



Dermatological Emergencies in a Tertiary Hospital: A Descriptive Study

Üçüncü Basamak Bir Hastanede Dermatolojik Acil Durumlar: Tanımlayıcı Bir Çalışma

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ABSTRACT

Objective: This study aims to determine the frequency of adult patients presenting to the emergency department with skin lesions, and the main diagnoses made in the ED. We aimed to investigate the reasons of patients choose the emergency department rather than dermatology outpatient clinics in non-emergency situations.

Material and Method: This is a prospective study conducted on patients with dermatological conditions diagnosed in the emergency department of a tertiary hospital during a 6-month period. Basic epidemiological and clinical characteristics, and whether the situation is a "real emergency" from the perspectives of the patients and clinicians were recorded.

Results: A total of 262 patients were included. The three most common diagnoses in the ED were acute urticaria (41.6%), maculopapular drug eruptions (17.2%) and pruritus (7.6%). Dermatology consultation was requested for 26 (9.9%) of all patients. When evaluating the necessity of emergency ED examination from the point of view of the patient and the physician, and asked whether the situation was emergent, 74.0% of 262 patients reported that their condition was emergent, but the physicians evaluated only 40.0% of patients has a truly emergent situation. The most important factor in the choice of ED in non-emergent patients was the lack of medical insurance (20.6%).

Conclusion: Patients who presented to the ED with dermatological complaints were not always "true emergencies" and several factors may play a role preference of patients' for the ED instead of the outpatient dermatology clinic. The most common cause was medical insurance problems according to our results.

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ÖZET

Amaç: Bu çalışmada, acil servise deri lezyonları ile gelen erişkin hastaların başvuru sıklıkları ve acil serviste konulan ana tanıların belirlenmesi amaçlanmıştır. Acil olmayan durumlarda hastaların dermatoloji polikliniği yerine acil servisi tercih etme nedenlerini araştırmayı amaçladık.

Gereç ve Yöntem: Bu çalışma, üçüncü basamak bir hastanenin acil servisinde prospektif olarak yapıldı. Altı aylık bir süre içinde dermatolojik şikayetleri olan hastalar çalışmaya alındı. Temel epidemiyolojik ve klinik veriler ile hastaların ve klinisyenlerin bakış açısından durumun "gerçek bir acil durum" olup olmadığı kaydedilmiştir.

Bulgular: Çalışmaya 262 hasta dahil edildi. Acil serviste en sık görülen üç tanı akut ürtiker (%41.6), makülopapüler ilaç döküntüleri (%17.2) ve kaşıntı (%7.6) idi. Tüm hastaların 26'sına (%9.9) dermatoloji konsültasyonu istendi. Acil servis muayenesinin hasta ve hekim açısından gerekliliği değerlendirildiğinde ve durumun gerçekten acil olup olmadığı sorulduğunda 262 hastanın %74.0'u durumunun acil olduğunu bildirdi, ancak hekimler sadece %40.0 hastanın acil müdahale ihtiyacı olduğunu değerlendirdi. Acil olmayan hastalarda acil servis seçiminde en önemli faktör sağlık güvencesinin olmamasıdır (%20.6).

Sonuç: Acil servise dermatolojik şikayetlerle başvuran hastalar her zaman "gerçek acil durumlar" değildir ve hastaların dermatoloji polikliniği yerine acil servis tercihinde çeşitli faktörler rol oynayabilir. Çalışmamızın sonucuna göre en sık acil servise başvuru nedeni sağlık sigortası sorunlarıdır.

1. Introduction

An emergency medical condition is generally defined as any condition that requires immediate medical or surgical evaluation and

treatment (1). While most dermatological diseases rarely cause life-threatening emergencies and are benign in the course, some may have high morbidity and require admission (2). Dermatological

problems encountered in the emergency departments (ED) are increasing and it is unknown to what extent the skin lesions are emergent enough to be treated in the ED (3).

A dermatological condition is often urgent for the patient, even if it is not emergent in the medical definition. As a matter of fact, the definition of dermatological emergency has the feature of being able to vary not only according to medical criteria, but also according to the individual, social, and/or economic situation of the patients, and also according to existing health insurance organizations (2,3).

