

The Complaint and Outcome of Geriatric Patient in Emergency Department

Geriatric hastasının acil serviste şikayet ve sonuçlandırılışı

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SUMMARY

Objective: The aim of this study was to evaluate the the ratio and outcome of geriatric patients in Emergency Department.

Methods: This retrospective study was performed by including the geriatric patients presenting to our emergency department between January 1 and July 1, 2008. The patients were grouped as 65-74, 75-84, 85 years old and older. Age, sex, the primary and chief complaint, outcome of patient management were evaluated.

Results: There were a total of 2046 geriatric patients. 70.8% of patients were discharged. The most common complaints were falls, chest pain, dyspnea, chronic extremity pain, abdominal pain and fever. The most common admission services were cardiology (7%), neurology (4.2%), general surgery (3.2%) and chest diseases (2.4%).

Conclusions: Age and sex were effective factors in complaints of geriatric patients in Emergency Department. The properties of older geriatrics were different in studied groups.

Key words: Emergency department; geriatry/complaint/result.

ÖZET

Amaç: Geriatrik hastaların acil servise başvuru nedenleri ve sonuçları değerlendirildi.

Gereç ve Yöntem: 1 Ocak 2008 - 1 Temmuz 2008 tarihleri arasında acil servise gelen 65 yaş ve üzerindeki hastalar çalışmamıza dahil edildi. Geriatri hastaları 65-74, 75-84, 85 yaş ve üstü olarak gruplandırıldı. Hastaların yaş, cinsiyet, ilk ve asıl şikayeti, sonucu değerlendirildi.

Bulgular: Toplam 2046 geriatri hastası değerlendirildi. Hastaların %70,8'i taburcu edildi. En sık şikayetler düşme, göğüs ağrısı, nefes darlığı, kronik ekstremitte ağrısı, karın ağrısı ve ateş yüksekliği olarak bulundu. En sık yatış yapılan servisler kardiyoloji (%7), nöroloji (%4,2), genel cerrahi (%3,2), göğüs hastalıkları (%2,4) idi.

Sonuç: Geriatri hastasının acil serviste şikayetinde yaş ve cinsiyet etkili faktörlerdir. Çalışılan gruplarda ileri geriatri hastalarının özellikleri farklı idi.

Anahtar sözcükler: Acil servis; geriatri/başvuru şikayeti/sonuç.

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Introduction

Geriatric patient is an important group of admissions^[1,2] and their management can be generally difficult. This group may include many nonspecific complains.^[1] The aim of this study was to determine the complaints and outcome of geriatric patients presenting in Emergency Department (ED).

Materials and Methods

The study included the geriatric patients admitted to the ED between January 1, 2008 and July 1, 2008. All data were studied from the emergency department registrations and written records manually and retrospectively, and not from the ICD codes to prevent the probable errors. The chief complaint and outcome were considered in all patients who were 65 years old and over in a tertiary ED in Ankara. Geriatric patients were grouped as 65-74, 75-84, 85 years and older. A2 form used to show the rate of geriatric patients left ED and/or transported to another hospital. Study data were analyzed in SPSS 15.0 for Windows. Frequent variables were expressed as rates. Groups with

categorical variables were compared with Chi-square test. All the hypothesis were constructed as two tailed and a critical alpha value of 0.05 was accepted as significant.

Results

There were 2046 geriatric patients among the 9018 emergency patients. 48% (n=983) of them were 65-74, 40.8% (n=834) of them were 75-84, 11.2% (n=229) of them were 85 years old and older. 56.3% (n=1152) were female and 43.7% (n=894) were male. The mean age of patients was 75.3±7.1 (65-103). Complaints of geriatric patients, outcome of management in ED, sex and age, results and age, common complaints related in age and sex, common results due to sex and age were demonstrated in Table 1-5.

Discussion

Geriatric patients (22.68%) had a remarkable admission rate in Emergency Department. Vanpee et al., described the rate of patients in 75 years and older was 12.3%,^[1] and in other studies, 65 years and older age were mentioned as 9%,^[2] 19.6%,^[4] 12.4%,^[6] 15.1%.^[7] The rate could be

Table 1. Sex distribution due to age groups.

