to the clock tower on September 21, World Alzheimer's Awareness Day, which has been held since 2021. After the march that increases visual perception and raises awareness with posters and banners, the youth group and Alzheimer's association members illuminate the Izmir Clock Tower with purple, the symbol of Alzheimer's disease. This day is celebrated by raising awareness by singing songs together with the members of the association, young people, and volunteers. Karşıyaka Day Life Center, which was opened on September 21, World Alzheimer's Awareness Day in 2022, was also combined with this meaningful day, and young people witnessed this precious moment. As Young Volunteers, we distributed brochures to the visitors at the opening conducted a survey, and contributed to the development of awareness about Alzheimer's disease and this issue. One of the traditional activities of the Youth Model for Alzheimer's is that at the end of each semester, certificates are given to volunteers who have contributed to the Alzheimer's Association and the elderly throughout the year, and this enjoyable event is celebrated with the elderly. The first certificate ceremony was held at Ege University and was celebrated in a very remarkable atmosphere with great participation and support. Since the day it was founded, Youth for Alzheimer's has been meeting with patients' relatives and other volunteers every Tuesday between 14.00-16.00 at the Izmir Alzheimer's Association building. In addition to playing card games and intelligence games that increase cognitive functions with patients and their relatives, answers to questions are sought from experts on various subjects.

Keywords: Alzheimer, volunteer, youth

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https://www.instagram.com/alzheimericingenclik/

Gerontology

SS-54

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THE DIGITAL GRANDCHILD PROJECT

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The Digital Grandchild Project aims to facilitate socialization for Alzheimer's patients and relatives affected by COVID-19 through video calls on the online platform of the Alzheimer's Association initiated by the Youth for Alzheimer's community in 2020. One of the side goals of the Digital Grandchild project is to bring together adults and young people in society and to "Young people do not get along well with the elderly." It is to break some prejudices, such as "old people and young people have nothing in common". This project started with the students of Izmir Atatürk Vocational High School who made regular visits to the association and then continued with the music support of Izmir Yamanlar Leo Group. The founders of the Youth for Alzheimer's group announced the Digital Grandchild Project within their own group and ensured the growth of the project. This project was approved by the Alzheimer Association of Turkey to be disseminated throughout the country and then shared in Alzheimer's Europe. Anadolu Agency reported on the Digital Torun Project and was awarded the Suna Kıraç Unrequited Service Award by Izmir Tülay Aktaş Güçbirligi in May 2020.

In January 2021, the number of young volunteers, consisting of approximately 30 people, increased to 60 in the Digital Grandchild Project during the 2023-2024 period. This project, strengthens social ties and intergenerational communication, as well as prevents them from becoming lonely and isolated from society by talking to the elderly who are members of the Alzheimer's Association or volunteers in Nursing Homes at least once a week and talking about their lives, dreams, problems and wishes, is a social responsibility project that provides high motivation for both the elderly and young people. The project aims not to leave the young and the elderly alone on special days such as holidays, and Mother's / Father's day after the pandemic and continues to serve this purpose. On Tuesdays, young and old people visit the Izmir office of the Alzheimer's Association. Card games offer the chance to become "grandchildren" and "elders" for a short time by doing activities that support cognitive functions.

By taking a photo from the moments they visit or talk to young people every week and sharing these photos on their social media accounts every week, it tries to expand the pool of new young volunteers and to prevent Alzheimer's patients and their relatives from being isolated from society thanks to this project. The young people who communicated with the elderly made it easier to evaluate the necessary arrangements, follow-up frequency, needs, and process management by recording how they communicated with the elderly after the interview, the content of the communication, and the reasons for the elderly who did not want to communicate on the forms. As part of the September 21 World Alzheimer's Day activities, the digital grandchild project also held a panel on the daytime Alzheimer's walk, "Volunteering and Generation Z" and "Being a Relative of Alzheimer's Patients and Advice to Youth". In addition, new volunteers are given training on how to communicate with the elderly and what they should pay attention to every semester.

In the future, it aims to introduce more elderly and young people and to raise awareness about Alzheimer's patients and the elderly in the society by increasing the participation of the elderly in social life.

Keywords: grandchild, Alzheimer's disease, elderly

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Chronic Diseases

SS-55

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THE FACTORS RELATED TO LOW DIASTOLIC BLOOD PRESSURE (<65 MMHG) IN OLDER ADULTS LIVING WITH HYPERTENSION (≥80 YEARS)

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Introduction: The management of hypertension in older patients, ≥80 years old, can be challenging. The systolic (SBP) and diastolic blood pressure (DBP) thresholds should be individualized. On the other hand, there is no certainty for the lower limits. These patients may have to struggle with hypotension and its consequences. Some of the reasons are having difficulties in reaching health services, differences in blood pressure targets, not checking blood pressure in clinical practice routinely, malnutrition, frailty, sarcopenia, etc. This study aimed to find out the relationship between low diastolic blood pressure (<65mmHg) and components of comprehensive geriatric assessment in older adults living with hypertension (≥80 years).

Method: The 349 patients, ≥80 years old, who were examined in a geriatric outpatient clinic or in their homes were included. After excluding patients with missing values, 266 patients were included in analysis. Living conditions, education level, marital status, chronic diseases, medications, and blood pressure were recorded for all. Mini-Nutritional Assessment Short Form (MNA-SF), SARC-F, Clinical Frailty Scale (CFS), Mini-Mental Status Examination (MMSE), Yesavage Geriatric Depression Scale: Short Form (GDS-15), Activities of daily living (ADL), and Instrumental activities of daily living (IADL) were performed. Patients were divided into two groups according to diastolic blood pressure (<65 mmHg or not). Mann-Whitney U test, independent t-test, and chi-squared test were used when appropriate for group comparisons. A binary logistic regression model was used.

Results: A total of 266 patients with hypertension were included in the final analysis. The mean (±SD) age was 84.6 ±3.9 (min 80, max 100), with a 63.9% female rate. The rates of low diastolic and systolic pressure were 20.7% and 24.4%, respectively. The baseline characteristics of patients are given in Table 1. The age and CFS scores were higher in the low DBP group, whereas body mass index (BMI), waist circumference, calf circumference (CC), ADL, IADL, and MNA-SF scores were lower. The comparison of the two groups is given in Table 2. Multivariable logistic regression model included age, sex, BMI, CC, mid-arm circumference, ADL, IADL, CFS, SARC-F, and MNA-SF. Age and MNA-SF scores were independently associated with low DBP (Table 3).

Conclusion: The management of hypertension in older patients, ≥80 years old, is highly crucial. The rate of low DBP is higher in this group. Although higher age and lower MNA-SF scores were independently associated with low DBS; patients with low DBP tend to have dependency, sarcopenia, malnutrition, and frailty.

Keywords: older, hypertension, octogenarian, frailty, risk of malnutrition, low blood pressure

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Table 1. Baseline characteristics of patients

Variables	*n:266*
Age, mean ± SD	84.6± 3.9
Sex, female,n(%)	170 (63.9)
Systolic blood pressure, mean±SD	135.0±21.7
Diastolic blood pressure, mean±SD	74.6±13.8
Living alone, n(%)	62(23.5)
Illiterate, n(%)	60(22.9)
Married, n(%)	104(39.2)
HT, n(%)	223(83.8)
DM, n(%)	78(29.3)
Hypotiroidism, n(%)	28(10.5)
Dementia, n(%)	34(12.8)
Depression, n(%)	22(8.3)
Number of medication, median(IQR)	5 (4-7)

Table 2. Comparison of variables between lower and higher diastolic blood pressure groups

Variables	*Diastolic blood pressure ≥65 mmHg*	*Diastolic blood pressure <65 mmHg*	*p value*
Age	84.2±3.7	86.3±4.3	<0.001
Sex, female	136(64.5)	34(61.8)	0.717
Body mass index	28.8±6.0	26.7±5.3	0.019
Waist circumference	99.5±13.7	95.3±15.1	0.036
Hip circumference	108.8±16.4	105.7±15.2	0.098
Mid-arm circumference	27.8±5.0	26.3±3.8	0.059
Calf circumference	34.2±5.6	32.4±5.5	0.045
ADL	5(4-6)	5(3-6)	0.041
IADL	8(5-8)	5(2-8)	0.001
Clinical Frailty Scale	5(3-6)	6(4-6)	0.020
SARC-F	3(1-6)	4(1-7)	0.149
MNA-SF	11 (10-13)	10(8-12)	0.004
MMSE	24(20-26)	23(19-26)	0.692
GDS-15	3(2-6)	4.5(2-7)	0.194

Table 3. Multivariable logistic regression analysis

Variables	*OR 95%CI*	*p value*
Age	1.145(1.051-1.248)	0.002
MNA-SF	0.829 (0.724-0.948)	0.006

Frailty

SS-56

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FRAILTY SCORE OUTPERFORMS OTHER RISK INDEXES IN PREDICTING 6-MONTH MORTALITY FOR HIP-FRACTURE PATIENTS: PRELIMINARY FINDINGS

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Introduction: Hip fractures are a significant health concern, especially in older adults, due to their severe impact on mobility, independence, and overall health. They often lead to prolonged hospital stays, increased risk of complications like infections, and a higher mortality rate. Risk models for hip fracture mortality in older adults are crucial tools in healthcare, as they help predict outcomes and guide treatment decisions. In this study, we aimed to explore the predictive effect of the several risk models (American Society of Anesthesiologists -ASA-, Hip fracture of Estimator Mortality of Amsterdam-HEMA- and Nottingham Hip Fracture Scale-NHFS-) and compare the predictive ability of Clinical Frailty Scale (CFS) in 6-month mortality.

Material and Methods: Patients who were admitted to Orthopedics and Traumatology clinic and undergone to surgery with the hip fracture between the 01.01.2023-31.12.2023 were enrolled to the study. The demographic and clinical features of the patients were recorded from the files of the patients retrospectively. The survival status of the patients was also noted in the 6 months of the admission from the death registry system.

Results: The mean age of the study population was 79.3±8.1 and the 62.9% (n=44) of the whole study group was female. The mortality rate after 6 months was 41.4% (n=29). The baseline features of the study population are demonstrated in Table 1. The risk models, HEMA, ASA, NHFS was significantly higher in the exitus group than survival group ($p<0.05$), and CFS scores were also higher in exitus group than in survival group (5.0 [0.5] vs 4.0 [1.0], and $p<0.001$). The ROC analysis results showed that all risk models could predict 6th month mortality, with the highest AUC was CFS.

Conclusion: In conclusion, this study highlights the importance of using predictive risk models in assessing 6-month mortality among older adults with hip fractures, with CFS demonstrating the highest predictive accuracy, underscoring its value in clinical decision-making.

Keywords: hip fracture; mortality; clinical frailty scale

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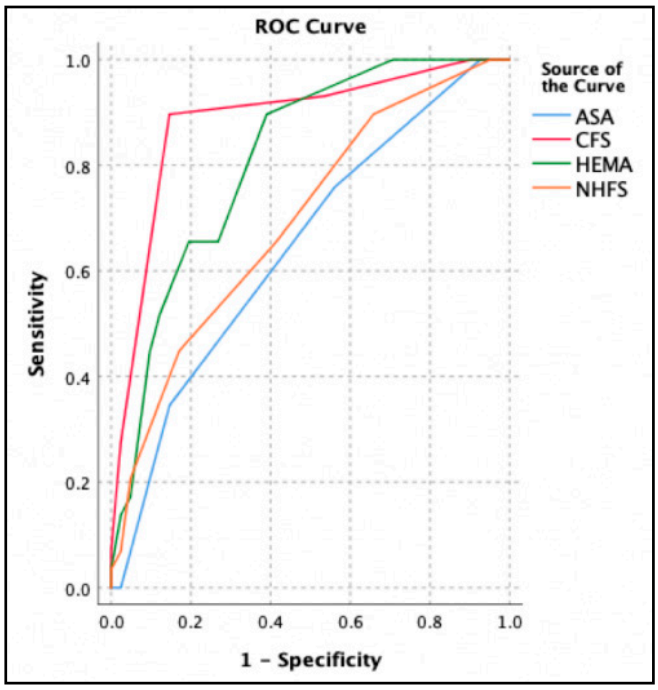

Figure 1. ROC Curves

Table 1. The baseline characteristics of the patients with hip fracture according to 6-month survival status

	Survived (n=41)	Exitus (n=29)	p
Age, years	76.9±7.5	81.6±7.8	0.002
Sex, female	26 (63.4)	18 (62.1)	0.91
Chronic Renal Disease	6 (14.6)	13 (44.8)	0.005
Chronic Heart Failure	2 (4.9)	3 (10.3)	0.64
Malignancy	5 (12.2)	4 (13.8)	0.85
Multimorbidity	16 (39.0)	14(48.3)	0.44
Malnutrition	7 (17.1)	18 (62.1)	<0.001
Dementia	6 (14.6)	14 (48.3)	0.003
Osteoporosis	11 (26.8)	4 (13.8)	0.24
Frailty, CFS	22 (53.7)	27 (93.1)	<0.001
Hospitalization, days	6.0 [4.5]	6.0 [19.5]	0.23
Vitamin D level	19.0 [16.2]	13.5 [15.1]	0.025

Table 2. Assessment of the risk models of the patients with hip fracture according to 6-month survival status

	Survived (n=41)	Exitus (n=29)	p
ASA	**3.0 [1.0]**	**3.0 [2.0]**	0.030
HEMA	2.5 [2.5]	4.5 [2.0]	<0.001
NHFS	4.0 [2.0]	5.0 [2.5]	0.005
CFS	4.0 [1.0]	5.0 [0.5]	<0.001

Table 3. The predictive ability of the risk models according to ROC analysis

	AUC	95% CI	P
ASA	0.645	0.514-0.775	0.030
HEMA	0.812	0.713-0.911	<0.001
NHFS	0.695	0.570-0.819	0.002
CFS	0.883	0.797-.0.969	<0.001

Frailty

SS-57

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SYSTEMIC INFLAMMATORY RESPONSE INDEX(SIRI) AND SYSTEMIC IMMUNE-INFLAMATION INDEX (SII) NEW BIOMARKERS IN FRAIL PATIENTS OVER 80 YEARS OLDER ADULT?

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Introduction: Frailty is a clinical condition characterized by an excessive vulnerability of the individual to endogenous and exogenous stressors. The pathogenesis of frailty and the role of inflammation are not fully understood. Therefore, in this study, we aimed to investigate the relationship between frailty and SIRI, SII in patients over 80 years of age.

Material and Method: Patients over the age of 80 who applied to the healthy aging clinic between 01.01.2024 and 01.08.2024 were included in our study. Patients were divided into 2 groups as prefrail and frail. Patient files were analysed retrospectively. Laboratory results were obtained from the hospital data system. Statistics were performed with IBM SPSS.18 program. P value was accepted as <0.05.

Results: A total of 131 patients, 97 of whom were female, were included in the study. The mean age of the patients was 84.4±4.4. The mean frail score was determined as 2.63±0.89. Patients were divided into 2 groups as prefrail and frail. There was no difference in terms of gender between the two groups. Age was significantly higher in the frail group (prefrail 83.08±3.5; frail 85.16±4.9 p=0.007). Laboratory results and inflammation markers of the groups are given in Table 1. Frail score was correlated with age, lymphocyte count, SIRI, SII, PLR, NLR and Hemoglobin. Correlation table is given in Table 2. Roc analysis was performed and cut-off values were given (Figure 1., Table 3.)

Conclusion: We suggest that SIRI, SII, NLR and PLR obtained from inexpensive and simple complete blood count can be predictive markers for the transition from prefrail to frailty.

Keywords: Aged, Inflammation, Biomarkers

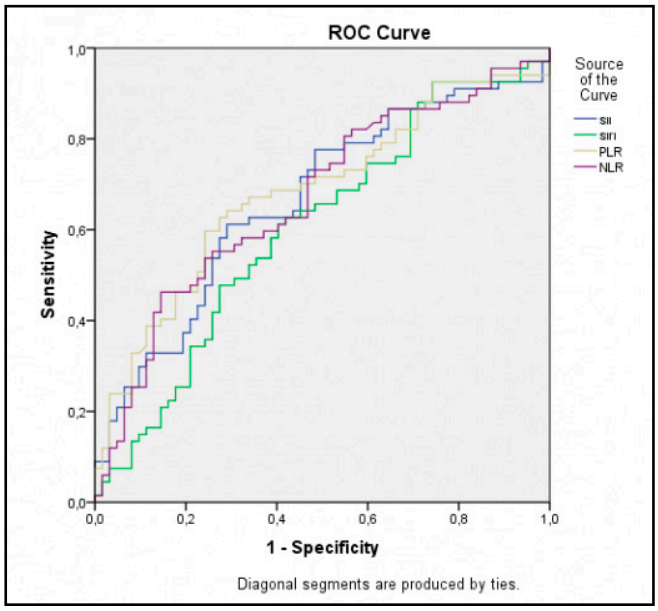

Figure 1. ROC curve of inflammation markers

Table 1. Laboratory results and inflammation markers

	PREFRAIL (n=63)	*FRAIL (n=68)*	*p value*
CRP (mg/L), median(min-max)	2,6(0,2-226)	3,4(0,3-145)	0,166
ESR (mm/hour), median(min-max)	21(3-103)	25(2-120)	0,215
Hemoglobin (g/dL), mean±SD	12,49±1,52	11,43±1,83	<0,001
Neutrophils (10^3/µL), median(min-max)	3,97(2,02-11,02)	4,29(2,04-14,11)	0,001
Monocytes (10^3/µL), median(min-max)	0,52(0,27-1,18)	0,45(0,23-1,31)	0,288
Lymphocytes (10^3/µL) median(min-max)	1,8(0,7-4,9)	1,5(0,6-13,4)	0,006
Platelet (10^3/µL), median(min-max)	211(132-429)	234,5(90-764)	0,117
High-density lipoprotein (mg/dL), mean±SD	55,08±15,23	52,17±14,42	0,227
SIRI median(min-max)	0,98(0,27-7,9)	1,37(0,05-15,5)	0,033
SII median(min-max)	456(127,26-1919)	639(44,8-3166,9)	0,215
MHR median(min-max)	9,3(3,8-27,8)	9,1(2,7-29,3)	0,966
PLR median(min-max)	111,5(61,02-311,4)	154,6(14,1-424,4)	<0,001
NLR median (min-max)	2,1(0,67-9,18)	2,9(0,24-14,8)	0,001

Table 2.

	Age	*Lymphocyte (10^3/µL)*	*Hemoglobin (g/dl)*	*NLR*	*PLR*	*SIRI*	*SII*
r	0,289	-0,318	-0,370	0,355	0,400	0,240	0,341
p values	<0,001	<0,001	<0,001	<0,001	<0,001	0,006	<0,001

Table 3. Cut-off values and sensitivity-specificity of inflammation markers

Risc Factor	*AUC(%95)*	*Cut off*	*p value*	*Sensitivity(%)*	*Specifity(%)*
NLR	0,668(0,575-0,762)	2,41	0,001	61	40
PLR	0,682(0,590-0,775)	129	<0,001	67	33
SIRI	0,603(0,505-0,702)	1,19	0,043	61	40
SII	0,661(0,571-0,758)	531,2	0,001	63	38

Surgical Diseases

SS-58

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SIX-MONTH MORTALITY AND COMPLICATIONS AFTER PERCUTANEOUS ENDOSCOPIC GASTROSTOMY IN THE ELDERLY

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Background: Percutaneous endoscopic gastrostomy (PEG) has become the modality of choice for providing enteral access to patients who require long-term enteral nutrition. Although generally considered safe, PEG tube placement can be associated with many potential complications. This study aimed to investigate the complications and factors associated with 6-month mortality after PEG in elderly patients.

Methods: In this prospective croSS-sectional study, patients aged ≥65 years who underwent PEG tube placement between July 2023 and July 2024 in the General Surgery and Gastroenterology clinics of our university were included. Demographic characteristics, chronic diseases, medications, indications for PEG placement, laboratory values before PEG, time between hospitalization and PEG placement, minor and major complications developing in the early and late periods after PEG, duration of hospitalization, type of discharge and 6-month survival status were recorded.

Results: A total of 64 patients with a median age of 74.5 (65–81) and 35 (54.7%) males were included in the study. No mortality was perceived due to the PEG tube insertion. Mortality occurred in 17 patients (26.6%) within 6 months. No statistically significant relationship was found between age, gender, education status, living together, number of diseases, chronic comorbid diseases, number of medications used, and 6-month mortality. The most common indications were neurological diseases (n=35, 54.6%) and malignancy (n=16, 25.0%). The most common neurological disease was cerebral infarction (n=20; 31.2%), and the most common malignancy was head and neck tumor (n=8, 12.5%). No early major complications were detected. No early major complication was detected. The most common early minor complication was periostomal leakage (n=6, 9.4%) and the most common late complication was disruption of the gastrostomy site (enlargement of tract diameter or tissue disruption) (n=8, 12.5%). 6-month mortality was found higher in patients with a long time between hospitalization and PEG placement (p=0.046). No relationship was found between the indications for PEG placement and early-late complications and 6-month mortality. When laboratory data were evaluated, CRP (p=0.004), AST (p=0.013), GGT (p=0.001), ferritin (p=0.004), INR (p=0.002), aPTT (p=0.026), procalcitonin (p=0.002) were

significantly higher in patients with mortality; UIBC (p=0.013), albumin (p=0.001) and prealbumin (p=0.021) were significantly lower.

Conclusion: The increased risk of death in patients with a long time between hospitalization and PEG placement suggests that patients could benefit from earlier referral for PEG. PEG is an effective and safe procedure with a low complication rate for enteral nutrition in geriatric patients.

Keywords: Elderly, mortality, percutaneous endoscopic gastrostomy, complication, PEG

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Sarcopenia

SS-59

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A NEW BIOMARKER FOR SARCOPENIA: THE SYSTEMIC IMMUNE-INFLAMMATION INDEX

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Background: Chronic inflammation is increasingly recognized as a crucial contributor to sarcopenia pathogenesis, but accurate diagnosis remains a challenge. To address this gap, our study aims to investigate the relationship between sarcopenia and the Systemic Immune-Inflammation Index (SII), a comprehensive indicator of inflammation.

Methods: This croSS-sectional study enrolled 632 patients. All participants underwent a comprehensive geriatric assessment. Sarcopenia was assessed through the evaluation of handgrip strength and calf circumference. To determine the SII, we used the formula: Platelet count (109/mm^3)×Neutrophil count (109/mm^3) / Lymphocyte count (109/mm+).

Results: The average age of the participants was 74.8±6.4; 62.3% (n=394) were female, and 15.2% (n=96) were sarcopenic. Sarcopenic patients showed a higher median SII score than the non-sarcopenic group (p<0.001). Multivariate logistic regression analysis revealed that the SII score was significantly and independently associated with sarcopenia even after adjusting for potential confounding factors (β=1.002, 95% CI=1.001-1.003, p<0.001). The area under the curve (AUC) of SII for sarcopenia was 0.623 (95% confidence interval [CI], 0.58-0.66; p<0.001). The ROC analysis identified the optimal cut-off for SII in predicting sarcopenia as >765. At this threshold, the negative predictive values were determined to be 88.1%, with a specificity of 88%.

Conclusion: SII may be a novel, simple, and easily measured biomarker that can be used to diagnose sarcopenia.

