

## Evaluation of dermatological disorders among admittances to a 112 emergency services in a year

### *Bir 112 acil servise bir yıllık başvurulardaki dermatolojik hastalıkların değerlendirilmesi*

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#### ABSTRACT

**Objective:** This study aimed to determine the clinical characteristics of the patients admitted to 112 emergency services with dermatological disorders in Kayseri city in 2011.

**Methods:** Data were obtained from the records of Emergency Health Care Services Department. Dermatological reasons for calling the 112 emergency services and dermatological cases diagnosed by physicians of 112 emergency services were recorded. Kayseri has a population for about 1.25 million. Kayseri 112 emergency services contain 45 physicians, 224 healthcare personnel.

**Results:** In 2011, 2 405 367 calls were occurred in Kayseri, 112 Emergency Service. Of these calls 920 502 (37.5%) real and necessary calls and the rest 1 484 865 (62.5%) were unnecessary calls. A total of 52472 (5.7% of real calls) cases were determined in real calls. Of the cases, 600 (1.14 % of real calls) patients with dermatological disorders were observed. The most common dermatological reason for calling the 112 emergency services was other insect bite (396 calls, 66%) and the most diagnosed dermatological case was other insect bite (396 cases, 66%). Total number of calls about burn were 131 (21,8 %), pruritus were 29 (4.83%), skin wound or infection 18 (3%), bee bite 17 (2.83%), scorpion bite 9 (1.5%).

**Conclusion:** Dermatological disorders in 112 Emergency Service are not rare. Further studies are needed involving the 112 Emergency Service and Emergency Departments in hospitals. *J Clin Exp Invest* 2013; 4 (1): 47-50

**Key words:** 112 Emergency Services, dermatological emergencies, unnecessary calls.

#### ÖZET

**Amaç:** Bu çalışmada, Kayseri'de 2011 yılında, 112 Acil Servise dermatolojik şikayetlerle başvuran hastaların klinik karakteristikleri araştırılmıştır.

**Yöntem:** Bilgiler Acil Sağlık Departmanı'ndan alınmıştır. 112 servisi aramaları arasında, dermatolojik hastalıklarla ilgili nedenlerle yapılan aramalar kaydedilmiştir. Sonrasında, 112 servisinde görevli doktorun tanıları arasında dermatolojik hastalıklarla ilgili olanlar değerlendirilmeye alınmıştır. Kayseri 1,25 milyon nüfusa sahiptir. Kayseri 112 Acil merkezinde 45 hekim ve 224 yardımcı sağlık personeli çalışmaktadır.

**Bulgular:** Kayseri'de 2011 yılında 112 Acil Servisine 2 405 367 arama yapılmıştır. Bu aramaların 920 502 (37,5%) gerçek ve gerekli aramalar, geri kalan 1 484 865 (62,5%) arama ise gereksiz olarak tespit edilmiştir. Gerçek aramalarda 52472 (% 5,7) adet klinik vaka tespit edilmiştir. Bu vakalardan dermatolojik hastalık olarak 600 (gerçek aramaların %1,14'ü) hasta tespit edilmiştir. 112 Acil servisi aramalarında ve tanı konan vakalarda en sık neden; diğer böcek sokmaları (sırasıyla 396 arama, %66 ve 396 tanı %66) olarak bulunmuştur. Yanık nedeniyle aramalar 131 (% 21,8), kaşıntı şikayeti ile aramalar 29 (%4,83) ve deride yara ve enfeksiyon nedeni ile aramalar 18 (%3), arı sokması 17 (%2,83) ve akrep sokması 9 (%1,5) olarak gözlemlenmiştir.

**Sonuç:** 112 acil aramalarında ve tanılarda dermatolojik sorunlar nadir değildir. 112 Acil Servisler ve hastanelerdeki acil servislerin dahil edileceği yeni çalışmalara ihtiyaç vardır.

