Anatolian Journal of Emergency Medicine 2024;7(1):8-14

ORIGINAL ARTICLE / ÖZGÜN ARAŞTIRMA MAKALESİ

Mortality Analysis of Geriatric Patients Who Fell Off The Stretcher in The Emergency Department: A Retrospective Clinical Study

Acil Serviste Sedyeden Düşen Geriatrik Hastaların Mortalite Analizi: Retrospektif Klinik Çalışma

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ABSTRACT

Aim: In this study, we wanted to examine the injuries, mortality, length of stay in the emergency department, and length of hospital stay of geriatric patients who applied to the emergency department after falling off the stretcher in the emergency department, and to determine which characteristics of the patients caused these problems.

Material and Methods: The study was conducted retrospectively and the data of patients who fell off the stretcher in the emergency department between January 1, 2020 and December 31, 2022 were examined. Patient records and electronic system data were used in the study. The patients' demographic information, chief complaints, fall details, Itachi fall score, length of hospital stay, and mortality were documented.

Results: The results of a total of 87 patients who fell off the stretcher in the Emergency Department were analyzed. The median age of the patients was 69 years (range 18-95). 56 of these patients were 65 years of age or older. Death occurred due to falls in 2 of our patients (2.3%). The median Itachi score in patients aged 65 and over was determined as 8 (1-26). Mortality due to falls was significantly related to cranial trauma (p<0.001).

Conclusion: Geriatric patients falling off the stretcher in the emergency department is more mortal. Measures must be taken to prevent it.

Keywords: Geriatric patients, emergency department, strecher, falling

ÖZ

Amaç: Bu çalışmada, acil serviste seden düşme sonucu başvuran geriatrik hastaların yaşadığı yaralanmalar, mortalite, acil serviste geçirilen süre ve hastanede kalış sürelerini incelemeyi ve bu sorunlara neden olan hastaların özelliklerini belirlemeyi amaçladık.

Gereç ve Yöntemler: Çalışma retrospektif olarak yürütülmüş olup, acil serviste seden düşen hastaların verileri 1 Ocak 2020 ile 31 Aralık 2022 tarihleri arasında incelenmiştir. Çalışmada hasta kayıtları ve elektronik sistem verileri kullanılmıştır. Hastaların demografik bilgileri, başvuru nedenleri, düşme detayları, Itachi düşme skoru, hastanede kalış süreleri ve mortalite kaydedilmiştir.

Bulgular: Acil serviste seden toplam 87 hasta incelenmiştir. Hastaların yaş ortalaması 69 yıl idi (18-95 yaş aralığı). Bu hastaların 56'sı 65 yaş ve üzerindeydi. Hastalarımızdan 2'sinde (%2,3) düşme nedeniyle ölüm gerçekleşmiştir. 65 yaş ve üzeri hastalarda median Itachi skoru 8 (1-26) olarak belirlenmiştir. Düşmelere bağlı mortalite, kranial travma ile önemli derecede ilişkilidir (p<0.001).

Sonuç: Acil serviste seden geriatrik hastaların mortalitesi daha yüksektir. Bu durumu önlemek için tedbirler alınmalıdır.

Anahtar Kelimeler: Geriatrik hastalar, acil servis, sedye, düşme

Received: 17 January 2024 Accepted: 23 February 2024

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Atıf için/Cited as: Özensoy HS, Kahraman FA, Gürü S, Özbay S, Özsoy O, Oğuztürk H. Mortality Analysis of Geriatric Patients Who Fell Off The Stretcher In The Emergency Department: A Retrospective Clinical Study. Anatolian J Emerg Med 2024;7(1):8-14. https://doi.org/10.54996/anatolianjem.1421178

Introduction

Advancements in technology and improved living standards worldwide have led to a rise in the elderly population within societies. In the United Kingdom, 17% of the population is aged 65 or over (1). According to Turkish data, 9.9% of the population will be 65 years old and over in 2022, and this rate is expected to increase to 12.9% in 2030 (2).