Keywords: systemic immune-inflammation index, sarcopenia, inflammation

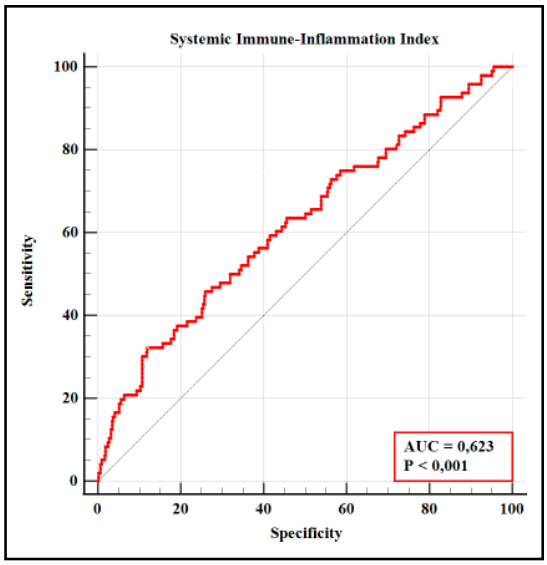

Figure 1. ROC curve of Systemic Immune-Inflammation Index (SII) for sarcopenia

Table 1. Demographic characteristics, comorbidities, and laboratory results with comprehensive geriatric assessments, categorized by sarcopenia status

	Total (n=632)	*Non sarcopenic (n=536)*	*Sarcopenic (n=96)*	*p*
Age, mean (SD)	74.8 (6.4)	74.2 (6.1)	78.2 (6.6)	<0.001
Female, n(%)	394 (62.3)	334 (62.3)	60 (62.5)	0.97
Diabetes Mellitus, n (%)	197 (31.2)	166 (31)	31 (32.3)	0.79
Hypertension, n (%)	433 (68.5)	367 (68.5)	66 (68.8)	0.95
Atherosclerotic heart disease, n (%)	124 (19.6)	108 (20.1)	16 (16.7)	0.42
BMI, kg/m2, mean (SD)	28.7 (4.9)	29.5 (4.8)	24.4 (3.7)	<0.001
Calf circumference, cm, mean (SD)	36.1 (3.77)	37.1 (3.17)	30.7 (1.7)	<0.001
Handgrip strength, kg, mean (SD)	21.7 (7.6)	22.3 (7.7)	18 (6)	<0.001
Gait Speed, m/s, mean (SD)	1.01 (0.31)	1.02 (0.31)	0.91 (0.34)	0.005
ADL, median(min-max)	6 (0-6)	6 (0-6)	6 (1-6)	0.019
IADL, median(min-max)	8 (0-8)	8 (1-8)	8 (0-8)	0.001
MNA-SF, median(min-max)	13 (4-14)	13 (5-14)	11 (4-14)	<0.001
SMMSE, median(min-max)	28 (15-30)	28 (15-30)	27 (15-30)	0.004
GDS, median(min-max)	2 (0-15)	2 (0-15)	2 (1-15)	0.025
Sedimentation, mm/h median (min-max)	18 (3-49)	18 (3-49)	19 (4-49)	0.34
C- reactive protein, mg/L median (min-max)	3.1 (0.2-9.9)	3.1 (1-9.9)	2.9 (0.2-9.3)	0.18
Neutrophil (109/uL), median (min-max)	3.9 (1.5-9.6)	3.9 (1.5-9.6)	4.2 (1.9-9)	0.022
Lymphocytes (109/uL), median (min-max)	1.8 (1.0-4.7)	1.9 (1-4.7)	1.7 (1-4.6)	0.007
Platelet (109/uL), median (min-max)	235 (116-434)	234 (116-434)	240 (137-405)	0.19
SII, median(min-max)	486.5 (154.8-1729)	468 (154.8-1729)	594.6 (225-1593)	<0.001

Table 2. Association between systemic immune inflammation index, other factors, and sarcopenia according to unadjusted and adjusted logistic regression models

Models	Independent Variables	OR	95% CI	p-value
Unadjusted Model	SII	1.002	1.001-1.003	<0.001
Adjusted Model 1	SII	1.002	1.001-1.003	<0.001
	Age	1.096	1.06-1.13	<0.001
Adjusted Model 2	SII	1.002	1.001-1.003	<0.001
	Age	1.085	1.043-1.13	<0.001
	MNA-SF	0.81	0.73-0.91	<0.001

Model 1: adjusted for age, gender; Model 2: adjusted for age, gender, mini nutritional assessment score, daily living activities scores, geriatric depression score, mini-mental state examination score, and comorbidities (diabetes mellitus, hypertension, atherosclerotic heart disease, and dementia

Table 3. ROC curve analysis of Systemic Immune-Inflammation Index (SII) for sarcopenia

	Cut-off	AUC	SE	p	95% CI	Sensitivity	Specificity	+PV	-PV
SII	>765	0.623	0.03	<0.001	0.58-0.66	32.3	88	32.3	88.1

SII: Systemic Immune-Inflammation Index, AUC: Area Under Curve, SE: Standard Error, +PV: Positive Predictive Value, -PV: Negative Predictive Value

Frailty

SS-60

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EXPLORING THE POTENTIAL OF THE SARC-CALF QUESTIONNAIRE AS A PREDICTIVE TOOL FOR FRAILTY

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Background: Frailty and sarcopenia exhibit overlapping physical characteristics, as described by the Fried Frailty Phenotype. Although the SARC-CalF questionnaire is widely utilized for sarcopenia screening, as recommended by the EWGSOP-2 guidelines, its potential for identifying frailty has not been thoroughly investigated. This study aims to evaluate the SARC-CalF as a simple and objective tool for frailty assessment in older adults.

Methods: This croSS-sectional study included 337 patients aged 60 years and older. Frailty was assessed using the Fried Frailty Phenotype (FFP). Demographic data and SARC-CalF questionnaire scores were collected. All participants underwent comprehensive geriatric assessment.. Exclusions were made for individuals under 65, unwilling to participate, those with moderate to severe dementia or communication issues that impeded reliable responses, and those with edema that interfered with accurate calf circumference measurement. Receiver operating characteristic (ROC) curve analysis was employed to determine optimal SARC-CalF cut-off points for detecting frailty, with the area under the curve (AUC) and 95% confidence intervals (CI) calculated.

Results: The mean age of the participants was 75.27±6.6, with 64% (n=216) being women. Frailty was observed in 15.4 % (n=52) of the study population. Frail patients exhibited a higher SARC-CalF score than the non-frail group (p<0.001). The area under the curve (AUC) of the SARC-CalF score for frailty was 0.800 (95% confidence interval [CI], 0.75-0.84; p<0.001). The negative predictive values were identified as 96.1%, and the optimal cut-off value of the SARC-CalF for frailty was >2 for all individuals.

Conclusions: The SARC-CalF questionnaire demonstrates potential as a simple and objective predictive measure of frailty in older adults.

Keywords: SARC-CalF; frailty; screening; sarcopenia

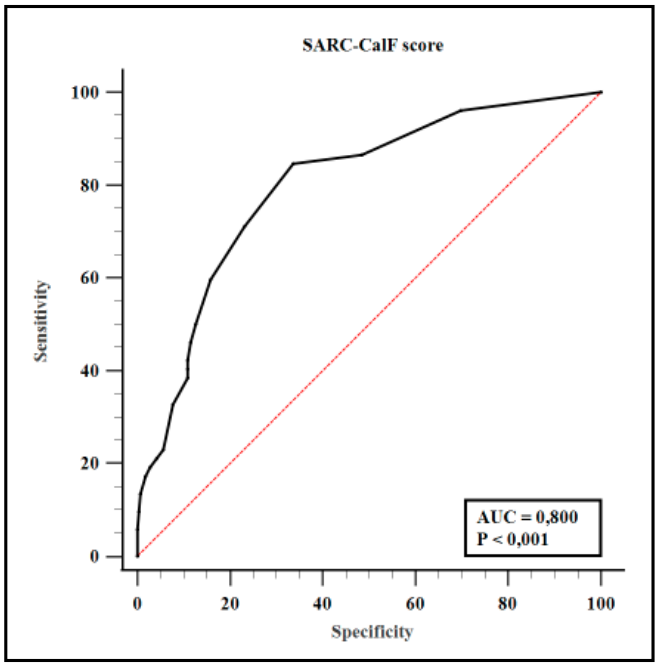

Figure 1. ROC curve of SARC-CalF for frailty

Table 1. Characteristics of the participants by sex

	Total (n=337)	Women (n=217)	Men (n=120)	p value
Age, mean (SD)	75.3±6.6	75±6.7	75.7±6.4	0.28
BMI, kg/m2, mean ± SD	28.6±5.1	29.7±5.2	26.5±4	<0.001
Diabetes Mellitus, n(%)	117 (34.8)	83 (38.4)	34 (28.3)	0.06
Hypertension, n(%)	238 (70.8)	161 (74.5)	77 (64.2)	0.24
Atherosclerotic heart disease, n(%)	82 (24.4)	42 (19.4)	40 (33.3)	0.005
Number of medicines used (min-max)	3 (0-11)	3 (0-11)	4 (0-11)	0.002
Arm circumference, cm, mean ±SD	29±3.4	29.6±3.6	27.9±3.4	<0.001
Calf circumference, cm, mean ±SD	36.3±3.8	36.4±3.9	36.1±3.4	0.54
Handgrip strength, kg, mean ±SD	20.8±7.5	17±4.5	27.7±6.8	<0.001
Gait speed, m/s, mean ±SD	0.97±0.3	0.91±0.3	1.07±0.32	<0.001
Frailty status				0.24
Robust, n(%)	81 (24)	46 (21.2)	35 (29.2)	
Prefrail, n(%)	204 (60.5)	135 (62.2)	69 (57.5)	
Frail, n(%)	52 (15.4)	36 (16.6)	16 (13.3)	
ADL, median (min-max)	6 (3-6)	6 (3-6)	6 (3-6)	0.10
IADL, median (min-max)	8 (1-8)	8 (1-8)	8 (1-8)	0.09
MNA-SF, median (min-max)	12 (5-14)	12 (5-14)	13 (5-14)	0.26
SMMSE, median (min-max)	28 (18-30)	27 (18-30)	28 (18-30)	0.024
GDS, median (min-max)	2 (0-14)	2 (0-14)	2 (0-10)	<0.001
SARC-F score, median (min-max)	1 (0-9)	2 (0-9)	1 (0-8)	<0.001
SARC-CalF score, median (min-max)	2 (0-18)	2 (0-17)	1 (0-18)	<0.001

ADL: Activities of daily living, IADL: Instrumental activities of daily living, MNA-SF: Mini nutritional assessment short form, SMMSE: Standardize Mini-mental state examination, GDS: Geriatric depression scale

Table 2. Association Between SARC-F, SARC-CalF, and Frailty

	Nonfrail, n=285 (84.6%)	*Frail, n=52 (15.4%)*	*p value*
SARC-F score, median(min-max)	1 (0-7)	4 (0-9)	<0.001
SARC-CalF score, median(min-max)	1 (0-17)	5.5 (0-18)	<0.001
SARC-CalF items			
Strength (difficulty in lifting and carrying 10 pounds) (%)			<0.001
None	66	38.5	
Some	25.6	30.8	
A lot or unable	8.4	30.8	
Assistance (difficulty in walking across a room) (%)			<0.001
None	86 1	50	
Some	3.3	36.5	
A lot or unable	0.7	13.5	
Rise from a chair (difficulty in transferring from a chair or a bed) (%)			<0.001
None	72.3	38.5	
Some	25.6	46.2	
A lot or unable	2.1	15.4	
Climb stairs (difficulty in climbing a flight of 10 stairs) (%)			<0.001
None	62.1	36.5	
Some	31.6	36.5	
A lot or unable	6.3	26.9	
Falls in the past year (%)			0.039
None	70.5	57.7	
1-3 times	27.4	34.6	
4 or more times	2.1	7.7	
Calf Circumference (%)			<0.001
≥33 cm	89.1	61.5	
<33 cm	10.9	38.5	

Table 3. ROC Curve Analysis of SARC-F and SARC-CalF for frailty

	Cut-off	*AUC*	*SE*	*P*	*95% CI*	*Sensitivity*	*Specificity*	*+PV*	*-PV*
SARC-F	>2	0.746	0.04	<0.001	0.70-0.79	67.3	73	30.5	92.7
SARC-CalF	>2	0.800	0.03	<0.001	0.75-0.84	84.6	66.3	30.7	96.1

AUC: Area Under Curve, SE: Standard Error, +PV: Positive Predictive Value, -PV: Negative Predictive Value

Frailty

SS-61

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THE RELATIONSHIP BETWEEN ULTRASOUND-DERIVED ANTERIOR THIGH MUSCLE THICKNESS AND FRAILTY IN OLDER ADULTS

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Background: Current measures of frailty often depend on subjective assessments. This study aims to investigate the utility of an ultrasound-derived anterior thigh muscle thickness, as a simple and objective predictive marker of frailty in older adults.

Methods: This croSS-sectional study included 641 patients aged 65 years and older. Comprehensive geriatric evaluations and anterior thigh muscle thickness (ATMT) measurements were performed via ultrasound were performed. Frailty was diagnosed using the Fried Frailty Phenotype (FFP). The association between ATMT and frailty was examined using multivariate logistic regression analysis. The predictive ability of ATMT for frailty was assessed using receiver operating characteristic (ROC) curve analysis.

Results: The average age of the participants was 75±6.4 with 62.9% (n=403) being women and 12% (n=77) being frail. Frail patients exhibited a lower ATMT than the non-frail group (p<0.001). Multivariate logistic regression analysis revealed that ATMT was significantly and independently associated with frailty even after adjusting for potential confounding factors (β=0.94, 95% CI=0.90-0.99, p=0.033). The area under the curve (AUC) of ATMT for frailty was 0.660 (95% confidence interval [CI], 0.62-0.69; p<0.001). The negative predictive values were identified as 90.3%, and the optimal cut-off value of ATMT for frailty was ≤30.5 mm for all individuals.

Conclusions: Ultrasound-derived anterior thigh muscle thickness shows potential as a simple and objective predictive measure of frailty in older adults.

Keywords: anterior thigh muscle thickness; ultrasound; frailty

Table 1. Clinical characteristics of patients according to frailty status

	Total (n=641)	*Non Frail (n=564)*	*Frail (n=77)*	*p value*
Age, mean (SD)	75±6.4	74.5±6.2	78.5±6.4	<0.001
Women, n(%)	403 (62.9)	353 (62.6)	50 (64.9)	0.68
BMI, kg/m2, mean ± SD	28.9±5.1	29.1±5.1	27.1±5.1	0.005
Diabetes Mellitus, n(%)	189 (34.6)	160 (33)	29 (47.5)	0.024
Hypertension, n(%)	380 (69.6)	334 (68.9)	46 (75.4)	0.29
Atherosclerotic heart disease, n(%)	131 (24)	112 (23.1)	19 (31.1)	0.163
Number of medicines, median (min-max)	3 (0-12)	3 (0-12)	4 (0-11)	0.002
Arm circumference, cm, mean ±SD	29.2±3.5	29.4±3.5	27.7±3.5	<0.001
Calf circumference, cm, mean ±SD	36.1±4.1	36.4±3.9	34±5	<0.001
Handgrip strength, kg, mean ±SD	21.5±7.6	22.2±7.5	15.8±5.6	<0.001
Gait speed, m/s, mean ±SD	1±0.30	1.04±0.27	0.61±0.23	<0.001
ADL, median (min-max)	6 (3-6)	6 (3-6)	5 (3-6)	<0.001
IADL, median (min-max)	8 (1-8)	8 (1-8)	6 (1-8)	<0.001
MNA-SF, median (min-max)	13 (5-14)	13 (6-14)	10 (5-14)	<0.001
SMMSE, median (min-max)	28 (16-30)	28 (16-30)	27 (16-30)	<0.001
GDS, median (min-max)	2 (0-15)	2 (0-15)	4 (0-11)	<0.001
ATMT, mm, mean±SD	33.8±7.1	34.2±7.1	30.3±6.1	<0.001

ADL: Activity of daily living, IADL: Instrumental activity of daily living, MNA-SF: Mini nutritional assessment short form, SMMSE: Standardize Mini-mental state examination, GDS: Geriatric depression scale, ATMT: Anterior thigh muscle thickness

Table 2. Correlation of anterior thigh muscle thickness (ATMT)

	Anterior thigh muscle thickness	
	rho	*p value*
Age	- 0.256	<0.001
BMI	0.320	<0.001
Handgrip strength	0.422	<0.001
Gait Speed	0.250	<0.001
Fried Frailty Phenotype score	-0.300	<0.001
MNA-SF	0.335	<0.001
IADL	0.161	<0.001
MMSE	0.203	<0.001

Table 3. Multivariate analysis of anterior thigh muscle thickness (ATMT) on frailty

Models	*Independent Variables*	*OR*	*95% CI*	*p value*
Unadjusted Model	ATMT	0.91	0.88-0.95	<0.001
Adjusted Model 1	ATMT	0.93	0.89-0.97	0.001
	Age	1.07	1.03-1.11	0.001
	Sex (female)	0.97	0.56-1.68	0.93
Adjusted Model 2	ATMT	0.94	0.90-0.99	0.033
	Age	1.07	1.02-1.12	0.003
	Sex (female)	0.62	0.31-1.24	0.18
	BMI	0.93	0.87-1.01	0.066
	Number of medicines used	1.20	1.07-1.35	0.001

Table 4. ROC curve analysis of anterior thigh muscle thickness (ATMT) for frailty

	Cut off	*AUC*	*SE*	*p*	*95% CI*	*Sensitivity*	*Specificity*	*+PV*	*-PV*
ATMT	≤30.5	0.660	0.03	<0.001	0.62-0.69	59.7	66.1	23.7	90.3

AUC: Area Under Curve, SE: Standard Error, +PV: Positive Predictive Value, -PV: Negative Predictive Value

Nutrition

SS-62

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DEVELOPMENT OF THICKENER "KIVAMPRO" IN PATIENTS WITH OROPHARYNGEAL DYSPHAGIA: TÜBİTAK ENTREPRENEURSHIP PROJECT

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Background & Aims: Oropharyngeal dysphagia is a significant health disorder characterized by fluid swallowing intolerance with aspiration risk and scientific evidence advices that thickening products can be beneficial for maintaining hydration status.1 The aim of this project is to develop a thickener product for patients with oropharyngeal dysphagia.

Methods: An interdisciplinary team, consisting of two geriatricians, two physiotherapists specializing in swallowing, and food engineers, was assembled to address the ongoing challenge of ensuring a reliable supply of thickeners, which are often difficult for patients and healthcare professionals to obtain. In 2023, an application was submitted to the TÜBİTAK 1512 - Entrepreneurship Support Programme, and the project was subsequently approved under number 2230023 on January 1, 2024. A comprehensive benchmarking study of commonly used commercial thickeners for oropharyngeal dysphagia was conducted, leading to the development of various formulations incorporating starch hydrolysates and hydrocolloids. Key properties of commercial thickeners such as viscosity, turbidity, and hydration time were analyzed, resulting in formulations that closely matched these parameters. During the formulation studies, the International Dysphagia Diet Standardisation Initiative (IDDSI) standards were considered, and formulations requiring minimal quantity and time to achieve the desired IDDSI levels were identified. Turbidity values were also taken into account to ensure optimal clarity and performance in the final products.

Results: Among the hydrocolloids tested locust bean gum, guar gum, tara gum, hydroxypropyl distarch, and xanthan gum; xanthan gum was found to provide the optimum hydration time with the highest viscosity, while also yielding the lowest turbidity value. The formulation containing xanthan gum and hydrolyzed starch was developed and subsequently tested in various cold and warm liquids. In this presentation, the hydration rates, viscosity values, and turbidity measurements of KivamPro, along with four different commercially available thickeners, will be presented. The recommended amounts of KivamPro thickener necessary to achieve the IDDSI levels in water, tea, fruit juice, and oral nutritional solutions will be reported. Additionally, the results of a sensory analysis conducted by healthcare professionals—including geriatricians, gastroenterologists, swallowing-specialized physiotherapists, nurses, and dietitians—working in the field of nutrition at Hacettepe University, will also be presented.

Conclusions: This is the first thickener development project in Turkey; initiated to adress the requirements of patients with oropharyngeal dysphagia involving health professionals and experimental engineers. Finally, the powder form of thickener was successfully developed. Furthermore the experimental studies on the liquid form are ongoing intensively. Sensory taste analysis has been designed for a large group.

Keywords: thickener, oropharyngeal dysphagia, swallow disorders

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Sarcopenia

SS-63

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THE DIAGNOSTIC PERFORMANCE OF MODIFIED SARC-F VERSIONS FOR SARCOPENIC OBESITY ACCORDING TO THE ESPEN/EASO CRITERIA IN OLDER ADULTS

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Background & Aims: Sarcopenic obesity (SO) is a clinical condition in which sarcopenia and obesity are seen together and is associated with worse clinical outcomes and increased mortality than sarcopenia. In our study, we aimed to evaluate and demonstrate the effectiveness of various modifications of SARC-F, including mid-arm circumference (MAC), calf circumference (CalF), waist circumference (WC), body mass index (BMI), height (H) and hip circumference (HC), which are predictors of

muscle mass, in a particularly sarcopenic obese population, such as SARC-CalF , SARC-F+MAC, SARC-F+WC, SARC-F+HC, SARC-F+EBM (elderly+BMI), SARC-F+WC/BMI, SARC-F+H/BMI.

Methods: Comprehensive geriatric assessment was performed on 240 participants who applied to the geriatric clinic as outpatients. SO diagnosis was made in according to ESPEN/EASO criteria in Table-1. In the SO evaluation, WC, HC, BMI, WC/BMI and H/BMI cut-off values were determined by performing receiver operating characteristic curve (ROC) analysis according to gender. Age, arm and calf circumference cut-off values were evaluated according to previous studies. We performed ROC analysis for SARC-F and other modified forms of sarcopenia diagnosed against ESPEN/EASO as the reference standard for SO (Figure-1). In 7 different modified tests of SARC-F, 2 points were added to the SARC-F score according to gender-specific cut- off values (Table-2), otherwise 0 points were taken, creating a total score between 0-14.

Results: The mean age of the patients was 73.5+6.4 years. (70.8% were female; 29.2% were male). Differences in the obese group according to the presence of sarcopenia are shown in Table-3. According to ESPEN/EASO, the prevalence of sarcopenia was 23.3%. SARC-F and its 7 modified forms had good internal consistency (Cronbach alpha: 0.983). Although the SARC-F cut-off value is 4, most modified SARC-F forms evaluated together with SARC-F were able to predict sarcopenia with higher sensitivity with a cut-off value of 3. SARC-F+H/BMI (area under the curve [AUC] 0.763, 95% confidence interval [CI] 0.69–0.84; sensitivity 85%; specificity 55%), and SARC-F+W/BMI had the best diagnostic performance (AUC 0.734, 95% CI 0.66–0.81; sensitivity 85%; specificity 51%). SARC-F (AUC 0.680, 95% CI 0.60–0.76; sensitivity 51%; specificity 75%) performed worse than almost all of its modified versions (Table-4) in predicting SO (P <0.001).

Conclusions: Our study shows that different, simple and usefull modified versions of SARC-F (SARC-F+ H/BMI, SARC-F+HC, SARC-F+WC, SARC-F+EBM, SARC-F+WC/BMI) could have a stronger performance in predicting SO than SARC-F.

Keywords: SARC-F, waist circumference, hip circumference, sarcopenic obese, sarcopenia

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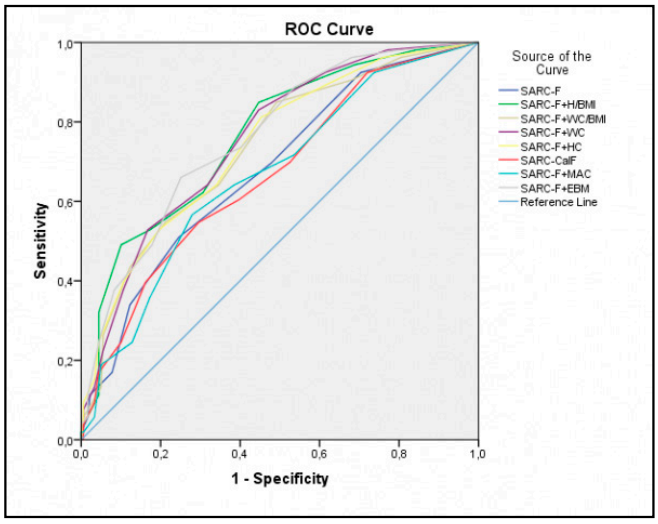

Figure 1. ROC curves of SARC-F and its modified versions for the detection of sarcopenia according to ESPEN/EASO criteria.