Our study aims to determine the frequency of adult patients presenting to the ED with skin lesions, to investigate the final diagnoses they frequently receive, and the reasons for preferring the ED rather than the dermatology outpatient clinic in non-emergency situations.

2. Materials and Methods

This study was conducted prospectively in patients with dermatological complaints who presented to the city center's ED of a tertiary training and research hospital for a 6-month period. All patients with dermatological symptoms who presented to the ED and accepted the study were recorded consecutively. The demographic characteristics of the patients, number of presentations with the same or similar complaints, treatments used, and the reasons for the patient's preference for the ED instead of the dermatology outpatient clinic were recorded. The identification of the lesions and the presence of systemic and/or septicemic findings accompanying the lesions were recorded. The tests requested for the diagnosis, whether a consultation was requested in the ED, the preliminary diagnosis and the result of the consultation, whether the patient has been referred to the dermatology outpatient clinic after the ED treatment for follow-up, and if so, the post-control diagnosis were recorded on the standard study forms. During the study period, a total of 77.040 patients were admitted to our ED and a total of 262 patients who had dermatological complaints were included in the study, excluding 17 patients who refused to participate in the study.

Data were evaluated with SPSS for Windows version 18.0 (Chicago, IL, USA) program. Descriptive statistics were used, given as numbers and percentages (%).

3. Results

A total of 262 patients with dermatological complaints in the ED were included in the study. The mean age of the patients was 39.45 ± 14.28 and the majority of them were female (n=151, 57.6 %). In total, 59.2% (n=155) of the patients had dermatological complaints for the first time. When the accompanying comorbid

diseases of the patients were examined, 24% (n=63) were found to have at least one comorbidity. The most common three comorbidities were diabetes mellitus, chronic venous insufficiency, and chronic renal failure. The ratio of patients who were using regular medication was approximately ¼ (25.2%). Dermatology consultation was requested for 26 patients (9.9%) and 6 of them were admitted to the dermatology service. Of the 6 patients admitted to the dermatology clinic, 3 of them were diagnosed with cellulitis-erysipelas, and the remaining 3 were diagnosed with acute urticaria and angioedema. A total of 256 patients (97.7%) were discharged from the ED. No prescription was given to 58.8% of the discharged patients. Of the prescribed patients, 33.2% were given systemic treatment, and 5.3% both topical and systemic treatment. The demographics and characteristics of the patients were represented in Table 1.

Table 1. Demographics and characteristics of the patients

Variable	n	%
Number of patients	262	100
Female	151	57.6
First admission	155	59.2
Comorbidity	63	24.0
Dermatology consultation	26	9.9
Prognosis, <i>discharge</i>	256	97.7
Prescription, <i>systemic or topical</i>	108	41.2

Table 2. Frequency of local dermatological diseases

Variable	n	%
Acute Urticaria	109	41.6
Maculopapular Drug Eruption	45	17.2
Pruritus	20	7.6
Contact Dermatitis	11	4.2
Cellulite/Erysipelas	10	3.8
Angioedema	7	2.7
Angioedema+Urticaria	7	2.7
Pityriasis Rosea	6	2.3
Furuncle	5	1.9
Herpes Zoster	3	1.1
Insect Bite	2	0.8
Tinea Pedis	2	0.8
Other	10	3.8
Total	237	90.5

The diagnoses of the patients admitted to the ED were grouped under 3 main categories: local dermatological disease (90.5%), systemic dermatological disease (3.8%), and other diseases that may cause

rash (5.7%). Acute urticaria (41.6%) was the most frequently diagnosed disease among local dermatological diseases (Table 2). Patients and emergency medicine physicians who evaluated the patients were asked separately whether the complaints of the patients were emergency. While 74.0% of patients reported that their condition was urgent, emergency medicine physicians evaluated only 40.0% of patients as truly urgent (Table 3).

Table 3. Evaluation of whether the patient admission to ED is "truly" emergent from the perspectives of the patients and physicians

		Patient opinion		Total
		Not emergent	Emergent	
Doctor opinion	Not emergent	68 (26%)	89 (34%)	157 (60%)
	Emergency	0	105 (40%)	105 (40%)
Total		68 (26%)	194 (74%)	262

Percentages (%) were calculated based on the total number of patients

When the reasons for preferring the ED of 68 patients who were considered to be non-emergent by both themselves and their physicians, it was revealed that 20.6% of them did not have health insurance. Other reasons were ignorance of the ED process, busy dermatology outpatient clinics, exacerbation of chronic lesions (like itching, or pain), limitation in daily activities, and fear of chronic infectious disease and death.

