

Investigation of the reasons and frequency of geriatric patients applying to the emergency department

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ABSTRACT

Aim: To determine the reasons for choosing the emergency department in patients aged 65 and over who applied to the emergency department and investigate the effect of their use of primary health care services on the frequency of emergency department visits.

Methods: The study is a prospective cross-sectional study. It was performed in the emergency department of a university tertiary hospital between 1 November 2017 and 30 April 2018. Demographic characteristics of patients aged 65 and over who applied to the emergency department, the reasons for applying to the emergency department and their use of primary health care services were evaluated with a questionnaire. The data were statistically analyzed.

Results: 242 patients were included in the study. 57.9% (n: 140) of the patients were male. 82.2% of the patients stated that they applied to the emergency department at least three times in a year. When the reasons for applying to the emergency department were examined, it was seen that the most common reason (35.5% n: 86) was not wanting to wait in line in the outpatient clinic. 33.5% (n: 81) of the patients did not know their family doctor and 41.3% (n: 100) did not use primary health care services.

Conclusion: It has been observed that the problems experienced during outpatient services in patients aged 65 and over and the status of benefiting from primary health care services in this age group are effective factors on the frequency of emergency department visits.

Key words: Emergency service, hospital, geriatric patient, patient admission, health care surveys, epidemiology.

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Received: 2022-05-31 / Revisions: 2022-06-20
Accepted: 2022-06-27 / Published: 2022-07-01

Introduction

In our country, the proportion of the population over the age of 65 in the total population is increasing. While the ratio of the population over the age of 65 to the total population was 8.2% in 2015, this ratio increased to 9.5% in 2020. By

2025, this rate is predicted to be 11%. In the light of these data, it is seen that the population is aging in our country. Among all age groups, the elderly population is increasing at a higher rate than other age groups [1].

The increase in the elderly population is also reflected in the number of emergency department applications. A study conducted by Albert et al. in 2017 showed that the emergency department admissions of patients aged 65 and over in the United States constituted 15.9% of all emergency department admissions [2]. Although there are

studies in the literature with different data between 10% and 31% on the frequency of emergency room use in the geriatric group, we think there are not enough studies on this subject [3,4].

This study aimed to investigate the frequency and causes of emergency department admissions in the 65 and older patient group and contribute to the literature on this subject.

Materials and methods

Our study started with the approval of Bolu Abant İzzet Baysal University Clinical Research Ethics Committee, numbered 2017/180. Our study was planned as a prospective cross-sectional. It was held between 1 November 2017 and 30 April 2018 for six months. Patients aged 65 and over who applied to the emergency department of our hospital and agreed to participate in the study were included in the study. Patients who applied after trauma, patients who were coded as yellow and red according to the triage coding system, patients who were coded as green field patients with blurred consciousness, and patients who did not accept to participate in the study were not included in the study.

A questionnaire form was applied to the patients in which demographic characteristics, reasons for applying to the emergency department, and their use of primary health care services were asked. Questionnaires were administered by the research assistants. An example of the questionnaire form is attached.

In order to calculate the ratio of our study group to the total number of patients who applied to the emergency department in six months, the total number of patients who applied during the study was learned from the information processing unit of our hospital.

Statistical analysis: For descriptive statistics, mean, standard deviation, minimum and

maximum values for numerical variables, for categorical variables number and percentage values are given. The Chi-square test was used to examine whether there was a significant difference between categorical variables. The significance level was determined as $p < 0.05$. Analyzes were obtained with the SPSS v.21 program.

Results

Of the 242 patients included in the study, 42.1% were female (n: 102), and 57.9% were male (n: 140). In our study, it was seen that young elderly patients (n: 191, 78.92%) applied to the emergency department at a higher rate than advanced elderly patients (n: 52, 21.07%). The mean age of the patients was calculated as 76.83 (65-101) (Table 1).