Table 1. The cut-off values for sarcopenic obesity screening

	Male	*Female*
BMI	≥30 kg/m2	≥30 kg/m2
WC	≥90 cm	≥80 cm
Low HGST	<27 kg	<16 kg
CST	≥17 s	≥17 s
High-fat percentage	>31%	>43%
Low SMM/W	≤37	≤27.6

BMI, body mass index; CST, chair stand test; HGST, hand grip strength test; SO, sarcopenic obesity; WC, waist circumference; SMM/W, skeletal muscle mass/weight

Table 2. Cut-off values for anthropometric measurements, 2 points are added to the SARC-F score

	Male	*Female*
CalF	≤34	≤33
BMI	≥36	≥36
MAC	≤26.5	≤28.4
WC	≥119.5	≥113.5
HC	≥120.5	≥117.5
Age	≥75	≥75
WC/BMI	≤3.34	≤3.24
H/BMI	≤3.57	≤3.34

(CalF, calf circumference; BMI, body mass index; MAC, mid-arm circumference; WC, waist circumference; HC, hip circumference; WC/BMI, Waist circumference/ body mass index; H/BMI, Height/ body mass index.

Table 3. Baseline characteristics

Parameters	*Non Sarcopenic Obese Group (n=184)*	*Sarcopenic Obese Group (n=56)*	*P value*
Age	73+/-6	75+/-7	0.047
Sex, Female	131 (77.1%)	39 (22.9%)	0.823
Sex, Male	53 (75.7%)	17 (24.3%)	
CFS	4 (3-4)	4 (4-5)	<0.001
Katz ADL	6 (5-6)	6 (5-6)	0.069
Lawton IADL	8 (7-8)	7 (6-8)	<0.001
MMSE	27 (25-29)	26 (23-29)	0.067
Yesavage GDS	4 (0-5)	3 (1-6)	0.655
MNA-SF	13 (12-14)	13 (11-14)	0.265
Handgrip strength test	20.4 (16-26.1)	15.6 (12.7-21.1)	<0.001
5 times sit to stand test	13.81 (11.8-16.8)	18 (14.7-20)	<0.001
BMI (kg/m2)	32.05 (30.45-34.36)	37.85 (32.41-41.26)	<0.001
SARC-F	1 (0-3)	4 (1-5)	<0.001
SARC-F+EBM	3 (1-4)	5 (3-7)	<0.001
SARC-CalF	2 (0-4)	4 (1-5)	<0.001
SARC-F+MAC	2 (0-4)	4 (1-5)	<0.001
SARC-F+WC	2 (1-4)	5 (3-6)	<0.001
SARC-F+HC	2 (1-4)	5 (3-6)	<0.001
SARC-F+WC/BMI	2 (1-4)	5 (3-6)	<0.001
SARC-F+H/BMI	2 (1-4)	5 (3-6)	<0.001

Data were expressed as n (%) or median [interquartile range], unless otherwise indicated Data were expressed as n + STD or mean, unless otherwise indicated CFS, clinical frailty score; ADL, activities of daily living; IADL, instrumental activities of daily living; MNA-SF, Mini Nutritional Assessment- Short Form; MMSE-Mini-Mental State Examination; GDS, geriatric depression scale, SARC-F, A Simple Questionnaire To Rapidly Diagnose Sarcopenia; BMI, body mass index; WC/BMI ,Waist circumference/ body mass index; H/BMI,Height/ body mass index. CalF, calf circumference; MAC, mid-arm circumference; WC, waist circumference; HC, hip circumference; H, height; WC/BMI, Waist circumference/ body mass index; H/BMI (Height/ body mass index; AUC, area under the curve; CI, confidence interval; EBM, elderly+body mass index.

Table 4. Sensitivity and specificity analyses for SARC-F and its modified versions using ESPEN/ EASO criteria

	Cut-off score	*Sensitivity %*	*Specificity %*	*AUC*	*P value*	*95% CI*
SARC-F	4	51	75	0.680	<0.001	0.600-0.761
SARC-CalF	4	55	70	0.667	<0.001	0.584-0.749
SARC-F+EBM	5	66	75	0.763	<0.001	0.692-0.833
SARC-F+MAC	4	57	72	0.667	<0.001	0.585-0.749
SARC-F+WC	3	83	55	0.756	<0.001	0.686-0.826
SARC-F+HC	3	81	55	0.741	<0.001	0.667-0.816
SARC-F+WC/BMI	3	85	51	0.734	<0.001	0.658-0.810
SARC-F+H/BMI	3	85	55	0.763	<0.001	0.692-0.835

SARC-F, A Simple Questionnaire To Rapidly Diagnose Sarcopenia; CalF, calf circumference;BMI, body mass index; MAC, mid-arm circumference; WC, waist circumference; HC, hip circumference; H, height; EBM, elderly+BMI; WC/BMI, waist circumference/ body mass index; H/BMI, height/ body mass index; AUC, area under the curve; CI, confidence interval; ; EBM, elderly+body mass index.

Cognitive Disorders

SS-64

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RELATION OF COGNITIVE FUNCTIONS WITH SERUM KLOTHO AND FGF23 LEVELS IN OLDER HEMODIALYSIS PATIENTS

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Kayseri City Hospital

İntroduction: Low levels of Klotho have been shown to serve as a biomarker for kidney damage. Furthermore, Klotho deficiency has been implicated in various neuropathologies within the central nervous system, including synapse loss, modulation of plasticity, behavioral disorders, and neurodegeneration. Klotho contributes to protection from vascular calcification and oxidative stress. Therefore, decreased Klotho may be a risk factor for cerebrovascular diseases in hemodialysis patients. Fibroblast growth factor 23 (FGF23) is a protein that plays a role in the regulation of phosphate and vitamin D metabolism in plasma. FGF23 is expressed primarily in bone, but is also produced in the ventrolateral nucleus of the thalamus. It is found in high concentrations in the brain and cerebrospinal fluid and is reported to affect neuronal morphology and synaptic density. A limited number of studies conducted in recent years have shown that high FGF23 and low serum Klotho values in hemodialysis (HD) patients may be causative risk factors for cognitive decline via the pathogenesis of vascular calcification. In this study, we evaluated the relationship between cognitive function and serum klotho and FGF23 levels in elderly hemodialysis patients, along with other confounding factors.

Methods: Patients aged 60 and over who had been on hemodialysis for at least 3 months were included in the study. Patients with existing Alzheimer's disease, patients with inadequate dialysis and dialysis disequilibrium, and patients with PTH >600 pg/mL were excluded from the study. Demographic data of patients were recorded. To evaluate the cognitive functions of the patients, the Mini Mental State Examination (MMSE) was applied. Serum FGF23 and klotho levels were measured appropriately.

Results: Eighty nine patients who had been on hemodialysis for at least 3 months participated in the study. The mean age of the patients was 70.9 ± 6.8 and their mean MMSE was 22.4 ± 5.2. There was a statistically significant weak negative correlation between FGF23 levels and MMSE total scores (r= -0,327, p=0.003) (Figure 1). This correlation persisted after adjustment for age and education (r= -0.273, p=0.016). There was a statistically significant weak positive correlation between Klotho levels and MMSE total scores (r= 0,242, p=0.03) (Figure 2). However, this correlation did not persist after adjustment for age and education (r= 0.199, p=0.084).

Conclusions: In our study, we observed a weak positive correlation between cognitive function and Klotho levels, while we observed a significant negative correlation, especially between FGF23 and cognitive function. These findings suggest that, in addition to other well known risk factors, the mechanism of vascular calcification may also play a significant role in the deterioration of cognitive functions in hemodialysis patients. Identification of new risk factors for cognitive impairment in hemodialysis patients may facilitate new treatment approaches to the agenda in this patient group in the future.

Keywords: FGF23,Klotho,Minimental State Examination,Alzheimer

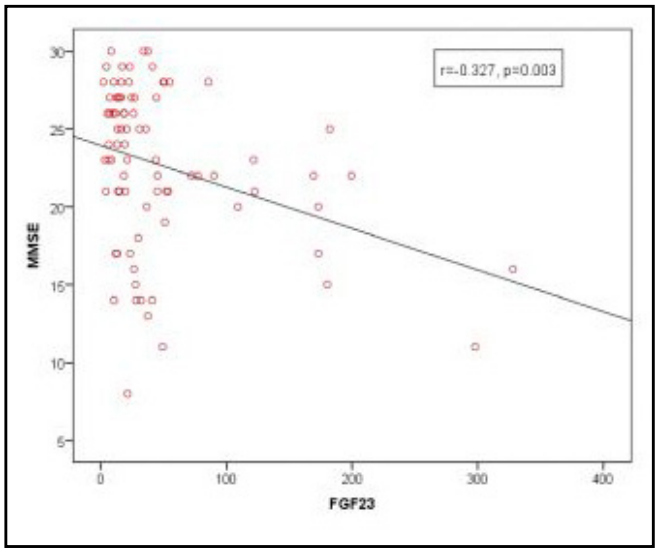

Figure 1. Relationship Between FGF23 and Mini Mental State Examination

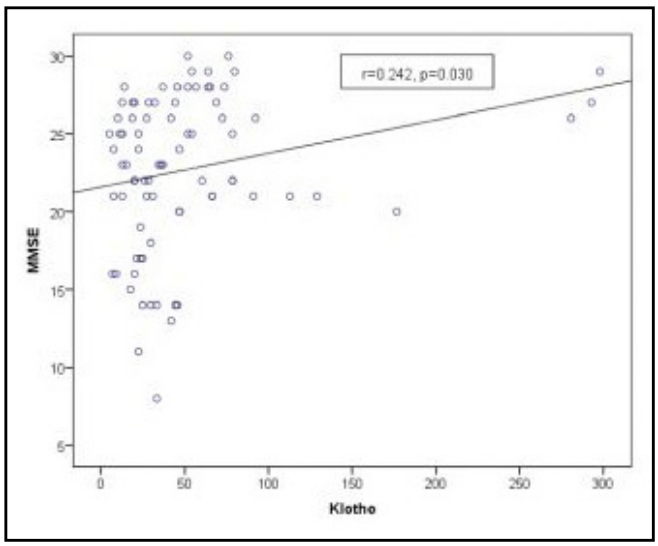

Figure 2. Relationship Between Klotho and Mini Mental State Examination

Nutrition

SS-66

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COMPREHENSIVE GERIATRIC ASSESSMENT OF PATIENTS CONSULTED TO THE GERIATRIC DEPARTMENT FOR MALNUTRITION DURING HOSPITALIZATION

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Background and Aim: One of the important geriatric syndromes is malnutrition, and proper and adequate nutrition is crucial for maintaining functionality and quality of life in the older adults. The aim of our study is to comprehensively assess geriatric patients aged 65 and older who were referred to us for malnutrition during their hospital stay and to evaluate the relationship between malnutrition, other geriatric syndromes, and in-hospital mortality.

Materials and Methods: This study included 327 patients aged 65 years and older who were referred to the Geriatrics Department for malnutrition during their hospital stay at Marmara University Pendik Training and Research Hospital between October 15, 2018, and April 29, 2024. Patients' age, gender, marital status, occupation, anthropometric measurements, comorbidities, medications used, reasons for hospitalization, laboratory values in the last three months, and recommended nutritional products were recorded. The Mini Nutritional Assessment-Short Form (MNA-SF) was used to evaluate nutritional status. Hospitalization duration, discharge and mortality status of the patients were obtained from the patient discharge data in the hospital information management system.

Results: The mean age of the patients evaluated was 80.9 ± 7.8 years and 51.7% (n=169) patients were female. Regarding malnutrition screening, 76.8% (n=251) of the patients were malnourished according to the MNA-SF score. Of the patients who were consulted and fed orally, 4.2% (n: 14) were receiving oral nutritional support with solution (ONS). After consultation, 59.3% (n: 194) patients received ONS, 22.3% (n: 73) patients received PEG, 17.4% (n: 57) patients received NG and 0.9% (n: 3) patients received parenteral nutritional support. The majority of patients discharged were those who received ONS (39.2% vs. 62.6%, p = 0.002). Initiating ONS support reduced the in-hospital mortality rate (p = 0.010). Mortality was detected in 14.1% (n:46) of the evaluated patients during follow-up. Non-survivors were malnourished (74.0% vs. 93.5%, p=0.005), had more sarcopenia risk (p=0.036) and more frail (p=0.037). The presence of dehydration and the type of nutrition after consultation were significant independent variables affecting in-hospital mortality (p=0.038 and p=0.019, respectively). ONS intake reduced the mortality rate by 10% compared to those fed with NG (Hazard Ratio (HR): 0.10; Confidence Interval (CI): 0.02-0.51, p=0.006), by 13% compared to those fed with PEG (HR: 0.13; CI: 0.03-0.71, p=0.018), and by 7% compared to those fed parenterally (HR: 0.07; CI: 0.01-0.40, p=0.002).

Conclusion: Comprehensive geriatric assessment of hospitalized older patients is crucial for reducing hospital stay duration and mortality risk. It is important for physicians providing healthcare to older adults to be knowledgeable about malnutrition and to refer at-risk patients to the Geriatrics Department for determining patient follow-up and treatment strategies.

Keywords: geriatric syndromes, hydration, in-hospital mortality, malnutrition

Tablo 4. Hastane-içi mortaliteye göre cox regresyon analizi

Tablo 4. Hastane-içi mortaliteye göre cox regresyon analizi

	Model 1		Model 2		Model 3		Model 4		Model 5	
	TO (%95 GA)	P değeri	TO (%95 GA)	P değeri	TO (%95 GA)	P değeri	TO (%95 GA)	P değeri	TO (%95 GA)	P değeri
Yaş	1.02 (0.98-1.06)	0.294	1.02 (0.98-1.06)	0.277	1.02 (0.99-1.06)	0.312	1.02 (0.98-1.06)	0.335	1.02 (0.98-1.05)	0.429
Cins (kadın)	1.38 (0.76-2.49)	0.293	1.35 (0.75-2.44)	0.325	1.49 (0.81-2.75)	0.199	1.65 (0.89-3.07)	0.115	1.54 (0.82-2.91)	0.180
FRAIL skor	0.97 (0.60-1.58)	0.911	0.73 (0.39-1.38)	0.336	0.76 (0.340-1.42)	0.385	0.84 (0.44-1.60)	0.584	0.74 (0.38-1.44)	0.379
MNA skor			0.88 (0.72-1.06)	0.177	0.89 (0.73-1.08)	0.222	0.93 (0.77-1.14)	0.487	0.94 (0.78-1.15)	0.562
Dehidratasyon varlığı					0.59 (0.33-1.07)	0.084	0.55 (0.30-1.01)	0.055	0.52 (0.28-0.96)	***0.038***
Konsültasyon sonrası beslenme sekli:								***0.033***		***0.019***
ODA:NG							0.14 (0.03-0.66)	***0.014***	0.10 (0.02-0.51)	***0.006***
ODA:PEG							0.20 (0.04-0.94)	***0.042***	0.13 (0.03-0.71)	***0.018***
ODA:Parenteral							0.10 (0.02-0.50)	***0.005***	0.07 (0.01-0.40)	***0.002***
Albumin düzeyi (g/dL)									0.65 (0.33-1.27)	0.205

Not: Model 1: Yaş, cinsiyet ve FRAIL skoruna göre düzeltilmiştir. Model 2: Model 1'e MNA skoru eklenmiştir. Model 3: Model 2'ye dehidratasyon varlığı eklenmiştir. Model 4: Model 3'e konsültasyon sonrası beslenme durumu eklenmiştir. Model 5: Model 4'e albümin düzeyi eklenmiştir.

Table 1. Demografik Variables

	Total n=327 n (%)
Yaş*	80.0 ± 7.8
Cinsiyet Erkek Kadın	150 (48.1) 169 (51.7)
Vücut ağırlığı (kg) *	67.4 ± 11.6
Boy (cm) *	164.3 ± 8.8
VKİ (kg/cm²) *	25.1 ± 4.5
Konsültasyon isteyen bölüm-1 Dahili bilimler Cerrahi bilimler	304 (93.0) 23 (7.0)
Kronik hastalık sayısı*	4.0 (1-9)
Kullandığı ilaç sayısı*	5.0 (1-14)
Polifarmasi	199 (60.9)
OYA Skoru*	8.0 (0-15.0)
Fonksiyonellik – OYA Bağımsız Yarı Bağımlı Bağımlı	22 (6.7) 76 (23.2) 229 (70.0)
EGYA Skoru*	9.4 ± 2.7
Fonksiyonellik – EGYA Bağımsız Yarı Bağımlı Bağımlı	17 (5.2) 73 (22.3) 237 (72.5)
MNA-SF Skoru*	8.0 (0-12.0)
Malnütrisyon Durumu (MNA-SF Skoru) Normal Malnütrisyon Riski Malnütrü	1 (0.3) 75 (22.9) 251 (76.8)
SARC-F Skoru *	7.6 ± 1.4
SARC-F Skoru ≥4 Normal Sarkopenik	7 (2.1) 320 (97.9)
FRAIL Skoru*	3.8 ± 0.7
Kırılganlık Normal Pre-kırılgan Kırılgan	0 (0) 14 (4.3) 313 (95.7)
4 metre yürüme hızı (m/sn) *	0.7 ± 0.1
Konsültasyon öncesi beslenme yolu Beslenme desteği almayan (R1-R2-R3) Beslenme desteği alan-ONS NG PEG Parenteral Oral alım	191 (58.8) 14 (4.2) 85 (25.3) 26 (7.7) 1 (0.3) 10 (3.0)
Konsültasyon sonrası beslenme yolu ONS desteği alan NG PEG Parenteral	194 (59.4) 57 (17.4) 73 (22.3) 3 (0.9)
Yeni başlanan ONS desteği	178 (53.0)
Yeni NG başlanan	18 (5.4)
Yeni PEG başlanan	48 (14.3)
Serum osmolaritesi (mosm) *	295.0 ± 13.6
Serum osmolaritesine göre sınıflandırılma Hipotonik İzotonik Hipertonik	9 (2.8) 180 (55.0) 138 (42.2)
Dehidratasyon (osm >295 mosm)	138 (42.2)
Hemoglobin (g/dL) *	10.0 ± 1.7
Albümin (g/dL) *	2.9 ± 0.5
Hastane İçi Mortalite Durumu	46 (14.1)
Hastane içi yatış süresi (gün)*	20.0 (2.0-233.0)
Hastane yatışından konsültasyona kadar geçen süre (gün)*	8.0 (1.0-205.0)
Konsültasyondan ölüme kadar geçen süre (gün)*	18.0 (3.0-120.0)
Hastane yatışından ölüme kadar geçen süre (gün)*	14.0 (5.0-146.0)

Not: *Değerler mean±standart sapma ve median (minimum-maksimum) olarak ifade edilmiştir.

Table 2. Data according to in-hospital mortality status

	Mortalite yok n=281, n (%)	Mortalite var n=46, n (%)	p değeri
Yaş*	81.0 ± 7.9	80.2 ± 7.2	0.524
Cinsiyet Erkek Kadın	132 (47.0) 149 (53.0)	26 (56.5) 20 (43.5)	0.408
Vücut ağırlığı (kg) *	67.4 ± 12.0	67.5 ± 9.3	0.978
Boy (cm) *	164.3 ± 7.0	164.4 ± 5.5	0.989
VKİ (kg/cm²) *	25.1 ± 4.7	25.0 ± 3.2	0.932
Konsültasyon isteyen bölüm-1 Dahili bilimler Cerrahi bilimler	262 (93.2) 19 (6.8)	42 (91.3) 4 (8.7)	0.644
Kronik Hastalık Sayısı*	4 (1-9)	4 (1-9)	0.631
Kullandığı İlaç Sayısı*	5 (1-14)	5 (1-12)	
Polifarmasi	174 (61.9)	25 (54.3)	0.329
OYA Skoru*	8 (0 -15)	8 (0-15)	0.980
Fonksiyonellik – OYA Bağımsız Yarı Bağımlı Bağımlı	21 (7.5) 60 (24.6) 101 (68.0)	1 (2.2) 7 (15.2) 38 (82.6)	0.083
EGYA Skoru*	9.5 ± 2.8	8.5 ± 1.5	**0.017**
Fonksiyonellik – EGYA Bağımsız Yarı Bağımlı Bağımlı	17 (6.0) 66 (23.5) 198 (70.5)	0 (0.0) 7 (15.2) 39 (84.8)	**0.021**
MNA-SF Skoru*	8 (0-12)	4 (2-10)	**0.004**
Malnütrisyon Durumu (MNA-SF Skoru) Normal Malnütrisyon Riski Malnütrü	1 (0.4) 72 (25.6) 208 (74.0)	0 (0.0) 3 (6.5) 43 (93.5)	**0.005**
SARC-F Skoru *	7.6 ± 1.5	7.4 ± 1.2	**0.016**
SARC-F Skoru Normal Sarkopenik	7 (2.5) 274 (97.5)	0 (0.0) 46 (100.0)	0.143
FRAIL Skoru*	3.8 ± 0.7	4.0 ± 0.5	0.105
Kırılganlık Pre-kırılgan Kırılgan	15 (5.0) 287 (95.0)	0 (0.0) 46 (100.0)	**0.037**
4 metre yürüme hızı (m/sn) *	0.7 ± 0.1	0.7 ± 0.1	0.177
Konsültasyon öncesi beslenme yolu Beslenme desteği almayan (R1-R2-R3) Beslenme desteği alan - ONS alan NG PEG Parenteral Oral alım	171 (60.9) 12 (4.3) 69 (24.6) 23 (8.2) 0 (0.0) 6 (2.1)	20 (43.5) 2 (4.3) 16 (34.8) 3 (6.5) 1 (2.2) 4 (8.7)	**0.038**
Konsültasyon sonrası beslenme yolu ONS desteği alan NG PEG Parenteral	176 (62.6) 42 (14.9) 62 (22.1) 1 (0.4)	18 (39.2) 15 (32.6) 11 (23.9) 2 (4.3)	**0.002**
Yeni ONS desteği başlanan	161 (57.3)	17 (37.0)	**0.010**
Yeni NG başlanan	12 (4.3)	6 (13.0)	**0.012**
Yeni PEG başlanan	39 (13.9)	9 (19.6)	0.329
Serum osmolaritesi(mosm) *	294.7 ± 13.0	296.6 ± 16.8	0.374
Serum osmolaritesine göre sınıflandırılma Hipotonik İzotonik Hipertonik	6 (2.1) 162 (57.7) 113 (40.2)	3 (6.5) 18 (39.1) 25 (54.3)	**0.037**
Dehidratasyon	113 (40.2)	25 (54.3)	0.071
Hemoglobin (g/dL) *	10.1 ± 1.7	9.6 ± 1.8	0.086
Albümin (g/dL) *	3.0 ± 0.5	2.7 ± 0.6	**0.001**
Hastane içi yatış süresi (gün)*	18 (2-233)	34 (5-146)	**<0.001**
Hastane yatışından konsültasyona kadar geçen süre (gün)*	8 (1-205)	10 (2-68)	0.370

Not: *Değerler mean±standart sapma ve median (minimum-maksimum) olarak ifade edilmiştir.

Table 3. Relationship between duration of hospital stay and nutritional status

	Hastane yatış süresi	
	Median (min-maks)	P değeri
Konsultasyon sonrası beslenme yolu ONS desteği alan NG PEG Parenteral	18.0 (2-107) 27 (5-104) 20 (7-233) 29 (18-29)	***0.035***
Yeni ONS başlanan Var Yok	18.5 (2-96) 23.0 (5-233)	***0.010***
Yeni NG başlanan Var Yok	27.0 (7-87) 20.0 (2-233)	0.674
Yeni PEG başlanan Var Yok	21.5 (8-146) 20.0 (2-233)	0.398

Chronic Diseases

SS-67

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NLR AND PLR EVALUATION IN INDIVIDUALS WITH HEPATOSTEATOSIS APPLIED TO CHECK UP CLINIC

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Introduction: Hepatosteatosis, which is quite common all over the world, is defined as steatosis in more than 5% of hepatocytes that is not due to chronic alcohol intake, genetic disease or drug use. Neutrophil lymphocyte ratio (NLR) and platelet lymphocyte ratio (PLR) are markers that have recently been used to predict inflammation. In our study, we investigated the relationship between hepatosteatosis and NLR and PLR in patients who applied to the check-up clinic..

Materials and Methods: This croSS-sectional study included 211 patients over the age of 45 who applied to the check-up center between January 2023 and December 2023; 25 patients with ferritin over 250 mg/dl, leukocytosis, additional liver and rheumatic diseases were excluded from the study, and a total of 186 patients without active complaints were included. The NLR and PLR rates of patients with hepatosteatosis were compared in USG images of 70 patients over the age of 65 and 116 patients between the ages of 45-64. Data were recorded with the SPSS 25 program.

