EMERGENCIES ATTENDED AT ACCIDENT & EMERGENCY DEPARTMENT, LADY READING HOSPITAL, PESHAWAR: AN OVERVIEW

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ABSTRACT

Objective: To determine the type and frequencies of Accident & Emergency (A&E) attended at Lady Reading Hospital, Peshawar.

Methodology: The data collected, consisted of 23,725 patients/year with an average of 65 patients/day. The data was statistically analyzed using SPSS version 16 for age, gender, etiology of trauma, referral status and single or multiple organ injuries (polytrauma). The frequencies and percentages were calculated for all variables.

Results: Most common age group with trauma or polytrauma presented during 21-30 years. The age range for male group was found to be 3-65 years while for female it ranges from 8-70 years. Male to female ratio was 4:1.Most common etiology for patients reporting to ER department with acute injury were due to RTA (48%) followed by fall from height (23%).Sixty eight percent patients were referred from other district hospitals while 32% patients directly approached ER OPD for consultation. Most of patients were referred to Neurosurgery department (30%) for consultation. Polytrauma patients with multiple organ injuries were referred mostly to orthopedic and general surgery ward. Five percent patients suffered mortality due to severe impact of injuries.

Conclusion: Majority of male patients reported to ER department of Lady Reading Hospital, Peshawar. The age range in polytrauma was found to be 21-30 yers. The major etiology of trauma was RTA followed by fall from heights. Most of trauma patients were referred from other district hospitals. Polytrauma patients were referred mostly to Neurosurgery+ Orthopedic ward for definitive surgery.

Key Words: Accident & Emergency (A&E), Trauma, Polytrauma, Etiology.

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INTRODUCTION

Trauma fulfills the disease classification criteria for global pandemic, as this is being recurrent and significant cause of morbidity and mortality across continents[1]. Worldwide 16000 people die every day as a result of injury[2,3]. An emergency department (ED), also known as Accident & Emergency (A&E), emergency room (ER), or casualty department, is a medical treatment facility specialized in acute care of trauma and serious illness of patients, presenting without prior appointment, either by their own means or by ambulance[2]. It is usually found in hospital or other primary care center[2,3]. The department provides initial treatment for a broad spectrum of illnesses and injuries, some of which may be life-threatening and require immediate attention[4]. The emergency departments of most hospitals operate 24 hours a day[5]. The critical conditions like cardiac arrest, heart attack (Angina, Myocardial infarction), trauma (RTA, bomb blast victims, fire arm injuries, assaults etc), mental sickness, asthma and COPD vice versa has been handled at ER deaprtment[6]. Polytrauma patient report with two or more injuries affecting multiple body parts or organ system, results in physiological, psychological and cognitive impairments[7,8]. ED staff are trained to work quickly and effectively even with minimal information about patient or unprecedented events[9]. Because time is such an essential factor in emergency treatment, EDs typically have their own diagnostic equipment to avoid waiting for equipment installed elsewhere in the hospital. Nearly all have an X-ray room, and many now have full radiology facilities including CT scanners and ultrasonography equipment. Laboratory services may be handled on a priority basis by the hospital lab, or even the ED may have its own basic labs (blood counts, blood typing, toxicology screens, etc.) for more effective

and quick results[10]. The Department is structured to provide prompt and efficient health care services geared towards reduction of disease morbidity and mortality[11]. As patient is immediately attended at ER; further rehabilitation is provided with definitive treatment plan to referred specialty (Neurosurgery, Orthopedics, general Surgery, Plastic Surgery, ENT, Ophthalmology, Maxillofacial Surgery etc)[12,13].

Lady Reading Hospital, Peshawar is one of busiest hospital and deal with all types of accident and emergencies. It attends referred patients from other district hospital as well as direct patients received in emergency.

This retrospective descriptive study was conducted to determine the type and frequencies of Emergencies attended at A&E Department, Lady Reading Hospital, Peshawar.

METHODOLOGY

The ethical approval was taken from the concerned department for research purpose. This retrospective and descriptive study was performed for a period of one year (2012-2013). The data collected consisted of 23,725 patients/year with a range of 65 patients/day.

Patients of all age groups entering ER department with an acute injury due to RTA (Road traffic accidents), BBV (Bomb blast victims), FAI (Fire arm injury), burns, stab wound, Glass injury, stray bullet and assaults were included in the study.

Patient which were attended, treated and found stable by trauma team and not being referred to other specialty for consultation was excluded from this study.

The data was statistically analyzed using SPSS version 16 (SRS Inc Chicago) for age, gender, etiology of trauma, referral status and single or multiple organ injuries (Polytrauma). The frequencies and percentages were calculated for all variables. The age group was expressed in range and ratio was determined for genders. The data was presented in tables and figures.

RESULTS

Most common age group with trauma or polytrauma presented during 21-30 years. The age range for male group was found to be 3-65 years while female age group ranges from 8-70 years (Table 1).

The male to female ratio was 4:1 where males were 68%.

Most common etiology for patients reporting to ER department with acute injury were due to RTA (48%) followed by fall from height (23%). FAI and Bomb blast victims constituted 15% and 12% respectively. Sixty eight percent patients were referred from other district hospitals while 32% patients directly approached ER OPD for consultation. Most of patients were referred to Neurosurgery department (30%) for consultation followed by general surgery (18%) and cardiothoracic ward (15%) respectively (Table 2).