21.5% (n: 52) of the study group were illiterate. One hundred forty-nine patients (61.6%) were primary school graduates, and nine patients (3.7%) were university graduates. 97.5% (n: 236) of the patients participating in the study lived with their families. 56.6% (n: 137) of the patients came to the emergency department by their own means (Table 1).

The most common reason for patients included in our study to apply to the emergency department was not wanting to wait in line in the outpatient clinic (n: 86, 35.5%). Another common reason was the thought that the work progressed rapidly in the emergency department (n: 70, 28.9%). The number of patients who applied to the emergency department due to not being able to find a queue in outpatient clinics was 51 (21.1%). When the participants were asked about the number of emergency department applications in a year, 45.0% (n: 109) stated that they applied to the emergency department 3-5 times in a year (Table 1).

66.5% (n: 161) of the study group knew the family health center where they were registered

Table 1. Demographic features, utilization of primary health care and reasons for applying to emergency department.

		Number (n= 242)	Percentage
Gender	Female	102	42.1
	Male	140	57.9
Age	Young Elderly (65-84)	191	78.92
	Advanced Elderly (85 and over)	51	21.07
Education Level	Illiterate	52	21.5
	Primary School Graduate	149	61.6
	High School Graduate	32	13.2
	University Graduate	9	3.7
Living With / Place	Alone	6	2.5
	Family	236	97.5
	Nursing Home	-	-
Arrival to the Emergency Department	By their own means	137	56.6
	By Ambulance	105	43.4
Reason for Application to Emergency Department	Inability to find a queue in the outpatient clinic	51	21.1
	Not wanting to wait in the outpatient clinic	86	35.5
	Thinking things are moving fast	70	28.9
	Thinking it's urgent	35	14.5
Number of Applications to the Emergency Department in a Year	1 – 2 times	43	17.8
	3 – 5 times	109	45.0
	> 5	90	37.2
Knows Their Family Physician	Yes	161	66.5
	No	81	33.5
Status of Going to the Family Physician	Yes	142	58.7
	No	100	41.3

Table 2. The relationship between the utilization of primary health care and the frequency of admission to the emergency department.

		Number of Emergency Department Applications			<i>P</i>
		1 – 2 Times	3 – 5 Times	> 5 Times	
Knows Their Family Physician	Yes	37 (23.0)	96 (59.6)	28 (17.4)	<0.001
	No	6 (7.4)	13 (16.0)	62 (76.5)	
Status of Going to the Family Physician	Yes	40 (28.2)	81 (57.0)	21 (14.8)	<0.001
	No	3 (3.0)	28 (28.0)	69 (69.0)	

and knew the family physician. When the participants were asked about their use of primary health care services when they had a health problem, 58.7% (n: 142) stated that they applied to family health centers (Table 1).

A statistically significant difference was found between the participants' use of primary health care services and their education level ($p < 0.001$). All of the patients (n: 9) who were university graduates stated that they applied to the family

health center when they had a health problem. All of the patients who stated that they did not benefit from primary health care services were illiterate and primary school graduates.

A statistically significant difference was found between the status of benefiting from the primary health care service of the patients participating in the study and the reason for applying to the emergency department. ($p < 0.001$). 73% (n:73) of the people who stated that they did not go to the family doctor stated that they chose the emergency department because they did not want to wait in line in the outpatient clinic and could not find a queue. There was no statistically significant difference between the education levels of the patients and the reasons for choosing the emergency department.

There is a statistically significant difference between knowing the family physician and the number of admissions to the emergency department ($p < 0.001$). While 59.6% (n=96) of the people who stated that they knew the family doctor applied to the emergency department between 3 and 5 times, 76.5% (n=62) of the people who stated that they did not know their family doctor applied more than 5 times. There is a statistically significant difference between the status of going to the family doctor and the number of admissions to the emergency department ($p < 0.001$). While 57% (n=81) of the people who stated that they went to their family doctor applied to the emergency department between 3 and 5 times, 69% (n=69) of those stated that they did not go to their family doctor applied more than 5 times (Table 2).