Results: A total of 88 female and 98 male patients were included in the study. No significant difference was found between age and hepatosteatosis (p=0.2). When the relationship between hepatosteatosis and NLR and PLR values was examined, there was no significant relationship in the elderly group (p=0.61-p=0.27). When the same relationship was examined in the young age group, there was no significant difference between hepatosteatosis and NLR, and the relationship between hepatosteatosis and PLR values was also not statistically significant (p=0.65-p=0.33).

Conclusion: No relationship was found between NLR and PLR values and incidentally detected hepatosteatosis in patients who applied to the check-up clinic for control purposes without any active complaints. Larger-scale studies with larger samples are required on this subject.

Keywords: Hepatosteatosis, neutrophil lymphocyte ratio, platelet lymphocyte ratio

Osteoporosis

SS-68

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PREVALENCE AND RELATED FACTORS OF ULTRASOUND-BASED OSTEOSARCOPENIA IN TURKISH OLDER ADULTS

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Objectives: Osteosarcopenia, the concurrent presence of osteoporosis and sarcopenia, represents a critical age-related condition. The anterior thigh muscles are the primary site affected during sarcopenia progression. Diagnosis of sarcopenia based on anterior thigh muscle assessment has become increasingly common in clinical practice, supported by established population-specific cut-off values. However, the prevalence of ultrasound-based osteosarcopenia and its associated factors in older Turkish adults remain underexplored. This study aims to assess the prevalence and identify factors related to ultrasound-based osteosarcopenia in this population.

Methods: We included 601 patients aged 65 years and older. Exclusion criteria comprised knee or hip replacements, advanced dementia, cerebrovascular disease, neurodegenerative conditions, decompensated heart failure, and the use of muscle-affecting medications such as steroids. Comprehensive geriatric assessments and anthropometric measurements were conducted. Sarcopenia was diagnosed based on the STAR index (the anterior thigh muscle thickness measured by ultrasonography/body mass index ratio, with cut-offs of <1.4 for men and <1.0 for women) and low handgrip strength. Osteoporosis was diagnosed using WHO criteria based on bone mineral density (BMD) measured at the hip and spine via dual-energy X-ray absorptiometry (DEXA). Frailty was assessed using the Fried Frailty Phenotype. Multivariate binary logistic regression analysis was performed to identify the independent related factors of osteosarcopenia.

Results: The mean age of participants was 74.37 ± 5.84 years, with 63% (n=379) being female, and 38% (n=228) having at least a high school education. Sarcopenia was observed in 21% (n=127) of the cohort, with 6.2% (n=37) classified as osteosarcopenic, and 13.4% (n=80) as frail. Additionally, 22% of participants reported a history of falls in the past year. Compared to non-osteosarcopenic individuals, those with osteosarcopenia were older, exhibited slower gait speeds, and had a lower prevalence of diabetes mellitus. Cognitive function, assessed by the Standardized Mini-Mental Test, and functional status, evaluated by the Lawton Brody Instrumental Activities of Daily Living Scale, were significantly lower in the osteosarcopenic group (p<0.001). Meanwhile, mood scores, measured using the Yesavage Depression Scale Short Form (p=0.033), and frailty, assessed via the Fried Frailty Phenotype (p=0.025), were significantly higher (p<0.001). Advanced age (OR:1.102 %; p=0.003), gait speed (OR:0.148; p=0.025) and Diabetes Mellitus (OR:0.362; p=0.044) were identified as independent factors associated with osteosarcopenia. The best cutoff point of gait speed for osteosarcopenia was detected as ≤0.85 m/s with an area under the curve of 0.74, sensitivity of 75%, specificity of 71.6% and negative predictive value of 97.8% (p<0.001).

Conclusion: The prevalence of ultrasound-based osteosarcopenia among Turkish older adults was found as 6.2%. Advanced age, reduced gait speed, and the absence of diabetes mellitus were significant independent factors associated with osteosarcopenia. A gait speed below 0.85 m/s should be recognized as an important indicator for the risk of osteosarcopenia.

Keywords: prevalance, osteosarcopenia, related factors, ultrasound

Keywords: Prevalance, osteosarcopenia, related factors, ultrasound

Atypical Presentations

SS-69

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A RARE DIFFERENTIAL DIAGNOSIS OF DEPRESSION AND DEMENTIA: LACK OF GLASSES

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75 year old female patient CFS 3
Presentation complaint:inability to enjoy life
Married, living with her husband
Diseases:Hypertension,Osteoporosis
A 75 year old female patient is admitted with complaints of not being able to enjoy life

It was learned that the patient's blood pressure was regulated and she had been using alendronic acid and vitamin D for 3 years with a diagnosis of osteoporosis.

Geriatric syndromes

The patient does not complain of forgetfulness; however, she has not been able to do the handicrafts and knitting that she could do before for the last month. Sometimes she cannot find where she puts her things. Recently, she has started not to follow current events and news. She prefers to stay home more than she used to, instead of going out. Apart from these complaints, she is cognitively normal

The patient's mood is depressed. She feels sad because she can no longer knit, which she used to be able to do. She does not want to go out as much as she used to, and instead spends most of the day at home. She can no longer follow the series she used to follow, and her interest in current events has decreased compared to before. Her average sleep time, which was 6 hours a month ago, has increased to 8-9 hours.She has started to have crying attacks, although rarely. She states that she has not had any major emotional trauma recently

Fall: The patient has a history of falling once in the last 3 months. The patient who fell due to tripping on the carpet states that she fell forward, did not hit her head and did not lose consciousness. She had no symptoms of dizziness, hypoglycemia or hyperglycemia before the fall, did not have an epileptic seizure or incontinence. Her blood pressure was not measured after the fall.

The patient has no history of polypharmacy, malnutrition, insomnia or incontinence.

The triggering event was questioned because the patient's complaints had started within the last month and she could not do the things she could do before. When the history was

detailed, it was learned that the patient's glasses had broken 1 month ago, had not been repaired since then, and therefore she could not do the things she could do before, and her going out time had decreased.

No pathological findings were detected in the patient's routine complete blood count, biochemical tests, complete urine test and ECG.

After the patient's broken glasses were repaired, her complaints completely regressed.

So, if the characteristics of this patient were asked to chatgpt, which diseases would be considered in the differential diagnosis and which tests would be recommended?

When we asked this question to chatgpt, it said that depression, dementia, anxiety disorder, Parkinson's disease, hypothyroidism should be investigated in the differential diagnosis. İt stated that in addition to routine blood tests for these diseases, a mini mental status assessment test, cranial magnetic resonance or cranial computerized tomography, psychiatric examination and neurological evaluation should be performed.

Take-home messages

Although there have been groundbreaking technological advances in laboratory tests and imaging methods, including artificial intelligence, the best way to make a diagnosis is still through a detailed history, a good physical examination, and comprehensive geriatric assessment.

Keywords: dementia, osteoporosis

Others

SS-70

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IMPORTANCE OF ADVANCE CARE PLANNING IN DEMENTIA: A CASE REPORT

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Aim: Dementia is a chronic and progressive disease characterized by cognitive impairment and deterioration in functionality. The decrease in quality of life and increase in care needs occur due to the loss of function that emerges in the course of the disease. In this case, the importance of care planning in the follow-up of dementia patients has been emphasized.

Case: A 73-year-old female patient with a history of type 2 diabetes mellitus, atherosclerotic heart disease, endometrial cancer in remission, transient ischemic attack, major depressive disorder, and moderate-stage Alzheimer's type dementia presented to the geriatrics for a routine follow-up. According to her medical history, she underwent a stent procedure in the left anterior descending artery (LAD) six months ago and has been using dual antiplatelet therapy. She has been diagnosed with dementia for the past 3 years, with the diagnosis of moderate-stage dementia in the last year, and it was found out that she is unable to perform functions such as shopping, cleaning, and taking her medications.

During the comprehensive geriatric evaluation, It was found that the patient had a decreased appetite in recent times. It was also found that the patient's depressive mood symptoms had increased recently and that her husband had not been helping her and had been spending time outside during the day, leaving her alone at home. Furthermore, it was found that the patient could not regulate her medications and had stopped taking all her medications.

During the examination, she experienced a feeling of faintness, complained of nausea, and later mentioned chest pain and a burning sensation in her chest. The patient's level of consciousness was confused. The patient's blood pressure was measured as 70/50 mm-Hg, pulse was rhythmic at 70 beats per minute, body temperature was 36,1 °C, and respiratory rate was 12 breaths per minute. Abdominal and respiratory system examinations were normal. Capillary blood glucose measurement revealed a blood sugar level of 364 mg/dL. Subsequently, the patient was transferred to the emergency department with suspicion of acute coronary syndrome under the supervision of a physician. Upon finding ST-segment elevation anterolateral myocardial infarction on the patient's electrocardiogram (Figure-1), the patient underwent emergency percutaneous coronary intervention, where a stent blockage in the LAD was detected and treated. After re-evaluation in the geriatric outpatient clinic, a care plan was reorganized with the assistance of the social services unit. The patient with high blood sugar had their insulin dose adjusted and a follow-up appointment was scheduled. In the follow-up visit, it was discovered that the patient was now consistently taking their medications. The patient's capillary glucose measurements were within the desired range. The patient reported improved appetite and mood, and it was also found that the patient had gained 3 kg in 1 month.

In conclusion, besides the pharmacological interventions aimed at addressing the medical problems, it is important to evaluate the environment in which the patient lives to develop a suitable care plan for the patient in dementia management. This is crucial in managing the disease and preventing potential complications.

Keywords: dementia, advance care planning

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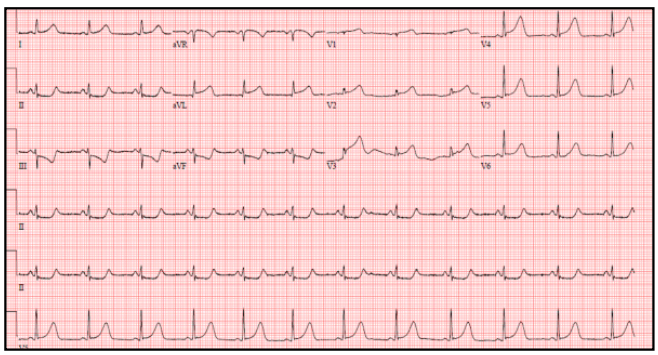

Figure 1. Patient's electrocardiogram.

Others

SS-71

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PARTIAL RESPONSE TO HCV TREATMENT IN A 95 YEAR OLD PANCYTOPENIC PATIENT

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We present a patient who presented with pancytopenia and hepatitis C virus (HCV) infection whose neutropenia resolved after HCV treatment despite the persistence of anemia and thrombocytopenia. A 95 year old woman presented to the emergency with poor functional status and extensive ecchymoses. The patient was hospitalized with pancytopenia. Her white blood cell count was 2800/mm3, neutrophils: 1000/mm3, hemoglobin: 8,1 gr/dL, mcv: 105 fl and platelets: 5000/mm3. Her INR was 1.1; aptt: 29 seconds; ldh: 501 U/L; total biluribin: 1.1 mg/dL, direct biluribin: 0,31 mg/dL, liver and renal function tests were normal. Peripheral blood smear showed no blasts, dysplasia, schistocytes, fragmentation, or atypical mononuclear cells. Bone marrow evaluation could not be performed because the patient and her caregivers refused to undergo bone marrow aspiration and biopsy. However, flow cytometric analysis of peripheral blood was not consistent with acute leukemia. Autoimmune screening tests, tests for brucellosis and paroxysmal nocturnal hemoglobinuria were negative. No pathology was detected in protein electrophoresis and serum immunofixation tests. Abdominal ultrasound imaging revealed grade 2 hepatosteatosis. Contrast-enhanced upper abdomen MRI was consistent with these findings. Thorax CT without contrast showed increased cardiothoracic ratio and some small lymph nodes in the mediastinum and both hilar regions. There were emphysematous changes, ground glass opacity suggestive of infective processes in both lungs. Her clinical picture was not consistent with pneumonia. There were osteodegenerative changes in the bone structures. Her TSH was 10.1 uıu/ml (0,35-5.5), fT4: 0.73 ng/dl (0,89-1,76), fT3: 2.16 ng/L (2,3-4,2); and 50 micrograms of levothyroxine sodium treatment was initiated. Her B 12 was 188 ng/l, B12 and folic acid treatment was initiated. She was periodically transfused with erythrocyte suspensions for symptomatic anemia and platelet apheresis for thrombocytopenia. During her stay her white blood cell count fell as low as 1600/mm3 and her neutrophils declined to 300/mm3. Since her HCV antibody was positive; her HCV rna was 1.85 x 10 6 IU/ml and she had Genotype 1b. At this point she was put on oral antiviral treatment for HCV which consisted of glecaprevir (100 mg/day) and pibrentasvir (40 mg/day). After 2 months of treatment, hcv rna was negative. Neutropenia improved soon after termination of antiviral treatment reaching as high as 4700 white blood cells and 2700 neurophils/mm3 but anemia and thrombocytopenia did not improve. Despite her long lasting neutropenia, she was successfully treated for pneumonia and a lower urinary tract infection during her 4 months of stay in the hospital. Based on a pesumptive diagnosis of immune thrombocytopenia, she was administered a two week course of 40 mg methylprednisolone and 4 additional days of 20 mg dexamethasone with no consistent response. The patient and caregivers refused rituximab treatment whereas an off-label use of eltrombopag is still being considered. A coagulation test profile consistent with disseminated intravascular coagulation was observed during follow up and she was also administered cryoprecipitate replacement along with vitamin K. In patients presenting with pancytopenia, successful treatment of the underlying HCV infection may improve the hematologic complications of HCV. In our case, a favorable change was achieved only in the myelocytic series.

Keywords: Hematologic complications of Hepatitis C virus, hepatitis C virus treatment in the elderly, Hepatitis C virus, Pancytopenia, Thrombocytopenia

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Cognitive Disorders

SS-72

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VALIDITY AND RELIABILITY OF THE SHORT PORTABLE MENTAL STATUS QUESTIONNAIRE IN TURKISH OLDER ADULTS

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Background: The Short Portable Mental Status Questionnaire (SPMSQ) is a brief screening tool to asses cognitive impairment among older adults. The aim of this study is to evaluate validity and reliability of the Turkish version of the SPMSQ and define optimal cut off points.

Methods: Patients aged ≥65 years referred to a university hospital geriatric medicine outpatient clinic were enrolled consecutively. All patients underwent comprehensive geriatric assessment by using Katz activities of daily living, Lawton Brody instrumental activities of daily living, Clinical Frailty Scale, Yesavage Geriatric Depression Scale and Mini Nutritional Assessment–Short Form. Permission and copyright to use the SPMSQ have been taken from the legal heir of Dr Eric Pfeiffer. After translation and cultural adaptation process, Turkish version of the SPMSQ and Standardised Mini Mental State Examination (MMSE) were performed to asses cognitive status. Cronbach's alpha was calculated to evaluate internal consistency. In order to test interrater reliability, the SPMSQ was administered to 12 patients, on the same day, in different rooms by the 2 trained raters blind to the results of the study. The same raters performed the SPMSQ a second time on the same 12 patients within 10 days to establish test–retest reliability.Patients were diagnosed dementia according to the National Institute of Aging and Alzheimer's

Association (NIA-AA) criteria and the major neurocognitive disorder definition on the Diagnostic and Statistical Manual of Mental Disorders-V (DSM-V). The diagnostic accuracy of the SPMSQ was analyzed by calculating the area under the curve (AUC) from receiver operating characteristic (ROC) curve analysis. The optimal cut-off point was calculated from the ROC curves. Spearmen correlation analysis was used to evaluate the correlation between the MMSE and SPMSQ scores.

Results: A total of 197 (48 dementia, 149 control) patients were included. Median age of the patients was 73 (69-78) and 65% of the patients were women. Total education time was less then five years in 67% of the study population. Demographic characteristics and comprehensive geriatric assessment scores of the study population were presented in table 1. The Cronbach's alpha value of the SPMSQ was 0.739. Regarding reliability of the SPMSQ, the intraclass correlation coefficient was 0.948 (95% CI: 0.833–0.985) for interrater reliability and 0.984 (95% CI: 0.949–0.995) for intra-rater (test-retest) reliability. In ROC analysis of the overall study population, the optimal cut-off point of the SPMSQ to differentiate dementia was ≥4 errors with 83.3% sensitivity, 90.6% specificity, (AUC:0.949) (Figure 1). Cut-off point was calculated as ≥4 errors in patients with education time of ≤5 years (87.2% sensitivity, 84.9% specificity, AUC:0.933) and ≥3 errors in patients with education time of >5 years (100% sensitivity, 98.2% specificity, AUC:0.997) (Figure 2). The SPMSQ and MMSE scores were statistically significant positively correlated (r = 0.661, p<0.001). Cut-off point of MMSE was ≤25 with 83.3% sensitivity, 97.3% specificity, (AUC:0.947) and was not statistically different when compared to SPMSQ AUC (p=0.93) (Figure 3).

Conclusion: The SPMSQ is a reliable tool for screening dementia among older adults and not inferior to MMSE. Different cut-off points should be used according to the education level of the patient.

Keywords: Reliability and Validity, Cognitive Test, Dementia

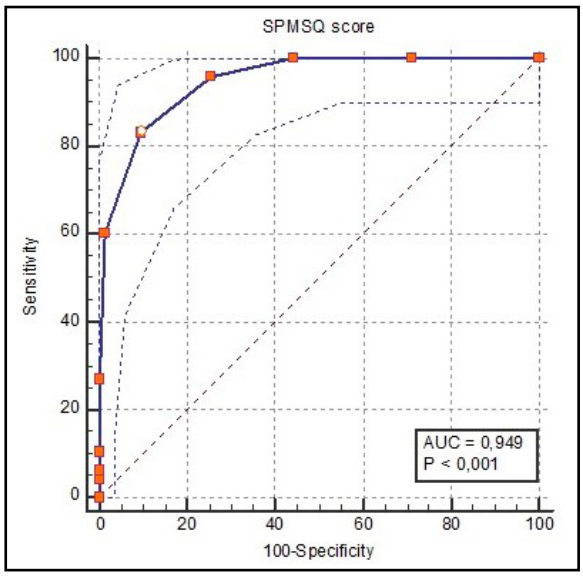

Figure 1. ROC analysis for SPMSQ in overall study population.

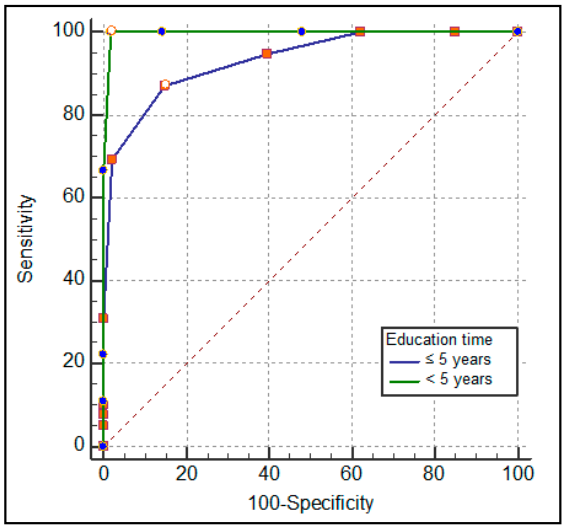

Figure 2. ROC analysis for SPMSQ according to education time.

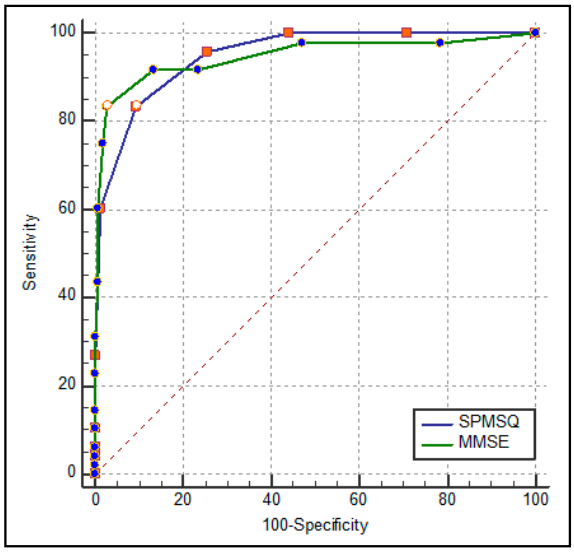

Figure 3. Comparison of ROC curves for SPMSQ and MMSE.

Table 1. Demographic characteristics and Comprehensive Geriatric Assessment Scores of the Study Population

	Dementia (n=48)	*Control (n=149)*	*p*
Age	78 (73-82)	73 (68-76)	<0.001
Gender (Women)	38 (29.7%)	90 (70.3%)	0.018
Education time (≤ 5 years)	39 (29.5%)	93 (70.5%)	0.016
Katz	5 (5-6)	6 (6-6)	<0.001
Lawton Brody	6 (4-7)	8 (8-8)	<0.001
YDS	5 (4-5)	1 (3-4)	<0.001
MNAS-SF	12 (10-13)	14 (12-14)	<0.001
CFS	5 (4-5)	3 (3-4)	<0.001
MMSE	23 (21-24)	29 (28-29)	<0.001
SPMSQ	5 (4-6)	9 (7-10)	<0.001

YDS: Yesavage Geriatric Depression scale, MNA-SF: Mini Nutritional Assessment Short Form, CFS: Clinical Frailty Scale, MMSE: Standardised Mini-Mental State Examination, SPMSQ: Short Portable Mental Status Questionnaire. Results were shown as median (IQR) for non-parametric variables (Age, Katz, Lawton-Brody, YDS and MNA-SF, CFS, MMSE and SPMSQ scores), and as numbers (n) and percentiles (%) for categorical variables. The difference between the groups was compared with Mann Whitney U test for non-parametric variables, Chi-square test for categorical variables (sex, education time).

Osteoporosis

SS-73

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FACTORS AFFECTING BONE FRACTURES IN OSTEOPOROSIS PATIENTS

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With the aging of the population, the prevalence of osteoporosis is increasing. In Turkey, osteopenia is detected in 50% and osteoporosis in 25% of individuals aged 50 and over. Fracture development is a significant complication of osteoporosis. Our study aimed to investigate the sociodemographic characteristics and comorbid conditions affecting fractures in osteoporosis patients presenting to the geriatrics clinic.

Keywords: Osteoporosis, Bone Fractures, Sociodemographic Factors, Sarcopenia, Comorbidities.

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Table 1A. Sociodemographic Characteristics

Characteristic	*Number(n) ± SD*	*Percentage(%)*
Age, Mean ± SD	75.33 ± 6.78	
Gender		
Male	228	30.3
Female	524	69.7
Weight, Mean ± SD	70.05 ± 13.73	
Height, Mean ± SD	156.73 ± 12.09	
BMI, Mean ± SD	28.50 ± 7.23	
Waist Circumference, Mean ± SD	98.90 ± 13.31	
Hip Circumference, Mean ± SD	106.25 ± 10.77	
Upper Arm Circumference, Mean ± SD	28.87 ± 4.03	
Calf Circumference, Mean ± SD	36.16 ± 4.47	
Walking Speed, Mean ± SD	1.01 ± 0.57	
Number of Medications		
No Polypharmacy	355	47.7
Polypharmacy	390	52.3
Fat Mass, Mean ± SD	31.19 ± 9.89	
FFM, Mean ± SD	45.60 ± 8.22	
FFMI, Mean ± SD	25.8 ± 7.43	
MNA Short, Mean ± SD	11.76 ± 2.44	
MNA Long, Mean ± SD	14.57 ± 4.77	

Abbreviations: Standard Deviation(SD), Body Mass Index(BMI), Free Fat Mass(FFM), Free Fat Mass Index(FFMI),Mini Nutritional Assessment(MNA).

