



ORIGINAL RESEARCH PAPER

General Surgery

A STUDY OF BLUNT CHEST TRAUMA : ETIOLOGY, EXTENT OF DANAGE AND MANAGEMENT

KEY WORDS: Trauma , productive age groups, blunt chest injury,manage conservatively,awareness among young

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ABSTRACT
 Trauma is an important and serious problem of public health concern. It leads to disability and mortality especially among most active and productive age group of 0-40 years. In urban areas, blunt type of chest injuries are more frequently found. Urbanization and industrialization are important reasons for these increasing numbers of accidents. **Methods:** This study was carried out among 100 cases of age group 15 to 75 years, all religions and both sexes in tertiary care hospital, civil hospital Ahmedabad, between period of December 2020 to July 2021. Inclusion and exclusion criteria were decided. Etiology, extent of underlying damage and management were studied. **Results:** Majority of Patient (41%) were from 25 to 35 years, majority of patient were male. Vehicular accident was the commonest (60%) cause of injury followed by assault (20%). Most of the patient suffered rib fracture. Majority were treated conservatively. **Conclusion:** Most active age group of 25 to 35 years and male were affected with commonly vehicular accident. This situation can only be controlled by increasing awareness among young and active age group.

INTRODUCTION

Trauma is an important and serious problem of public health concern. It leads to disability and mortality especially among most active and productive age group of 0-40 years. Trauma is the third most leading cause of death globally. It can lead to any kind of disability ranging from short term to long term. Trauma to chest can lead to damage to internal organs like heart, lungs and other tissues of chest thereby threatening and endangering the life of injured person. Most commonly affected body part in any type of accident is chest. Chest injuries most commonly are blunt in nature. These blunt injuries can damage airway and harm the circulation. This affects the outcome in such patients. These injuries are common and increasing in India. In urban areas, such type of injuries is more frequently found. Urbanization and industrialization are important reasons for these increasing numbers of accidents and especially blunt chest injuries. Commonly the young are affected as they are more adventurous. They are the most productive group of the population. In tertiary care hospitals, most of these patients are taken primarily by ambulance services or referred from the lower centers. Most of these patients are of polytrauma patients. Moreover, 20-25% of deaths in polytrauma patients are attributed to chest injury. Blunt chest injuries can lead to fracture of ribs, fracture of sternum and even fracture of thoracic vertebrae. It can also lead to various types of injuries like contusions, lacerations and sometimes causing hemothorax, pneumothorax, hemopneumothorax. Hence the presence of intra-thoracic involvement may be overlooked. Rib fracture acts as the factor that presents the severity of trauma patients. It is common for trauma patients to experience other organ injuries; only 6% to 12% of trauma patients complain only of rib fracture. This study was designed to find out this particular aspect of injury pattern where different etiologies of chest injuries occurring in the tertiary care hospital at Ahmedabad and their management done.

AIM AND OBJECTIVES :

To study the pattern of blunt chest injuries with resultant underlying damage in tertiary care hospital.

METHODS :

The present study was carried out among 100 cases of age group 15 to 75 years, all religions and both sexes in tertiary care hospital at Ahmedabad between the period of December 2020 to July 2021. All patients received in the Emergency

Room (ER/Casualty) were immediately attended and history, primary survey and resuscitation were done simultaneously. X ray chest & HRCT thorax were taken and subsequent management either operative or non-operative was done according to clinic-radiological findings. After discharge, patients were followed on OPD basis till the time they return to the normal activity.

Inclusion criteria

- Patients of age group 15 to 75 years
- All patients of polytrauma
- Patients of vehicular accidents who has sustained chest injury
- Patients of accidental chest injury due to fall from a vehicle, height or in the well
- Patients of chest injuries other than the causes mentioned in 2 and 3.

Exclusion criteria

- Patients who are < 15 years and > 75 years of age
- Patients with associated head injury with altered level of consciousness
- Patients with associated abdominal injury requiring surgery
- Patients having pulmonary TB
- Patients having respiratory tract infection
- Patients having malignant or non-malignant space occupying lesion of chest or lung.

Results :

Majority of patients (41%) were from 25 to 35 years of age group and were male (71%). Vehicular accident was the commonest (60%) cause of injury followed by Assault (20%) followed by fall from height (18%). Most of the patient suffered rib fractures only (39%) followed by rib fracture with Hemothorax (25%). Least common was flail chest (2%). Majority of patient were treated conservatively (62%) followed by ICD insertion (30%) followed by thoracotomy (8%).

Conclusions :

The most active age group of 25 to 35 years and males were affected with commonly vehicular accidents. They mainly suffered chest injuries. This situation can only be controlled by increasing awareness for preventing morbidity and mortality among young and active age group.



Figure 1: chest x ray PA view of multiple ribs fracture with icd in situ on left side in a patient of blunt chest trauma



Figure 2 : ICD with underwater drainage bag on rt side of chest in a patient with blunt chest trauma.



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