Analysis of Complaints and Processes of Patients Consulted from Emergency Service to Cardiology Department

Acil Servisten Kardiyoloji Bölümüne Konsülte Edilen Hastaların Şikayet ve Süreçlerinin Analizi

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ABSTRACT

Introduction: Emergency clinics are the most important part of the health centers serving throughout the day uninterrupted for 24 hours for all kind of patients and diseases. In this study, we evaluated the reasons of referral and consultation processes of the patients who applied to the emergency outpatient clinic and were consulted to the cardiology department.

Methods: Patients who were admitted to the emergency department at a secondary health center and consulted on cardiology were included in the study. The pediatric patient group was excluded from the study.

Results: Cardiology consultation was requested for 0.22% (n=382) of the patients who applied to the Emergency Department. 58.4% (n=223) of the patients were male and 41.6% (n=159) were female. The initial diagnosis by the emergency physician for cardiology consultation were as follows; 30.4% (n=116) of patients had chest pain, 11.5% (n=44) had chronic obstructive pulmonary disease, 9.2% (n=35) had acute myocardial infarction, 5.2% (n=20) had hypertension, 4.2% (n = 16) had palpitation symptoms and 39.5% for other reasons. 11.7% (n=45) of the patients died in the emergency department after cardiac arrest. 39.2% (n=150) of the patients were referred to another center directly from emergency clinic for advanced examination and treatment. The remaining 27.2% (n=104) of the patients did not have an emergency cardiac pathology after cardiology evaluation.

Conclusion: In this study, we determined the general characteristics of the patients who presented to the emergency clinic and who were considered suitable for cardiology consultation. Determining the patient profiles for consultation in emergency departments, evaluation of consultation functioning system and consultation related problems will be useful in shaping training programs, determining bed capacity and improving the quality of health services in health institutions.

Key words: Emergency department, cardiology, consultation

ÖZET

Giriş: Acil servisler, her türlü hasta ve hastalık için gün boyu 24 saat kesintisiz hizmet veren birimlerdir. Bu çalışmada acil polikliniğe başvuran ve kardiyoloji bölümüne konsülte edilen hastaların sevk nedenleri ve konsültasyon süreçleri değerlendirildi.

Yöntemler: Çalışmaya ikinci basamak bir sağlık merkezi acil servisine başvuran ve kardiyoloji bölümüne konsülte edilen hastalar dahil edildi. Pediatrik hasta grubu çalışmadan dışlandı.

Bulgular: Acil Servise başvuran hastaların %0,22'sine (n=382) kardiyoloji konsültasyonu istendi. Hastaların %58,4'ü (n=223) erkek, %41,6'sı (n=159) kadındı. Acil hekimi tarafından kardiyoloji konsültasyonu isteme sebepleri şu şekildedir; Hastaların %30,4'ünde (n=116) göğüs ağrısı, %11,5'inde (n=44) kronik obstrüktif akciğer hastalığı, %9,2'sinde (n=35) akut miyokart infarktüsü, %5,2'sinde (n=20) hipertansiyon, %4,2'sinde (n=16) çarpıntı semptomları vardı ve %39,5'i diğer nedenlere bağlıydı. Hastaların %11,7'si (n=45) kalp durması sonrası acil serviste öldü. Hastaların % 39,2'si (n=150) ileri tetkik ve tedavi için doğrudan acil servisten başka bir merkeze sevk edildi. Hastaların kalan %27,2'sinde (n=104) kardiyoloji değerlendirmesi sonrası acil kardiyak patoloji saptanmadı.

Sonuç: Bu çalışmada acil polikliniğine başvuran ve kardiyoloji konsültasyonu için uygun görülen hastaların genel özelliklerini belirledik. Acil servislerde konsültasyon için hasta profillerinin belirlenmesi, konsültasyon işleyiş sisteminin değerlendirilmesi ve konsültasyonla ilgili sorunlar; sağlık kurumlarında eğitim programlarının şekillendirilmesi, yatak kapasitesinin belirlenmesi ve sağlık hizmetlerinin kalitesinin artırılmasında faydalı olacaktır.