Table 1B. Comorbidities

Condition	*Number(n)*	*Percentage(%)*
HT,n(%)		
Absent	206	27.4
Present	546	72.6
HL,n(%)		
Absent	605	80.5
Present	147	19.5
DM Type 2,n(%)		
Absent	493	65.6
Present	259	34.4
HD,n(%)		
Absent	117	64.3
Present	65	35.7
AF,n(%)		
Absent	723	96.1
Present	29	3.9
İHD,n(%)		
Absent	629	83.6
Present	123	16.4
HF,n(%)		
Absent	723	96.1
Present	29	3.9
Hypothyroidism,n(%)		
Absent	645	85.8
Present	107	14.2
PD,n(%)		
Absent	728	96.8
Present	24	3.2
Dementia,n(%)		
Absent	717	95.3
Present	35	4.7
Depression,n(%)		
Absent	587	78.1
Present	165	21.9
CVE,n(%)		
Absent	724	96.3
Present	28	3.7
LD,n(%)		
Absent	676	89.9
Present	76	10.1

(Abbreviations: Hypertension(HT), Hyperlipidemia(HL), Diabetes Mellitus Type 2(DM Type 2), Heart Disease (HD), Atrial Fibrillation (AF), Ischemic Heart Disease (İHD), Heart Failure (HF), Parkinson's Disease (PD), Cerebrovascular Event (CVE), Lung Disease (LD).)

Table 2A. Comparison of Sociodemographic Data Between Patients with and without Bone Fractures

Parameter	*No Fracture (n=604)*	*Fracture (n=148)*	*p*
Age, Mean±SD	77.77±7.35	78.47±6.92	0.915
Weight, Mean±SD	71.39±12.97	64.58±15.33	<0.001
Height, Mean±SD	157.38±11.31	154.10±14.61	0.003
BMI, Mean±SD	28.88±7.53	26.96±5.59	0.004
Waist Circumference, Mean±SD	99.33±13.35	97.14±13.06	0.078
Hip Circumference, Mean±SD	106.90±9.99	103.59±13.31	0.001
Upper Arm Circumference, Mean±SD	29.20±3.84	27.54±4.52	<0.001
Calf Circumference, Mean±SD	36.56±4.43	34.52±4.32	<0.001
Fat Mass, Mean±SD	32.09±9.53	27.12±10.51	<0.001
FFM, Mean±SD	46.37±8.39	42.82±6.95	<0.001
MNA Short Form, Mean±SD	11.94±2.36	11.00±2.66	<0.001
MNA Long Form, Mean±SD	14.11±4.22	16.53±6.24	<0.001

b:Independent t-test, p<0.05 is statistically significant) (Abbreviations: SD:Standart Deviation, BMI:Body Mass Index, FFM:Free Fat Mass, MNA:Mini Nutritional Assessment

Table 2B. Comparison of Comorbidities Between Patients with and without Bone Fractures

Condition	No Fracture (n=604)	Fracture (n=148)	p
HT,n(%)			
Absent	160 (26.5)	46 (31.1)	0.262
Present	444 (73.5)	102 (68.9)	
HL,n(%)			
Absent	480 (79.5)	125 (84.5)	0.170
Present	124 (20.5)	23 (15.5)	
Type 2 DM,n(%)			
Absent	72 (65.5)	45 (62.5)	0.054
Present	38 (34.5)	27 (37.5)	
HD,n(%)			
Absent	72 (65.5)	45 (62.5)	0.684
Present	38 (34.5)	27 (37.5)	
Atrial Fibrillation(AF),n(%)			
Absent	583 (96.5)	140 (94.6)	0.275
Present	21 (3.5)	8 (5.4)	
İHD,n(%)			
Absent	507 (83.9)	122 (82.4)	0.657
Present	97 (16.1)	26 (17.6)	
HF,n(%)			
Absent	587 (97.2)	136 (91.9)	0.003
Present	17 (2.8)	12 (8.1)	
Hypothyroidism,n(%)			
Absent	515 (85.3)	130 (87.8)	0.422
Present	89 (14.7)	18 (12.2)	
PD,n(%)			
Absent	585 (96.9)	143 (96.6)	0.885
Present	19 (3.1)	5 (3.4)	
Dementia,n(%)			
Absent	583 (96.5)	134 (90.5)	0.002
Present	21 (3.5)	14 (9.5)	
Depression,n(%)			
Absent	469 (77.6)	118 (79.7)	0.584
Present	135 (22.4)	30 (20.3)	
CVE,n(%)			
Absent	582 (96.4)	142 (95.9)	0.813
Present	54 (8.9)	22 (14.9)	
LD,n(%)			
Absent	550 (91.1)	126 (85.1)	0.032
Present	54 (8.9)	22 (14.9)	

a:Chi-Square test, p<0.05 is statistically significant) (Abbreviations: Hypertension(HT), Hyperlipidemia(HL), Diabetes Mellitus Type 2(DM Type 2), Heart Disease (HD), Atrial Fibrillation (AF), Ischemic Heart Disease (İHD), Heart Failure (HF), Parkinson's Disease (PD), Cerebrovascular Event (CVE), Lung Disease (LD).

Table 3. Multivariate Logistic Regression Results for Various Clinical Variables on Bone Fractures

Variable	*OR (95% CI)*	*p*
Dementia	1.52 (0.59-3.92)	0.383
Heart Failure (HF)	1.39 (0.44-4.41)	0.570
BMI	1.09 (1.01-1.19)	0.046
Age	1.06 (1.02-1.11)	0.001
FFM	0.94 (0.90-0.97)	0.002
CC	0.25 (0.87-1.03)	0.256
Fat Mass	0.93 (0.90-0.97)	0.001

Abbreviations: Heart Failure (HF), BMI (Body Mass Index), FFM (Free Fat Mass), Calf Circumference(CC), OR (Odds Ratio), R^2=0.19, -2 Log-Likelihood=388.72, p<0.05 is statistically significant

Swallowing Disorders

SS-74

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ASSOSIATION BETWEEN FRAILTY AND DYSPHAGIA IN HOSPITALIZED PATIENTS IN THE İNTERNAL MEDICINE WARD

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Introduction and Aim: Dysphagia is a geriatric syndrome that increases in frequency with age. Dysphagia is highly prevalent in several elderly cohorts, including hospitalized patients (29.4%–47%) and hospitalized patients with community-acquired pneumonia (55%–91.7%), compared to the general population. Dysphagia can lead to serious medical consequences in older people, including dehydration, malnutrition, aspiration pneumonia, and hospitalization. It is, therefore, necessary to assess and screen for dysphagia in hospitalized older patients. Frailty is characterized by declining physiological reserve and losing resistance to stressors caused by cumulative age-related functional deficits. Loss of skeletal muscle mass and strength is considered an essential component of frailty. Muscle mass also decreases with age, affecting the muscles involved in swallowing. In this study, we aimed to investigate the relationship between dysphagia and frailty in hospitalized elderly patients and to assess whether frailty increases the risk of dysphagia.

Materials and Methods: This study is a retrospective croSS-sectional study. The study population consists of patients over 65 hospitalized in the general internal medicine ward between January 2022 and December 2024. Dysphagia was assessed using the EAT-10 questionnaire, and frailty was assessed using the FRAIL scale. Handgrip strength (HGS) was assessed with a handheld dynamometer. Walking speed was assessed with 4-m usual walking speed (UGS). Nutritional status was evaluated using the mini-nutritional assessment short form (MNA-SF). Malnutrition was diagnosed with the Global Leadership Initiative on Malnutrition (GLIM) test. Logistic regression analyses were used to identify the association between frailty and dysphagia.

Result: 502 patients were included in the study. 312 of the participants were female, and 190 were male. The mean age was 78.2±9.4 years. The characteristic features of the study are given in Table 1. EAT-10 score >15 points was considered a significant risk of dysphagia. Participants with EAT-10>15 points were older compared to participants with EAT-10<=15 points (p<0.001). For people with an EAT-10 score of more than 15, being female and having neurodegenerative diseases were more common (p=0.03 and p<0.01, respectively); staying in the hospital and having a higher FRAIL score were also more common (p<0.001 and p<0.0001, respectively); and HGS, UGS, and MNA-SF scores were lower (p<0.001, p<0.001, p<0.0001, respectively) (Table 2). In the logistic regression analysis, the factors independently linked to an EAT-10 score of more than 15 were found FRAIL score, age, MNA-SF test score, and malnutrition defined by GLIM (Table 3).

Conclusion: This study revealed that there was a high prevalence of age-related dysphagia and frailty among hospitalized elderly individuals. Frailty was significantly higher in patients with

dysphagia. Frailty can be considered a predictor of dysphagia. Further research is needed to confirm this relationship. Currently, age-related swallowing disorders may be underdiagnosed and underrecognized. Older patients without typical signs and symptoms may have potential dysphagia and be at risk of complications. Therefore, we suggest that dysphagia should be part of the assessment of older adults with frailty, and frailty should be part of the assessment of patients with dysphagia.

Keywords: Frailty, frail, dysphagia, elderly hospitalized patients, hand grip strength

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Table 1. Characteristics of the study population

Variable	Men (n=190)	Women(n=312)	p
Age (years)	77.1±9.2	78.8±9.5	0.05
BMI (kg/m²)	24.1 (6.4)	24 (8.3)	0.9
Number of Disease	4 (2)	4 (2)	0.1
Number of Drugs	7 (5)	7 (5)	0.1
Neurodegenerative Disease	15.8%	24.6%	0.02
HGS (kg)	22 (13)	12 (8)	<0.001
Low HGS	64.1%	74.6%	0.02
UGS (m/s)	0.8±0.23	0.58±0.13	<0.001
MNA-SF Score	9 (7)	8 (7)	0.06
Malnutrition defined by GLIM	45.3%	42.8%	0.05
EAT Score ≥ 3	28.4%	31.1%	0.05
EAT Score > 15	21.1%	27.6%	0.1
Frailty Score	4 (4)	5 (4)	0.01
Normal	10.5%	3.9%	<0.001
Prefrail	25.3%	21.9%	<0.001
Frail	64.2%	74.2%	<0.001
EAT-10 QUESTIONS (positive)*			
My swallowing problem has caused me to lose weight.	21%	26.3%	0.1
My swallowing problem interferes with my ability to go out for meals.	21%	25.1%	0.3
Swallowing liquids takes extra effort	27.4%	28.8%	0.7
Swallowing solids takes extra effort.	25.3%	30.1%	0.2
Swallowing pills takes extra effort	26.3%	30.1%	0.3
Swallowing is painful.	11.6%	16%	0.1
The pleasure of eating is affected by my swallowing	23.2%	67.2%	<0.01
When I swallow food sticks in my throat.	22.1%	21.1%	0.8
I cough when I eat.	26.3%	26.1%	0.9
Swallowing is stressful	26.3%	27.6%	0.7

Data are given as mean±standard deviation (median) or percentage (%) as appropriate; HGS: hand grip strength; UGS: usual gait speed; MNA-SF: mini nutritional assessment-short form; GLIM: global leadership initiative on malnutrition *For each EAT-10 question, it is defined as positive if the score for that question was answered as >=1

Table 2. Univariate analyses results for EAT-10 score > 15 points

Variable	EAT-10 Score≤ 15	EAT Score> 15	P
Age (years)	76.5 (16)	85 (11)	<0.01
Sex (Female/Male)	72.4% / 78.9%	27.6% / 21.1%	0.03
Number of Disease	4 (2)	4 (3)	0.8
Number of Drugs	7 (5)	7 (5)	0.8
Neurodegenerative Disease	12%	48.4%	<0.01
FRAİL Score	3 (4)	5 (0)	0.001
HGS (kg)	16 (4)	9 (8)	<0.001
UGS (m/s)	0.8 (0.2)	0.5 (0.2)	0.001
MNA-SF Score	10 (6)	4 (4)	<0.001
GLIM defined nutritional status	38.8%	89.6%	<0.001
Length of stay hospital (days)	6 (6)	10 (12)	<0.001

MNA-SF: mini nutritional assessment-short form; GLIM: global leadership initiative on malnutrition

Table 3. Binary logistic regression analysis results for the presence of EAT 10 score > 15

Variable	Odds ratio [Exp(B)]	95% Confidence Interval (CI)	P
Age	1,08	(1.05- 4.11)	0.001
Sex	1.06	(0.65- 1.72)	0.8
Number of Disease	1.04	(0.86- 1.26)	0.6
Number of Drugs	1.0	(0.91 -1.11)	0.8
Neurodegenerative Disease	4.32	(2.65 – 7.04)	0.01
FRAİL Score	4.29	(2.62- 7.02)	<0.001
HGS (kg)	0.97	(0.91 – 1.02)	0.3
UGS (m/s)	0.56	(0.056 – 9.44)	0.8
MNA-SF Score	0.66	(0.58 – 0.75)	<0.001
Malnutrition defined by GLIM	5.4	(2.73 -10.6)	<0.001

HGS: hand grip strength; UGS: usual gait speed; MNA-SF: mini nutritional assessment-short form; GLIM: global leadership initiative on malnutrition

Nutrition

SS-75

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LONG-TERM IMPACTS OF RAMADAN FASTING ON THE ELDERLY

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Introduction: Ramadan fasting (RF) is one of the practiced form of intermittent fasting distinguished from other types of IF by its diurnal character and lack of fluid consumption. RF is not mandatory for all elders and it may affect them. Whether the changes in elderly caused by fasting are reversible is unclear. The aim of this study is to determine the effect of RF on anthropometric measurements, metabolic profile and geriatric assessment in elderly and to observe whether this effect is reversible within 3 months.

Method: The single-center study was conducted at outpatient geriatric clinic during the month of Ramadan from March 11 to April 9, 2024. Participants were aged 60 years and older, expressed the intention to fast for 30 days during the month of Ramadan. People who agreed to participate in, had no mental disorders, were able to move physically, had no uncontrolled chronical disease, did not use multiple drugs. 3 appointments were given; 1. the routine outpatient clinic control before Ramadan, 2. the last week of Ramadan, 3. 3 months after Ramadan. Anthropometric measurements were taken twice

and the average were noted. The Katz Index of the Activities of Daily Living (ADL), The Lawton–Brody Instrumental ADL Scale, The Mini-Mental State Examination, FRAIL Questionnaire, The SARC-F Screen, Geriatric Depression Scale, 4 meters gait speed, The Mini Nutritional Assessment Short-Form and International Physical Activity questionnaire (IPAQ) were performed. Their nutritional intakes were noted at every visit. Before and after Ramadan lipid parameters, hemoglobine, nutritional parameters, kidney function tests were performed. The datas were presented as mean±standard deviation and median (interquartile range). Dependent variables were compared with paired t-test and Wilcoxon's test according to distrubition.

Results: 37 participants underwent clinical scales and anthropometric measurements before, after and 3 months later their fasting period.Age were 70,2 ± 5,7 and 23 (62.2%) were female, 26 (70.3%) had hypertension, 15 (40.5%) had diabetes mellitus. Participants were divided into two groups: inactive and minimal active as there was no active group according to IPAQ. 18 (48,6%) were minimal active. After the fasting; weight, body mass index (BMI), body fat percentage, waist, hip, thigh circumference were significantly decreased while body water percentage and 4 meters gait speed test were increased (p<0,001, p=0,004, p=0,012, p=0,033, p=0,016, p=0,038, p=0,009, p=0,01). Plasma creatinin, blood urea nitrogen were significantly increased after fasting while estimated glomerular filtration rate and total cholesterol were decreased (p=0,001, p=0,014, p=0,001, p=0,043). At third appointment; weight, BMI, body fat percentage, body water percentage, waist circumference, gait speed test had returned to baseline, but hip circumference, thigh circumference and calf circumference were significantly lower than baseline (respectively, p=0,001, p=0,001, p<0,001 table2-3). Change of anthropometric measurements and gait speed in IPAQ groups were not significant.

Conclusion: According to the results of our study, although Ramadan fasting has been shown to have positive effects on body mass index and fat ratio in the elderly without impairing the geriatric assessment, it has been shown that these effects return to the initial level in the long term and this effect has been seen to be independent of minimal physical activity.

Keywords: Intermittant Fasting, Geriatrics, Ramadan Fasting, Anthropometry, Physical Activity

Chronic Diseases

SS-76

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CLINICAL CHARACTERISTICS AND MORTALITY RISK FACTORS IN ELDERLY PATIENTS WİTH CIRRHOSIS: A CROSS-SECTIONAL STUDY

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Introduction: Cirrhosis is the final stage of chronic liver disease and is a major global cause of morbidity and mortality. The prevalence of cirrhosis is increasing among the elderly population due to rising life expectancy and aging. Improving care access for this vulnerable group through prevention and early treatment is crucial. This study aimed to determine the clinical characteristics of elderly patients with cirrhosis and to identify factors that influence 90-day mortality in such patients.

Method: The single-center, croSS-sectional study included 234 patients diagnosed with cirrhosis who followed Ankara University School of Medicine, Department of Gastroenterology, between March 2021 and February 2022. Patients were divided into two groups: those 65 and older and those younger than 65. Survival and mortality data were recorded for 90 days post-visit. Factors affecting mortality were analyzed.

Results: Of the patients, 113 (48.3%) were elderly, with an average age of 69.9±4.5. The elderly group had a higher proportion of women and diabetics (p<0.001]. Metabolic dysfunction-associated steatotic liver disease (MASLD) (35.5%) and viral hepatitis (25.2%) were the most common etiological factors of cirrhosis. Hepatic encephalopathy was more frequent decompensation in the elderly (p=0.016). No significant difference in terms of 90-day mortality between the two groups was found (p=0.687). Non-survival patients had higher levels of diuretic use (p<0.001), ascites (p<0.001), hepatic encephalopathy (p=0.035), portal vein thrombosis (p=0.008), acute kidney injury (p<0.001), hyponatremia (p<0.001), MELD-Na (p<0.001), CHILD-Pugh scores (p<0.001), recent hospital admissions (p=0.001), and past infections (p=0.016).

Independent mortality risk factors for the elderly included diabetes history, high serum creatinine and bilirubin levels, low serum sodium levels, and high INR.

Conclusion: MASLD and viral hepatitis were the most common etiological factors of cirrhosis in the elderly population. Diabetes mellitus and disease severity negatively affect survival.

Keywords: liver diseases, cirrhosis, geriatric population, diabetes mellitus, mortality

Nutrition

SS-77

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THE EFFECTIVENESS OF GNRI IN PREDICTING MORTALITY IN ELDERLY PATIENTS

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Introduction: The aging process is characterized by a progressive decrease in individuals' capacity to adapt to functional and physiological changes. This process puts the elderly population at high risk for malnutrition.This study aims to determine the GNRI in elderly patients hospitalized in the geriatrics clinic and examine its relationship with mortality.

Materials and Methods: The study retrospectively examined admission and mortality data from 1,085 patients followed in the inpatient service of Ankara University Faculty of Medicine, Department of Geriatrics, between 2020 and 2021. Patients with repeated admissions, those diagnosed with COVID-19 upon admission, and those admitted due to infection were excluded from the study.Survival assessment was considered as the number of survival days within a 1-year period from the date of admis-

sion. Patients were divided into two groups based on their GNRI scores: high-risk (severe and moderate risk) and low-risk (low risk and no risk). One-year mortality data of the patients were recorded. In addition to the relationship between GNRI scores and mortality, the relationship between demographic factors such as age, gender, and age groups (65-74, 75-84, 85 and above) and mortality was also examined. Appropriate tests were used for inter-group comparisons in statistical analyses, and $p<0.05$ was considered statistically significant.

Results: The mean age of the patients was 79.7 years, with 53.2% in the high-risk group. The one-year survival rate was found to be 63.8%. A significant relationship was found between GNRI risk groups and 1-year survival ($p<0.001$). The survival rate of patients in the low-risk group (79.9%) was significantly higher than the high-risk group (49.7%). In the high-risk group, the mortality rate was significantly higher in males compared to females ($p<0.001$). The high-risk ratio was found to be higher in the 75 years and older groups ($p<0.05$).

Discussion: This study demonstrates that the Geriatric Nutritional Risk Index (GNRI) is a strong and reliable prognostic tool for predicting malnutrition risk and 1-year mortality in elderly patients hospitalized in the geriatrics clinic. It was found that the mortality rate was significantly higher in patients in the GNRI high-risk group, indicating the critical importance of GNRI in clinical practice. The results of our study clearly show that the risk of malnutrition increases significantly in the population aged 75 and over, and this age group requires special attention in terms of nutrition. Age 75 appears to be a crucial turning point for nutritional risk. Furthermore, it was determined that male gender has a significant effect on mortality in the high malnutrition risk group, with males carrying a higher mortality risk compared to females. In light of these findings, it was concluded that nutritional assessment and intervention strategies in the elderly patient population should be optimized according to age and gender. Integrating GNRI into routine clinical practice could play an important role in reducing mortality rates and improving quality of life by enabling early detection of high-risk patients.

Conclusion: The study shows that GNRI can be used as an important risk assessment tool in clinical practice. These findings can be used in developing age- and gender-specific nutritional assessment and intervention strategies.

Keywords: GNRI, Malnutrition, Mortality

Chronic Diseases

SS-78

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RETROSPECTIVE ANALYSIS OF RELATION BETWEEN SERUM URIC ACID LEVELS AND FUNCTIONAL ASSESMENT IN OLDER SUBJECTS

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Background: The global prevalence of hyperuricemia is on the rise, likely due to aging populations in Western countries and shifts in lifestyle habits. The role of serum uric acid in the development of adverse health outcomes in advanced age remains uncertain.

Aims: The study aimed to evaluate the relationship between serum uric acid (SUA) levels and disability in older adults living in the community.

Methods: Patients followed up in our clinic between 2018 and 2024 were examined. A total of 422 patients who were not taking uric acid-lowering treatments were included in this study. Demographic characteristics (age, sex, smoking status, alcohol consumption, education level), body mass index, Mini-Mental State Examination (MMSE) score, comorbidities, and laboratory values (hemoglobin, creatinine, albumin, cholesterol, CRP, and uric acid levels) were recorded. Functional assessments of participants were evaluated using the Lawton-Brody Instrumental Activities of Daily Living (IADL) scale. Patients were divided into two groups: those with an IADL score below 7 and those with an IADL score of 7 or 8 (controls). The association of parameters with IADL groups was analyzed using Chi-square tests, and then parameters significantly associated with IADL groups were analyzed using logistic regression.

Results: Of the 422 patients, 122 fell into the IADL<7 group, and 300 fell into the control group. Among the parameters, age, smoking status, alcohol consumption, education level, MMSE score, heart failure, history of cerebrovascular events, malignancy, Parkinson's disease, hemoglobin, albumin, cholesterol, and uric acid levels differed significantly between IADL groups (Table 1). In multivariate logistic regression, serum uric acid levels were independently associated with IADL score (OR: 1.348, 95% CI: 1.006-1.806, $p = 0.045$). This association was independent of age, MMSE score, heart failure, and albumin levels (Table 2).

Conclusions: Serum uric acid levels were found to be associated with disability scores (IADL), independent of age and MMSE scores. Therefore, uric acid levels may help identify patients at risk of disability. These findings contribute to the understanding of the complex relationship between SUA levels and the integrity and functioning of both the brain and muscles, which are key factors in frailty and disability [1,2]. The results of our study indicate the need for more comprehensive research on this matter.