Sex	65-74		75-84		85+		Total	
	n	%	n	%	n	%	n	%
Male	437	44.5	358	42.9	99	43.2	894	43.7
Female	546	55.5	476	57.1	130	56.8	1152	56.3
Total	983	100	834	100	229	100	2046	100

Table 2. The most common complaints and age groups.

Complaints	65-74		75-84		85+		Total	
	n	%	n	%	n	%	n	%
Falls	91	16.0	90	19.3	35	24.5	216	18.3
Chest and upper back pain	99	17.4	57	12.2	11	7.7	167	14.2
Dyspnea	79	13.9	59	12.6	23	16.1	161	13.7
Chronic extremity pain	65	11.4	43	9.2	12	8.4	120	10.2
Abdominal pain	55	9.7	50	10.7	12	8.4	117	9.9
Fever	52	9.1	40	8.6	9	6.3	101	8.6
Hypertension	37	6.5	32	6.9	6	4.2	75	6.4
Emesis	31	5.4	32	6.9	12	8.4	75	6.4
General impairment	24	4.2	35	7.5	15	10.5	74	6.3
Dizziness and vertigo	36	6.3	29	6.2	8	5.6	73	6.2

Table 3. Common complaints and sex.

Complaints	Male		Female		Total	
	n	%	n	%	n	%
Falls	77	15.6	139	20.3	216	18.3
Dyspnea	77	15.6	84	12.3	161	13.7
Chest and upper back pain	90	18.2	77	11.3	167	14.2
Chronic extremity pain	42	8.5	78	11.4	120	10.2
Abdominal pain	49	9.9	68	9.9	117	9.9
Fever	63	12.7	38	5.6	101	8.6
Hypertension	16	3.2	59	8.6	75	6.4
Emesis	27	5.5	48	7.0	75	6.4
General impairment	35	7.1	39	5.7	74	6.3
Dizziness and vertigo	19	3.8	54	7.9	73	6.2

changed according to rates of geriatric patients related in different hospitals of areas due to development, population^[8] and the mean life time of these groups. The mean age of geriatrics were found as 73.5 and 75.2,^[2] 74,^[3] 72.8,^[6] 75 years^[7] in previous reports and 75.3 years was concordant with literature. Our age dissemination rates were 48% in 65-74, 40.8% in 75-84, 11.2% in 85 years old and over comparing with a previous study reported as 45.3%, 37.4%, and 17.2%, however the number of advanced age was low in this region.^[4]

Female sex was dominant (56.3%) in all age groups and in parallel with reviewed literature. These studies provided ratios of females as 56%,^[1] 65%,^[2,4] 65.41%,^[7] except only

one report which demonstrated that 57.4% of geriatric patients were male.^[6]

Vanpee et al., found that general condition impairment (21.5%), dyspnea (15%), falls and traumas (15%), abdominal problems (13%), thoracic pain (9%), syncope, dizziness (7%) and stroke (5.5%) were the essential complaints.^[1] Joilo demonstrated this as respiratory disorders (21.3%), chest pain (10.3%) and aches/pains (14.6%), falls (5.4%), respectively.^[2] While Brokaw reported that chest pain (20.8%), somatic complaints (18.9%), gastrointestinal (16.1%), dyspnea (13.7%), and change in mental status (12.8%),^[3] Lim showed that abnormalities of breathing (10.6%), falls (9.4%) and musculoskeletal

Table 4. Common results according to geriatric age groups.

Outcomes (Admissions)	65-74		75-84		85+		Total	
	n	%	n	%	n	%	n	%
Discharged	742	77.9	566	70.5	141	63.8	1449	73.3
Cardiology	69	7.2	56	7.0	19	8.6	144	7.3
Neurology	36	3.8	60	7.5	13	5.9	109	5.6
General surgery	27	2.8	30	3.7	9	4.1	66	3.3
Chest diseases	19	2.0	19	2.4	11	5.0	49	2.5
Internal medicine	11	1.2	22	2.7	12	5.4	45	2.3
Orthopedics	3	0.3	19	2.4	6	2.7	28	1.4
Neurosurgery	11	1.1	9	1.1	3	1.3	23	1.1
Gastroenterology	8	0.8	5	0.6	3	1.4	16	0.8
Cardiothoracic surgery	8	0.8	7	0.9	1	0.5	16	0.8

Table 5. Common complaints and sex.