Falls are a common and undesirable event in hospital environments, and patients are at risk of falling during their hospital stay (3). One of the accreditation standards for hospitals in many countries is the prevention of harm caused by falls (4). A considerable portion of patient safety incidents in hospitals is attributed to falls, with rates reaching 41% in the United Kingdom and 38% in Australia. (5). The effects and consequences of falls that threaten patient safety can be fatal (6).

In a study examining in-hospital falls, it was reported that 6.06% of patients experienced falls during their hospital stay, and 87.5% of them were in the age group of 65 years and above. Factors contributing to these falls include missing or malfunctioning stretcher rails, inappropriate stretcher height, inadequate placement of personal belongings, and inadequate night lighting (7).

In international health systems, in-hospital falls are recorded in adverse event reporting systems and plans for prevention have been developed (8). These plans aim to reduce the risk of patient harm due to falls (8). Fall risk assessment advocates ongoing, individualized assessments that include measures of risk, education, and environmental changes (9). Geriatric patients are more susceptible to falls due to their unique characteristics (7). Studies examining in-hospital falls have shown that the majority of patients who fall are debilitated geriatric patients (7, 10).

In parallel with the above, healthcare institutions have established a number of guidelines as prophylactic measures against falls (11). However, it is important to highlight that current health policies, guidelines and scientific research focus predominantly on falls near hospitals, with a noticeable gap in specific research on falls from ED (emergency departments) and stretchers.

The hospital where the study was conducted is one of the hospitals with the largest patient admissions in the country. The ED is a service with an average of 2500 patient admissions per day. In our clinic, the Itachi risk score is used to determine the risk of patients falling from the stretcher. This scoring is done by nurses at the bedside. Our clinic's policy for patients at high risk of falling includes: warning healthcare personnel, doctors, and attending relatives; ensuring a companion is present beside the patient; and guaranteeing that healthcare personnel are nearby when the patient needs to get up from the stretcher. We do not impose additional routine restrictions on patients.

In this study, our aim was to investigate the injuries, mortality rates, duration of ED stays, and length of hospital stays among geriatric patients who presented to the ED after falling off the stretcher. Additionally, we sought to identify the patient characteristics contributing to these issues. Thus, we aimed to determine the characteristics of patients who are likely to fall off the stretcher and take more careful precautions, and to reduce mortality and morbidity due to falling off the stretcher in the ED. Ultimately, we believe that with this study, we can contribute to the literature and increase the quality of patient care by increasing awareness for geriatric patients while making hospital planning.

Material and Methods

Study Design and Ethics

Approval for this study was obtained from Ankara City Hospital No. 2 Clinical Research Ethics Committee (decision number E2-23-3810).

Patents who fell off the stretcher in the Adult Emergency Medicine Department of Ankara City Hospital between January 1, 2020 and March 30, 2023 were retrospectively examined. As a health system policy in Turkey, "adverse event reporting" is made for patients who fall off the stretcher or bed in hospital inpatient services and ED. This system is also applied in the hospital where the study was conducted. In the study, the Itachi fall scale is used to determine the fall risk of hospitalized patients and is recorded in the hospital information system. Ithachi Fall Scale: It is designed for patients aged 17 and over and includes the patient's demographic information, reason for evaluation, major and minor risk factors. The scale consists of a total of 19 items, and a score is obtained by adding up the points given to each item. A total score between 0 and 4 points is considered low risk, and a total score of 5 points and above is considered high risk (12).

The information of the patients who fell off the stretcher in the ED was accessed by examining the patient records and electronic system data containing these notifications. The following characteristics of patients who fell off the stretcher in the ED were examined: Age, gender, comorbidities, GCS (Glasgow Coma Scale), post-fall pathology development (Nasal Fracture, Subarachnoid Hemorrhage, Subdural Hemorrhage, Extremity Fracture, Skull Bone Fracture), post-fall mortality development and Itachi fall scores.

Patient selection

Patients >65 years of age who fell off the stretcher during the observation period in the ED were included in the study. Among these patients, those who reported adverse events and whose data could be accessed from the hospital information system were included in the study.