Keywords: IADL, serum uric acid, disability, older people

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Distrubution of parameters between groups

Distrubution of parameters between groups	IADL<7 (n=122)	Controls (IADL 7 or 8) (n=300)	P value
Demographic characteristics			
Age	78,97 (6,89)	73,07 (6,32)	**.00**
Sex, female	91 (74,6%)	202 (67,3%)	.142
Smoking			**.010**
Active use	2 (1,6%)	23 (7,7%)	
Prior use	27 (22,1%)	88 (29,3%)	
Never	93 (76,2%)	189 (63,0%)*	
Alcohol consomption			**.031**
Active use	2 (1,6%)	22 (7,3%)	
Prior use	8 (6,6%)	30 (10,0%)	
Never	112 (91,8%)	248 (82,7%)*	
Education level			**.000**
Illiterate	36 (29,5%)	35 (11,7%)*	
Literate	24 (19,7%)	27 (9,0%)	
Primary School	43 (35,2%)	113 (37,7%)	
Middle School	6 (4,9%)	23 (7,7%)	
High School	4 (3,3%)	48 (16,0%)	
Higher Education	9 (7,3%)	54 (18%)	
Physical and cognitive parameters			
BMI (kg/m2)	29,8 (5,9)	29,75 (5,34)	.926
MMSE <24 points	55 (47,4%)	28 (9,9%)	**.000**
Comorbidities			
Diabetes	43 (35,2%)	113 (37,7%)	.640
Hypertension	82 (67,2%)	219 (73,0%)	.233
Heart failure	16 (13,1%)	16 (5,4%)	**.006**
Coronary artery disease	31 (25,4%)	53 (17,7%)	.071
History of cerebrovascular event	16 (13,1%)	10 (3,3%)	**.000**
Chronic kidney disease	11 (9,0%)	13 (4,3%)	.060
Malignancy	19 (15,7%)	24 (8,0%)	**.018**
Chronic liver disease	2 (1,6%)	6 (2,0%)	.805
Peripheral vascular disease	3 (2,5%)	20 (6,7%)	.084
Parkinson's	12 (9,8%)	8 (2,7%)	**.002**
Arthritis	24 (19,7%)	50 (16,7%)	.462
Biochemical parameters			
Hemoglobin (g/dl)	12,2 (1,47)	12,83 (1,58)	**.000**
Creatinine (mg/dl)	0,97 (0,37)	0,92 (0,54)	.070
Albumin (g/dl)	4,24 (0,38)	4,45 (0,3)	**.000**
Total cholesterol (mg/dl)	207,4 (119,9)	208,9 (46)	**.047**
Uric acid (mg/dl)	5,7 (1,66)	5,28 (1,32)	**.039**
CRP (mg/dl)	7,42 (17,9)	3,87 (5,07)	.214

Description of the Figure: Results of the multivariate logistic regression analysis

Results of the multivariate logistic regression analysis	OR	%95 CI	P value
Age	1,100	1,035 - 1,168	**.002**
Smoking	0,433	0,166 – 1,133	.088
Alcohol consumption	0,283	0,060 - 1,331	.110
Education level (illiterate)	2,025	0,731 - 5,613	.175
MMSE <24 points	9,509	3,936 - 22,974	**.000**
Heart failure	6,008	1,269 - 28,440	**.024**
History of cerebrovascular event	2,553	0,598 - 10,898	.206
Malignancy	1,050	0,356 - 3,097	.930
Parkinson's	5,329	0,907 - 31,324	.064
Hemoglobin	1,166	0,913 - 1,488	.219
Albumin	0,111	0,028 - 0,431	**.002**
Total cholesterol	1,002	0,998 - 1,007	.345
Uric acid	1,348	1,006 - 1,806	**.045**

Nutrition

SS-79

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THE PREDICTIVE CAPACITY OF THE TRIGLYCERIDE TO HIGH-DENSITY LIPOPROTEIN RATIO IN THE DIAGNOSIS OF MALNUTRITION

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Background&Aims: Detecting malnutrition in older adultspresents a significant challenge that requires a holisticapproach for timely intervention. The role of laboratoryindicators, including total cholesterol, in malnutritionassessment has been established. The triglyceride to high-density lipoprotein (TG/HDL) ratio, due to its establishedassociation with metabolic diseases and sarcopenia, showspromise in diagnosing malnutrition. This study aims to assessthe predictive capability of the TG/HDL ratio in diagnosingmalnutrition.

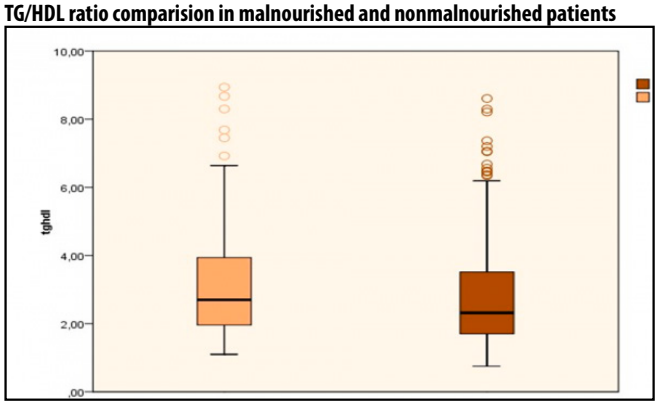
Methods: This croSS-sectional study included 462 patients aged 65 years and older. All participants underwent comprehensive geriatric assessments and laboratory evaluations. Nutritional status was assessed using the Global Leadership Initiative on Malnutrition (GLIM) criteria. The relationship between the triglyceride-to-high-density lipoprotein (TG/HDL) ratio and malnutrition was analyzed using multivariate logistic regression. The predictive ability of TG/HDL ratio for malnutrition was assessed using receiver operating characteristic (ROC) curve analysis by MedCalcstatistical software.

Results: The average age of the participants was 75.2 ±6.4 with 295 (63.9%) being women. Malnutrition was observed in 23.8 % (n=110) of the study population. atients with malnutrition had a significantly higher TG/HDL ratio compared to the well-nourished group (p=0.019). Multivariate logistic regression analysis demonstrated that the TG/HDL ratio was independently and significantly associated with malnutrition, even after adjusting for potential confounders (β=1.17, 95% CI=1.01–1.37, p=0.039). The area under the curve (AUC) for predicting malnutrition was 0.574 (95% CI, 0.527–0.619; p=0.018). The negative predictive value was 89.5%, with an optimal TG/HDL cutoff value of >2.23 for identifying malnutrition in all participants.

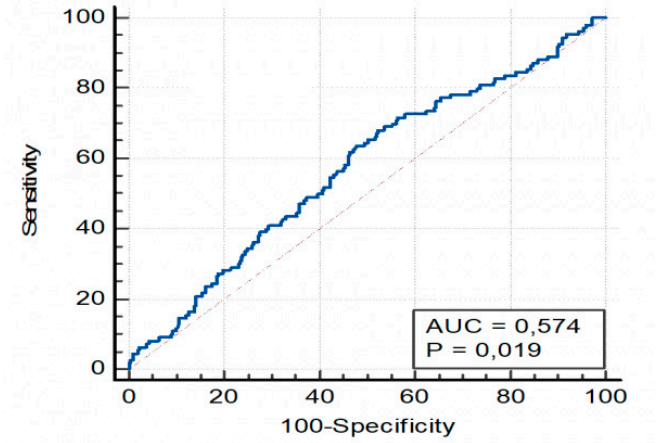
Conclusions: The triglyceride to high-density lipoprotein ratio may serve as a simple and valuable biomarker for identifying malnutrition in older adults.

Keywords: malnutrition; triglyceride to high-density lipoprotein ratio; geriatrics

TG/HDL ratio comparision in malnourished and nonmalnourished patients



Description of the Figure: ROC analysis for TG/HDL ratio in predicting malnutrition



Description of the Figure: multivariate regression analysis of TG/HDL ratio on malnutrition

Models	Independent Variables	OR	95% CI	p-value
Unadjusted Model	TG/HDL-C ratio	1.169	1.024-1.334	0.021
Adjusted Model 1	TG/HDL-C ratio	1.176	1.009-1.371	0.039
	Age	1.066	1.026-1.107	0.001
	Gender (female)	2.205	1.297-3.748	0.004
	BMI	0.891	0.585-1.900	<0.001
	Diabetes Mellitus	1.055	0.413-1.498	0.859
	Atherosclerotic heart disease	0.787	0.413-1.498	0.465
	Number of medicines used	1.272	1.113-1.453	<0.001
Adjusted Model 2	TG/HDL-C ratio	1.168	1.004-1.359	0.044
	Age	1.069	1.030-1.110	0.001
	Gender (female)	2.103	1.175-3.764	0.012
	Exercise status None 1-2 days/week ≥3 days/week	 1 1.955 0.840	 1 1.112-3.436 0.395-1.786	 0.013 0.020 0.651
	BMI	0.894	0.850-0.940	<0.001
	Smoking status (ex-smoker)	0.703	0.381-1.299	0.261
	Diabetes Mellitus	0.656	0.384-1.119	0.122
	Atherosclerotic heart disease	0.552	0.303-1.008	0.053
	Antidepressant/antipsychotic use	1.118	0.588-2.127	0.734
Adjusted Model 3	TG/HDL-C ratio	1.185	1.020-1.376	.027
	Age	1.083	1.043-1.125	<0.001
	Gender (female)	2.005	1.112-3.615	.021
	Smoking status (ex-smoker)	.751	0.407-1.385	.359
	Exercise status None 1-2 days/week ≥3 days/week	 1 2.000 .799	 1 1,139-3.514 0.368-1.737	 .008 .016 .572
	BMI	.907	0.862-.954	.000
	Waist-to-hip ratio	.655	0.027-15.882	.795

Characteristics of patients according to malnutrition status

	Total n=462	Non-malnurished n=352	Malnourished n=110	p-value
Age, mean, ± SD	75.3±6.4	74.4±6.1	78±6.69	<0.001
Gender, Women, n (%)	295 (63.9)	220(62.5)	75 (68.2)	0.279
Exercise, n(%) None 30 min,1-2 days/week 30 min, ≥3 days/week	 207 (44.8) 89 (19.3) 166 (35.9)	 140 (40.1) 75 (21.3) 136 (38.6)	 66 (60) 14 (12.7) 30 (27.3)	0.001
Smoking status, n(%) Never smoke Ex-smoker	 361 (78.) 101 (21.9)	 276 (78.4) 76 (21.6)	 85 (77.3) 25 (22.7)	0.801
BMI, kg/m², mean ± SD	29±5.4	29.5±5.3	27.3±5.6	<0.001
Arm circumference, cm, mean ±SD	29.2±3.8	29.6±3.6	28±4.1	<0.001
Calf circumference, cm, mean ±SD	36.2±3.9	36.8±3.8	34.1±3.7	<0.001
Waist circumference, cm, mean ±SD (n:453)	99.73±12.1	100.5±12	97±11.8	0.009
Handgrip strength, kg, median,(min-max,IQR)	19.9 (6.8-42.4,10.33)	20.9 (6.8-42.4,11)	17.6 (8.6-33,9.1)	<0.001
Gait speed, m/s, mean ±SD	0.97±0.33	1.02±0.32	0.79±0.31	<0.001
Diabetes Mellitus, n(%)	114 (24.7)	78 (22.2)	36 (32.7)	0.025
Hypertension, n(%)	299 (64.7)	223 (63.4)	76 (69.1)	0.272
Atherosclerotic heart disease, n(%)	75 (16.2)	50 (14.2)	25 (22.7)	0.034
Number of medicines used, median (min-max,IQR)	2 (0-10,3)	2 (0-9,3)	3 (0-10,3)	<0.001
Antidepresant/antipsychotic use, n(%)	73 (15.8)	55 (15.6)	18 (16.4)	0.85
FFP Score, median (min-max,IQR)	1 (0-4,1)	1 (0-4,2)	3 (0-4, 2)	<0.001
ADL, median (min-max,IQR)	6 (1-6,1)	6 (1-6,1)	5 (1-6,1)	<0.001
IADL, median (min-max,IQR)	8 (0-8,2)	8 (0-8,1)	7 (0-8,3)	<0.001
MMSE, median (min-max,IQR)	28 (8-30,4)	28 (9-30,3)	27 (8-30,5.5)	<0.001
GDS, median (min-max,IQR)	1 (0-15,4)	1 (0-15,3)	3 (0-12,5)	<0.001
TC (mg/dL), mean ±SD	210.48 ±45.07	214.1 ±44.6	198.8±44.7	0.002
LDL-C (mg/dL), mean ±SD	131.24 ±36.6	134.3 ±36.5	121.1 ±35.3	0.001
HDL-C (mg/dL), mean ±SD	51.94 ±12.63	52.8 ±12.3	49.11 ±13.1	0.007
TG (mg/dL), median (min-max,IQR)	122 (52-386,64.7)	122 (52-386,64)	121 (61-363,73)	0.283
TG/HDL-C ratio, median (min-max,IQR)	2.32 (0.75-8.9,1.62)	2.29 (0.75-.61,1.62)	2.41 (1.1-8.91.71)	0.019

Preventive Medicine

SS-80

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THE GERIATRIC POPULATION'S PERSPECTIVE ON VACCINES: FRIEND OR FOE?

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Ankara University Faculty Of Medicine

Introduction: As the geriatric population continues to grow, the importance of elderly health in the context of public health becomes increasingly significant. One of the fundamental strategies to ensure this is through adult vaccination. Understanding individuals' tendencies towards vaccination is crucial for promoting adult vaccination. The aim of our study is to determine the attitudes, knowledge, and awareness of the elderly towards vaccines, as well as any changes in attitude following the provision of information.

Method: Patients and their caregivers who met the study criteria and visited the Geriatrics Department outpatient clinics at Ankara University School of Medicine, Department of Internal Medicine between April 5, 2024, and May 20, 2024, were included in the study. A 41-item questionnaire, based on the literature, was administered to the participants. The questionnaire gathered information on demographic characteristics, knowledge levels regarding vaccines, attitudes towards vaccination, and opinions on vaccine efficacy and safety. The results were analyzed croSS-sectionally.

Results: The 275 participants were divided into two groups: those aged 18-65 and those over 65. When examining vaccination attitudes, vaccine hesitancy was observed in 13.8% of the elderly and 8.5% of the younger participants, with age not being a significant factor in vaccine hesitancy. The perception of having sufficient knowledge about vaccines was 28.7% among younger participants, compared to 8.8% among the elderly ($p<0.001$). After being informed about the Herpes Zoster vaccine, 22.3% of younger participants considered getting vaccinated, compared

to 41.4% of elderly participants. The increase in vaccine uptake with age following the provision of information was found to be statistically significant (p=0.002).

Conclusion: In our study, we found that the lack of vaccine knowledge was significantly higher among the elderly compared to younger individuals. Furthermore, we observed that the rate of vaccination increased with age after providing information. This underscores the importance of education in improving public health and suggests that vaccination rates can be increased through informative interventions.

Keywords: Elderly, Vaccine, Herpes Zoster, Public Health, Vaccination Attitudes, Vaccine Awareness, Health Education, Vaccine Hesitancy

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Frailty

SS-81

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THE RELATIONSHIP BETWEEN SOCIAL COMPONENTS OF FRAILTY AND GERIATRIC SYNDROMES IN COMMUNITY-DWELLING OLDER ADULTS; A CROSS-SECTIONAL PROSPECTIVE STUDY

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Introduction: The relationship between social frailty and geriatric syndromes has been better understood recently. We aimed to evaluate this relationship in Turkish older adults since social frailty is affected by socio-cultural factors.

Methods: A total of 136 older adults admitted to the geriatric outpatient clinic at the university hospital were included. All patients had a comprehensive geriatric assessment. Social frailty was evaluated with The Makizako Social Frailty Index; physical frailty was evaluated with the modified Fried Scale. All variables were skew-distributed and were compared with the Mann–Whitney U-test between the two groups.

Results: A total of 136 outpatients were included. The mean age was 72.76±5.85 years, and 83 (61%) of the study population were female. Demographic data and comprehensive geriatric assessment results with and without social frailty are shown in Table 1. Logistic regression analysis was conducted. It was found that living alone increases the risk of social frailty by 5.25-fold (95% CI:1.871-14.735, p=0.002). Each additional medication was associated with a 19% increase in the risk of social frailty (95% CI:1.041-1.361, p=0.011), and the presence of physical frailty according to the Modified Fried Index was associated with a 4.02-fold increase in the risk of social frailty (95% CI:1.499-10.753, p=0.006).

Key Conclusions: Our findings show that the conception of social frailty, which is associated with many adverse conditions and has less data in the literature, should not be ignored when evaluating older adults. This approach may be useful in preventing complications that may accompany social frailty.

Keywords: Social frailty, geriatric syndromes, comprehensive geriatric assessment, older adult.

Table 1. Demographic data and comprehensive geriatric assessment results for with and without social frailty according to The Makizako Social Frailty Index

	Total n:136	Social non-frail n:95	Social frail n:41	p value
Age (mean±SD)	72.76±5.85	72±5.00	75±7.00	**0.011**
Sex (n,%)				0.708
Male	53 (39.0%)	38(40.0%)	15(36.6%)	
Female	83 (61.0%)	57(60.0%)	26(63.4%)	
Living With Someone (n,%)				**0.003**
Alone	26 (19.1%)	11 (11.6%)	15 (36.6%)	
Family members without spouse	24 (17.6%)	18 (18.9%)	6 (14.6%)	
Spouse	86 (63.2%)	66 (69.5%)	20 (48.8%)	
Education (n,%)				0.495
Not literate	25 (18.4%)	16 (16.8%)	9 (22.0%)	
Education duration ≤5 years	60 (44.1%)	45 (47.4%)	15 (36.6%)	
Education duration >5 years	51 (37.5%)	34 (35.8%)	17 (41.5%)	
Marital status (n,%)				**0.022**
Married	86 (63.2%)	66 (69.5%)	20 (48.8%)	
Others	50 (36.8%)	29 (30.5%)	21 (51.2%)	
Elixhauser Comorbidity Index	0[(-1)-(3.5)]	0 [(-1)-(3)]	2[(-1)-(6)]	0.099
Number of medications	5 [3-7]	5 [3-7]	5 [5-6]	**0.019**
ADL*	5 [5-6]	6 [5-6]	5 [5-6]	**0.017**
IADL*	8 [7-8]	8 [8-8]	8 [6-8]	**0.004**
MMSE*	28 [26-30]	28 [27-30]	28 [25-29]	0.298
GDS*	2 [0-5]	1 [0-4]	3 [0-5]	0.155
MNA-SF*	14 [12-14]	14 [12-14]	13 [11-14]	**0.009**
SARC-F*	1 [0-4]	1 [0-2]	4 [2-4]	**<0.001**

*ADL: Activities of Daily Living Scale (Katz ADL), IADL: Instrumental activities of daily living, MMSE: The Mini-Mental State Examination, GDS: The Geriatric Depression Scale, MNS-SF: Mini Nutritional Assessment Short-Form, SARC-F: A simple Questionnaire to Rapidly Diagnose Sarcopenia

**Social frailty was determined according to the five-item test, and those who scored 2 or more were considered socially frailty. Numerical variables that are not normally distributed are also indicated as median [25p-75p].

Nutrition

SS-82

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SUBCUTANEOUS FAT TISSUE IS ASSOCIATED WITH THE INTENSIVE CARE UNIT STAY IN OLDER PATIENTS: PRELIMINARY RESULTS FROM A CROSS-SECTIONAL STUDY

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Background-Aim: Subcutaneous fat tissue (SFT) is accepted as an active endocrine organ, besides several hormonal secretion It produces cytokines and other inflammatory mediators that play a role in immune responses. SFT can contribute to chronic low-grade inflammation, on the other hand some studies have shown that critically ill patients with lower levels of SFT may have poorer survival rates. It was observed that higher BMI (as a proxy for SFT) is associated with reduced mortality in certain subsets of critically ill patients, known as "obesity paradox". In this study, we aimed to explore the relationship between SFT and stay in ICU in older patients with critical illness.

Methods: Patients aged 60 years and older admitted to internal medicine intensive care unit (ICU) was included in study between March 2024- July 2024. Patients who were expected to stay in ICU less than 24 hours, patients with malignancy, patients treated with positive inotropic agents, and patients with invasive mechanical ventilation support were excluded from the study. Demographic and clinical features, laboratory parameters of the 41 patients were recorded from the hospital information system. The SFT measurement was performed from the anterior thigh by B-mode ultrasonography (US). The ICU stay was calculated the duration between the admission and the transfer to another ward or discharge.

Results: The mean age of the study population was 76.5 ± 10.4 years. The female ratio was 43.9% (n=18). The median ICU stay was 9.5 [15.0] days. The mean SFT thickness was measured as 9.0±5.6 millimeters. Seven patients (17.1%) were deceased during the ICU follow-up. It was shown that there was moderate and negative correlation between ICU stay and SFT thickness (rho=-0.418, p=0.006). When the correlation was controlled by age, sex and BMI, the negative correlation was persisted (rho=-0.360, p=0.026). In linear regression analysis, it was found that SFT was independently associated with the ICU stay (Table 2).

Conclusion: SFT may act as a protective factor in critically ill patients, possibly due to its role in energy storage and metabolic functions. Patients with higher SFT might better resist the catabolic stress associated with critical illness, leading to quicker recovery and shorter ICU stays. Further research could explore whether interventions aimed at optimizing nutritional status and maintaining SFT stores might improve outcomes in critically ill patients.

Keywords: older adults, critically-ill, subcutaneous fat tissue, hospital stay

Table 2. Linear regression analysis of the factors related to ICU stay

	B	95% Confidence Interval		p
Age, years	0.15	-0.16	0.46	0.33
Sex, female	-1.66	-7.97	4.65	0.60
BMI, kg/m²	0.15	-0.51	0.80	0.65
Subcutaneous Fat tissue	-0.75	-1.40	-0.10	0.026

Table 1. The baseline clinical and demographic features of study population

	Study Population (n=41)
Age, years	76.5 ±10.4
Sex, female	18 (43.9)
ICU indication	
Acute respiratory failure	8 (19.5)
Septicemia	12 (29.2)
Acute renal failure	7 (17.1)
Pneumonia	7 (17.1)
Others	7 (17.1)
BMI, kg/m²	25.7±5.9
Calf circumference, cm	30.0 [6.0]
Mid upper arm circumference, cm	25.0 [3.3]
Charlson Comorbidity Index	3.0 [2.0]
Number of medications	3 [5.0]
Subcutaneous fat tissue, mm	9.2 ±5.8
ICU stay, days	9.5 [15.0]
Exitus	7 (17.1)

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Frailty

SS-83

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A NOVEL VALIDATED PROGNOSTIC INDEX FOR OLDER PATIENTS IN THE EMERGENCY DEPARTMENT: GAZI INDEX

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Aim: While indices such as the PRISMA-7 questionnaire can predict poor outcomes in older patients admitted to the emergency department, there remains a need for more easily applicable and sensitive scales. This study aimed to develop a new prognostic index to predict the risk of disability, hospitalization, and mortality in elderly patients presenting to the emergency department.

Materials and Methods: A total of 356 patients aged 65 and older who presented to the emergency department of a University Hospital were included. Exclusion criteria were age under 65, impaired general condition or consciousness (GCS <15), inability to provide contact information for follow-up, or being unreachable at the 1-month and 6-month follow-ups. Data collected included demographic characteristics, vital signs, laboratory parameters, anthropometric measurements, and emergency department outcomes. The G8 screening scale (G8), PRISMA-7 questionnaire, Katz Activities of Daily Living (ADL) scale, and Charlson Comorbidity Index were administered. Follow-up assessments were conducted via telephone on the 30th and 180th days post-admission, using the Katz ADL scale. Patients or their relatives were also asked about repeated outpatient visits, emergency admissions, hospitalizations, nursing home admissions, and survival status. A poor outcome was defined as reduced functionality, emergency department visits, hospitalizations, nursing home admissions, or mortality within 180 days. Patients were categorized into two groups based on outcome: those with adverse outcomes and those without.

Results: Parameters significantly associated with adverse outcomes in univariate analysis (to be presented during oral presentation) were further examined using binary logistic regression (Table 1), resulting in the development of the Gazi index. The Gazi index, ranging from 0 to 13, consists of six easily applicable parameters independently associated with adverse outcomes, with scores above 4 indicating a higher risk (Table 2). The index's predictive validity for adverse outcomes was compared to the PRISMA-7 scale, a validated tool in the emergency department (Table 3). The Gazi index demonstrated superior predictive accuracy for adverse outcomes compared to PRISMA-7 (p=0.008, Figure 1).

Conclusion: The GAZİ index is a valid tool for predicting adverse outcomes in older patients presenting to the emergency department.

