

Evaluation of Geriatric Psychiatric Patients in The Emergency Department

Acil Serviste Geriatrik Psikiyatri Hastalarının Değerlendirilmesi

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ABSTRACT

Objective: Besides the known co-morbidities, emergency department (ED) applications reveal an increasing trend due to the complications originating from the increase in the elderly population in the society. In addition, ED applications with psychiatric symptoms also continuously rise in numbers. Along these lines, in the current study, we focus on the fundamental causes associated with the ED applications of geriatric patients (> 64 years old) with psychiatric symptoms.

Materials and Methods: The patients who applied to our ED with psychiatric symptoms between February 2019 and August 2019 and who had a psychiatry consultation were evaluated retrospectively. The demographic data, co-morbidities, known psychiatric diseases, admission symptoms, and outcome diagnoses of the patients were recorded. The results were evaluated statistically.

Results: A total of 43.2 % of male patients who were over the age of 65, and 43.3 % of female patients were admitted to our ED with the most common complaint of anxiety. No significant relations were detected between suicide attempts and the presence of psychiatric disease in elderly patients ($p = 0.93$). Delirium was the most common diagnosis in the geriatric population without any known psychiatric disease ($n = 10$). All patients were diagnosed with depression, delirium, and dementia, respectively, after the emergency psychiatric evaluation.

Conclusion: Healthcare costs and morbidity-mortality rates of the senior patients with psychiatric symptoms can be significantly diminished upon the diagnosis of depression, delirium, and dementia via psychiatric examinations.

Keywords: Aging, emergency medicine, geriatric psychiatry

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Ö Z

Amac: Bilinen komorbiditelerin yanı sıra toplumda yaşlı nüfusun artmasından kaynaklanan komplikasyonlar nedeniyle acil servis (AS) başvuruları artan bir eğilim göstermektedir. Ayrıca psikiyatrik belirtileri olan acil servis başvuruları da sürekli artış göstermektedir. Bu doğrultuda, mevcut çalışmada, psikiyatrik semptomları olan geriatric hastaların (>64 yaş) acil servis başvurularıyla ilişkili temel nedenlere odaklanıyoruz.

Gereç ve Yöntem: Acil servisimize Şubat 2019-Ağustos 2019 tarihleri arasında psikiyatrik belirtilerle başvuran ve psikiyatri konsültasyonu yapılan hastalar geriye dönük olarak değerlendirildi. Hastaların demografik verileri, ek hastalıkları, bilinen psikiyatrik hastalıkları, başvuru semptomları ve sonuç tanıları kaydedildi.

Bulgular: 65 yaş üstü erkek hastaların % 43.2'si, kadın hastaların ise % 43.3'ü en sık anksiyete şikayeti ile acil servisimize başvurdu. Yaşlı hastalarda intihar girişimi ile psikiyatrik hastalık varlığı arasında anlamlı bir ilişki saptanmadı ($p=0.93$). Deliryum bilinen herhangi bir psikiyatrik hastalığı olmayan geriatric popülasyonda en sık görülen tanıydı ($n=10$). Acil psikiyatrik değerlendirme sonrasında tüm hastalara sırasıyla depresyon, deliryum ve demans tanısı konuldu.

Sonuç: Psikiyatrik semptomları olan yaşlı hastalarda psikiyatrik muayene ile depresyon, deliryum ve demans tanısı konulduğunda sağlık maliyetleri ve morbidite-mortalite oranları önemli ölçüde azaltılabilir..

Anahtar Kelimeler: Yaşlanma, acil tıp, geriatric psikiyatri



1. Introduction

The world's population is aging, bringing about an ever-greater burden of mental disorders in older adults [1]. Literature data suggest that number of people over the age of 65 exceeded 40 million in the U.S. in 2012, while senior citizens older than 65 years old surpassed 23.2 % of the population in Italy in 2020, and 25 % in Japan in 2013 [2,3]. It is expected that this ratio will reach > 30 % in Japan by 2025 [2,3]. The relative population of the elderly people in Turkey with respect to the national population is rapidly increasing [4]. For instance, the population over the age of 65 in Turkey corresponded to the 8.5 % of the overall population in 2017, where this value is expected to increase up to 10.2 % in 2023 [4]. According to a study conducted in a psychiatric hospital in Turkey, the rate of psychiatric patients aged 60 and above was found to be 8.2%, and it was reported that the proportion of elderly individuals seeking psychiatric emergency services has increased in parallel with the rise in the elderly population [5]. Depression is one of the most common psychiatric conditions in geriatric patients. Depressive symptoms are typically seen in about 15 % of geriatric patients. Age, malnutrition, obesity, race, economic inadequacies and functional disabilities are important risk factors leading to depression [6]. A study conducted in China identified more than 50 million patients over the age of 65 with dementia and cognitive impairment. This increased the need for psychiatric care in geriatric patients in the country and implied stringent measures to be taken at the national level. These measures not only reduced the hospitalization time of the patients, but also provided service to a greater number of patients [7].

