

RESEARCH ARTICLES

THE CONCEPT OF EMERGENCY HAS AN INFLUENCE ON PATIENT CARE IN THE EMERGENCY DEPARTMENT†

Aslı ÇEPIK KURUOĞLU, M.D., Zehra ARIKAN, M.D., Ali Fuat IŞIK*, M.D.,
Didem İNCE**, M.D.

Gazi University, Faculty of Medicine, Departments of Psychiatry, Forensic Medicine*, and
Emergency Care**, Ankara, Turkey
Gazi Medical Journal 1998; 9 : 3-8

SUMMARY :

Purpose: Optimal organisation of an Emergency Department can be made possible by identifying the dominating concepts of emergency. To be able to use for a possible restructuralisation process of the emergency department of a university hospital, we conducted a study on 1000 patients admitted to this service. **Method:** Data were collected from the emergency department (ED) visits from May 1, 1995 through May 31, 1995 by a physician questionnaire which included the sociocultural characteristics of the patients, the principal complaints, and the preliminary diagnoses of the attending interns. The physicians' attitudes towards the patient and the management of the so-called emergency and non-emergency patients were also reviewed. **Results:** This study shows that the physicians' notion of emergency is different from how the patients feel about their illnesses. Sixhundred-sixtyfour out of 1000 patients were considered as real emergency cases, while 318 were non-emergency. The patients commonly thought as emergency cases were either suicidal or had severe cardiac or neurologic manifestations. **Conclusion:** It is demonstrated that medical professionals equate the concept of "emergency" to life-threatening conditions. Moreover, the concept of emergency seems to be significantly related to the demand for a specialty consultation ($p < 0.00001$).

Key Words: Emergencies, Emergency Medicine, Patient Care Team, Emergency Department.

INTRODUCTION

The emergency department (ED) assumes a central role within the medical disciplines. Optimal organisation of any ED is a prerequisite for a rapid and qualified medical help. A review of the health systems in various countries shows that, there are great structural and functional variations among EDs, shaped according to the needs and health policies of a particular country (1-4). According to the regulations of the Turkish Ministry of Health,

"an emergency service is the part of a hospital where patients are rapidly evaluated to support vital functions and to prevent disability. Consequently they are transferred to the related clinic where specific treatment will be undertaken" (5). Under this definition, the ED is a transitional unit, where patients have initial evaluation, diagnosis and treatment before they are transported to the specialty clinics.

† Presented in part at the 3rd Social Psychiatry Symposium, Çanakkale, Turkey, April 1996.

Apart from the structure and functional organisation of the emergency department, the concept of "emergency patient" is also unclear. The answers to some questions like "How one should define an emergency patient?" and "Who should be admitted to the EDs?" depend upon who the questions are directed (1). In numerous studies conducted to determine the appropriate and optimal use of the EDs, the criteria of appropriateness usually depends on life threatening events or the opinion of the physicians; but commonly they do not take into account what the patients perceive. On the other hand, the American College of Emergency Physicians maintains that the most important measure of seeking emergency medical care is what the patient thinks and perceives. The following statement clarifies their viewpoint: "An unforeseen condition of a pathophysiological or psychological nature develops which a prudent lay person, possessing an average knowledge of health and medicine, would judge to require urgent and unscheduled medical attention most likely available, after consideration of possible alternatives, in a hospital emergency department" (1).

In order to have an optimal structure and function, an ED should be shaped according to the needs of the hospital and the health system of that particular country. Furthermore, the concept of emergency should be redefined clearly. To be able to use for a possible restructuring process of the emergency department of a university hospital, we conducted a study to evaluate the patients admitted to this service and the physicians' attitudes towards them. Moreover, the management of these patients was reviewed.

MATERIALS AND METHODS

Data were collected from all the ED visits from May 1, 1995 to May 31, 1995, during which the principal author of the study was one of the supervising physicians of the ED. A physician questionnaire was developed which included the sociocultural characteristics of the patients, the number of admissions, the chief complaints, the preliminary diagnoses of the interns, the interns' opinion whether the patient is a good candidate for emergency care or not, and also the treatment undertaken.

There were 1356 visits to the ED during the period of the study. Of those 1356 visits, 356 were

excluded from further study because the patients visited ED for administration of medications, like intramuscular injections, for treatment of minor traumatic wounds, or because the data were insufficient. The total number of the patients involved in the study, after the exclusion of the above was 1000.

Paradox database program was used for evaluation of the results, while statistical analysis was performed with χ^2 test.

