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WHY DO PATIENTS LEAVE THE EMERGENCY DEPARTMENT AGAINST MEDICAL ADVICE?

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ABSTRACT

Introduction: Leaving against medical advice is a worrying situation which is a problem not only for patients also for physicians. For many different reasons, people may choose to leave the hospital on their own requests. If we know the reasons for leaving, we can find the solution.
Method: This prospective study was conducted at an emergency department of a university hospital that is visited by more than 30.000 patients annually. Demographic characteristics such as sex and age, triage level, insurance status of the patients, length of stay in the emergency department and why they were leaving against medical advice were recorded.
Results: A total of 321 patients which constituted 1.1% of all admissions to the emergency department during the study period left against medical advice. The main reason was refusing the observation or hospitalization (34.6%; n=111) and the second reason was inadequate health insurance (19.6%; n=63) in all study population (Table 1). Although inadequate health insurance was the second reason in males (36 of 153 patients; 24.0%), the second reason was refusing the intervention or medication in females (52 of 168 patients; 31.1%). The patients who left due to dissatisfaction with health care were predominantly male (72.7%; n=24; p=0.002) whereas who left due to refusing the intervention or medication were predominantly female (88.9%; n=48; p<0.001).
Conclusion: Hospitals should endeavor to identify the reasons why patients leave the ED, to document the events in detail and also to solve the problem.

Key words: Emergency department, leaving Against Medical Advice

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INTRODUCTION

Leaving against medical advice (AMA), or known as self-discharge, is a worrying and undesirable situation, which is a problem not only for patients but also for physicians who treat these patients [1]. It means that a patient chooses to leave the hospital before the treating physician recommends discharge. Although discharge should be after the physician's advice, patients admitted to hospital are free to leave whenever they want. This problem has been studied in different hospitals and various patient groups including emergency departments and the prevalence differs according to the patient groups [1, 2]. Leaving AMA is not uncommon which is estimated at 2% of all discharges from emergency departments going up to 6% in different populations [2-4]. These patients are at significant risks. Patients leaving AMA have higher readmission rates and higher adjusted relative risk of 30-day mortality than patients discharged conventionally [5, 6]. Therefore, treating physicians report distress when patients choose to refuse the treatment and leave AMA [5].
For many different reasons, people may choose to leave the hospital on their own requests. It may be

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due to factors related to patients, medical staffs or medical environment. Sometimes, patients may choose to leave AMA when they feel well enough to leave the hospital. However, a conflict between the medical staff and the patient is a more serious cause of self-discharge [2]. If we know the reasons for leaving AMA, we can find solutions.
We aimed to investigate why patients leave the Emergency Department (ED), AMA, factors affecting their decisions, the triage scale of these patients and to discuss what we can do about this population in the ED.

METHOD

Study sample and data collection

This study was conducted at an ED of a university hospital in Istanbul that is visited by more than 30,000 patients annually. Patients admitted to our ED and who left AMA before the treatment was completed from June 1, 2007 to May 31, 2008, were enrolled prospectively. A self-constructed questionnaire was used to gather data. Demographic characteristics such as sex and age, triage level according to The Canadian Emergency Department Triage and Acuity Scale (CTAS) [7], insurance status of the patients, length of stay in the ED and why they were leaving the ED AMA were recorded. Patients under 18 years of age, unable to decide by themselves and taken away by their relatives, and patients who did not want to participate in the study were excluded. The Institutional Ethics Committee approved the study protocol.
There were 366 patients who left AMA during the study period, representing 1.1% of all ED admissions at the same period. 45 patients were excluded: six patients were unable to decide and they were taken away by legal relatives and 39 patients refused to participate in the study.

Definitions

The CTAS was used as the triage method and triage scale was divided into five groups. The number of patients was insufficient for statistical analysis in Level I and II. Therefore, five groups of triage were redesigned to three groups as follows; "emergency" group (EG, Level I-III), "less emergent" group (LEG, level IV) and "non-emergent" group (NEG, level V).
Patients were asked about the primary reasons for leaving AMA and the answers were classified into five groups including “inadequate health insurance”, “dissatisfaction with health care”, “longer length of stay”, “refusing the observation or hospitalization” and “refusing the intervention or medication”.

