

The Analysis of Poisoning Cases Presented to the Emergency Department within a One-Year Period

Acil Servise Başvuran Bir Yıllık Zehirlenme Olgularının Analizi

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SUMMARY

Objectives

Intoxication is the emergence of unwanted signs and symptoms in an organism after exposure to potentially harmful chemical, physical or organic materials. In our study, we evaluated demographic and etiological factors of adult patients admitted to the emergency department with suicidal or accidental poisoning.

Methods

This study was conducted retrospectively by using data from the forensics books, protocol notebooks and patient files. Patients over the age of 14 years that were admitted to the Goztepe Training and Research Hospital during a 1-year period (September 2011-September 2012) with poisoning were included in the study.

Results

A total of 430 patients were included in the study and 278 of those patients were females (64.7%). The male/female (F/M) ratio was 1.82/1 and the mean age of the patients was 27.4±11.75 years. The analyses showed that in 348 patients (80.93%) the cause of poisoning was medicine, in 39 patients (9.06%) alcohol and drugs, in 37 patients (8.6%) rat poison, in 4 patients (0.93%) a caustic substance and organophosphates in 2 patients (0.46%). The highest rate of admittance due to poisoning was seen in July, followed by August and September. When the frequency of admittance was evaluated in terms of seasons: summer had the highest frequency with 35.6%, then autumn with 29.1%, spring with 19.8% and winter with 15.6%.

Conclusions

The results of our studies are similar to previously reported studies in Turkey. Poisoning cases are more common in women and the most common way of poisoning is by medication. Unlike previous reports from the literature, we found that poisoning was most frequent in the summer.

Key words: Emergency services; poisoning; suicide.

ÖZET

Amaç

Zehirlenme potansiyel olarak zarar verebilen herhangi bir kimyasal, fiziksel veya organik maddeye maruziyet sonrası organizmada bazı istenmeyen belirti ve bulguların ortaya çıkmasıdır. Biz bu çalışmamızda intihar amaçlı veya kazara zehirlenme nedeniyle acil servisimize başvuran erişkin hastaların demografik ve etiyolojik faktörlerini araştırdık.

Gereç ve Yöntem

Çalışma geriye dönük bir çalışma olup veriler adli defter, protokol defteri ve hasta dosyalarından elde edilmiştir. Bir yıllık süre içerisinde (Eylül 2011-Eylül 2012) Goztepe Eğitim ve Araştırma Hastanesi'ne zehirlenme ile başvuran 14 yaş üstü hastalar çalışmaya dahil edildi.

Bulgular

Çalışmaya toplam 430 hasta dahil edildi. Olguların 278'i kadın (%64.7), 152'si erkekti (%35.3). Kadın/erkek (K/E) oranı 1.82/1, yaş ortalaması 27.4±11.75 idi. Zehirlenme nedeni incelendiğinde; 348'inin (%80.93) ilaç, 39'unun (%9.06) alkol ve ilaç, 37'sinin (%8.6) fare zehiri, dördünün (%0.93) kostik madde, ikisinin (%0.46) organofosfat olduğu görüldü. En yüksek başvurunun sırasıyla temmuz, ağustos, eylül aylarında olduğu görüldü. Mevsimlere göre başvuru sıklığına bakıldığında %35.6 yaz, %29.1 sonbahar, %19.8 ilkbahar ve %15.6 kışın başvuru olduğu tespit edildi.

Sonuç

Çalışmamızın sonuçları literatürde Türkiye'de daha önce yapılan çalışmalarla benzerlik göstermektedir. Zehirlenme olguları kadınlarda daha sık olup en sık ilaç alımı yolu ile olmaktadır. Literatürden farklı olarak en sık yaz mevsiminde zehirlenme tespit edildi.

Anahtar sözcükler: Acil servis; zehirlenme, intihar.

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Introduction

Intoxication is the emergence of unwanted signs and symptoms in an organism after exposure to potentially harmful chemical, physical or organic materials.^[1,2] The poisoning can be unintentional (accidental) or intentional (suicide). Early diagnosis, identification of substance that caused intoxication and early treatment are important for good prognosis.

