

**Pattern of Surgical and Medical
Diseases Among Pilgrims Attending
Al-Noor Hospital, Makkah**

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PATTERN OF SURGICAL AND MEDICAL DISEASES AMONG PILGRIMS ATTENDING AL-NOOR HOSPITAL MAKKAH

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هدف الدراسة : يعتبر الحج أزمة فريدة من نوعها و خاصة بالنسبة لقسم الطوارئ و تهدف هذه الدراسة إلى التعرف على الحالات الطبية و الجراحية التي وصلت إلى قسم الطوارئ خلال فترة الحج و النمب المنوي من تم إدخالهم إلى المستشفى .
تصميم الدراسة : دراسة مستقبلية لنمط الأمراض الجراحية و الطبية التي وصلت إلى قسم الطوارئ خلال فترة الحج في واحدة من أكبر المستشفيات في مكة المكرمة و الأراضي المقدسة .
طريقة الدراسة : أجريت للدراسة خلال فترة الحج من عام ١٤١٣ (١٩٩٣) بين ١٤١٣/١١/٢٠ إلى ١٤١٣/١٢/٢٠ . و قد تم إدراج جميع الحجاج الذين وصلوا إلى قسم الطوارئ بمستشفى النور التخصصي سواء كانوا مقيمين في السعودية أو غير ذلك .
نتائج الدراسة : بلغ عدد المرضى الذين وصلوا إلى قسم الطوارئ ٧٦٧٦ مريضا تم إدخال ١٤٢٦ منهم إلى المستشفى ، كانت هنالك ٢١٦ حالة جراحية بين من أدخلوا و كان السبب الغالب هو الحوادث لهذه الحالات ، بينما بلغ عدد الحالات الطبية ٥٤٥ و كان السبب الغالب لهذه الحالات هو التهاب الرئة .
الخلاصة : هنالك العديد من الحالات التي يمكن التعامل معها في العيادات الخارجية أو المراكز الصحية الأولية .
الكلمات المرجعية : الحج ، قسم الطوارئ ، الرعاية الصحية الأولية .

Objective: Hajj usually presents a unique medical crisis especially for the Emergency Department. This study will identify the surgical and medical cases that presented at the Emergency Department during Hajj and percentage admitted.
Design: A prospective study of the pattern of surgical and medical cases that presented at the Emergency Department of the largest tertiary care hospital in Makkah city and holy lands during Hajj.
Methods: The study was conducted prospectively during the 1413 (1993) Hajj pilgrimage from 20.11.1413 to 20.12.1413. All Saudi and non-Saudi pilgrims presenting at the Emergency Department of Al-Noor Specialist Hospital were included.
Results: From the 7,676 patients who came to the Emergency Department, 1426 were admitted. The commonest cause for surgical admission was trauma, while the commonest cause for medical admission was pneumonia.
Conclusion: More than 50% of cases could have been dealt with in the Outpatient Department or Primary Health Care Centers.
Key Words: Hajj, Emergency Department, Primary Health Care

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INTRODUCTION

Hajj is the fifth pillar of Islam and though it should usually be performed once in one's lifetime, many Muslims perform the Hajj several times. Nearly two million Muslims gather during the Hajj period in Makkah every year. This season is the period from 15/11 to 15/12 of the lunar calendar with the peak period between 3 to 14/12. Health problems during Hajj are due to the following reasons: 1) Hajies are usually elderly, of different nationalities, social backgrounds, with diverse health problems. 2) The same rituals are performed by everyone over a short period of time, resulting in over-crowding and mass movement from one place to another. 3) The weather is usually very hot, reaching 48°C sometimes.

Many patients, who normally come to the Emergency Room, do not have serious complaints. This is even more so during the Hajj period. The hospital staffs get overworked as a result of the sheer weight of numbers, thus prolonging the waiting period for the patients. Several health problems including heat stroke and exhaustion,¹⁻³ medical,⁴ surgical,⁵ renal⁶ and epidemic problems⁷⁻⁹ have been studied during Hajj period. However, very few studies if any have dealt with the problems of the Emergency Room. The aim of this study is to identify: 1) The major surgical and medical problems during Hajj as a means towards the improvement of care and the reduction of the morbidity and mortality. 2) Simple cases that could be dealt with at an outpatient clinic or primary health care center instead of the Emergency Department.