Polytrauma patients with multiple organ injuries were referred mostly to orthopedic and general surgery ward (18%) followed by neurosurgery and orthopedic (15%) ward for consultation. Fifteen percent patients were also referred to general surgery and cardiothoracic ward.

Five percent patients suffered mortality due to severe impact of injuries (Figure 1).

DISCUSSION

Initial management of trauma or polytrauma patient is of vital importance to minimize both morbidity and mortality in both genders of all age groups[14].

In this study most of patients reported to ER with the age range of 21-30 yers, which corresponds well with the survey of Hassan and his colleagues[2]. The study conducted by Field[3] showed that most of trauma patient were of 15-30 yers age group.

Majority of male patients were affected as they are more subject to exposure to various injury sources. But the study Hassan[2] and his colleagues claim that both genders are subject to trauma. In contrast, the study of Puri and Goel[3] showed that 80% male reported to ER services of Northern Indian Hospital.

Kunreuther[5] and Puri[3] has reported that most of patients were referred from other regions of province which clearly states the lack of well established facility at other areas. This study also impose the importance of well established ER department to deal with every type of emergency, as 68% patients were being referred from other districts to. It also shows the lack of basic needs and equipments in other centers to treat patient during golden hour.

Majority of patients were experiencing trauma due to RTA and fall form heights. The study of Caldwell and his colleagues[6] also showed similar results. But the study of Lyons and his colleagues[10] has presented different results in their survey. They mentioned fall and violence as major cause of severe trauma to population. This difference can be explained as etiology varies with different regions of world. In developed nations RTA is still leading cause of polytrauma[9,12].

The study of Strohmetal[7] even mentioned an increasing number of cyclists and it related accidents in recent years.

To decrease the morbidity and to improve the sur-

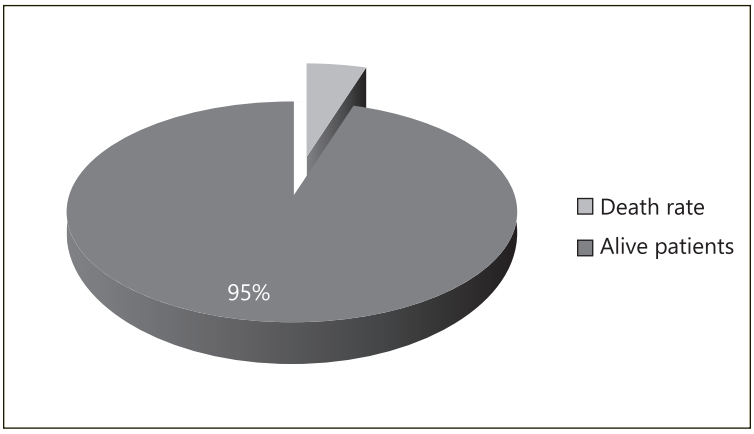
Table 1: Age groups for patients attending A & E department

Age	1-10 yers	11-20 yers	21-30 yers	31-40 yers	41-50 yers	51-60 yers	61-70 yers
Male	13 %	15%	34%	23%	12%	2%	1%
Female	13 %	22%	24%	11%	15%	12%	3%

Table 2: Etiology and referral status of trauma and poly trauma patents

Variables	Number of patients (n)	Percentage
Etiology of trauma		
RTA	11388	48%
Fall from height	5456	23%
FAI	2609	11%
BBV	2135	9%
Burn	1429	6%
Assaults	474	2%
Stray bullet	237	1%
Referral status		
Referral from other districts/local hospitals/ tertiary care centre	7592	68%
Direct report to ER	7117	32%
Referral to one specialty		
Neurosurgery	7117	30%
General surgery	4270	18%
Cardiothoracic	3558	15%
Orthopedics	2372	10%
ENT	2135	9%
Burn	1898	8%
Ophthalmology	1423	6%
Maxillofacial surgery	474	2%
Pediatric surgery	474	2%
Polytrauma referral		
Orthopedics+General Surgery	4270	18%
Neurosurgery+orthopedics	4745	20%
General Surgery+cardiothoracic	3558	15%
ENT+Ophthalmology	2847	12%
ENT+ Maxillofacial Surgery	2847	12%
ENT+ Plastic Surgery	2372	12%
NeuroSurgery+General Surgery	1898	8%
Ophthalmology+Maxillofacial Surgery	1186	5%

Figure 1: Mortality rate of trauma patients



vival chances of trauma patient they were referred to inter hospital specialties for definitive treatment. Majority of them were referred to Neurosurgical ward for consultation while polytrauma patient were referred mostly to General Surgery and Orthopedic ward. Puri[3] showed majority of patients being referred to Orthopedics followed by Neurosurgical specialty. While Sarcevic and Burd[16] has referral to General Surgery and Cardiothoracic wards. Field[4] and Hassan[2] has correspond well with this study findings, as patient with multiple organ injuries were referred to Neurosurgery + Orthopedics followed by General Surgery+ Orthopedic specialty for definitive treatment plan.

CONCLUSION

Majority of male patients reported to ER department of Lady Reading Hospital, Peshawar. The age range in polytrauma was found to be 21-30 yers. The major etiology of trauma was RTA followed by fall from heights. Most of trauma patients were referred from other district hospitals. They were referred to neurosurgery department for consultation. Polytrauma patients were referred mostly to Neurosurgery+ Orthopedic ward for definitive treatment.

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