**Anahtar kelimeler:** 112 Acil Servis, dermatolojik aciller, Kayseri.

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## INTRODUCTION

Emergencies in dermatology are common and may sometimes be life threatening. In Turkey, 112 Emergency Services admit calls from public. Diagnostic and therapeutic processes performed by 112 emergency services are critical. It is often challenge for a emergency physician to differentiate mundane skin ailments from more serious life-threatening conditions that require immediate treatment. It is important which diseases are real emergencies and which patient apply urgently.<sup>1,2</sup> There are few studies investigate this topic.<sup>1,3,4</sup> This study aimed to determine the clinical characteristics of the patients admitted to 112 emergency services with dermatological disorders in Kayseri city in 2011.

## METHODS

Data were obtained from the records of Emergency Health Care Services Department and analyzed by using SPSS 17.0 for Windows package program. Kruskal-Wallis H test was performed for comparing monthly and seasonal distributions of calls. Kayseri is a big city in Middle Anatolia Region, with a population for about 1.25 million. Kayseri Province Directorate of Health provides 112 emergency services which contain 45 physicians, 224 healthcare personnel.

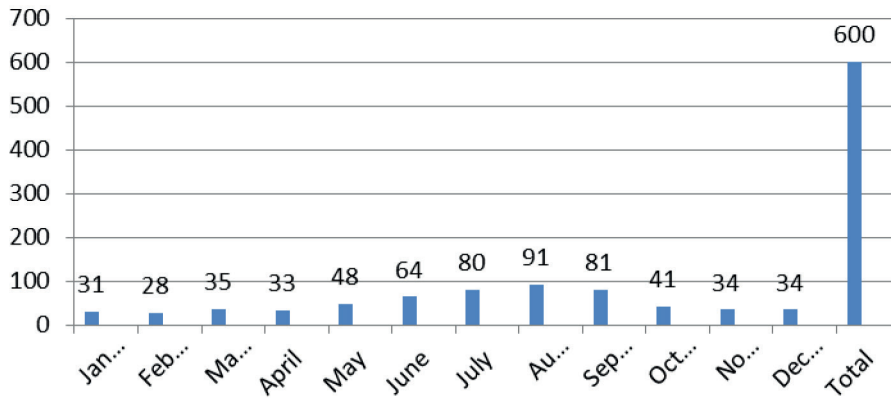
## RESULTS

In 2011, 2 405 367 calls were occurred in Kayseri, 112 Emergency Service. Of these calls 920 502 (37.5%) real and necessary calls and the rest 1

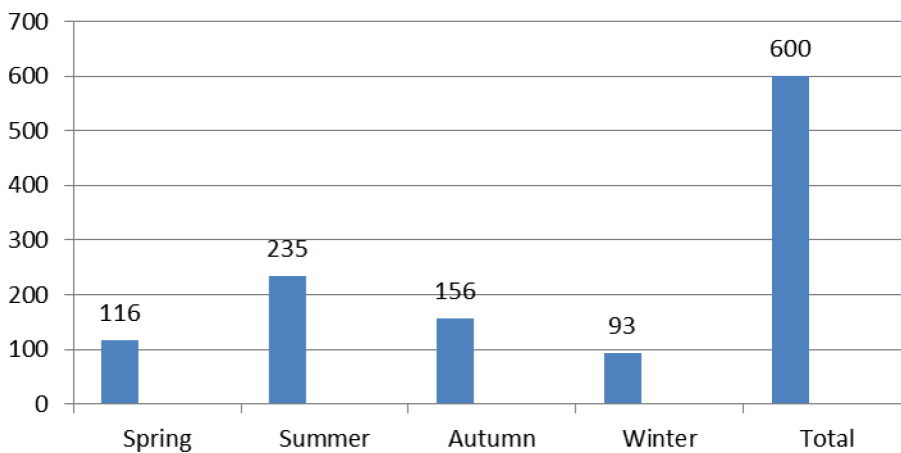
484 865 (62.5%) were unnecessary calls. A total of 52472 (5.7% of real calls) cases were determined in real calls. Of the cases 39815 (75,8 %) were from urban and 12657 (24.2%) were from rural regions of the city. Of the cases, 600 (1.14% of real calls) patients with dermatological disorders were observed. The most common dermatological reason for calling the 112 emergency services was other insect bite (396 calls, 66%) and the most diagnosed dermatological case was other insect bite (396 cases, 66%). Other insect bites consisted of bites of all insects except scorpion and bee. Total number of calls about burn were 131 (21.8%), pruritus were 29 (4.83%), skin wound or infection 18 (3%), bee bite 17 (2.83%), scorpion bite 9 (1,5 %). These were summarized in Table 1 (Table 1). Calls about pruritus involved 20 acute urticaria and 9 except urticaria in 29 cases. Calls about skin infections was in 11 and ulcer of decubitus was in 7 cases of 18 patients. Numbers of cases were summarized in Table 1 (Table 1). The distributions of dermatological cases according to the months were listed in Figure 2. It is notable that most of the applications take place in August (91 cases, 15.6%) and September (81 cases, 13.5%). However, there is no statistically significant difference between the dermatological complaints regarding the months ( $p>0.05$ ). The distributions of dermatological cases according to the seasons were listed in Figure 2. Also our study pointed that most of the cases seen in summer (235 cases, 39,1%) and autumn (156 cases, 26%). However, there is no statistically significant difference between the dermatological complaints regarding seasons ( $p>0.05$ ) (Figure 2).