Keywords: Older adult, Emergency, Frailty, Prognosis

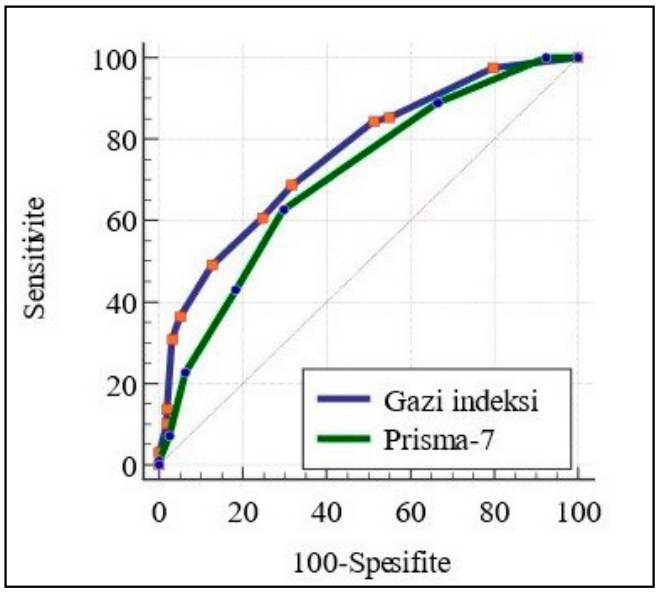

Figure 1. Comparison of ROC curves of Gazi and PRISMA-7 indices in predicting adverse outcomes

Table 1. Logistic regression analysis results evaluating the relationship between Gazi index parameters and poor outcome

	Odds Ratio	*95% Confidence İnterval*	*P*
Age ≥75	1.79	1.09-2.96	0.023
Body mass index <25	1.73	1.05-2.86	0.031
Male	2.34	1.43-3.84	0.001
Use of cane/walker/assistive device	2.22	1.24-4.00	0.008
Self-perception of poorer health compared to peers	2.77	1.58-4.87	<0.001
Requires assistance in meeting at least one of their bathroom-related needs	2.28	1.29-4.05	0.004

Table 2. Gazi Index

Sex	***Woman = 0 points / Male = 2 points***
Is there a need for the use of a cane, walker, or any other assistive device?	No = 0 points / Yes = 2 points
Is the individual able to independently manage toileting and bathing activities?	Independent =0 points / Needs support in at least one = 2 points
Body mass index	≥25 = 0 Points / <25 = 2 Points
How would you describe your general health condition?	Comparable to or better than that of my peers= 0 / Worse than that of my peers= 3
Age	<75 years =0 / ≥75 years = 2

Table 3. ROC analysis results of Gazi and PRISMA-7 indices in predicting adverse outcomes

	Cut-off	*AUC*	*p*	*95% CI*	*Sensitivity*	*Specificity*	*+PV*	*-PV*
Gazi index	>4	0.76	<0.001	0.71-0.81	68.7	68.4	73.1	63.5
Prisma-7 index	>2	0.71	<0.001	0.66-0.75	62.6	70.3	72.5	60.0

Sarcopenia

SS-84

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ASSOCIATION BETWEEN SARCOPENIA AND RIGHT HEART FUNCTION IN THE GERIATRIC POPULATION: A CROSS-SECTIONAL STUDY

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Ankara University School Of Medicine

Introduction: Sarcopenia is a prevalent condition in the geriatric population, characterized by a progressive decline in skeletal muscle mass and strength, leading to functional impairments and increased risk of adverse health outcomes. Right heart function, which can be evaluated by the Tricuspid Annular Plane Systolic Excursion (TAPSE), is a critical determinant of morbidity and mortality in older adults. Previous studies have indicated that muscle wasting and cardiovascular dysfunctions may be interconnected, yet the specific relationship between sarcopenia and right heart function remains underexplored in the Turkish geriatric population. This study aims to investigate the association between sarcopenia, determined by hand grip strength and Skeletal Muscle Index (SMI), and right heart function as assessed by TAPSE.

Methodology: In this ongoing croSS-sectional study, 60 geriatric patients have been enrolled so far. The study aims to enroll a total of 180 patients based on power analysis to ensure sufficient statistical power. Sarcopenia was classified based on hand grip strength and SMI, with thresholds of 27 kg for men and 16 kg for women for hand grip strength, and SMI thresholds of 7.0 kg/m^2 for men and 5.7 kg/m^2 for women. SMI values were obtained using Bioelectrical Impedance Analysis (BIA), a widely used method for estimating body composition. Right heart function was evaluated using TAPSE measurements, where values below 19 mm were considered indicative of impaired right heart function. Echocardiography for TAPSE measurement was performed by the same expert cardiologist for all patients to ensure consistency.

Results: Out of the 60 patients enrolled so far, 20 (33.3%) were classified as sarcopenic, while 40 (66.7%) were non-sarcopenic. Among the sarcopenic group, 12 (60%) had TAPSE values below 19 mm, indicating impaired right heart function, compared to 11 (27.5%) in the non-sarcopenic group. The mean TAPSE was 18.1 mm in the sarcopenic group and 19.7 mm in the non-sarcopenic group. Statistical analysis using a t-test revealed a trend towards lower TAPSE values in the sarcopenic group; however, the difference was not statistically significant ($p = 0.093$). Despite the lack of statistical significance, the observed trend suggests a potential impact of sarcopenia on right heart function, warranting further investigation with the full cohort.

Conclusion: No significant association was found between sarcopenia and right heart function ($p = 0.093$). However, there was a non-significant trend towards lower TAPSE values in the sarcopenic group. This trend may become significant once the target sample size is reached, potentially providing more definitive evidence of the relationship between sarcopenia and right heart function.

Keywords: Sarcopenia, TAPSE, Right heart

Others

SS-85

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EXPLORING THE KNOWLEDGE LEVELS AND ATTITUDES OF OLDER ADULTS TOWARDS LGBTQ+ RIGHTS: A DEMOGRAPHIC ANALYSIS

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Introduction: The attitudes and knowledge levels of older adults regarding LGBTQ+ issues are crucial in understanding the broader societal acceptance of these individuals. As society evolves, it is important to examine how those aged 65 and above perceive LGBTQ+ rights, including marriage equality, adoption rights, and non-discrimination. Older adults often have deeply ingrained beliefs shaped by the cultural and societal norms of their time, which can influence their acceptance of LGBTQ+ individuals. Understanding these perspectives is essential for developing targeted educational initiatives that promote inclusivity and combat prejudice. This study aims to explore these attitudes by examining how demographic factors such as age, gender, education, and marital status influence the perspectives of older adults towards LGBTQ+ rights.

Methodology: A structured survey was conducted with 100 participants aged 65 and above. The survey included a series of questions designed to assess their familiarity with LGBTQ+ terminology and their attitudes towards various rights and issues facing LGBTQ+ individuals, such as marriage equality, adoption rights, and public visibility. Participants were selected to ensure a diverse representation of education levels, marital statuses, and age ranges. Statistical analyses, including chi-square tests, were employed to examine the relationships between demographic variables and survey responses, allowing for the identification of significant patterns and correlations.

Results: The study found that 60% of participants were familiar with the LGBTQ+ acronym, with awareness significantly higher among those with higher educational attainment ($p < 0.001$). Regarding equal rights for LGBTQ+ individuals, 34% supported, 50% opposed, and 16% were undecided. Support for equal rights varied significantly by age ($p < 0.001$), gender ($p = 0.004$), and education level ($p < 0.001$), but not by marital status ($p = 0.514$). Younger participants within the elderly group and those with higher education levels showed more support for equal rights.

Support for marriage equality was observed in 55% of respondents, with significant differences based on education ($p = 0.045$) and marital status ($p = 0.035$). However, only 35% supported adoption rights, with a notable 25% of those supporting marriage equality not supporting adoption rights ($p = 0.012$). This selective acceptance was more pronounced among older participants (aged 75 and above) ($p = 0.009$). There was broad support for non-discrimination in healthcare (70%) and employment (65%) ($p = 0.023$).

Conclusion: This study highlights the varied levels of support for LGBTQ+ rights among older adults. While 34% support equal rights for LGBTQ+ individuals, a significant portion remains opposed or undecided. Marriage equality is supported by 55% of participants, but adoption rights garner less support at 35%. These findings suggest that while there is some acceptance of LGBTQ+ rights, particularly in terms of marriage, there is still considerable resistance, especially regarding adoption. While there is significant support against discrimination in healthcare and employment, other aspects such as marriage equality and adoption rights reveal more divided opinions. Targeted educational efforts are essential to bridge these gaps and promote broader inclusivity within this demographic.

Keywords: LGBTQ+, gender, sexual identity, discrimination

Others

SS-86

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DEMOGRAPHIC AND CLINICAL CHARACTERISTICS OF THE OLDER ADULTS ATTENDING "DAY CARE AND ACTIVE LIVING CENTER" IN AN EARTHQUAKE CITY

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Aim: To reveal the demographic and clinical characteristics of the older adults actively attending the "Day Care and Active Living Center" in Hatay, one of the provinces most affected by the Kahramanmaras earthquakes that caused great destruction in our country in 2023.

Methods: The center was visited twice a week between June and August 2024 and individuals aged 60 years and older who had been actively participating in activities for at least 1 year were included in the study. Patients' ages, chronic diseases, place of residence (container city or home), injury status during earthquake, presence of loss of first-degree relatives in the earthquake, and comprehensive geriatric assessment scores were recorded.

Results: Of the 56 older individuals in the center, 34 (60.7%) were women. The mean age was 69.35±5.72. 32 (57.1%) of the attenders were living in container cities and 8 had lost at least one of their first-degree relatives in the earthquake. Hypertension was the most common chronic disease (46.4%). The mean Clinical Frailty Scale score of the study population was 3.23±0.7 and the mean Geriatric Depression Scale score was 3.3±2.63.

Conclusion: Day Care and Active Living Centers, where the older individuals interact with each other, provide psychological and physical rehabilitation of individuals, especially in disaster areas, and should be expanded nationwide.

Keywords: Keywords: Earthquake, disaster, older adults, geriatric syndrome

Others

SS-87

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RELATIONSHIPS BETWEEN CAREGIVING READINESS, CAREGIVING BURDEN AND QUALITY OF LIFE ACCORDING TO APIM AMONG CAREGIVERS OF FRAIL OLDER ADULTS

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Objective: In this study, we aim to explore the relationships between caregiver readiness, caregiver burden, and quality of life according to the actor-partner interdependence model (APIM) among caregivers of frail older individuals.

Materials and Methods: The research was conducted with 65 older adults living with frailty and 65 caregivers who applied to Hacettepe University Hospital Outpatient clinic of Geriatric Medicine between 25 October 2023 and 25 February 2024. Research data for individuals over the age of 65; Introductory Information Form, Edmonton Frail Scale (EFS), Care Dependency Scale (CDS), for caregivers of individuals over the age of 65; It was collected using the Caregiver Introductory Information Form, Caregiving Readiness Scale (CRS), Zarit Caregiving Burden Scale (ZCBS) and Short Form-36 (SF-36). 600 patients were evaluated for inclusion criteria, and this research was completed with 65 older adults living with frailty and family caregivers. Frailty and care dependency in the older adults; the variables of readiness to provide care, care burden and quality of life (sub-dimensions; physical function, physical role difficulty, pain, general health, vitality, social function, emotional role difficulty and mental health) in caregivers and the effects between these variables were assessed. Path analysis was used to analyze the interrelationships among the scales based on the theoretical model of the APIM.

Results: According to the research results, the average age of the individuals participating in the research was 78.98±7.922 and it was observed that 76.9% of the individuals were women. The average age of caregivers is 56.55±11.74 and it was observed that 86.2% of caregivers were women. According to the study findings, the mean scores for the EFS, CDS, CRS, and ZCBS were determined as 9,89 (Q1-Q3: 9-11), 48,84 (Q1-Q3: 34-65), 23,01 (Q1-Q3: 18-29), and 42,56 (Q1-Q3: 28-56) respectively. The mean quality of life score for caregivers was lowest in emotional role functioning (39,49 points) and highest in physical functioning (74,38 points) (Table 1). A statistically significant negative relationship was observed between the frailty and care dependency scores ($p<0.05$). Frailty score was found significantly affect emotional role functioning scores of SF-36 negatively (B=-5,782 and, $p<0.05$). When the covariance relation was examined, a negative relationship was found between CRS and ZCBS; however, there were statistically significant positive relationships between SF-36 dimensions such as pain, general health, vitality, social functioning, emotional role functioning, and mental health (B=-56,409; B=51,124; B=40,779; B=44,773; B=49,415; B=66,689; B=45,369, respectively and $p<0.05$). ZCBS showed statistically significant positive relationships with SF-36 dimensions including physical functioning, physical role functioning, pain, general health, vitality, social functioning, emotional role functioning, and mental health (B=-117,492; B=-166,860; B=-219,437; B=169,313; B=-303,550; B=-280,982; B=-311,393; B=-210,758, respectively and $p<0.05$) (Table 2).

Conclusion: Based on our findings, there is a relationship between care readiness, care burden and quality of life in caregivers of older patients living with frailty.

Keywords: caregiver, caregiver burden, quality of life

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Table 1. Descriptive statistics of scores on scales

Dimension	*M*	*SD*	*Med*	*Q1*	*Q3*	*Skewness*	*Kurtosis*	*Cronbach's*
Edmonton Frail Scale	9.892	1.847	10.00	9.0	11.0	0.71	0.33	0.725
Care Dependency Scale	48.846	17.889	47.00	34.0	65.0	-0.01	-1.00	0.927
Caregiving Readiness Scale	23.015	6.702	24.00	18.0	29.0	-0.45	-0.68	0.746
Zarit Caregiver Burden Scale Short Form-36 (SF-36) Scale	42.569	18.588	43.00	28.0	56.0	0.38	-0.73	0.901
Physical function	74.385	22.000	80.000	65.0	90.0	-0.96	0.28	0.884
Physical role functioning	43.846	38.281	25.000	0.0	75.0	0.36	-1.42	0.755
Pain	53.462	28.284	52.000	32.0	74.0	-0.19	-0.99	0.772
General health	50.617	22.151	50.000	40.0	67.0	-0.11	-0.77	0.822
Vitality	49.308	27.921	45.000	30.0	70.0	-0.11	-0.99	0.817
Social functioning	65.128	34.819	62.500	37.5	100.0	-0.46	-1.14	0.870
Emotional role functioning	39.460	35.289	33.300	0.0	66.6	0.26	-1.28	0.738
Mental health	60.369	21.837	68.000	44.0	76.0	-0.70	-0.23	0.728

Sarcopenia

SS-88

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THE RELATIONSHIP BETWEEN SARCOPENIA AND THYROID FUNCTION AND THYROID NODULES

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Introduction: Sarcopenia, characterized by loss of muscle mass and function, is often observed in older adults and can significantly impact quality of life. This study aimed to assesed the relationship between sarcopenia, thyroid function, and thyroid nodules.

Methods: Sociodemographic characteristics of the patients were evaluated. All patients underwent comprehensive geriatric assessment. Serum levels of f T3, fT4, TSH, anti-TG, and anti-TPO were measured. Ultrasonographic findings of thyroid nodules were examined.

Results: A total of 95 participants were divided into two groups: sarcopenia (n=33) and non-sarcopenia (n=62). The sarcopenia group was significantly older compared to the normal group [77.5 (83-73.75) vs. 73 (69-76.75), p=0.004]. Thyroid function analysis revealed that while TSH and fT4 levels were similar between two groups (p=0.455, p=0.275; respectively. However, f T3 levels were significantly lower in the sarcopenia group [3.97 ± 0.62 vs. 4.38 ± 0.53, p=0.001]. A weak positive correlation was observed between handgrip strength and fT3 levels (r=0.230, p=0.002). Thyroid nodule number, size and echogenicity were similar between the two groups (Table-1).

Conclusion: These findings suggest that reduced T3 levels are associated with sarcopenia and may impact muscle strength, while thyroid nodules do not appear to be directly related to sarcopenia. Further research is needed to clarify the mechanisms underlying these associations.

Keywords: Sarcopenia, thyroid function, thyroid nodules, hypothyroidism, hyperthyroidism

Sarcopenia table

Table-1: Thyroid ultrasonography and laboratory findings in sarcopenic and non-sarcopenic groups

	Sarcopenia (n=33)	Non- sarcopenia (n=62)	p
TSH	1.54 (1.19-2.01)	1.71 (1.21-2.09)	0.455
fT4	15.78 ± 2.48	15.23 ± 2.24	0.275
fT3	3.97 ± 0.62	4.38 ± 0.53	0.001
Anti-TPO	9.95 (0-13.3)	0 (0-10.45)	0.186
Anti-TG	13.55 (11.82-20.40)	13.7 (12.40- 17.60)	0.793
Thyroid volume	13.95 (9.1-22.05)	13.55 (9.1-19.67)	0.786
Thyroid nodule number	1 (1-2)	2 (1-2)	0.176
Nodule size ≥ 1.5 cm <1.5 cm	 2 (%13.3) 13 (%86.7)	 16 (%34) 31 (%66)	0.193
Hypoechoic nodule	6 (%25)	20 (%33.3)	0.455
Isoechoic nodule	8 (%33.3)	26 (%43.3)	0.399
Hyperechoic nodule	3 (%12.5)	6 (%10)	0.710

Others

SS-89

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IS COLORECTAL CANCER DIFFERENT IN GERIATRIC PATIENTS?

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Introduction: According to the 2022 Cancer Statistics (GLOBOCAN), colorectal cancers (CRC) account for approximately 10% of new cancer diagnoses in both sexes. It is the third most common cancer in men and the second most common in women. Unlike many other cancer types, the incidence rates are higher and increasing in developed countries compared to underdeveloped countries. This is primarily attributed to changes in dietary habits, rising obesity, and lifestyle changes. RAS also plays a significant role in cancer development. Besides being an oncoprotein, it controls various cellular functions such as growth, cell proliferation, survival, cell architecture reorganization, adhesion, motility, and differentiation. The aim of our study is to investigate the differences between patients diagnosed with CRC at the age of 65 and older and those diagnosed at a younger age.

Methods: Cases diagnosed with colorectal cancer at Ankara University Faculty of Medicine between 2010-2020 were retrospectively reviewed. Patients' files, chemotherapy prescriptions, laboratory, pathology, and radiology reports were examined to gather data relevant to the study. The 422 patients were divided into two groups: those aged 65 and older, and those younger than 65. Differences between the groups were analyzed for RAS and BRAF mutation status, presence of obesity, smoking history, family history, comorbidities, Rh and ABO blood group status, right or left colon localization, tumor grade, stage, and gender distribution.

Results: Of the 422 patients included in the study, 31% (n=132) were aged 65 and older. No significant differences were observed between the groups in terms of BRAF mutation status, presence of obesity, smoking history, family history, Rh and ABO blood group status, right or left colon localization, tumor grade, stage, or gender distribution. However, RAS mutation was significantly more frequent in those diagnosed at 65 and older (p=0.03). Additionally, for all age groups, the presence of a RAS mutation was associated with a lower incidence of diabetes mellitus (p=0.022) and a higher incidence of hypertension (p=0.015).

Conclusion: The finding that RAS mutation is more frequent in patients diagnosed at the age of 65 and older is a significant result of our study, as it highlights the importance of mutation frequency increasing with aging in cancer development. This may also suggest a link between metabolic diseases and similar signaling pathways. Additionally, this could contribute to the approach to cancer screening in individuals with associated conditions.

Keywords: Elderly, Colorectal Cancer, RAS Mutation, Risk Factors

References

Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries.

Others

SS-90

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THE EFFECT OF RAMADAN FASTING ON ANTHROPOMETRIC MEASUREMENTS AND INFLAMMATORY BIOMARKERS IN ELDERLY PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Aim: The aim of this study was to investigate the effect of Ramadan fasting on anthropometric measurements and various anti-pro inflammatory biomarkers in elderly patients with type 2 diabetes mellitus.

Methods: In this case-control study, 27 elderly with T2DM who fasted during Ramadan and 32 non-fasting elderly with T2DM (Control) were included. The questionnaire form developed by the researchers consists of 4 sections: socio-demographic characteristics, health-nutrition status information, food consumption frequency and body composition measurements (weight, body mass index, BMI; fat mass, fat percentage, fat free mass, total muscle mass, waist fat rate, waist circumference, middle upper arm circumference). All evaluations were performed to fasting group twice at the beginning and end of Ramadan and the study protocol was applied once to the control group during Ramadan. Various pro-inflammatory (myeloperoxidase, MPO; malondialdehyde, MDA; interleukin-6, IL-6) and anti-inflammatory (superoxide dismutase, SOD; glutathione peroxidase GPx; glutathione, GSH; nitric oxide, NO; nitrite) biomarkers were studied from blood samples. The SPSS Statistics software (version 22.0) was used for statistical analysis. The normality was assessed according to the SkewneSS-Kurtosis values. In determining the difference between the fasting and control groups, Student t test or Mann-Whitney U was used according to normality assumptions. Student's paired t-test or Wilcoxon signed rank test were performed between paired datas.

Results: The difference between the before and after fasting anthropometric measurements of the fasting and control groups was not significant (p>0.05). In the fasting group, only BMI showed a significant change after fasting (p<0.05). At baseline, only the GSH, GPx and IL-6 levels between the fasting group and the control group were different (p<0.05), whereas after fasting GPX, IL-6 and MDA levels were statistically different (p<0.05). The serum MDA levels showed a significant decrease after fasting (p<0.05). But other parameters did not show a significant change before and after fasting (p>0.05).

Conclusion: In this study has demonstrated for the first time in the literature that Ramadan fasting improves inflammation by reducing MDA in elderly T2DM patients. Futhermore our findings support that Ramadan fasting has had positive effect on BMI but no effect on muscle mass.

Keywords: ramadan fasting, biomarkers, elderly

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Frailty

SS-91

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EVALUATION OF GERIATRIC OUTPATIENTS AND FRAILTY IN A CITY HOSPITAL

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Introduction: The proportion of 65 years and older people in Turkey population increased to 10.2% in 2023 and it will continue to rise in upcoming years. In this geriatric population, frailty is a common and important problem. It is characterized by age-associated declines in physiologic reserve and function in all multiorgan systems and causes increased vulnerability for

adverse health outcomes. In this study, we aimed to evaluate characteristics of geriatric outpatients in a city hospital and investigate their frailty status.

Methods: In this retrospective croSS-sectional study, outpatients aged 65 years and older who applied to the Geriatrics Outpatient Clinic for the first time between March and June 2024 were included. The patients who did not have comprehensive geriatric assessment were excluded. Demographic and clinical data of the patients were extracted from the patient files. SPSS 20.0 statistical program was used in the data analysis.

Results: In this time period, 70 outpatients were included in the study. Mean age of the patients was 74.8±6.7. Considering gender, 50 (71.4%) of the patients were female and 20 (28.6%) were male. Mean number of chronic diseases was 3.5±2.3 and mean number of drugs was 5.6±3.5. When we analyzed drugs in depth, it was detected that 42 (60%) of the patients had polypharmacy and 28 (40%) had anticholinergic cognitive burden scale 1 and more. According to FRAIL scale, 39 (55.7%) of the patients were prefrail and 16 (22.9%) were frail. In terms of sarcopenia, probable sarcopenia was detected in 31 (44.3%) patients. In 20 of 31 patients sarcopenia was confirmed and in 13 of 20 patients sarcpenia was labeled as severe. When malnutrition was investigated with MNA-SF, 25 (35.7%) patients had malnutrition or risk of malnutrition. When we evaluated the factors associated with frailty, malnutrition and probable-confirmed-severe sarcopenia were found to be statistically significantly associated with frailty (p=0.041, p=0.006, p=0.034 and p=0.037, respectively).

Conclusion: According to our study, frailty is common in geriatric outpatients, which was thought because of the uncontrolled complicated diseases in the patients in our study. Consistent with the literature, in this study it was found that malnutrition and sarcopenia were associated with frailty in geriatric patients.

Keywords: Frailty, Geriatrics, Outpatients

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Polypharmacy and Inappropriate Drug Use

SS-92

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THE IMPACT OF ANTICHOLINERGIC BURDEN ON GERIATRIC SYNDROMES: SCREENING IN COMMUNITY-DWELLING OLDER ADULTS

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Objective: Anticholinergic burden (ACB) describes the cumulative impact of using multiple medications with anticholinergic effects. These medications interact with the muscarinic acetylcholine receptors, affecting the central and peripheral nervous systems and leading to various side effects throughout the body. ACB could be an important factor that may exacerbate or contribute to geriatric syndromes in older adults. We aimed to investigate the prevalence of ACB and the relationship between ACB and geriatric syndromes among community-dwelling older adults with focusing on commonly used medications with anticholinergic side effects.