Statistical Analysis

Statistical analyses were performed using "IBM SPSS Statistics for Windows, Version 25.0 (Statistical Package for the Social Sciences, IBM Corp., Armonk, NY, USA)." Descriptive statistics were presented as n and % for categorical variables and Mean±SD for continuous variables. Independent T-test was used for comparisons among groups for various numerical parameters. Pearson Chi-Square test or Fisher's exact test was used for comparing categorical variables. $p<0.05$ was considered statistically significant.

Results

Descriptive Data

In our study, the results of a total of 87 patients who fell from the strecher in the ED between January 1, 2020, and December 31, 2022, were analysed. The median age of the patients was 69 (range 18-95). Out of these patients, 56 were aged 65 and above. During observation in the ED, traumatic

	n	%
Gender		
Male	53	60.9
Female	34	39.1
Comorbid Disease		
HT[a]		
No	74	85.1
Yes	13	14.9
DM[b]		
no	83	95.4
Yes	4	4.6
CAD[c]		
No	80	92.0
Yes	7	8.0
CHF[d]		
No	83	95.4
Yes	4	4.6
COPD[e]		
No	78	89.7
Yes	9	10.3
Epilepsy		
No	78	89.7
Yes	9	10.3
CVD[f]		
No	79	90.7
Yes	8	9.3
Neurological Disease[g]		
No	79	90.7
Yes	8	9.3
Other		
No	72	82.8
Yes	15	17.2
Follow-up diagnosis in Emergency department		
Epilepsy	6	6.9
Infection disease	22	25.3
Cardiac and pulmonary disease	10	11.5
Cranial events	21	24.1
GI bleeding	8	9.2
Trauma	1	1.1
Acute renal failure and electrolyte imbalance	10	11.5
Other	9	10.3
Malignancy		
No	72	82.8
Yes	15	17.2
Itachi Risk Score		
Low risk	24	27.6
High risk	63	72.4
Falling Time		
08.00-16.00	24	27.6
16.00-24.00	36	41.4
24.00-08.00	27	31.0
Mortality		
No	68	78.2
Yes	19	21.8
Cause of mortality is a fall in the Emergency department		
No	85	97.7
Yes	2	2,3
Trauma From Falling		
No	71	81.6
Nasal Fracture	5	5.7
Subarachnoid Hemorrhage	1	1.1
Subdural Hemorrhage	6	6.9
Extremity Fracture	3	3,4
Skull Bone Fracture	1	1.1
Fall Caused by Seizure		
No	82	94.3
Yes	5	5.7
Latest Status		
Discharge	25	28.7
Servive	20	23.0
İntensive Care Unit	31	35.6
Transfer to another Hospital	9	10.3
Exitus in the Emergency department	2	2,3
	Mean±SD	
Age	66.28±17.14	
Length of stay in the emergency department (hour)	24.14±19.78	
Length of hospital stay (hour)	233.65±433.65	
GCS	14.52±1.59	
Itaki Fall Risk Scale	8.14±5.57	

Table 1: Data of Patients Who Fell During Observation in the Emergency Department n:87

a) Hypertension, b) Diabetes Mellitus, c) Coronary Artery Disease, d) Congestive Heart Disease, e) Chronic Obstructive Pulmonary Disease, f) Cerebrovascular Disease, g) Neurological Disease include Parkinson's Disease and Alzheimer's Disease

issues developed in 16 patients because of falls, and investigations and treatment related to their trauma were initiated in addition to their existing medical condition. Out of a total of 19 mortalities, 17 were independent of falls and non-traumatic, while the other 2 (2.3%) were due to falls.

The average length of stay in the ED for patients was 24.14±19.78 hours, while the total length of hospital stay was 233.65±433.65. The data for patients who fell in the ED during observation are summarized in Table 1.

Clinical Analysis

The median age of patients aged >65 was 75 (min 66 – max 95). In this age group, 2 patients (3.6%) experienced death related to falls within the ED.