4. Discussion

There is a wide range of dermatological emergencies, from benign diseases such as urticaria to life-threatening diseases such as necrotizing fasciitis. In a study conducted in Canada, it was reported that 15-20% of admissions to family medicine and EDs include dermatological problems (4). In another study, skin diseases constituted 0.9% of all ED admissions (5,6). The exact definition of a dermatological emergency is still unclear for both physicians and patients (6). There is a widespread belief among physicians that outpatient clinic studies are sufficient in the diagnosis and treatment of most dermatological diseases and they are not life-threatening (7). Among the reasons for patients, the desire to be examined urgently in all lesions that develop due to the fact that the skin is a visual organ may increase the inappropriate use of EDs. When it comes to dermatological emergencies, regional and cultural differences affect the habits of applying to health institutions (2).

The mean age of all patients included in the study was 39.45±14.28 years and 57.6% were female. Lowell et al (8) and Chan et al (9)

reported similar age and sex characteristics in their studies. Women seem to tend to seek medical care more frequently for dermatological problems in EDs in our study similar to the literature (5). Erdoğan et al (10) reported that patients with dermatological complaints for the first time were admitted to the EDs more often. Similarly, the rate of first-time admission was higher (59.2%) in our study.

Differential diagnosis and determination of lesions in dermatological diseases may be difficult in ED conditions. There are many different data on this subject in the literature. Legoupil et al (11) reported that the most common dermatological lesions were cutaneous infections and urticarial were the least common lesion in their patients. Murr et al (12) on the other hand reported that infectious lesions, eczema, undifferentiated rash, and urticaria were the most common lesions respectively. Penso et al (13), Son et al (14), and Grillo et al (15) also reported similar results. In our study, the local dermatological disease group (90.5%) was the most frequently diagnosed group, and urticaria (41.6%) was the most common disease. We consider that this may be due to the different approaches in the grouping and management of dermatological diseases in studies. In addition, the rates of endemic diseases according to the regions where the studies were carried out, the variability of environmental factors, and cultural differences are effective. Finally, the inclusion of family medicine and dermatology clinics other than EDs in some of the studies plays a role in the emergence of differences.

The discharge of the patients was found to be 97.7% which was relatively high. In addition, there was no mortality in our study. Similarly, the rates of dermatological diseases with hospitalization indication and/or mortal course were given as low in the literature. In a 6-month study by Chan et al, 74% of 1733 patients did not require intervention in the ED and 85.3% of them were discharged (9).

In only one-third of the cases in the study of Penso et al (13), and 21% of cases in the study of Gupta et al (16), physicians thought that the admissions were real emergencies. This rate was found to be 40% in our study. A total of 194 patients (74%) in our study considered that their disease was a "real" emergency. This difference between physicians and patients in terms of thoughts about the emergency of the admission may be due to the insufficient level of knowledge of the patients about skin diseases, anxiety, and panic factors caused by the disease which appears suddenly and visually warns the patient or distressing symptoms such as severe itching. Interestingly, 68 of our patients agreed with the physician that their admission was not a real emergency. When asked why they

preferred the ED for their complaints even though they considered it was not an emergent situation, the most common reason was not having any health insurance. In our country, patients have to pay a certain contribution fee for outpatient clinic admissions, while ED admissions are completely free (17). This may be one of the reasons why relatively fewer emergent admissions such as dermatological complaints are made through the EDs.

5. Conclusion

Dermatological complaints constituted a small portion of ED admissions, and the majority of this patient group was discharged. The patients were generally middle-aged and mostly women. The most common diagnoses were acute urticaria, maculopapular drug eruptions, and pruritus. Emergency physicians did not consider a significant proportion of the patients as true emergencies.

One of the important reasons for choosing the ED for non-emergency patients seemed to be that they did not have any health insurance to admit to the dermatology outpatient clinic.

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Authorship Contribution:

DUK: Design and writing of the study, collection of cases - writing the study form

MSY: Design and writing of the study, statistical calculations

FC: Reviewing and editing the study

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