RESULTS

a. The Patient Characteristics

There were 450 (45%) male and 550 (55%) female patients with a mean age of 38. Seventy-six per cent of the patients were admitted the ED for the first time while the number of admission was two for 18%, three for 4%, four for 2%.

b. The Concept of Emergency

The interns believed that 664 out of 1000 patients were real emergency cases, while 318 were not considered as such (Table 1). The patients commonly thought as emergency cases were either suicidal or had severe cardiac or neurologic manifestations. Patients with acute abdominal and urologic symptoms or with physical trauma fell also into this category. Almost half of the patients with initial diagnoses of gastroenteritis, sinusitis or otitis were considered emergency (EG), while the remainder was lumped into the non-emergency group (NEG). On the other hand, the patients with conversion hysteria, myalgia, arthritis and upper respiratory tract infections were generally considered non-emergency. NEG consisted of 58 (18%) upper respiratory tract infections, 44 (14%) conversion hysteria, 22 (7%) generalised trauma, 24 (7.5%) nonspecific myalgia and 18 (6%) urinary tract infections (Table 1). Rest of the patients had menometrorrhagia, gastritis, urolithiasis, hypertension etc. The remaining 18 (2%) patients were thought as indeterminate cases by the caring physicians.

c. Management of Emergency Patients

Twenty-four suicide cases were admitted to the ED. Although the majority of these cases (92%) were considered as emergency, a psychiatry consultation was obtained only in 4 (18%) of the EG. Because 91% of 66 patients admitted with cardiac manifestations such as anginal pain,

Diagnosis (n)	EG (%)	NEG (%)	Indeterminate (%)
Conversion hysteria (44)	0	44(100)	0
Attempted suicide (24)	22 (91.7)	2 (8.3)	0
Myalgia, arthralgia, arthritis (24)	0	24(100)	0
Gastroenteritis (36)	20(55.6)	16 (44.4)	0
URTI ¹ (72)	12 (16.7)	58 (80.6)	2 (2.7)
Acute abdomen (26)	20 (77)	2 (7.7)	4 (15.3)
CVD ² (32)	28 (87.5)	4 (12.5)	0
Epilepsy (10)	4 (40)	6 (60)	0
UTI ³ (62)	44 (71)	18 (29)	0
Generalised trauma (78)	56 (71.8)	22 (28.2)	0
Otitis, sinusitis (32)	14 (43.75)	18 (56.25)	0
MI, PAT, angina ⁴ (66)	60 (90.9)	6 (9.1)	0
Others ⁵ (494)	384 (77.73)	98 (19.84)	12 (2.43)
Total (1000)	664 (66.4)	318 (31.8)	18 (1.8)

¹Upper Respiratory Tract Infection, ²Cerebrovascular Disease, ³Urinary Tract Infection, ⁴Myocardial Infarction, Paroxysmal Atrial Tachycardia, ⁵Vertigo, Ménière's disease, migraine attacks, dysmenorrhoea, menometrorrhagia, urticaria, pulmonary edema, pneumothorax, pneumonia, deep vein thrombosis, GIT bleeding, facial paralysis, anxiety, acute psychotic attacks, asthmatic crisis etc. EG : Emergency group NEG : Non - emergency group.

Table 1: The concept of emergency as defined by interns (Gazi University Faculty of Medicine, Emergency Department, May 1995).

paroxysmal atrial tachycardia or myocardial infarction was classified as emergency, a specialty consultation was obtained in 38 (63%) of the EG.

A neurology consultation was obtained for all of the 32 patients with a possible diagnosis of cerebrovascular accident, regardless of their clinical status. Neurology consultation concurred with the diagnosis of cerebrovascular disease in 69% of the patients. The remainder was diagnosed as migraine, hypertensive crisis or subdural haematoma.

Twenty-six patients presented with acute abdominal symptoms. Seventy-seven per cent of these patients were classified as emergency cases and were referred to the related departments, while 8% of the patients were lumped into the NEG and they were consulted with the ED staff. The physician was unable to make a definite decision in 15% of these patients.

Seventy-two per cent of the 78 patients with generalised trauma due to traffic or other types of accidents or physical insults were considered as emergency cases. Of those, 64% were consulted to

the related clinics, while the remaining 36% were consulted to the staff of the ED.

d. Management of Non-Emergency Patients

One hundred per cent of the 44 patients with diagnosis of conversion hysteria were regarded to be inappropriate admissions. Psychiatry consultation was made in only two of these patients (5%), while the remaining patients were either referred to psychiatry outpatient department or put on medication. Since 78% of these patients were discharged without a consultation to the ED physicians or to the psychiatrists, the final diagnosis did not change.