When patients aged 65 and above were compared with those below 65, no significant differences were observed in terms of age, gender, comorbidities, length of stay in the ED, time of the fall, and mortality. However, statistically significant differences were observed in Itaki scores, with a median score of 7 (range 1-24) for patients below 65 years and a median score of 8 (range 1-26) for those aged 65 and above (p0.046; Z-1999). The comparison of data between patients aged below 65 and those aged 65 and above is summarised in Table 2.

For patients aged 65 and above, the comparison of data with mortality is summarised in Table 3.

There was no significant relationship between mortality and gender (p 0.596); HT (hypertension) (p0.795); DM (diabetes mellitus) (p0.491); CAD (coronary artery disease) (p0.578); CCF (congestive cardiac failure) (p0.634); COPD (chronic obstructive pulmonary disease) (p0.339); Epilepsy (p0.572); CVD (cerebrovascular disease) (p0.630); Neurological disease (p0.680); fall-related trauma (p0.643); time of the fall (p0.568); Itaki score (p0.773); age (p0.250); length of stay in the ED (p0.736); length of hospital stay (p0.148).

However, mortality was significantly higher in patients with post-fall trauma (p 0.018). When all deaths were examined, patients with malignancy had a significantly higher mortality rate. Among the 9 patients with a diagnosis of malignancy, 6 (66.7%) died (p0.003; OR 10; CI 95% 2.2-45.1). For patients who died in the ED, the median GCS was 15 (range 6-15), while it was 15 (range 10-15) for those who survived (p 0.013; Z-2487). Patients who experienced post-fall trauma had significantly higher mortality (p 0.018, Fisher's exact test).

75% of epilepsy patients (3 out of 4) stayed in the ED for less than 8 hours. The duration of stay in the ED for epilepsy patients was significantly lower than that for those without epilepsy (p0.022, OR 0.068; CI%95 0).

In Table 4, we compared trauma-related mortality and demographic data, trauma time, GCS, fall risk score, and ED and hospıtal stay times of patients aged 65 and over. In patients aged 65 and over, there is a significant relationship between trauma-related mortality and post-fall trauma. When analyzed, cranial injuries were found to be more associated with trauma-related mortality. p<0.001 (Z -4.038) (Table 4).

Discussion

Our study provides a comprehensive review of stretcher falls in the ED, shedding light on relevant demographics, clinical outcomes, and potential risk factors. Falls constitute approximately 40% of accident reports in hospitals and can lead to serious injuries such as fractures, dislocations, lacerations, intracranial trauma and even death (4). Most falls result from the interaction of more than one risk factor (13). These risk factors can be classified as individual and environmental factors.

In our study, Among the key findings, the average age of patients who fell off a stretcher was 69, and 56 were >65 age. During their observation in the ED, 16 patients developed traumatic problems that required additional examination and treatment beyond their existing medical condition. Of the 87 patients analyzed, 19 died; 17 were deaths unrelated to falls, and 2 (2.3%) were directly attributed to falls. The average length of stay in the ED was 24.14±19.78 hours, and the total length of hospital stay was 233.65±433.65 hours. There was no significant difference in the length of stay in the ED and hospital between patients aged <65 years and >65 years who fell off the stretcher in the ED.

The study focused on geriatric patients aged >65, and the average age was 75 years. In this age group, 3.6% experienced a fall-related death in the ED. A comparative analysis between patients aged 65 years and above and patients under 65 years of age did not reveal any significant differences in various parameters such as age, gender, comorbidities, and length of hospital stay. However, notable differences emerged in Itaki scores; Mean scores were higher in the geriatric group.

It is also known that the presence of a history of falling and the fear of falling are associated with recurrent falls and significantly increase the risk of falling (10). As a limitation of our study, we did not have information about the patients' past fall history.

In our study, there was no significant age difference between patients >65 years of age and patients <65 years of age. This emphasizes the importance of assessing fall risk in every patient presenting to the ED. However, in our study, mortality was significantly higher in patients aged 65 and over who experienced trauma after a fall. Similar to the results in our study, Healthcare and quality guidelines emphasize the importance of identifying and addressing specific fall risk factors for an individual patient rather than simply identifying fall risks (14).