**Table 1.** The number of calls and dermatological cases in 112 Emergency Service in Kayseri-2011

Reasons of calls	n (%)	Diagnosis of cases	n (%)
Pruritus	29 (4.83)	Acute urticaria	20 (3.3)
Other insect bite (except bee&scorpion)	396 (66)	Pruritus (except urticaria)	9 (1.5)
Scorpion bite	9 (1.5)	Other insect bite (except bee&scorpion)	396 (66)
Bee bite	17 (2.8)	Scorpion bite	9 (1.5)
Skin wound or infection	18 (3)	Bee bite	17 (2.8)
Burn	131 (21.8)	Cellulitis and other skin infection	11 (1.8)
Total	600 (100.0)	Decubitus ulcer	7 (1.1)
		Burn	131 (21.8)
		Total	600 (100.0)



**Figure 1.** The distribution of dermatological cases in 112 Emergency Service according to the months, in 2011, Kayseri



**Figure 2.** The distribution of dermatological cases according to the seasons

## DISCUSSION

Public consciousness is important for dialing 112 only in urgent, true dials are someone's life and health. Making unnecessary 112 calls can endanger the lives of others as precious time is being wasted dealing with these calls whilst other callers are trying to get through. Current study demonstrated 1484 865 (62.5%) unnecessary calls in 2011 in Kayseri.

It is believed that urgent dermatological disorders are rare. In a study, which observed dermatological disorders in emergency service, notified the infectious disorders and drug reactions as the most common.<sup>3</sup> Another study reported eczematous dermatitis as the most frequent dermatological disorder in emergency service.<sup>4</sup> In our study the most common dermatological reason for calling the 112 emergency services was insect bite. Our results were not similar. The difference can be explained with 112 emergency service involved in our study. Also, we did not observe life-threatening dermatoses like pemphigus vulgaris, necrotizing fasciitis, toxic epidermal necrosis or Stevens-Johnson syndrome which may need care similar to that required

for a major burn. Early recognition and treatment of these disease can reduce morbidity and mortality.<sup>2</sup>

It is often a challenge for a primary care provider to differentiate common skin disorders from more serious, life-threatening conditions that require immediate intervention.<sup>2,5,6</sup> It's possible to direct the patients through the correct clinics faster and to reduce the disease load by means of a well-organized emergency health care service. Dermatological disorders in 112 Emergency Service are not rare. The purpose of this study is to highlight some dermatologic emergencies. Further studies investigating specific dermatological diagnosis are needed involving the 112 Emergency Service and Emergency Departments in hospitals.

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