The number of the patients with initial manifestations of myalgia, arthralgia and arthritis was 24. None of them were considered to be appropriate admissions, while 17% of these patients were consulted to the related clinics.

Of the 72 patients with initial diagnosis of upper respiratory tract infection, only 12 (17%) belonged to EG, while the remaining 60 (83%) were accepted

Diagnosis (n)	Management of the NEG			
	SC (%)	EDC (%)	DRx (%)	Other (%)
Conversion hysteria (44)	2 (4.6)	10 (22.8)	4 (9)	28 (63.6)
Attempted suicide (2)	0	0	0	2 (100)
Myalgia,arthralgia,arthritis (24)	4 (16.7)	14 (58.3)	6 (25)	0
Gastroenteritis (16)	0	10 (62.5)	6 (37.5)	0
URTI ¹ (58)	6 (10.3)	26 (45)	24 (41.3)	2 (3.4)
Acute abdomen (2)	0	2 (100)	0	0
CVD ² (4)	4 (100)	0	0	0
Epilepsy (6)	6 (100)	0	0	0
UTI ³ (18)	2 (11.2)	8 (44.4)	8 (44.4)	0
Generalised trauma (22)	14 (63.6)	8 (36.4)	0	0
Otitis, sinusitis (18)	0	12 (66.6)	6 (33.3)	0
MI, PAT, angina ⁴ (6)	4 (66.6)	2 (33.3)	0	0
Others ⁵ (98)	26 (26.5)	25 (25.5)	37 (37.7)	10 (10.3)
Total (318)	68 (21.4)	117 (36.8)	91 (28.6)	42 (13.2)

SC: Specialty Consultation, EDC: Consultation to the staff in Emergency Department, DRx: Drug treatment without any consultation, Others: Minor surgical reparations or referral to the related clinics without any consultation, ¹Upper Respiratory Tract Infection, ²Cerebrovascular Disease, ³Urinary Tract Infection, ⁴Myocardial Infarction, Paroxysmal Atrial Tachycardia, ⁵Vertigo, Ménière's disease, migraine attacks, dysmenorrhoea, menometrorrhagia, urticaria, pulmonary edema, pneumothorax, pneumonia, deep vein thrombosis, GIT bleeding, facial paralysis, anxiety, acute psychotic attacks, asthmatic crisis etc.

Table 2 : Management of the non-emergency patients(Gazi University Faculty of Medicine, Emergency Department, May 1995).

as inappropriate admissions. Fifty-five per cent of the latter group was consulted either to the related clinics or the ED physicians, while the remainder was discharged by the interns (Table 2).

e. Management of the Equally Emergency and Non-emergency Cases

The number of patients with initial diagnosis of gastroenteritis was 36. Fifty-six per cent of these cases were considered appropriate admissions for the ED. The remaining 44.5% were not accepted as emergency cases, therefore the majority of them (62.5%) was consulted with the staff in the ED and 37.5% were given medical treatment without any consultation.

Similarly, 60% of the 10 patients with a possible diagnosis of epilepsy were considered appropriate admissions for the ED and all of the patients obtained a neurology consultation.

f. Comparison of the EG with the NEG

EG had significantly more specialty

consultations (39%) than the NEG (8%) ($\chi^2=97.72$, $p<0.00001$). Furthermore, they were consulted more commonly to the staff in the ED (20% vs 15%) ($\chi^2=27.25$, $p<0.00001$). Thus, the total number of consultations obtained in the EG (59% vs 23%) is significantly higher than NEG ($\chi^2=40.55$, $p<0.00001$).

The initial diagnosis of the patients changed significantly after the consultations. The alterations in the initial diagnoses of the patients after specialty consultations (15%) were significantly more common than the patients consulted to the ED physicians (9%) ($\chi^2=3.77$, $p<0.05$).

DISCUSSION

The Turkish Ministry of Health (5) classifies emergency services in three subtypes, in regard to the availability of various medical and surgical departments as well as various laboratory facilities. Being the most sophisticated one, type "A" emergency service is situated generally within the university and the state hospitals. They are

supposed to give continuous service for 24 h headed by at least one qualified specialist of emergency care or a specialist who has a training in emergency medicine. The other medical and surgical departments are obliged to supply specialists for emergency calls.