Even after controlling for sociodemographic and disease-related variables, older adults with high levels of depressive symptoms have a 25% higher risk of all-cause mortality [8]. Therefore, the treatment of

mental health disorders among older adults is of critical importance for both mental and physical well-being [9].

There is a limited number of studies in Turkey regarding psychiatric emergency admissions in geriatric patients. In the present study, the purpose was to evaluate the demographic data of geriatric patients who applied to the ED with psychiatric symptoms, and the results of comorbidities and psychiatric diseases. In addition, it is aimed to contribute to the database of our country in geriatric psychiatric diseases.

2. Material and Method

The study was planned with a retrospective observational design. Patient consent was not obtained because it was in the form of a file review over the hospital automation system and did not contain images that would enable patients to be identified. The study was approved by the Ethics Committee. The present study was conducted in line with the Declaration of Helsinki and good clinical practices. There is no conflict of interest between the authors.

In the current study, patients ≥ 65 years of age who applied to the ED with psychiatric symptoms between February 2019 and August 2019 were evaluated retrospectively. These patients also received psychiatric consultation.

Among the patients admitted to the ED with psychiatric complaints, 67 patients who needed psychiatric consultation were included in the study. Those with any missing data were excluded from the study. The patients were divided into 2 groups as males and females. Patients' data were obtained through the hospital registry system. The results of the ED epicrisis and ED psychiatry consultations that were registered in the system were analyzed. The gender, age, place of residence, co-morbidities, known psychiatric diseases, whether or not patients had received any psychiatric treatment, and the final psychiatric diagnosis decision made in the process were recorded. The distribution of these data by gender was reported in statistical terms. The distribution of the final psychiatric diagnoses of the patients according to age was determined. Hospitalization decisions and the length of stay of the patients were also determined. The correlation between suicide attempts, which is among the reasons for admission to the ED, and psychiatric diagnosis status were examined. Finally, the relations between psychiatric diagnosis and hospitalization were investigated.

The SPSS 22 (Statistical Package for Social Sciences; SPSS Inc., Chicago, IL) program was used in the evaluation of the data. The categorical data were expressed as numbers and percentages, and numerical data as mean \pm standard deviation. The categorical data were compared with the Chi-Square Analysis (Pearson Chi-Square). A p value of < 0.05 was taken to be statistically significant.

3. Results

Among the currently investigated patients, 55 % (n = 37) of the patients were male and the mean age was 73 ± 7.0 in males. 45 % (n=30) of our patients were women. The mean age of the women was $77, 77.1\pm 9.7$ years. 92.5 % of the patients lived in their own houses. When the comorbidities of the patients were examined, the most common comorbidity was found to be the cerebrovascular disease with a rate of 35.8 %. This is followed by hypertension (23.9 %), and Alzheimer's disease (16.4 %). The distribution of the demographic data is summarized in Table 1.

Table 1. Distribution of the demographic data for those over the age of 65

		n	%
Gender	Male	37	55
	Female	30	45
Residence	Home	62	92.5
	Nursing home	5	7.5
Comorbidities	None	2	3
	Diabetes Mellitus	8	11.9
	Hypertension	16	23.9
	Cerebrovascular Disease	24	35.8
	Chronic Kidney Failure	1	1.5
	Parkinson	5	7.5
	Alzheimer's Disease	11	16.4
	Other*	33	49.3

*Peripheral Vascular Disease, Meniere's Disease, Systemic Lupus Erythematosus, Anemia, Neuro-brucellosis

It was found that anxiety was the most common symptom of patients in males (n=16) and females (n=13). Furthermore, 16.8 % of women who applied to the ED had a former a suicide attempt. In men, the most common reason for the admission was anxiety corresponding to the 43.2 % of the male patients, followed by aggression (21.6 %). When the distribution of the known psychiatric diseases of the patients was considered, it was found that 18.9% (n=7) of the males had dementia and (n=8) of females had depression (26.7 %). 43.3 % of women and 35.1 % of men did not have a known diagnosis of psychiatric disease. Observed symptoms and the distribution of known psychiatric disorders are summarized in Table 2.