Statistical analysis

Statistical Package for Social Sciences software (SPSS 17.0, Chicago, IL, USA) was used for the statistical analysis. Continuous variables were expressed as the mean ± standard deviation, whereas categorical variables were presented as percentages. Chi-square (x^2) test was employed for the comparison of categorical variables. The differences between normally distributed numeric variables were evaluated by Student’s t-test or one-way analysis of variance, while non-normally distributed variables were analyzed using Mann-Whitney U test or Kruskal-Wallis variance analysis as appropriate. Statistical significance was assumed for $p<0.05$.

RESULTS

The final study population included 321 patients representing 1.1% of all patients admitted to the ED during the same period. The mean age was 48.7 ± 18.6 year and 47.7% (n=153) of the patients were male. The mean length of stay in the ED was 150.5 ± 149.8 minutes. The main reason of leaving AMA was refusing the observation or hospitalization (34.6%; n=111) and the second reason was inadequate health insurance (19.6%; n=63) in all study population (Table I).

Table I: Reasons for leaving AMA

Reasons for leaving AMA	n (%)
Refusing the observation or hospitalization	111 (34.6)
Inadequate health insurance	63 (19.6)
Longer length of stay	60 (18.7)
Refusing the intervention or medication	54 (16.8)
Dissatisfaction with health care	33 (10.3)

Although inadequate health insurance was the second reason in males (36 of 153 patients; 24.0%), the second reason was refusing the intervention or medication in females (52 of 168 patients; 31.1%). Patients who left due to dissatisfaction with health care were predominantly male (72.7%; n=24; p=0.002), whereas those who left due to refusing the intervention or medication were predominantly female (88.9%; n=48; p<0.001) and the difference was statistically significant (Table II).

JMSR
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JMSR 2014, Vol I ; N°2 : 37- 42

Table II: Reasons for leaving against medical advice (AMA) according to the gender

Reasons for leaving AMA	Gender		P
	Male; n (%)	Female; n (%)	
Inadequate health insurance	36 (24.0)	27 (16.2)	0.121
Dissatisfaction with health care	24 (15.6)	9 (5.4)	0.002
Longer length of stay	28 (17.5)	32 (18.6)	0.886
Refusing the observation or hospitalization	59 (39.0)	52 (31.1)	0.160
Refusing the intervention or medication	6 (3.9)	48 (28.7)	<0.001
Total	153 (100)	168 (100)	

The triage acuity scales of the patients are showed in table III.

Table III: The triage scale of the patients who left against medical advice

Triage scale	(n; %)
Level I	0; 0%
Level II	3; 0.9%
Level III	171; 53.3%
Level IV	96; 29.9%
Level V	51; 15.9%

"Emergent" group (EG, level I-III), "less-emergent" group (LEG, level IV) and "non-emergent" group (NOG, level V)

The mean ages of patients in EG, LEG and NEG were as follows respectively; 54.0 ± 18.8, 46.7 ± 17.1 and 36.1 ± 12.5 years and the post-hoc test showed that the difference between each group was statistically significant ($p < 0.05$). The difference was found to be significant when reasons for leaving were compared with acuity. Of the patients who left due to inadequate health insurance, 57.3% (n=36) were in EG, 38.0% (n=24) in LEG and 4.7% (n=3) in NEG. Of the patients who left due to dissatisfaction with health care, 54.5% (n=18) were in EG, none in LEG and 45.5% (n=15) in NEG. Of the patients who left due to longer length of stay, 36.6% (n=22) were in EG, 46.7% (n=28) in LEG and 16.7% (n=10) in NEG. Of the patients who left due to refusing the observation or hospitalization, 73.2% (n=82) were in EG and only 5.4% (n=6) were in NEG. Of the patients who left due to refusing the intervention or medication, 27.8% (n=15) were in EG, 38.9% (n=21) in LEG and 33.3% (n=18) in NEG (Figure 1).