Materials and Methods: This croSS-sectional study, designed to screen community-dwelling older adults aged 60 years and above. The study was announced by the municipality of Altindag, a district in Ankara, inviting individuals who wished to participate. Participants were required to attend a designated location for examination. The inclusion criteria were being 60 years or older, having knowledge of their medications and bringing them to the examination. Individuals were excluded if they had communication problems that made them unable to comprehend the study materials or answer the questions. The participants were evaluated by geriatricians and internal medicine doctors from Ankara University Faculty of Medicine. Comprehensive geriatric assessment was applied to all participants, and their ACB scores were calculated using the Anticholinergic Cognitive Burden scale. The participants were then categorized as no ACB (score =0), low ACB (score =1), and high ACB (score ≥2).

Results: Out of the 608 individuals, 521 participants (median age: 68 years) were included. The prevalence of high ACB was 7.5%, with anticholinergic medication use observed in 24.6% of community-dwelling older adults (Table 1). The number of geriatric syndromes increased significantly with higher ACB scores (p<0.001). A high ACB was significantly associated with various geriatric syndromes, including polypharmacy (p<0.001), urinary incontinence (p=0.046), frailty (p<0.001), sarcopenia (p<0.001), cognitive dysfunction (p=0.015), and depression (p<0.001) (Table 2). Among the 451 participants taking at least one medication, the most commonly used drugs with anticholinergic effects included metoprolol (17.3%), colchicine (2%), warfarin (1.8%), and furosemide (1.6%) (Figure 1 and Table 3). In multivariate logistic regression analysis, after adjusting for

age and Charlson Comorbidity Index, polypharmacy and frailty was significantly associated with increased odds of high ACB (OR=5.317, p≤0.001 and OR=3.042, p=0.002) (Table 4).

Conclusion: A high ACB score was linked to more geriatric syndromes, particularly increasing the risk of polypharmacy and frailty in community-dwelling older adults. While antidepressants, antipsychotics, and urinary incontinence drugs are known for their anticholinergic effects, even common cardiovascular medications like metoprolol, furosemide, warfarin, nifedipine, and captopril contribute to the anticholinergic burden. Regular medication reviews, especially for frail older adults, are vital. Deprescribing or substituting these medications when possible can improve cognition, reduce adverse effects, and enhance quality of life by reducing the anticholinergic burden, and potentially decrease the development of geriatric syndromes.

Keywords: Cholinergic Antagonists, Geriatric Assessment, Frailty, Polypharmacy, Deprescription

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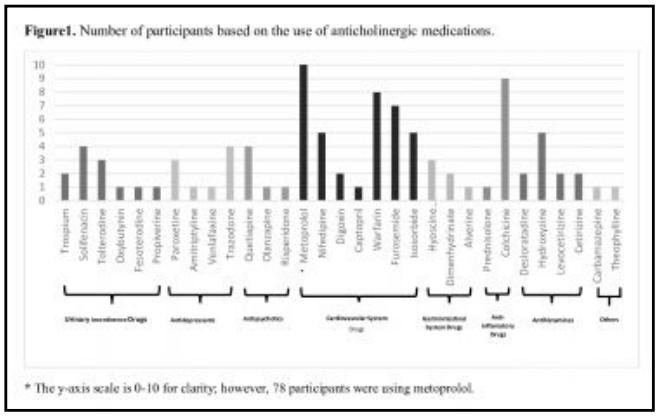

Figure 1. Number of participants based on the use of anticholinergic medications

Table 1. Characteristics of Study Participants and Anticholinergic Burden Score Distribution

Age (median)	68 (65-72)
60-69 years (n, %)	318 (61%)
70-79 years (n, %)	182 (34.9%)
≥80 years (n, %)	21 (4%)
Female (n, %)	328 (63%)
Male (n, %)	193 (37%)
Education Status	
Illiterate	122 (23.4%)
Literate	71 (13.6%)
Primary school graduate	220 (42.2%)
Middle school graduate	39 (7.5%)
High school graduate	51 (9.8%)
University graduate	18 (3.5%)
BMI (median)	31.1 (28-35)
CCI (median)	3 (2-4)
Comorbidities (n, %)	
Hypertension	303 (58.2%)
Diabetes Mellitus	153 (29.4)
Coronary Artery Disease	91 (17.5%)
Heart Failure	12 (2.3%)
Cerebrovascular Disease	11 (2.1%)
Chronic Kidney Disease	3 (0.6%)
Dementia	3 (0.6%)
Chronic Pulmonary Obstructive Disease	8 (1.5%)
Depression	30 (5.8%)
Number (%) of patients on anticholinergic meds	128 (24.6%)
Number (%) of patients on at least 2 anticholinergic meds	23 (4.5%)
Number (%) of patients on at least 3 anticholinergic meds	5 (1%)
Number (%) of patients on ≥4 anticholinergic meds	1 (0.2%)
ACB Score (n, %)	
ACB score 0	393 (75.4%)
ACB score 1 (low)	89 (17.1%)
ACB score ≥2 (high)	39 (7.5%)
Values are presented as numbers and percentages (%).	

Table 2. Anticholinergic Burden Score Categories According to Participants' Characteristics and Geriatric Syndromes

	No ACB (ACB score=0) (n:393, 75.4%)	*Low ACB (ACB score=1) (n:89, 17.1%)*	*High ACB (ACB score≥2) (n:39, 7.5%)*	*p*
Age (median)	67 (65-72)	69 (66-71)	69 (65-74)	0.040
60-69 years	248 (63.1%)	49 (55.1%)	21 (61%)	0.185
70-79 years	132 (33.6%)	34 (38.2%)	16 (41%)	
≥80 years	13 (3.3%)	6 (6.7%)	2 (5.1%)	
Female (n, %)	238 (60.6%)	58 (65.2%)	32 (82.1%)	0.027
Male (n, %)	155 (39.4%)	31 (34.8%)	7 (17.9%)	
BMI (median)	30.8 (27.7-34.7)	31.7 (28.7-34.6)	34.4 (29-37.5)	0.043
CCI (median)	3 (2-4)	3 (3-4)	4 (3-5)	<0.001
Katz ADL (median)	6 (6-6)	6 (5-6)	6 (5-6)	<0.001
ADL dependent (n, %)	60 (15.3%)	27 (30.3%)	13 (33.3%)	<0.001
Lawton IADL (median)	8 (8-8)	8 (8-8)	8(7-8)	<0.001
IADL dependent (n, %)	38 (9.7%)	11 (12.4%)	12 (30.8%)	<0.001
Number of medications (median)	2 (1-4)	5 (3-6)	6 (4-8)	<0.001
Number of Geriatric Syndromes (median)	1 (1-2)	2 (1-4)	4 (2-5)	<0.001
Polypharmacy (n, %)	73 (18.6%)	50 (56.2%)	29 (74.4%)	<0.001
Urinary Incontinence (n, %)	143 (36.4%)	36 (40.4%)	22 (56.4%)	0.046
Fall history (n, %)	93 (23.7%)	28 (31.5%)	14 (35.9%)	0.107
Frailty (n, %)				
Robust	167 (42.5%)	27 (30.3%)	6 (15.4%)	<0.001
Prefrail	166 (42.2%)	36 (40.4%)	13 (33.3%)	
Frail	60 (15.3%)	26 (29.2%)	20 (51.3%)	
Probable Sarcopenia (n, %)	40 (10.2%)	20 (22.5%)	14 (35.9%)	<0.001
Muscle strength (kg) (median)	24.8 (19.1-33.3)	22.6 (17.6-30.3)	19.4 (14-24.1)	<0.001
Low muscle strength (n, %)	194 (49.6%)	49 (55.1%)	30 (76.9%)	0.004
Gait speed (m/s) (median)	0.57 (0.44-0.8)	0.66 (0.5-0.8)	0.5 (0.35-0.64)	<0.001
Low physical performance (n, %)	291 (74.8%)	55 (61.8%)	36 (92.3%)	0.001
MMSE scores (n, %)				
≤ 21 points	51 (13%)	10 (11.2%)	7 (17.9%)	0.015
GDS scores (n, %)				
≥5 points	133 (34%)	45 (50.6%)	23 (59%)	<0.001
MNA scores (n, %)				
Malnutrition Risk	13 (3.3%)	4 (4.5%)	3 (7.7%)	0.447
Malnutrition	2 (0.5%)	1 (1.1%)	0 (0%)	

Values are presented as numbers and percentages (%) or medians (interquartile range [IQR]).
Abbreviations: ACB: Anticholinergic burden, ADL: activities of daily living, BMI: body mass index, CCI: Charlson comorbidity index, GDS: Geriatric depression scale, IADL: Instrumental activities of daily living, MMSE: Mini-mental State examination, MNA: Mini nutritional assessment

Table 3. List of drugs used by participants with anticholinergic effects and their ACB scores according to the Anticholinergic Cognitive Burden Scale

Medications with anticholinergic side effects	*Number of participants (among those taking at least one medication) (n= 451)*	*Medication Scores on Anticholinergic Cognitive Burden Scale*
Urinary Incontinence Medications		
Trospium	2 (0.4%)	3
Solifenacin	4 (0.9%)	3
Tolterodine	3 (0.7%)	3
Oxybutynin	1 (0.2%)	3
Fesoterodine	1 (0.2%)	3
Propiverine	1 (0.2%)	3
Antidepressants		
Paroxetine	3 (0.7%)	3
Amitriptyline	1 (0.2%)	3
Venlafaxine	1 (0.2%)	1
Trazodone	4 (0.9%)	1
Antipsychotics		
Quetiapine	4 (0.9%)	3
Olanzapine	1 (0.2%)	3
Risperidone	1 (0.2%)	1
Cardiovascular System Medications		
Metoprolol	78 (17.3%)	1
Nifedipine	5 (1.1%)	1
Digoxin	2 (0.4%)	1
Captopril	1 (0.2%)	1
Warfarin	8 (1.8%)	1
Furosemide	7 (1.6%)	1
Isosorbide	5 (1.1%)	1
Gastrointestinal System Medications		
Hyoscine butylbromide	3 (0.7%)	3
Dimenhydrinate	2 (0.4%)	3
Alverine	1 (0.2%)	1
Anti-inflammatory Medications		
Prednisolone	1 (0.2%)	1
Colchicine	9 (2%)	1
Antihistamines		
Desloratadine	2 (0.4%)	1
Hydroxyzine	5 (1.1%)	3
Levocetirizine	2 (0.4%)	1
Cetirizine	2 (0.4%)	1
Others		
Carbamazepine	1 (0.2%)	2
Theophylline	3 (0.7%)	1

Values are presented as numbers and percentages (%).

Table 4. Results of univariate and multivariate analyses of factors associated with high ACB score

		Univariate			Multivariate	
Variable	*OR*	*95% CI*	*p*	*OR*	*95% CI*	*p*
Age (continuous)	1.034	0.976-1.095	0.260	0.978	0.912-1.048	0.529
CCI (continuous)	1.798	1.368-2.364	<0.001	1.291	0.906-1.841	0.158
Polypharmacy	8.464	4.009-17.871	<0.001	5.317	2.303-12.275	<0.001
Frailty	4.847	2.481-9.470	<0.001	3.042	1.482-6.242	0.002

Values are presented as odds ratios (OR) and 95% confidence interval (CI). Abbreviations: CCI: Charlson comorbidity index

Others

SS-93

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TSH LEVELS AND MORTALITY IN GERIATRIC PATIENTS

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Introduction: The prevalence of thyroid diseases increases with aging. As the global population continues to age, the significance of thyroid diseases grows. However, the association between thyroid dysfunction and morbidity and mortality in the elderly remains unclear. This study aims to determine the relationship between thyroid-stimulating hormone (TSH), the most sensitive and specific indicator of thyroid function, and 2-year all-cause mortality in individuals over 65 years old.

Methods: Patients aged 65 and above, who were admitted to the Geriatrics Department of Ankara University Faculty of Medicine between 01/04/2021 and 31/05/2022 and had their TSH values measured for any reason, were included in the study. Exclusion criteria included TSH values <0.1 or >10 to eliminate extreme values, and elevated acute phase reactants to exclude acute illnesses. The patients included in the study were evaluated for their survival within two years from the date of their examination. The study was designed as a retrospective study.

Results: A total of 170 patients were divided into three groups for balanced numerical distribution based on TSH levels: TSH ≤1.45 (n=56), TSH 1.45-2.3 (n=56), and TSH ≥2.3 (n=58). Survival rates for these three groups were 76.8%, 75%, and 72.4%, respectively, with no significant difference between them (p=0.86). Additionally, there was no significant difference in mean TSH levels between survivors (mean TSH 2.17) and deceased individuals (mean TSH 2.14).

Conclusion: Our study found no significant association between TSH levels and mortality. This suggests that, when extreme values are excluded, TSH levels do not influence two-year mortality.

Keywords: Elderly, Thyroid Dysfunction, Thyroid-Stimulating Hormone (TSH), Mortality Rate

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Frailty

SS-94

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THE RELATIONSHIP BETWEEN FIB-4 SCORE AND FRAILTY IN THE ELDERLY POPULATION

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Introduction: Frailty is a geriatric syndrome that arises due to physiological changes across multiple systems associated with aging. The Hepatic Fibrosis-4 (FIB-4) index is an effective, reliable, and non-invasive method used to indicate liver fibrosis in the progression of various chronic and infectious diseases. Moreover, the hepatic FIB-4 index score not only rises in liver diseases but also serves as an indicator of inflammation in conditions such as sepsis and coronavirus disease. In our study, we aimed to explore the relationship between the FIB-4 score and frailty in patients presenting to our clinic for routine annual geriatric examinations without any specific complaints.

Methods: Between January 1, 2022, and December 31, 2023, a total of 2,378 patients were screened. Data from 1,011 asymptomatic patients who attended the geriatric outpatient clinic for a routine annual geriatric examination were used. Patients with known chronic thyroid disease, chronic liver disease, chronic renal failure (GFR<15), chronic heart failure, known autoimmune diseases, anti-HCV positivity, hepatitis B surface antigen (HBsAg) positivity, HIV-1-2 antibodies and p24 antigen positivity, and diabetes mellitus (DM) were excluded from the study. Scores were categorized into three groups: <1.45, ≥1.45 to ≤3.25, and >3.25.

Results: A statistically significant, moderate positive correlation was observed between age and the FIB-4 score ($r = 0.541$, $p < 0.001$), suggesting that the risk of liver fibrosis may increase with aging. There was a moderate positive correlation between the FIB-4 score and frailty score ($r = 0.326$, $p < 0.001$), indicating a relationship between liver fibrosis risk and frailty. A statistically significant relationship was found between frailty classification and FIB-4 classification ($\chi^2 = 43.967$, $df = 6$, $p < 0.001$). CroSS-tabulation analysis showed that higher FIB-4 classifications (indicative of a higher risk of cirrhosis) tended to correspond with increased levels of frailty, particularly in the group with high FIB-4 scores, where the proportion (12.7%) was significantly higher than expected (3.3%). Gender-based analyses revealed that men had significantly higher FIB-4 scores (1.8649 ± 1.15842) than women (1.5274 ± 0.79520) ($t = 3.162$, $p = 0.002$). Additionally, the incidence of frailty varied by gender, with women more frequently classified as pre-frail (46.9%) and frail (28.2%).

These findings demonstrate a complex relationship between the FIB-4 score, frailty, and aging in the geriatric population. Notably, as the level of frailty increases, there is a tendency for the risk of liver fibrosis to rise. These results underscore the importance of concurrently considering liver health, fibrosis, and frailty in the assessment of geriatric patients. Advanced age, a high FIB-4 score, and frailty status emerge as potentially interrelated factors that may impact geriatric health outcomes.

Keywords: FRAIL,FIB4 SCORE, AGING

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CHALLENGES OF NIRAPARIB IN FRAIL OLDER ADULTS WITH OVARIAN CANCER: CASE REPORT

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Abstract: We present a case of an 80-year-old female patient with ovarian cancer who has been receiving Niraparib for one year. Her medical history includes type 2 diabetes mellitus, hypertension, and coronary artery disease. She visited the geriatric outpatient clinic due to nausea. After Niraparib was started, she had poorly controlled diabetes, leading to 3–4 emergency room visits in the past year. A resistant urinary tract infection (UTI) required hospitalization for approximately two months. When Niraparib was restarted at a lower dose, her blood sugar control worsened to grades 2–3. Consequently, she was referred for a medication review and potential adjustment.

Introduction: Ovarian cancer is the third-most common gynecological malignancy. Studies have shown that adding PARP inhibitors, such as Niraparib, to conventional chemotherapy improves both overall and progression-free survival. However, clinical trials for these drugs generally involve younger populations with fewer comorbidities. Clinical studies often fail to account for the multiple health issues and medications associated with older patients. Therefore, it is critical to assess patients from a geriatric perspective, as this affects their quality of life, mortality rates, and healthcare costs. Researchers have developed tools like the G8 and VES13 scores to screen frail patients and predict chemotherapy toxicity and mortality. This report details a frail female patient who experienced significant treatment intolerance.

Case: An 80-year-old female patient with a Clinical Frailty Scale score of five (indicating frailty) had a medical history of diabetes, hypertension, atherosclerotic heart disease, and ovarian cancer. She underwent six cycles of conventional chemotherapy and then started Niraparib. After that, she made multiple emergency room visits. She began insulin therapy to manage her blood sugar levels and discontinued Niraparib. She received various antibiotics, including piperacillin-tazobactam, meropenem, and ceftazidime-avibactam, for the UTI. A pressure sore on her sacrum developed while in the ICU. After discharge, Niraparib was reintroduced at the lowest dose, but her blood sugar control worsened. She presented to the geriatric outpatient clinic with complaints of nausea and high blood sugar. Laboratory tests indicated hyperglycemia, ruling out diabetic ketoacidosis. The insulin dose was increased, but the patient could not tolerate even the lowest dose of Niraparib, prompting a referral to medical oncology for potential drug modification or discontinuation.

Discussion: Recent studies on PARP inhibitors have demonstrated improved overall and progression-free survival in ovarian cancer patients. Niraparib is associated with side effects such as hyperglycemia (66%), nausea (57%), UTI (11%), and acute kidney injury (12%). Frail patients frequently experience lower tolerance. While comprehensive geriatric assessment continues to be the gold standard for examining frailty, it can be time-consuming. Thus, screening tools like the G8 score can help identify frail patients who may benefit from a CGA. Her Niraparib treatment resulted in long-term hospitalizations, highlighting the need for screening frail patients before starting therapy and potentially modifying their therapy based on their geriatric assessment.

Conclusion: This case highlights the use of screening tools like the G8 score to tailor cancer treatment for frail older patients, ensuring better management.

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Keywords: niraparib, ovarian cancer, older adults, frailty, comprehensive geriatric assessment (CGA), G8 score

Tablo 1. Patient Timeline

2024-01-24	Emergency servise application with acute kidney injury and hyperglisemia / discharge within two days
2024-02-01	Hospitalization with acute kidney ınjury, hyperglycemia, and urinary tract infection, which respectively used meropenem, ertapenem, amikacin, colistin, fuconazole
2024-02-13	ICU hospitalization: used ceftazidime avibactam
2024-02-23	Transfer to internal medicine service
2024-04-05	Discharge
2024-05-28	Geriatric outpatient clinic application with nausea, womiting, hyperglisemia

Table 2. Laboratory Values

Type	*Value*	*Unit*
2024-01-24		
Creatinine	2.14	mg/dL
FBS (fasting blood sugar)	454	mg/dL
Bicarbonate	20	mmol/L
2024-02-01		
Urine culture	positive	
Creatinine	2.36	mg/dL
2024-02-06		
Creatinine	2.34	mg/dL
CRP (C-reactive protein)	60	mg/dL
2024-05-04		
Creatinine	1.21	mg/dL
CRP (C-reactive protein)	5	mg/dL
FBS (fasting blood sugar)	120	mg/dL
2024-05-28		
Creatinine	1.47	mg/dL
CRP (C-reactive protein)	110	mg/dL
FBS (fasting blood sugar)	217	mg/dL

POSTER BİLDİRİLER

Atypical Presentations

PS-1

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ATYPICAL PRESENTATION OF A CASE: LOW BACK PAIN, PANCREATITIS, AORTIC ANEURYSM, AND DISSECTION

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Introduction: Aortic aneurysm (AA) is a condition characterized by the weakening of the aortic wall, often asymptomatic, and can lead to sudden rupture. Aortic dissection (AD) is a life-threatening emergency caused by a tear in the aortic wall, presenting with severe chest or back pain and requiring immediate intervention. Pancreatitis, inflammation of the pancreas, usually causes abdominal pain and can lead to serious complications. Low back pain is a common symptom that may sometimes mask severe conditions like AA (1,2,3,4,5).

Case Presentation: A 61-year-old man with a history of hypertension and coronary artery disease, who had undergone coronary bypass surgery, presented with low back pain for 10 days. Initial evaluations at physical therapy and neurosurgery clinics indicated severe pain, and patient hospitalized for support terapy before an MRI. The patient had difficulty expressing himself, and relatives reported severe low back pain, nausea, and yellow vomiting. Physical examination revealed cachexia, and abdominal defense. Laboratory tests showed elevated amylase, lipase, and CRP, indicating acute pancreatitis. Normal cholestasis enzymes and bilirubin levels were noted. Hydration and antibiotics were started. Persistent severe pain led to gastroenterology consultation, and CT scans revealed significant findings: pancreatic duct enlargement, potential metastasis, pleural effusion, and aortic aneurysm with dissection extending into various arteries. The patient was transferred to cardiovascular surgery for emergency intervention but developed acute renal failure and respiratory distress, leading to death on the fifth day of intensive care.

Discussion: This case underscores the importance of thorough evaluation for severe conditions behind common symptoms like low back pain. While 90-95% of acute low back pain cases do not reveal significant pathology, 5-10% may involve life-threatening conditions such as AA, AD, or spinal metastases. The patient's presentation of low back pain and difficulty in communication complicated the diagnosis. Although low back pain is not typical for AA, studies show pain localization can include the back (7). Pancreatitis, usually associated with abdominal pain, is rare following AD and may be linked to hypoperfusion induced pancreatic damage (8). Similar cases have reported pancreatitis developing post-AD, but typically with severe abdominal pain (9,10,11). Early diagnosis and intervention are critical in managing such cases.

Keywords : low back pain, pancreatitis, aortic aneurysm, aortic rupture, aortic dissection

Multidisciplinary Approaches

PS-2

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THE BURDEN OF GERIATRIC SYNDROMES IN COMMUNITY-DWELLING OLDER ADULTS WITH DEMENTIA

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Introduction: Global aging trends increase the prevalence of age-related diseases like dementia. Management of dementia can be challenging due to coexisting geriatric syndromes.Here, we aimed to identify the clinical conditions and geriatric syndromes strongly associated with dementia.

Methods: This retrospective,cross-sectional study included older adults ≥60 years who applied to a tertiary outpatient clinic (November 2012-December 2023).We obtained data regarding baseline characteristics, performed comprehensive geriatric assessment to the patients who gave informed consent, and included individuals scoring higher than 20 points in Mini-Mental State Examination (early dementia) to ensure reliable measurements. We performed uni-and multivariate analyzes to identify the factors independently associated with dementia.

Results: We included 750 older adults;69,3% were female, median age: 74,9±6,8 (60-96).The prevalence of dementia was 15.7%.The most common geriatric syndromes were polypharmacy(72.9%), urinary incontinence(60.2%), and sleep disturbance(47.2%) in older adults with dementia. In multivariate analyses;age, male sex, higher number of comorbidities, impaired Timed Up-and-Go test, and chronic pain were independently associated with dementia Odd ratio (OR);95% Confidence İnterval(CI): 1.078; 1.036-1.22, 0.52; 0.306-0.884, 1.182; 1.026-1.362, 3.466; 1.658-7.244 , 0.423; 0.254-0.706; respectively).

Conclusion: Our findings highlight the significant burden of polypharmacy, urinary incontinence, and sleep disturbance in older adults with early dementia.However, only chronic pain had an independent association, demonstrating a lower risk of dementia.Although we included a significant number of older adults, exclusion of patients with advanced stage dementia may affected our findings.Further studies with larger samples will clarify the relationship between dementia and geriatric syndromes stronger.

Keywords: Geriatric syndromes, dementia, older adults