Outcomes (Admissions)	Male		Female		Total	
	n	%	n	%	n	%
Discharged	592	69.4	857	76.3	1449	73.3
Cardiology	75	8.8	69	6.1	144	7.3
Neurology	56	6.5	53	4.7	109	5.6
General surgery	29	3.4	37	3.3	66	3.3
Chest diseases	24	2.8	25	2.2	49	2.5
Internal medicine	23	2.7	22	2.0	45	2.3
Orthopedics	12	1.4	16	1.4	28	1.4
Gastroenterology	9	1.1	7	0.6	16	0.8
Cardiothoracic surgery	9	1.1	7	0.6	16	0.8

pain (8.2%),^[6] pain (21.8%) were the reasons of ED presentation. Ronald mentioned that gastrointestinal (14%), dyspnea (13%), accidental reports (8.3%)^[7] were the most common complaints in recent reports. The most common complaints were falls, chest pain, dyspnea, chronic extremity pain, abdominal pain, fever in geriatrics that were different from other reports.

Falling was the major problem resulted in feebleness of musculoskeletal system.^[5] Chest pain and dyspnea were common presentations of acute vascular or in exacerbation of chronic respiratory diseases.^[1,7] Chronic extremity pain was a major problem to come to ED^[7] and these patients have to be seen in fast-track with a careful history and physical examination, not in the crowded clinic with many investigations and over long hours as it is not an emergency problem. Fever could be a serious symptom in this group as their chronic diseases were enable for infections.^[3] Beside these, chest pain was the most common complaint in 65-74 age group, more than other groups, mainly.

Hospitalization rates were 69% in cases 75 years and older,^[1] 23.8%,^[2] 34.5%,^[6] 38.4%^[7] in other reports (≥ 65 years). A total of our admission rate was 26.54%, however this did not include the patients transported to another hospitals (2.7%).

The most common diagnoses were chest infection / pneumonia (8.2%), non-fractured head injury (7.2%) and heart failure (6.6%) in a study.^[6] Falls and injuries (18.65%), cardiac disease (18.10%), arteriosclerotic heart disease

(10.88%), heart failure (7.25%), respiratory tract infection (9.32%), stroke/transient ischemic attack (4.92%)^[7] reported in previous reports. 70.8% of all geriatric patients were discharged, our admission rate in cardiology was 7%, neurology was 4.2%, general surgery was 3.2%, chest diseases was 2.4%, general internal medicine was 2.2%. The main reasons for admission were due to vascular pathologies, complications of previous surgeries, malignancies, and infection diseases in geriatrics.

Patient complaints were reported similar between the groups of young-old (65-84 years) and the old-old ($> = 85$ years), recently.^[4] While the most common complaint in the age of 65-74 years were acute chest and/or upper back pain, in the groups of 75-84 years and over it was falls. Most common complaints and age were related, and general condition impairment and emesis were common only in advanced geriatric group. Acute chest and/or upper back pain, falls, dyspnea, fever, abdominal pain, complaints were common in males; and falls, dyspnea, chronic extremity pain, acute chest and/or upper back pain, abdominal pain were established the line in females. Studied common complaints and sex were related.

The wards that patients commonly admitted in the age group of 65-74 and 75-84 were cardiology, general surgery, neurology; however in the age of 85 and over the order was cardiology followed with internal medicine and chest diseases. Common hospitalization results and age were related in especially advanced geriatrics. General internal medicine admissions included multiple internal systems disruption. Common hospitalization wards in

male and female were similar as cardiology, neurology and general surgery, respectively. Sex was not a factor, however being a geriatric patient was an effective factor in hospitalization in above mentioned branches. Consequently, geriatric patients' complaints and hospitalization in ED were similar in different age groups, especially excluding advanced (85 and over) age that had to be evaluated in a different manner.

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