Anahtar Kelimeler: Acil servis, kardiyoloji, konsültasyon

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INTRODUCTION

The quality of healthcare services is one of the most important factors that determine the socioeconomic development levels of countries (1). Hospitals are one of the most important parameters representing the quality of healthcare services. The operation and architecture of emergency services play a very prominent role in the quality assessment of hospitals. In other words, Emergency Services are considered as the showcase of hospitals (2).

Emergency Services are units that serve all kinds of emergency patients in hospitals and provide uninterrupted service 24/7. The care of the patients who come to the Emergency Service results in the resolution of the acute problem with the treatment and intervention performed after the first evaluation and their hospitalization to the relevant department for the continuation of the treatment or referral to another health institution. In order for this cycle to be fast and not to cause patient neglection, the Emergency Service flow should be well organized. Therefore, Emergency Services should have the comfort that can provide the ideal service at any time and should serve with a professional team (3-6).

Consultation is an important method that provides a multidisciplinary approach (7). Consultations are often used in Emergency Departments (8). In order for the consultation system to be properly implemented, the procedures of the consultation system should be determined in hospitals and physicians should comply with this (9). If the Emergency Department physician thinks that the patient he evaluates should be hospitalized, if he needs information and technical support, or if he needs to perform any intervention other than the training he received, the physician asks for a consultation from the relevant specialist. The consultant physician also advises on diagnosis and treatment, performs the appropriate interventional procedure or informs the decision of hospitalization / referral / discharge (7,8,10).

Delay in specialist consultation and lack of relevant specialist may lead to delayed patient care and increased transfers to hospitals with higher care levels (11,12).

With this study, we aimed to evaluate the reasons of referral and consultation processes of patients who were admitted to the emergency department and consulted to the cardiology department, to determine the patient profiles for which consultation is requested in emergency services, to evaluate consultation operating system and problems related to consultation, to shape training programs in institutions that train specialist physicians, to determine of bed capacity and to contribute to forward planning such as increasing the quality of healthcare services.

MATERIALS AND METHODS

18 years and older patients who admitted to the emergency department of a secondary health-care center and consulted with the cardiology department were included in this retrospective study. For the study, patients who applied to the emergency department over a period of 6 months were examined. The pediatric patient group was excluded from the study. The patient's application complaints, admission diagnoses, cardiology consultation processes and clinical results were evaluated. Data analysis was performed using SPSS 20.0 software. The frequencies and frequencies of descriptive data were investigated and categorical variables are expressed as number of cases and percentages (%). Ethical approval was obtained from Eskişehir Osmangazi University Non-Interventional Clinical Research Ethics Committee.

RESULTS

It was determined that 171724 patients applied to a secondary health-care center adult emergency

department during the 6-month period of this study and that cardiology consultation was requested in 382 (0.22%) of the patients who applied to the Emergency Department. 58.4% (n = 223) of the patients were male and 41. 6% (n = 159) were female.

The complaints and diagnoses of the patients who applied to the Emergency Department and requested cardiology consultation were examined. The initial diagnosis by the emergency physician for cardiology consultation were as follows; 30.4% (n = 116) of patients had chest pain, 11.5% (n = 44) had chronic obstructive pulmonary disease, 9.2% (n = 35) had acute myocardial infarction, 5.2% (n = 20) had hypertension, 4.2% (n = 16) had palpitation symptoms, 3.1% (n = 15) had abdominal pain and 2.9% (n = 15) had lower respiratory tract infection (Table 1).

39.2% (n = 150) of the patients were referred to another center directly from emergency clinic for advanced examination and treatment such as coronary angiography, pacemaker implantation etc. Acute myocardial infarction was diagnosed in 88.0% (n = 132) of these referrals, 6.0% (n = 9) had pulmonary disease and 4.0% (n=6) of the patients had cardiac arrest.

21.8% (n = 83) of the patients were hospitalized by the cardiology department. 12% (n = 10) of the hospitalized patients had diagnosed as heart failure, 10.8% (n = 9) had chest pain, 9.6% (n = 8) had acute myocardial infarction, 9.6% (n = 8) and hypertension, and 7.2% (n = 6) were hospitalized with dyspnea.