Poisoning cases can vary according to type of exposed poisonous substances, method of poisoning, demographic characteristics of the country and even regions within the same country. In this study we aimed to contribute to the literature by determining the demographic and etiologic features of patients admitted to our emergency department with poisoning in a 1-year period.

Materials and Methods

All patients over the age of 14 years that were admitted to Goztepe Training and Research Hospital Adult Emergency Department due to acute poisoning within a one-year period (between 01.09.2011 and 01.09.2012) were included in the study. Children under the age of 14 are not assessed in the adult emergency department and therefore were excluded from the study. The data was obtained and recorded by retrospectively analyzing protocol and forensic books.

Goztepe Training and Research Hospital Research Assessment Commission approved our study (decree # 22/e from 17/05/2012). Patients' age, gender, chronic diseases, diagnosed psychiatric conditions, previous suicide attempts, causes of poisoning, the time of admission after the medication intake, the reason for medication intake, examination findings, follow-up time, admission time (in terms of months), discharge from emergency department or hospitalization status were investigated.

The SPSS (Statistical Package for Social Science) 17.0 program was used for statistical analyses. Descriptive statistical methods (mean, standard deviation, frequency, percentage) were used for evaluation of the data. The 95% confidence interval and p-value <0.05 were considered statistically significant.

Results

A total of 55,752 patients applied to the emergency department within a 1-year period. Four-hundred thirty (0.77%) patients presented to the emergency department with acute poisoning. Among those patients, 278 were females (64.7%). The female/male (F/M) ratio was 1.82/1. According to this ratio, poisoning was significantly more common in females than males (p<0.05) in this study. The average age of female

patients was 25.15±9.56 years, while that of male patients was 31.39±4.14 years. The mean age of poisoned patients was 27.4±11.75 years (minimum 14, maximum 90). The age and gender distribution of poisoned patients is given in Table 1.

The causes of poisoning included the following: 348 patients (80.93%) due to medication, 39 patients (9.06%) from alcohol and medication, 37 patients (8.6%) ingested rodenticides, 4 patients (0.93%) took a caustic substance and 2 patients (0.46%) consumed organophosphates (Figure 1). Among the patients that were poisoned due to medication intake, 106 patients (24.7%) took multiple medications, 102 patients (23.7%) took antidepressants, 66 patients (15.3%) took non-steroidal analgesics, 24 patients (5.6%) took acetylsalicylic medicine, 19 patients (4.4%) took antibiotics, 8 patients (1.9%) took antiepileptics and 23 patients (5.34%) used other medications.

According to the statistical evaluation of poisoning causes, medication related poisoning was significantly more common than any other reason (p<0.05). There was no significant difference in terms of causes of poisoning between male and female patients (p=0.062).

We also determined that among our patients, 293 (91.2%) did not have continuous medication use, while 38 patients (8.8%) used at least one medication continuously. In addition, 36 out of 430 patients (8.4%) had a chronic disease,

Table 1. Distribution according to age and gender

	n (%)	
Gender		
Women	278 (64.7)	
Men	152 (35.3)	
Age (Mean±SD)	27.4±11.75	Min./Max.: 14/90

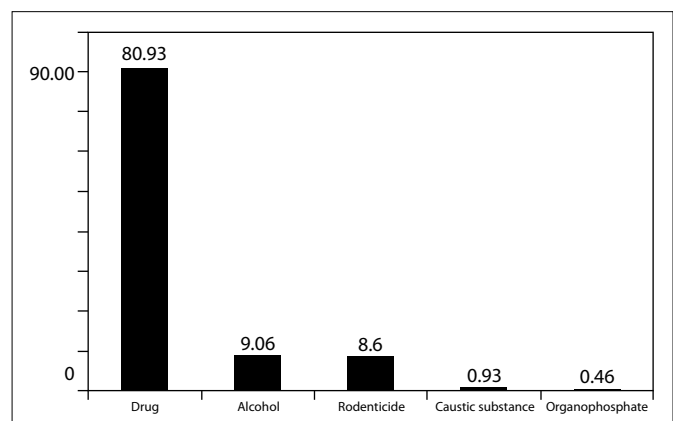


Figure 1. Distribution according to the reason for poisoning.

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