METHOD

The study was conducted prospectively during the 1413 (1993) Hajj pilgrimage from 20.11.1413 to 20.12.1413. All Saudi

and non-Saudi pilgrims presenting to Al-Noor Specialist Hospital's Emergency Department were included. Al-Noor Specialist Hospital is 500-bed modern hospital with all subspecialties and the main hospital in Makkah. Most emergency cases were brought to this hospital either by Red Crescent or medical Hajj missions or by relatives and friends. Data collected included age, sex, nationality, diagnosis and admission status. The diagnosis was coded according to the international classification of diseases (ICD-9-CM). The data were entered into a PC computer file of access program and the statistical analysis was done using statistical package for social sciences version 7 (SPSS). Some of the collected data were missing in <1%.

RESULTS

The number of patients attending Emergency Department from 20.11 to 20.12.1413 was 7,676 patients, 55.1% (4228) of whom were males. Out of those patients 1426 (18.6%) were admitted. The age distribution was from newborns to 120 years old, with a mean age of 48. There were 1230 patients (Saudi national and expatriates), 735 Egyptians, 732 Pakistanis and 368 Indonesians.

Table 1: The commonest surgical problems attending Emergency Department

Diagnosis	Number of cases	
	Seen	Admitted (%)
Abdominal pain	377	11 (2.9)
Cut wound	178	2 (1.1)
Renal colic	172	23 (13.4)
Fracture (excluding ribs)	130	82 (63)
Trauma (Abdominal & chest)	83	62 (74.7)
Burn	47	18 (38.3)
Appendicitis	35	18 (51)
Total	1022	216 (21)

Table 1 shows the commonest surgical problems attending Emergency Department. Patients with abdominal pain and cuts were the commonest, 377 and 178 respectively and the lowest number of admissions. The commonest medical problem was asthma as shown in Table 2. As shown in Table 3, there were many medical problems that could have been treated in the outpatient clinic or primary health care centers.

Table 2: The commonest medical problems attending Emergency Department

Diagnosis	Number of cases attending	
	Seen	Admitted (%)
Asthma	576	66 (11.5)
Gastroenteritis	228	20 (8.8)
Heat exhaustion	202	83 (41)
Pneumonia	153	115 (75)
Hypertension	149	20 (13.4)
Heat Stroke	63	63 (100)
Angina + MI*	84	84 (100)
Arrhythmia + OCP†	82	82 (100)
Total	1567	533 (34)

*Myocardial infarction

†Other cardiac problems

Table 3: The commonest medical problems attending Emergency Department with minimum admissions

Diagnosis	Number of cases attending	
	Seen	Admitted (%)
Sore-throat	520	9 (0)
Tonsillitis	506	1 (0.2)
Common cold	464	9 (0)
Upper RTI*	340	1 (0.3)
Bronchitis	288	10 (3.5)
Headache	125	0 (0)
Cough	94	9 (0)
UTI†	64	9 (0)
Total	2401	12 (0.5)

*Respiratory tract infection

†Urinary tract infection

DISCUSSION

The Emergency Department is one of the most difficult departments run since it

deals with different types of medical emergencies as well as cold cases.

Hajj creates a unique medical situation because of the huge number of patients presenting at the Emergency Department with different types of medical emergencies. Hajjies are usually elderly who participate in several strenuous physical activities. Beside medical problems, other problems including the language barrier, different cultural backgrounds are evident. Similar to a previous study done in Al Madinah Al-Munawara⁵ the commonest surgical cause for hospital admission in our study was trauma with or without fractures. Though abdominal pain and cuts were the commonest surgical reasons for attending Emergency Room, they formed the smallest number of reasons for admission and they could have been dealt with at the outpatient clinic or primary health care centers. Similar to previous study done in Al Madinah Al-Munawarah⁴ the commonest medical cause for admission was pneumonia. As shown in Table 2, asthma and gastroenteritis were the commonest cause for attendance at Emergency Room though they could have been treated in due outpatient clinic or primary health care centers and constituted the least important cause for admission.

As these patients were in need of oxygen or intravenous fluid, they occupied emergency room beds for a few hours, which unnecessarily aggravated the problem of overcrowding. Cardiovascular problems were the second commonest cause of admission after respiratory problems.

Table 3 shows cases that should have gone to the primary health care centers instead of the Emergency Room since they were not serious enough for admission. In an overcrowded unit such as emergency room, a great deal of the work is urgent and any unnecessary overload affects the quality of care given to the sick patients. Over 50% of patients in this study did not need to go to the

Emergency Room and could have been managed in primary health care centers.

In conclusion, the following are the observations of the researcher: 1) an important subject for further research is trauma, which was the commonest surgical problem requiring admission. 2) The commonest medical problems were respiratory and may be climate-related. 3) Several medical and surgical problems could be dealt with in primary health care centers, leaving the staff to care for real emergency cases more effectively.

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