

Extremities Trauma in Emergency Unit of Al-karama Hospital-Alkut city- Wassit province

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Abstract

Extremity wounds compose the burden of injury in Emergency Unit in Al-karama hospital and there is a great need for research to improve the treatment of patient who incur these devastating injuries.

Objective: The aim of this project was to define the epidemiological profile of the patients attended in Emergency Unit in Al-karama hospital regarding the upper and lower limb trauma.

Methods: Authors and trained assistants collected data with aid of a simple proforma was designed to collect basic demographic data , type of accident,type of injury in general, type of management , site of injury in the body, place of management and the last result of this management, A total number of 189 cases were included in this study. The period of the present study extended from October 1, 2010 to February 1, 2011.

Results: Most cases of this present study were male (67.7%) . The commonest causes of trauma admissions were musculoskeletal injuries to the extremities (41.8%).

RTA are the major cause of extremity trauma (31.7%) . This study shows that trauma of the upper limb is (63.5%) . (52.9%) of present study were managed in surgical ward. According to faith of the patient,the present study show that (55.5%) had complet healing.

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Conclusion: Extremity wounds compose the burden of injury in Emergency Unit in Al-karama hospital. So in conclusion the demands of providing quality affordable emergency surgical services in the setting of a developing country are enormous and will continue to rise. There must be adequate government support as well institutional commitment to the development of its human and structural resources to meet these needs.

Introduction

Trauma refers to "a body wound or shock produced by sudden physical injury, as from violence or accident."^[1] It can also be described as "a physical wound or injury, such as a fracture or blow."^[2] Major trauma (defined by an Injury Severity Score of greater than 15)^[3] can result in secondary complications such as circulatory shock, respiratory failure and death. Resuscitation of a trauma patient often involves multiple management procedures. Trauma is the sixth leading cause of death worldwide, accounting for 10% of all mortality, and is a serious public health problem with significant social and economic costs.

Blunt trauma is the leading cause of traumatic death in the United States.^[4] Most cases of blunt trauma are caused by motor vehicle accidents.^[4] Falls, a subset of blunt trauma, are the second most common cause of traumatic death.^[5] In most cases a fall of greater than three times the victim's height is defined as a severe fall.^[5] Penetrating trauma is caused when a foreign object such as a bullet or a knife enters a tissue of the body, creating an open wound. In the United States most deaths caused by penetrating trauma occur in urban areas and 80% of these deaths are caused by firearms.^[6] Blast injury is a complex cause of polytrauma. It commonly includes both blunt and penetrating trauma and may also be accompanied by a burn injury.

By identifying risk factors present within a community and creating solutions to decrease the incidence of injury, trauma referral systems can help to enhance the overall health of its population.^[7] Ingestion of alcohol and illicit drugs are risk factors for trauma, particularly traffic collisions, violence and abuse.^[3] Long-acting benzodiazepines increase the risk of trauma in elderly people.^[3]

Classification

Trauma can be classified by the affected area of the body^[4] (percentages of total incidence^[3]):

- Polytrauma
- Head injury
- Chest trauma
- Abdominal trauma
- Extremity trauma
- Facial trauma

- Spinal cord injury
- Genitourinary system trauma
- Pelvic trauma
- Soft tissue injury
- Soft tissue injury

Trauma may also be classified by the affected demographic group (for example, trauma in the pregnant, pediatric, or geriatric patient).^[4] They may also be classified by the type of force applied to the body, such as blunt trauma versus penetrating trauma. Trauma is the sixth leading cause of death (accounting for 10% of all mortality) worldwide, and the fifth leading cause of significant disability.^[3] In people between the ages of 1–45 years, trauma is the leading cause of death.^{[3][4][8][9][10]} The primary causes of death are central nervous system injury, followed by exsanguination.^[3] Patients who were admitted into an ICU and received a trauma diagnosis causes a negative change in their health related quality of life with a potential to create anxiety and symptoms of depression.^[11] People who have suffered trauma may require specialized care, including surgery and blood transfusion. Outcomes are better if this occurs as quickly as possible thus the so called golden hour of trauma. This is not a strict deadline, but recognizes that many deaths which can be prevented by appropriate care occurring in a relatively short time after injury.^[8] Community-based trauma referral systems seek to decrease overall injury-related morbidity and mortality and years of life lost within a population by ensuring the provision of optimal care during both the acute and late phases of injury.^[7] Such systems have been established in many places to provide rapid care for injured people. Research has shown that deaths from physical trauma decline where there are organized trauma systems. The care of acutely injured people is a public health issue that involves bystanders and community members, health care professionals, and health care systems. It encompasses prehospital assessment and care by emergency medical services personnel, emergency department assessment, treatment, and stabilization, and in-hospital care among all age groups.^[12] An established trauma system network is also an important component of community disaster preparedness, facilitating the care of victims of natural disasters or terrorist attacks.^[7] In those with cardiac arrest due to trauma cardiopulmonary resuscitation (CPR) is considered futile but still recommended.^[13, 23, 24]

Methodology

All patients who were admitted to the surgery section of the accident and emergency center between October 1, 2010 to February 1, 2011 in Al-karama hospital-Alkut city- wassit province were prospectively studied.