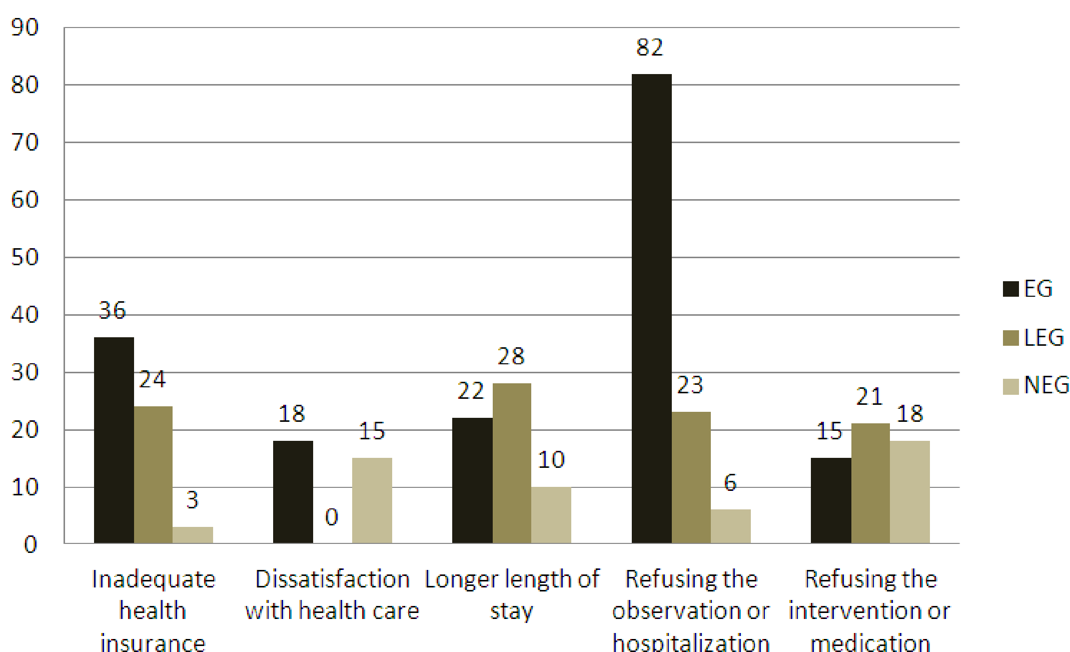

Figure 1: Reasons for leaving against medical advice and triage acuity

JMSR
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The difference between reasons for leaving and age was insignificant ($p>0.05$). The mean waiting time of patients who left due to inadequate health insurance was 97 ± 75 min., due to dissatisfaction with health care was 133 ± 151 min., due to longer length of stay was 171 ± 127 min., due to refusing the observation or hospitalization was 216 ± 189 min., due to refusing the intervention or medication was 64 ± 44 min. post-hoc test showed that the difference between each group according to waiting time was statistically significant. When acuity scale was compared with waiting time, the difference was statistically significant ($p<0.05$). The mean waiting times in EG, LEG and NEG were as follows respectively; 171±160 min., 122 ± 122 min. and 130 ± 148 min.

DISCUSSION

We found that the main reasons for leaving AMA were refusing the observation or hospitalization and inadequate health insurance. Although other reasons showed similarity in all study population, the number of patients who left AMA due to refusing the intervention or medication in females was prominent. It is known that the rate of leaving the ED is higher for patients who have less urgent or non urgent conditions; however, studies have shown that patients with potentially emergent, even life threatening conditions are also reported to leave [8, 9]. In our study, more than half of the patients who left the ED were classified as Level I-III according to CTAS and defined as EG. This raises the importance of the subject.

In our study, patients who left the emergency service represented 1.1% of all patients admitted to our ED. Our result is similar to other studies in the literature. However, higher rates were found in other studies [4]. Some studies have revealed a relationship between demographic characteristics and rates for leaving; detecting higher rates for leaving the emergency service especially in male gender and younger age groups [10]. The patients' demographic characteristics have discrepancies among many studies. In our study, females constituted 52.3% of the patients but in the study by Henson et al. [8], males constituted 60% of the patient group. The average age for our patients showed similarity to the other studies in the literature [2, 11, 12]. But the NEG patien were younger than the others.