In line with the general trend of most of the other university hospitals, rotating interns care for the patients in the emergency department of Gazi University Faculty of Medicine. Two residents from different departments rotate monthly in the emergency department. Varying numbers of general practitioners and specialists from different branches work in the emergency department as well. Unfortunately, there are no specialists of emergency care. Therefore, rotating interns and residents are basically responsible for patient care.

This study shows that the physicians' notion of emergency is different from how the patients feel about their illnesses. It is clear that any patient who comes to the ED is in need of emergency help of some kind in his own perspective. On the other hand, interns considered 32% of the admissions in this study inappropriate. No decision could be given for 2% of the patients. Understandably, some patients seek emergency care due to the problems of present health care system or because of lack of knowledge. For example, any patient with upper respiratory tract infection or gastroenteritis may have disturbing symptoms and may be in need of immediate treatment. If the related departments have a too busy schedule, the only other alternative that remains for these patients is to seek care in the emergency department.

It is demonstrated that medical professionals equate the concept of "emergency" to life-threatening conditions, as in case of the EDs in western countries (1). The majority of patients with acute cardiac, abdominal and neurologic problems are regarded as "emergency". On the other hand, most of the patients with initial diagnoses of upper respiratory tract infection, conversion hysteria or myalgia are considered inappropriate admissions for the EDs, regardless of the possibly intolerable symptoms on the part of the patients.

Moreover, the concept of emergency seems to be significantly related to the demand for a specialty consultation ($p < 0.00001$). The "inappropriate admissions" are discharged without consulting the related clinics, and sometimes the

staff of the emergency department. Alterations of the initial diagnoses of the 24.5% of the consulted group ($p < 0.05$) make us think that at least some of the unconsulted patients had a missed diagnosis, due to the unavailability of specialist care. These findings demonstrate that in order to have a qualified emergency help, one should have at least a possible life-threatening condition.

Another important finding of this study is that, although the suicidal patients are regarded as emergency, psychiatry consultation is obtained in only a small percentage. As a matter of fact, regarding the suicidal patient as emergency has much to do with the initial physical damage. On the other hand, the underlying psychopathology, motivation and the risk of recurrence of the suicidal behaviour which are as much critical as the physical damage, do not seem to have major impact for the emergency care physicians. Similarly, the patients with initial diagnosis of conversion hysteria are neither regarded as good candidates for emergency help, nor are they consulted with psychiatrists. As a result we do not have any idea of the final diagnosis of those patients. Only a neurology consultation is obtained to rule out a possible epileptic phenomenon. Clearly, the physicians do not have a true emotional insight for emergency psychiatric conditions, which delays qualified professional help and leads to the use of unnecessary drug treatments.

CONCLUSION

Our findings show that both the concept of emergency and the need for consultation are directly linked with life-threatening conditions. These decisions by interns have a great influence on the management of patients. Optimal management of emergency patients calls for a redefinition of concepts. If we accept the concept that any admission to the ED is appropriate, this should be stated clearly during the medical education. Furthermore, the availability of at least one specialist of emergency care or a specialist who has training in this discipline would be of great help to the rational organisation of such departments, which will also eliminate the unnecessary appointments of specialists of different medical branches to the EDs.

Correspondence to : Dr.Aslı ÇEPIK KURUOĞLU
Gazi Üniversitesi Tıp Fakültesi
Psikiyatri Anabilim Dalı
Beşevler
06500 ANKARA - TÜRKİYE
Phone : 312 - 214 10 00 / 5419

REFERENCES

1. Frey L, Schmidt J, Derksen DJ, Skipper B : A rural emergency department. *Western J Med* 1994; 160 : 38-42.
2. National Heart Attack Alert Program Coordinating Committee. Emergency department: Rapid identification and treatment of patients with acute myocardial infarction. *Ann Emerg Med* 1994; 23 : 311-329.
3. Stock LM, Bradley GE, Lewis RL, Baker DW, Sipsy J, Stevens CD : Patients who leave emergency departments without being seen by a physician: Magnitude of the problem in Los Angeles country. *Ann Emerg Med* 1994; 23 : 294-298.
4. Zenker C, Lang P : Drug emergency patients are a burden for the medical care system: Inadequate care for drug emergency patients. *Forensic Sci Int* 1993; 62 : 117-120.
5. Acil Servis ve Hizmetler Yönetmeliği. Sağlık Bakanlığı 1995.