A total number of 189 cases of upper and lower limb trauma were included in this study, simple proforma was designed and data collected regarding

basic demographic data , type of accident,type of injury in general, type of management , site of injury in the body, place of management and the last result of this management.This is done by Author and trained assistants collected data with aid of a simple proforma was designed to collect these data. The collected data was analysed in simple tabular.

Results

Table 1: Distribution of the study group by gender. Most cases of this present study were male (67.7%) .

Table 1: Distribution of the study group by gender.

Gender	Frequency	Percentage
Male	128	67.7
Female	61	32.3
Total	189	100

Table 2:Distribution of the study group according to type of injury in general. The commonest causes of trauma admissions were musculoskeletal injuries to the extremities (41.8%) , head injuries(30.2%) and abdominal trauma(8%) .

Table 2:Distribution of the study group according to type of injury in general.

Type of injury	Frequency	Percentage
Head injury	57	30.2
Extremity	79	41.8
Chest	7	3.7
Abdominal	15	8
Spinal cord /vertebra	8	4.2
Burns	14	7.4
Orofacial injury	9	4.7
Total	189	100

Table 3 : Distribution of the study group according to type of accident. RTA are the major cause of extremity trauma (31.7%) , accidents at work (24.3%) , accident at home (20.1%).

Table 3 : Distribution of the study group according to type of accident.

Type of accident	Frequency	Percentage
Home	38	20.1
RTA	60	31.7
Work	46	24.3
Others	45	23.8
Total	189	100

Table 4 : Distribution of the study group according to site of injury. This study shows that trauma of the upper limb(63.5%) is the most affected site during extremity trauma ,followed by lower limb (19.6%).

Table 4 : Distribution of the study group according to site of injury.

Site of injury	Frequency	Percentage
Upper limbs	120	63.5
Lower limbs	37	19.6
Pelvis& vertebra	12	6.3
Upper&lower limbs	17	9.0
Pelvis	3	1.6
Total	189	100

Table 5: Distribution of the study group according to place of management. (52.9%) of present study were managed in surgical ward while (47.1%) were managed in emergency unit.

Table 5: Distribution of the study group according to place of management.

Place of management	Frequency	Percentage
Inpatient surgical ward	100	52.9
Emergency unit	89	47.1
Total	189	100

Table 6 : Distribution of the study group according to faith of the patient. According to faith of the patient,the present study shows that (55.5%) had complete healing,while the percentage of death was (10.6%) .

Table 6 : Distribution of the study group according to faith of the patient.

faith of the patient.	Frequency	Percentage
Healing	105	55.5
Disability	35	18.5
Complication	29	15.3
Death	20	10.6
Total	100	100

Table 7:

Descriptive Statistics	N	Minimum	Maximum	Mean	Std.Deviation
Age	189	1	67	29.85	15.563
Valid N(listwise)	189				

Discussion

Most cases of this present study were male (67.7%) ,this result may occur due to more involvement of male in works or occupations that causes accidents in extremities. Overall, the literature of gender differences in injuries is limited. [17]

The commonest causes of trauma admissions were musculoskeletal injuries to the extremities (41.8%) , head injuries(30.2%) and abdominal trauma(8%) similar to other reports .[16, 25, 26]

RTA are the major cause of extremity trauma (31.7%) , accidents at work (24.3%) , accident at home (20.1%). Accidents on public roads continue the chief causes of these kinds of lesions. ^[20,21,22] A thorough search of all important and relevant sources was performed through Medline and the Cochrane register. As numerous studies investigate multiple risk factors simultaneously, detailed methodology is provided only in the initial reference to a study.[17]

This study shows that trauma of the upper limb(63.5%) is the most affected site during extremity trauma ,followed by lower limb (19.6%). Howard and Court-Bronw^{[23],[27]} , presented upper limb injuries as the most important & frequent in their series.Prevention of injury remains an important goal for clinicians and researchers. However, to prevent lower extremity injury, the risk factors must be established. Many intrinsic and extrinsic risk factors have been implicated for lower extremity injury; however, at present there is little agreement.[28]

(52.9%) of present study were managed in surgical ward while (47.1%) were managed in emergency unit,similar results were` found in other researches.[17],[28]

According to faith of the patient,the present study shows that (55.5%) had complet healing,while the percentage of death was (10.6%) .Causes of mortality were: multiple trauma , bleeding and septicaemia This study and others provide evidence of wide-ranging variations in outcome following major trauma, with a substantial proportion of patients experiencing long-term disability. In addition, outcomes often are more affected by the patient's economic, social, and personal resources than by the initial treatment of the injury—specifically. [18,19,29]

Conclusion

Epidemiological studies are of vital importance to the centers of reference of health care services for the population; this information can be used to plan the treatment, define priorities and enhance the understanding of this complex group of traumas. Extremity wounds compose the burden of injury in Emergency Unit in Al-karama hospital , so in conclusion the demands of providing quality affordable emergency surgical services in the setting of a

developing country are enormous and will continue to rise . There must adequate government support as well institutional commitment to the development of its human and structural resources to meet these needs .

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