In most of the other studies, longer length of stay was found to be the dominant reason for leaving the ED [10, 13]. In our study, the rate of patients who left the ED due to longer length of waiting time seems to be lower than other studies. Waiting period was found to be longer in EG when compared to LEG and NEG. In a previous study performed in our hospital, the waiting period was found to be longer in NEG [12]. This may have been due to the increasing workload of EDs as a result of changes in health system policy in our country. For those patients, since hospital beds were not available, patients had been observed in ED or transferred to a different hospital [14]. So, the waiting time in ED increased.

In the study by Tong and his colleagues, the reasons for leaving the emergency service were classified as patient-related or family-related, physician-related, cultural and social factors [15]. Regarding the waiting period, if it could be shortened, patients' satisfaction would be better, leading to lower rates of leaving the emergency service. Additionally, triage classification of the patients is another factor influencing the waiting period [10]. In the study of Lee et al. [13], 90% of the patients leaving ED were evaluated as "not urgent" or "less urgent". Therefore, it is necessary to make the initial evaluation carefully. In studies performed on patients admitted to emergency services, various criteria were compared to diagnose patients with real emergency conditions, but still a considerable rate of missed diagnoses were observed [16]. For this purpose, various triage evaluation scores have been developed and are currently used in emergency services [7, 17]. Correct identification and faster evaluation of emergency patients will decrease the possible health problems to a minimum. We are not fully aware of the reasons such as refusing the observation, hospitalization, intervention or medication. Therefore, more comprehensive studies are needed.

Recommendations

The patient leaving the emergency service should not be seen as an incompatible individual. People providing health care services, should endeavor to understand the underlying problems causing refusal of medical treatment. If these problems are identified, the disagreement may also be eliminated. Furthermore, effort spent by both patient and doctor may provide a consensual environment. It was shown that patients were unable to communicate comfortably with the medical care personnel, having difficulty in asking questions or unable to get understandable answers [18]. Therefore, informing the patients and giving appropriate guidance is necessary to eliminate the currently encountered problems. This approach will increase the satisfaction of the patients and their relatives. Patients' satisfaction is a valuable parameter when

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evaluating the quality of the services provided in emergency departments [19]. In previous studies, giving explanations to the patient about the emergency service procedures and why the patient should wait were determined to increase patient satisfaction [20]. Taylor et al. pointed out that the improvement of communication skills of emergency service personnel and developing positive attitudes towards their patients, informing the patients in more detail and shortening the waiting period were effective in increasing patient satisfaction in ED [21].

If the patient decides to leave, the specified data-sheet for leaving patients should be dated and signed by the patient. Date and time of admittance and decision to leave should be recorded. If possible, signature of another individual should be taken as a witness [22]. General management of a leaving patient is shown in table IV.

Table IV: When a patient refuses treatment [22]

1. Evaluate his/her decision making adequacy.
2. Evaluate patient's point of view on the situation.
3. Try to understand the patient's worries and concerns.
4. Inform about the risks of refusing treatment.
5. If appropriate, call other individuals (eg. family members, social worker).
6. Consider alternative therapies.
7. If possible, provide adequate information regarding the treatment and follow-up.
8. Avoid intimidating and punitive explanations.
9. Document the refusal decision and the result in detail.
10. Think about the telephone follow-up.

Informed consent and informed refusal about treatment are the most fundamental rights of the patients. Emergency service physicians should follow an appropriate route about informed consent and informed refusal of treatment. They should inform the patient about planned medical treatment and interventions and also should act with a persuasive manner about protecting the patient's rights. In the emergency service, many potential obstacles exist about informed consent (For example, inadequacy of patient's' decision making ability, language issues, illiteracy, time limitations, communication problems and different expectations). Since general conditions of many emergent patients tend to deteriorate, full attention should be given to them. The adequacy of patient's decision making should be well evaluated, a detailed explanation should be made during informing procedure and the non-compliance of the patient on planned intervention, its risks and benefits should be abolished.

In conclusion, leaving AMA is a worrying situation and reasons may differ according to the hospitals and patient groups including emergency department patients. Therefore, hospitals should endeavor to identify the reasons why patients leave the ED, to document the events in detail and also to solve the problem.

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