It is detected that 11.7% (n = 45) of the patients died in the emergency department after cardiac arrest and the remaining 27.2% (n = 104) of the patients did not have an emergency cardiac pathology after cardiology evaluation.

DISCUSSION

Emergency services are the most important units of

Table 1. Distribution of Initial diagnosis of the emergency physician for cardiology consultation

Initial Diagnosis	Number of Patients	Percentage (%)
Chest pain	116	30.4
Chronic Obstructive Pulmonary Disease	44	11.5
Acute Myocardial Infarction	35	9.2
Hypertension	20	5.2
Palpitation	16	4.2
Nausea and Vomiting	15	3.9
Dyspnea	15	3.9
Myalgia/Lumbalgia	14	3.7
Abdominal Pain	12	3.1
Lower Respiratory Tract Infections	11	2.9
Dizziness	11	2.9
Soft Tissue Disorders	9	2.4
Syncope	8	2.1
Upper Respiratory Tract Infections	6	1.6
Cardiac Arrest	6	1.6
Heart Failure	5	1.3
Headache	4	1.0
Cerebrovascular Event	3	0.8
Others	32	8.3
Total	**382**	**100**

hospitals that provide uninterrupted service and care for all kinds of emergency patients and injured people (13,14). Applying this service to patients as soon as possible and in the fastest way should be considered as the main goal. In this respect, it should not be forgotten that the structuring and working style of emergency services directly affects the quality of patient care.

When a patient is admitted to an emergency department, urgent examination of the patient and rapid completion of diagnosis and treatment are expected. Also, emergency departments are important hospital units that have the highest mortality rate (15-17). Every patient must be examined; the necessary laboratory tests should be performed; and in most cases, consultation from the related branches may be needed. Consultation is one of the most important stage in this procedure (1,15,16).

Consultation is an essential component of the clinical practice in emergency departments (18). In the literature, the term “consultant” has been used to refer to any fellow physician the emergency physician would call by telephone or contact regarding any aspect of patient care (10). Consultation is exchanging ideas and/or receiving technical support from different areas of specialties in order to maintain patient-centered diagnosis, treatment, and follow-up processes.

Cardiovascular diseases are the major cause of death in adults in Turkey as well as in the world and patients with cardiovascular symptoms frequently visit emergency departments (19). In almost all emergency departments in Turkey, the primary physician to see the patient is usually a general practitioner or an emergency physician but not a cardiologist. The cardiologist usually meets the patient when he is called for a consultation after the patient has been evaluated by an emergency physician in the emergency department. Hence, emergency physicians should be competent to evaluate and decide an early, appropriate initial managament of patients with suspected cardiovascular diseases in the emergency department.

When the patients included in this study are evaluated according to their gender; It was determined that the number of male patients consulted was higher, including 159 men (58.4%) and 112 women (41.6%). Similar to our study, the rate of male patients (54.8%) was found to be higher than women (45.2%) in the study of Köse et al. (20).

When the most frequent diagnosis were determined, it was found that 30.4% of the patients in our study had chest pain. In the study of Kıyan et al. (21), chest pain was found to be the most common symptom with a rate of 19.4%, and it is similar to our study.

60.99% of the patients included in our study were to be hospitalized but it was determined that 64.37% (n= 150) of the patients were referred to the external center due to the lack of angiography and intensive care bed in the secondary health-care center where our study was conducted. It was found that 88.0% (n=132) of these referrals were for coronary angiography. In the study of Aydın et al. (22), the referral rate was found to be 4.5%. The absence of an angiography unit in our hospital during the study period increased the referral rates and led to higher referral rates than the literature.

It was determined that 21.7% of the patients included in the study were hospitalized in the cardiology clinic. The rate of hospitalization we found in our study is similar to previous similar studies (20,23).

CONCLUSION

As a result, day by day the patient density increases exponentially, patient circulation becomes more impossible, and therefore, serious problems are experienced in emergency services. Therefore, the importance of the functionality of consultant physicians increases significantly. Determining the patient profiles for consultation in emergency departments, evaluation of consultation functioning system and consultation related problems will be useful in shaping training programs, determining bed capacity and improving the quality of health services in heath institutions.

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