Discussion

In this study, we investigated the reasons for applying to the emergency department in patients aged 65 and over, who were classified as 'non-urgent patients' according to the triage coding system, and determined that the patients' habits

of using primary health care services and long waiting times in outpatient clinics were the main reasons that led individuals to the emergency department.

In our study, an average of 7% of all patients aged 65 and over who applied to our emergency department was patients classified as non-emergency patients according to the triage coding system. Although there is not enough study in the literature on this subject, in the study of Özel et al., non-emergency patients were found to be 6.5% of the total patients [5]. Studies are showing that this patient group is more frequently admitted to the emergency department (26%) in Europe [6].

It was seen that the two most common reasons for the participants to apply to the emergency department were "not wanting to wait in the outpatient clinic and the patients and their relatives thought that things were going to go fast in the emergency department". According to the triage coding system, more than half (64.4%) of this non-emergency patient group were patients who applied to the emergency department even though they could actually apply to the outpatient clinic. In this patient group; considering the length of stay in the emergency room, examinations and consultations, it is seen that the workload and occupancy rates in the emergency department increase. Although the reason for application is nonspecific in patients aged 65 and over, the fear of the patient's advanced age and ignoring a possible vital cause directs physicians to examination and consultation. It is also seen in the study of Ukkonen et al. that a similar approach is shown in the emergency departments to elderly patients in Europe [6].

As the elderly population apply to the emergency department for more vital and complicated reasons, more examinations and consultations are requested, the time spent in the emergency department for this age group is prolonged. In the

literature, studies show that the elderly patient group stays longer in the emergency department than young adults [7,8,9,10]. We think that the factors that cause patients aged 65 and over to apply to emergency departments instead of applying to primary health care institutions and outpatient clinics should be investigated and steps should be taken to solve the problems.

In our study, the rate of benefiting from primary health care services in elderly patients was 58.7%. Although there is not enough research on this subject in our country, Çelik et al found the rate of regular primary health care service in the family health center as 28.4%; however, we think that the rate is lower in patients aged 65 and over, since patients receiving regular health care services were not categorized according to age groups in this study [11]. In another study from our country, the rate of application to family health centers in the population aged 65 and over was found to be high. However, in the same study, it was shown that individuals do not regularly benefit from primary health care services [12].

According to the triage coding system, it is seen that the reasons for applying to a health institution for elderly patients, who are classified as 'non-emergency patients,' are often chronic diseases. Nutritional problems, pressure sores and psychogenic disorders were the most common reasons for admission in our study. We think that these health problems should be evaluated primarily within the scope of primary health care services or outpatient clinics. The fact that individuals with chronic diseases can be followed up periodically in family health centers suggests that primary health care services will be more effective than emergency departments in solving problems [13].

Our study has some limitations. First of all, since our study is a single-center study, it does not represent the whole group of patients aged 65 and

over. Another limitation is that the study was limited to six months.

Conclusions

In our study, the reasons for admitting the geriatric patient population to the emergency department of a university were investigated. It has been observed that the problems experienced during the outpatient service in patients aged 65 and over and their use of primary health care services in this age group are effective factors on the frequency of emergency department visits. We think that informative and encouraging studies should be planned for the geriatric patient population, which constitutes an important part of the increasing workload of emergency departments in our country, to benefit from primary health care services, and patients should be directed to emergency departments according to the referral chain system. Considering the problems experienced by patients aged 65 and over during outpatient services, plans should be made by provincial health directorates and chief physicians to speed up the procedures in this age group.

Funding: *The author(s) received no financial support for the research, authorship, and/or publication of this article.*

Conflict of Interest: *The authors declare that they have no conflict of interest.*

Ethical Statement: *Approval for the study was obtained from the ethics committee of Bolu Abant İzzet Baysal University. (Date and number: 2017/180).*

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