Table 2. Distribution of admission symptoms, psychiatric disease, and use of medication of patients over the age of 65

	Gender		n	% (in terms of gender)
Symptom	Male	Aggression	8	21.6
		Anxiety	16	43.2
		Suicide	5	13.5
		EPS&	3	8.1
		Hallucination	3	8.1
		Drug Overdose	0	0
		Depressive Symptom	2	5.4
	Female	Aggression	4	13.3
		Anxiety	13	43.3
		Suicide	5	16.8
		EPS&	0	0
		Hallucination	4	13.3
		Drug Overdose	1	3.3
		Depressive Symptom	3	10
Known Psychiatric Disease	Male	None	13	35.1
		Dementia	7	18.9
		Bipolar Disorder	3	8.1
		Depression	6	16.2
		Schizophrenia	6	16.2
		GAD*	2	5.4
	Female	None	13	43.3
		Dementia	3	10
		Bipolar Disorder	1	3.3
		Depression	8	26.7
		Schizophrenia	4	13.3
		GAD*	1	3.3
		Psychiatric treatment status	Male	21
Female	17	56.7		

& Extrapramidal Symptoms, * Generalized Anxiety Disorder

Upon initial psychiatric evaluations of the patients, it was found that the most common diagnosis was major depression (n=24). After the secondary evaluation, delirium (n=16) and dementia (n=8) were also diagnosed in addition to depression. It was also found that the most common diagnosis for the patients without a known psychiatric disease was delirium (n=10). Depression was the second most common

(n=6) diagnosis among the patients without a psychiatric diagnosis. The relationship between the final psychiatric diagnosis and age is summarized in Table 3.

Table 3. Distribution of the final psychiatric diagnosis and age of patients over the age of 65

		n	Age (Mean±SD)
Psychiatric disease diagnosis after psychiatric assessment	Depression	24	72.2±7.62
	Delirium	16	79.1±7.54
	Dementia	8	78.6±11.8
	Psychosis	5	70.2±5.4
	No	2	76.5±12.02
	PTSD*	1	66
	Other**	11	74.18±7.87

* Post-traumatic stress disorder, ** Anxiety disorder, psychiatric follow-up, Extrapyramidal symptom

No correlation was found between patients with known psychiatric disease and those who attempted suicide as a control (p=0.93). There were no significant correlation between the patients who were diagnosed with a psychiatric disease after psychiatric evaluations and suicide (p=0.54). All of the patients without a known diagnosis of psychiatric disease were diagnosed with a psychiatric disease after the suicide attempt (Table 4).

Table 4. Relation of patients over the age of 65 diagnosed with psychiatric disease with suicide

Known Psychiatric Disease	Suicide		Total	p*
	Yes	No		
Yes	6	35	41	0.93
No	4	22	26	
Psychiatric disease diagnosis after psychiatric evaluation				
	Suicide		Total	p*
	Yes	No		
Yes	10	55	65	0.54
No		2	2	

*Chi-Square Test

Table 5 summarizes the relationship between the need for hospitalization and the psychiatric diagnosis of the patients. No correlations were detected between the patients' known psychiatric disease diagnosis and the need for hospitalization (p=0.37). There were no significant relations between the patients who were diagnosed with a psychiatric disease after psychiatric evaluation and the need for hospitalization (p=0.68).

Table 5. Relation with hospitalization of patients over the age of 65 with psychiatric disease diagnosis

Known Psychiatric Disease	Hospitalization		Total	p*
	Yes	No		
Yes	4	37	41	0.37
No	1	25	26	
Psychiatric disease diagnosis after psychiatric assessment				
	Hospitalization		Total	p*
	Yes	No		
Yes	5	60	65	0.68
No		2	2	

*Chi-Square Test

4. Discussion and Conclusion

The care of elderly patients who have multiple comorbidities is important in terms of reducing mortality and morbidity. In this sense, a geriatric-based approach may increase survival rates [10,11]. The present study deals with the psychiatric aspect of the issue in the emergency services, where an important examination and treatment process of individuals over 65 years of age is managed. More than half of the cases in the present study were men. However, there were differences in the rate of admission between the genders in previous studies. The number of female applicants was reported to be higher than that of males in some studies [12]. While Kalenderoğlu et al. found that the patients were mostly female in their study [13]. Sawayama identified a large proportion of male patients [14]. This difference in gender distribution may be because of regional, socioeconomic, and cultural differences. It is apparent that larger epidemiological studies are needed to clarify this issue. However, most studies show that the mean age of women is greater than that of men in the elderly population. The biggest reason for this may be that women have a longer life expectancy than men [15]. In our study, clinical complaints in the emergency department and anxiety symptoms were the first in both genders. Epidemiological studies have shown that anxiety disorders are more commonly observed among geriatric patient groups, with physical limitations, social, and economic problems emerging as prominent contributing factors [16]. Although aggressive behavior was the second most common among men, suicidal attempts were more common among women. The least common reason for men to apply was depressive complaints, and that of women was the drug overdose. Numerous studies reported that anxiety increased with age, comorbid disease, and multiple drug use in the elderly. This rate was between 10-20 % in the elderly [13]. It has been observed that anxiety and loneliness trigger depression in older individuals [16]. Although anxiety was the most common symptom in the our study, these patients were mostly diagnosed with depression and delirium. When the known psychiatric diagnoses were evaluated, there were only three patients diagnosed with anxiety disorder. After the emergency psychiatric examination of the patients, depression was added as a new diagnosis in two of them.