In the meta-analysis, which included 34 articles and analyzed 22 factors, it was reported that advanced age, low education level, polypharmacy, malnutrition, living alone, living in cities, smoking and alcohol consumption increase the risk of falling in the aging population. In addition, it has been determined that comorbid diseases such as heart disease, hypertension, diabetes, stroke, frailty, previous fall history, depression, Parkinson's disease and pain increase the risk of falling (15). In our study, the presence of comorbidities was not significantly associated with mortality. However, since our study was conducted retrospectively, we did not have data on the environmental factors of the patients. This was one of the limitations of our study.

Cancer is becoming increasingly common among geriatrics individuals; More than half of cancer diagnoses occur in people aged 65 and over. It is estimated that 77% of people diagnosed with cancer aged 65 and over in the United Kingdom will have cancer by 2040 (16). The incidence of falls in this specific elderly group with cancer can be as high as 50% and may require additional evaluations in treatment planning (17). In our study, 17.9% of the patients aged 65 and over who applied to the ED were patients diagnosed with malignancy. These patients had a significantly higher 1-month mortality rate, but this rate was independent of falls in the ED.

It is estimated that the duration of hospital stay after a fall in the hospital environment increases by 8-12 days and the cost of care increases by 61.4% (18). In a study examining fall patients, it was found that 27.7% of fall patients were aged 60 and over, and 14 of 295 patients suffered minor injuries and 2 suffered serious injuries (3). In our study, out of 56 patients aged 65 and over, 4 developed subdural hematoma, 1 developed subarachnoid hemorrhage, 2 experienced extremity fractures, and 1 developed a nose fracture after a fall. The conditions of two patients who developed subdural hematoma after falling resulted in death. Unlike our study, there was no significant difference between the length of stay of the patients in both the ED and the hospital.

	<65 n(%)	≥65 n(%)	p
Gender	20 (64.5)		
Male	11 (35.5)	33 (58.9)	0.609*
Female		23 (41.1)	
HT*	28 (90.3)		
No	3 (9.7)	46 (82.1)	0.364**
Yes		10 (17.9)	
DM**	31 (100)		
No	0 (0)	52 (92.9)	0.057**
Yes		4 (7.1)	
CAD***	30 (96.8)		
No	1 (3.2)	50 (89.3)	0.413**
Yes		6 (10.7)	
CHF******	28 (90.3)		
No	20 (64.5)	55 (98.2)	0.127**
Yes	3 (9.7)	1 (1.8)	
COPD*******			
No	29 (93.5)	49 (87.5)	0.481**
Yes	2 (6.5)	7 (12.5)	
Epilepsy			
No	29 (93.5)	49 (87.5)	0.481**
Yes	2 (6.5)	7 (12.5)	
CVD********			
No	29 (96.7)	49 (87.5)	0.252**
Yes	1 (3,3)	7 (12.5)	
Malignancy			
No	26 (83.9)	46 (82.1)	
Yes	5 (16.1)	10 (17.9)	
Neurological Disease*********			0.838*
No	29 (96.7)	49 (87.5)	
Yes	1 (3.3)	7 (12.5)	
Other			
No	26 (83.9)	46 (82.1)	0.838*
Yes	5 (16.1)	10 (17.9)	
Trauma From Falling			
No	23 (26.4)	48 (55)	
Nasal Fracture	4 (4.5)	1 (1)	
Subarachnoid Hemorrhage	0 (0)	1 (1)	0,222***
Subdural Hemorrhage	2 (2.2)	4 (4.5)	
Extremity Fracture	1 (1)	1 (1)	
Falling Time			
08.00-16.00	10 (32.3)	14 (25)	
16.00-24.00	11 (35.5)	25 (44.6)	0.667*
24.00-08.00	10 (32.3)	17 (30.4)	
Itachi Risk Score			
Low Risk	11 (35.5)	13 (23.2)	0.220*
High risk	20 (64.5)	43 (76.8)	
Cause of mortality is a fall in the emergency department			
Yes	0 (0)	2 (2,2)	0,412
No	31 (35,6)	54 (62,2)	
Mortality			
No	26	42	0,484*
Yes	5	14	
Length of stay in the emergency department(hour), Mean±SD	25.61±24,33	23.33±16,94	0.646***
Length of hospital stay (hour), Mean±SD	251.93±502,95	223.53±341.33	0.755***
GCS, Mean±SD	14.25±2,15	14.67±1.16	0.320***
Itaki Fall Risk Scale, Mean±SD	7.00±5.92	8.78±5.32	**0.046*** **

