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## A study of chest trauma

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### Abstract

Motor vehicle accidents are the most common cause of traumatic chest injuries. Early arrival to the hospital improves the chances of survival. Patients already in shock at the time of arrival to hospital have poor prognosis. There is an increase in traumatic chest injuries in the present days due to increase in road traffic accidents and violence in various forms. Chest trauma cases are usually associated with other injuries also. The most common being head injury, which also incidentally is the most common cause of death in many patients. Complete evaluation of the patient and early intervention can reduce the mortality and morbidity.

**Keywords:** Chest trauma, study, cross sectional study

### Introduction

Thoracic trauma directly accounts for approximately 25% of trauma-related mortality and is a contributing factor in another 25%. Fortunately, over 80% of injuries can be managed nonoperatively utilising tube thoracostomy, appropriate analgesia and aggressive respiratory therapy. The World Health Organisation (WHO) documented over 300,000 deaths in 2008 (9% of all world deaths) [1, 2, 3]. There is an increase in traumatic chest injuries in the present days due to increase in road traffic accidents and violence in various forms. Chest trauma cases are usually associated with other injuries also [4, 7]. The most common being head injury, which also incidentally is the most common cause of death in many patients [8, 9]. Motor vehicle accidents are the most common cause of traumatic chest injuries. Early arrival to the hospital improves the chances of survival. Patients already in shock at the time of arrival to hospital have poor prognosis. There is an increase in traumatic chest injuries in the present days due to increase in road traffic accidents and violence in various forms. Chest trauma cases are usually associated with other injuries also [10]. The most common being head injury, which also incidentally is the most common cause of death in many patients. Complete evaluation of the patient and early intervention can reduce the mortality and morbidity [11, 12]. Complete evaluation of the patient and early intervention can reduce the mortality and morbidity [13]. At the same time, the knowledge about when to intervene and when to adopt an observation approach is also important.

### Aims and Objectives

To study the patients with chest trauma.

### Materials and Methods

This study was done in the Department of Surgery at Srinivas Institute of medical Sciences, Mangalore.

This study was done from Feb 2018 to March 2019.

Twenty-one cases was the sample size of the study.

The signs and the symptoms were noted.

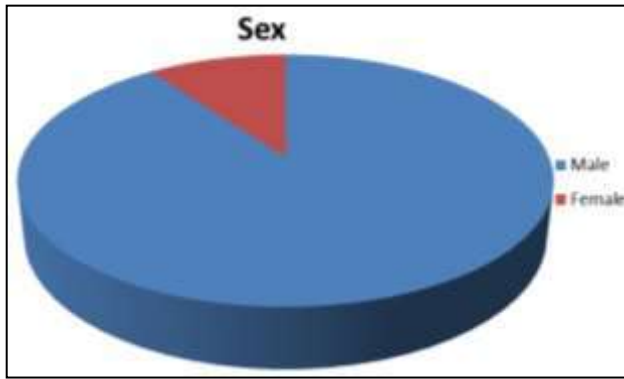
The type of injury, treatment modality and the mortality rate has been noted and described.

### Results

**Table 1:** Age Distribution:

20-30 years	11
31-40 years	07
41-50 years	03
51-60 years	09

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**Fig 2:** Sex Distribution:**Table 2:** Cause of the Injury

RTA	23
Fall from height	02
Stab injury	01
Run over (Compression)	03
Blast	01

**Table 3:** Injury

Soft tissue Injury	14
Multiple rib fracture	07
Haemo/pneumothorax	03
Mediastinal emphysema	01
Lung Injury	03
Heart Injury	01
Diaphragmatic Injury	01
Sucking wounds	02
Flail chest	01

**Table 4:** Intervention:

ICTD	03
Thoracotomy	05
Laparotomy	01
Tracheostomy	18
Laparotomy and Thoracotomy	01

**Table 5:** Other Line of treatment

Shock	24
Blood transfusion	19
Soft tissue and Ortho	11
Ventilatory support	09

**Table 6:** Mortality

Death	07
First 24 hours	04

## Discussion

The thoracic cavity contains three major anatomical systems: the airway, lungs, and the cardiovascular system. As such, any blunt or penetrating trauma can cause significant disruption to each of these systems that can quickly prove to be life threatening unless rapidly identified and treated. Chest trauma accounts for approximately 25% of mortality in trauma patients<sup>[1, 2]</sup>. This rate is much higher in patients with polytraumatic injuries. 85-90% of chest trauma patients can be rapidly stabilized and resuscitated by a handful of critical procedures. Trauma patients are commonly encountered in all emergency departments, not just in specified trauma centers. For this reason, emergency medicine providers should be prepared to appropriately evaluate, resuscitate and stabilize any patient with chest trauma. Unlike other disease entities, trauma patients often present with a known traumatic mechanism such as a car collision, fall,

gunshot or stab wound. In rare cases, a patient may present in a state of significant altered mental status and be unable to provide any significant history. In these situations, certain physical examination clues to the presence of trauma include findings such as contusions, lacerations, or deformities. Palpation of crepitus over the chest wall may also be appreciated.

In patients who are awake and lucid, the chest trauma may present with chest pain, dyspnea, back or abdominal pain, and occasionally syncope. Unstable chest trauma patients may show signs of severe respiratory distress or profound shock requiring emergent resuscitation. Unstable chest trauma patients can also deteriorate to the point of traumatic arrest and depending on the mechanism of chest trauma, may be candidates for an emergent ED thoracotomy. Thoracic trauma can be distinguished by the mechanism of injury. Blunt trauma refers to mechanisms causing increased intrathoracic pressure such as car collisions (most common cause of thoracic trauma), and falls. By comparison, penetrating trauma largely refers to gunshots, stab wounds, and occasionally impalement. There is considerable overlap amongst the various traumatic disorders experienced in both penetrating and blunt chest trauma. However, in comparison to penetrating trauma, blunt chest trauma patients may have a more subtle presentation with less obvious physical exam findings.

## Conclusion

There is an increase in traumatic chest injuries in the present days due to increase in road traffic accidents and violence in various forms. Chest trauma cases are usually associated with other injuries also. The most common being head injury, which also incidentally is the most common cause of death in many patients. Complete evaluation of the patient and early intervention can reduce the mortality and morbidity.

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