When the patients admitted to the emergency department because of a suicide attempt were examined, no significant relations were detected between a previously known psychiatric disease diagnosis. When the patients without a psychiatric diagnosis were evaluated from this point of view, no significant relations could be established with suicide. It was reported that an average of 13 people over the age of 65 die from suicide every day in the U.S. Furthermore, it was shown that 18.1 % of those who attempted suicide in 2000 were caused by the geriatric population [17]. A Canadian study evaluated psychiatric emergency service use among the people aged over and below the age of 65. It was found that 19% of people who were over the age of 65 had suicidal ideas and 8 % attempted suicide [18]. In the current study, it was also observed that a significant proportion of the patients had a history of suicide attempts. We believe that this is noteworthy even though there are differences between the relative populations of elderly people for different countries. A previous study reported that the rate of suicide was 5-6 times higher in men aged 80-84 than in the general population [19]. The reason for the higher rate in our study may be because of the level of development between countries and economic reasons. We think that this problem may increase with the increased geriatric population in our country .

Overall assessment of the currently investigated patients reveal that more than half of them had previously undergone a psychiatric examination and had been diagnosed with a known symptom. Most of these patients were using their medications regularly. Almost all of our patients were diagnosed with a psychiatric disorder after undergoing a psychiatric evaluation in the emergency department. A secondary additional psychiatric diagnosis was made to some of them who were previously diagnosed. The most frequently diagnosed disease was delirium in the patients who had no diagnosis, and depression was the second most common. When all patients were evaluated in the ED, the most common diagnosis was depression. In emergency department admissions, delirium is present in 8% to 17% of elderly patients and up to 40% of those residing in nursing homes [20]. Delirium has consistently been associated with adverse outcomes, including mortality [21]. These results as well as the current study underscore the prominence of depression and delirium in the emergency service diagnoses in the geriatric population. In accordance with the results of the current study, in a former study that was conducted in Canada, depression was detected among 20% of the patients over the age of 65 applying to the psychiatric emergency service. Admission to the emergency department because of substance use, especially alcohol, was found to be high in this study [18]. In the our study, no patients were detected who applied to the emergency department because of substance abuse. Accidental excessive drug intake was found in only 1 female patient. This may be because of the low rate of substance use such as alcohol among the elderly in our country and sociocultural differences. In the current study,

almost all of these patients were diagnosed with a new psychiatric disease for the first time. In summary, this result suggests that there are more elderly psychiatric patients in the geriatric population in our country than expected. Our work will be informative for more comprehensive studies. According to the results of the present study, the most important suggestion is the need to establish psychiatric diagnosis centers for the elderly population. The elderly must have easy access to these centers, which must be equipped in terms of geriatric care principles. Finally, dealing with the emergency psychiatric problems of elderly psychiatric patients in these centers outside the general emergency services will protect these patients, especially from the delirium manifestation caused by the general emergency room environment.

The geriatric population is experiencing a steady increase in our country, necessitating the establishment of healthcare institutions capable of providing psychiatric evaluations for these individuals. While developed countries have implemented specialized psychiatric emergency services, in our country, general emergency services are predominantly utilized for addressing the needs of such patients. Upon evaluating the results of the present study, it becomes evident that the aging population is associated with a heightened prevalence of anxiety among geriatric patients. Consequently, it is essential to conduct psychiatric evaluations for geriatric patients who present to the emergency department with psychiatric behavior changes or symptoms, irrespective of whether they have a previously diagnosed psychiatric condition. The psychiatric evaluation must be performed in geriatric patients who present to the emergency department with psychiatric behavior changes or symptoms, whether or not they have a previously known psychiatric disease or not. Comorbidities that occur with age, especially the history of cerebrovascular disease, loneliness, loss of cognitive functions, and physical decline cause depression in geriatric patients. Secondly, delirium and then dementia appear as other leading diseases. Periodic psychiatric examinations of geriatric patients in these periods of their lives without symptoms may decrease the development of diseases such as depression, delirium, and dementia. Reducing these three diseases can prevent other diseases and traumas which may develop in the elderly. Thus, ED admissions and hospital stays can be reduced due to psychiatric limitations in geriatric patients.

Declaration of Ethical Code

In this study, we undertake that all the rules required to be followed within the scope of the "Higher Education Institutions Scientific Research and Publication Ethics Directive" are complied with, and that none of the actions stated under the heading "Actions Against Scientific Research and Publication Ethics" are not carried out.

The study was approved by the Ethics Committee of Ankara City Hospital with E1-21-2169 on 21,12,2021.

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