Table 2. Comparison of data between age groups under 65 years old and over

*:Pearson Chi Square test, **:Fisher's Exact test, ***:Independent t test, p<0.05 Statistically significant
Hypertension, b) Diabetes Mellitus, c)Coronary Artery Disease, d) Congestive Heart Disease, e) Chronic Obstructive Pulmonary Disease, f) Cerebrovascular Disease, g) Neurological Disease include Parkinson's Disease and Alzheimer's Disease

Today, various scoring systems are being developed to evaluate the risk of falling (19). The most common approach in this regard is to first determine the risk level that makes patients prone to falling. Using a model, scale or scoring system to determine the risk of falling in the diagnosis phase, which begins with the patient's admission, will facilitate timely care interventions and preventive measures, as well as prevent harm to the patient (8). In the center where our study was conducted, the Itaki Fall Risk Scale is used for this purpose. In a study comparing the Itaki Fall Risk Tool with the Morse and Hendrich-II tools, it was found that the Itaki Fall Risk Tool was the most sensitive tool in assessing fall risk in hospitalized elderly patients (20). In our study, when patients aged 65 and over who applied to the ED were compared with patients under 65, the Itaki Fall Risk Score was found to be significantly higher. However, in the group aged 65 and over, the high Itaki Fall Risk Score was not significant in terms of mortality.

		Mortality				
		Alıve		Exitus		
		Mean	n	Mean	n	p
Gender	Man		23		10	0.218
	Woman		19		4	
HT[a]	No		18		8	0.268*
	Yes		24		6	
DM[b]	No		27		11	0.259*
	Yes		15		3	
CAD[c]	No		34		12	0.518
	Yes		8		2	
CHF[d]	No		39		13	0.742
	Yes		3		1	
COPD[e]	No		36		14	0.162
	Yes		6		0	
Malignancy	No		40		9	**0.008**
	Yes		2		5	
Epilepsy	No		41		14	0.750
	Yes		1		0	
CVD[f]	No		35		14	0.176*
	Yes		7		0	
Neurological Disease[g]	No		36		13	0.433
	Yes		6		1	
Other	Yok		34		12	0.518
	Var		8		2	
Falling Time	08.00-16.00		14		3	0.703
	16.00-24.00		10		4	
	24.00-08.00		18		7	
Trauma Falling	No		37		11	0.398
	Yes		5		3	
Trauma From Falling	No		37		11	0.366
	cranial injury		4		2	**
	Etremity injury		1		1	
Age		76		77		0.645
GCS		15		14		0.083
Itaki Fall Risk Scale		9		7		0.705
Length of stay in the emergency department (hour)		27		20		0.431
Length of hospital stay (hour)		213		255		0.770

Table 3. Comparison of data of patients over 65 years of age with mortality

*Fisher's exact test , **Independent t test , a) Hypertension, b) Diabetes Mellitus, c)Coronary Artery Disease, d) Congestive Heart Disease, e) Chronic Obstructive Pulmonary Disease, f) Cerebrovascular Disease, g) Neurological Disease include Parkinson's Disease and Alzheimer's Disease,

A study found that falls due to going to the toilet in the hospital were significantly higher between 00:00 - 06:00 compared to other hours of the day. However, in this study, no significant increase in the hospital stay of patients was detected (21). Unlike this study, in our study, no correlation was found between the time the patients fell off the stretcher and mortality.

In our study, no statistically significant difference was found between length of hospital stay and mortality. The reason for this may be that we could not reach the hospital stay of 9 referred patients and these patients were referred to intensive care units, which may have caused the patient's average hospital stay to be lower. We believe that there are many factors that affect the length of stay in the ED. In our study, two patients who died as a result of falling off the stretcher died in the intensive care unit on the 11th and 18th days.

We think that as the length of stay in the ED increases, the probability of falling off the stretcher increases, and the length of stay in the ED for patients who can be discharged in a shorter time due to trauma also increases.

		Cause of mortality is a fall		p
		No	Yes	
Gender	Man	31	2	0.343
	Woman	23	0	
HT[a]	No	25	1	0.718
	Yes	29	1	
DM[b]	No	36	2	0.456
	Yes	18	0	
CAD[c]	No	44	2	0.672
	Yes	10	0	
CHF[d]	No	50	2	0.861
	Yes	4	0	
COPD[e]	No	48	2	0.795
	Yes	6	0	
Malignancy	No	47	2	0.764
	Yes	7	0	
Epilepsy	No	53	2	0.964
	Yes	1	0	
CVD[f]	No	47	2	0.764
	Yes	7	0	
Neurological Disease[g]	No	48	1	0.236
	Yes	6	1	
Other	Yok	44	2	0.672
	Var	10	0	
Falling Time	08.00-16.00			0.559*
	16.00-24.00			
	24.00-08.00			
Trauma From Falling	No	48	0	
	Cranial injury	4	2	**<0.001***
	Extremity injury	2	0	
		Median	**Range**	
Age		75	66-95	0.413*
GCS		15	8-15	0.561*
Itaki Fall Risk Scale		8	1-26	0.807*
Length of stay in the emergency department (hour)		22	4-96	0.507*
Length of hospital stay (hour)		72	4-1608	0.106*

Table 4. Comparison of data of patients aged 65 and over whose cause of mortality was falling.

*Independent t test , a) Hypertension, b) Diabetes Mellitus, c)Coronary Artery Disease, d) Congestive Heart Disease, e) Chronic Obstructive Pulmonary Disease, f) Cerebrovascular Disease, g) Neurological Disease include Parkinson's Disease and Alzheimer's Disease,

In fact, The average length of stay in the ED for patients aged 65 and over was 23.6 hours (minimum 4 – maximum 80 hours). One of the discharged patients suffered an extremity fracture as a result of a fall.

Limitations

Our study was conducted retrospectively in a single center and the number of patients was low. Therefore, our data pool was limited. Since we could not reach the hospital stay of the 9 patients who were taken to intensive care, the average hospital stay seems to be lower. We did not have information about the environmental factors of the patients before the ED. Because it was a retrospective study, we did not have information about the emotional factors and fears of falling that the patients experienced before and after the fall.

Conclusion

Our retrospective observational study highlights the complex challenge of preventing patient falls in healthcare settings, particularly in the dynamic environment of ED. While it is universally accepted that the healthcare facility does not want patients to experience falls and associated

adverse outcomes, our findings underscore the multifactorial nature of these events.

Our study revealed a notable trend in which patients of all ages experienced falls during observation, but worryingly, falls in geriatric patients carried a high risk of death. This highlights the urgency of targeted interventions to improve the safety of this vulnerable demographic.

We recommend a multifaceted approach to prevent falls from stretchers in ED. It is of great importance to create special areas for geriatric patients in ED and to provide special training to nurses and allied health personnel on geriatric patient care. Increased collaboration with geriatricians can provide valuable information and support in managing the unique needs of geriatric patients. Keeping patient stretchers at a lower height to ensure safe mobility can reduce complications due to falls.

Although our study adds valuable information, we acknowledge its limitations and the need for continued research in this area. Implementation of recommended preventive measures requires a concerted effort by healthcare institutions and policymakers to create environments that prioritize patient safety and reduce the incidence of falls, especially among our elderly population.

Acknowledgements: We thank all the study participants and our colleagues.

Conflict of Interest: The authors declare no conflict of interest regarding this study.

Financial Disclosure: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Authors' Contributions: All authors contributed significantly to the conception and design of the study, acquisition, analysis and interpretation of data, and critique of the final manuscript.

Ethical Approval: Ethical approvals were obtained from Ankara City Hospital No. 2 Clinical Research Ethics Committee (E2-23-3810).

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