

## Original Research

### Assessment of profile of patients reporting with blunt abdominal: A retrospective study

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#### ABSTRACT:

**Background:** Trauma has been called the neglected disease of modern society, despite its close companionship with man. Trauma is the leading cause of death and disability in developing countries and the most common cause of death under 45 years of age. Hence; the present study was conducted for assessing the profile of patients reporting with blunt abdominal. **Materials & methods:** The present study was conducted on 200 patients admitted in the surgical ward, with blunt trauma abdomen (BAT). From the institutional ethical committee, ethical approval was taken and written consent was obtained from all the patients after explaining in detail the entire research protocol. On presentation, an assessment of the vital functions was done. Primary survey was focus on the ABC of resuscitation i.e. restoration of airway, breathing and circulation. The intra-operative finding i.e. organ involved in the injury sustained and management done was recorded. **Results:** Mean age of the patients was 38.6 years. 94 percent of the patients were males. Road traffic accident was the etiology in 76 percent of the patients. Abdominal distension was seen in 79.5 percent of the patients. Haematuria was seen in 9 percent of the patients. According to chest X- ray Abdomen with air under diaphragm was seen in 12 percent of the patients. Hematemesis was seen in 16 percent of the patients. **Conclusion:** Unlike penetrating abdominal trauma, where management is largely determined clinically, the diagnosis of blunt abdominal injury by clinical examination is unreliable, particularly in patients with a decreased level of consciousness.

**Key words:** Profile, Blunt Abdominal trauma

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#### INTRODUCTION

Trauma has been called the neglected disease of modern society, despite its close companionship with man. Trauma is the leading cause of death and disability in developing countries and the most common cause of death under 45 years of age.<sup>1</sup> World over injury is the 7th cause of mortality and abdomen is the third most common injured organ. Abdominal injuries require surgery in about 25% of cases. 85% of abdominal traumas are of blunt character.<sup>2</sup> The spleen and liver are the most commonly injured organs as a result of blunt trauma. Clinical examination alone is inadequate because patients may have altered mental status and distracting injuries. Initial resuscitation along with focused assessment with sonography in trauma (FAST) and computed tomography (CT) abdomen are very beneficial to detect those patients with minimal and clinically undetectable signs of abdominal injury and are the part of recent

management guidelines. Approach to trauma should be systemic and prioritized. About 10% of patients have persistent hypovolemic shock as a result of continuous blood loss in spite of aggressive fluid resuscitation and require an urgent laparotomy.<sup>3-5</sup> Plain abdominal radiography has no role in the assessment of blunt abdominal trauma, although some authorities continue to advocate its use. Little evidence exists to support such a recommendation, and it is difficult to justify conceptually—plain abdominal radiography does not visualise abdominal viscera or detect free fluid, so it cannot provide direct evidence of organ injury or indirect evidence of haemorrhage. Abdominal radiography may provide indirect evidence of hollow viscus injury by showing air or gas in the peritoneum, but it lacks sensitivity and specificity.<sup>6, 7</sup> Hence; the present study was conducted for assessing the profile of patients reporting with blunt abdominal.

## MATERIALS & METHODS

The present study was conducted for assessing the profile of patients reporting with blunt abdominal. The present study was conducted on 200 patients admitted in the surgical ward, with blunt trauma abdomen (BAT). From the institutional ethical committee, ethical approval was taken and written consent was obtained from all the patients after explaining in detail the entire research protocol.

### INCLUSION CRITERIA

- 1) Patients with blunt trauma abdomen.

### EXCLUSION CRITERIA

- 1) Patients with penetrating trauma abdomen.

On presentation, an assessment of the vital functions was done. Primary survey was focus on the ABC of resuscitation i.e. restoration of airway, breathing and circulation. Simultaneously recording detailed history

including demographic profile, mode of presentation, time of presentation, clinical profile and haematological investigations like Hb, BT,CT, TLC ,DLC, RBS, Blood Urea, serum creatinine, serum electrolytes, serum amylase was done. The intra-operative finding i.e. organ involved in the injury sustained and management done was recorded. All the results were analysed by SPSS software.

## RESULTS

Mean age of the patients was 38.6 years. 94 percent of the patients were males. Road traffic accident was the etiology in 76 percent of the patients. Abdominal distension was seen in 79.5 percent of the patients. Haematuria was seen in 9 percent of the patients. According to chest X- ray Abdomen with air under diaphragm was seen in 12 percent of the patients. Hematemesis was seen in 16 percent of the patients.

**Table 1: Distribution of subjects according to age**

Age group (years)	Frequency	Percentage
<20	20	10
21-40	121	60.5
41- 60	39	18.5
>60	20	10
<b>Total</b>	<b>200</b>	<b>100</b>

**Table 2: Distribution of subjects according to gender**

Gender	Frequency	Percentage
Male	188	94
Female	12	6
<b>Total</b>	<b>200</b>	<b>100</b>

**Table 3: Distribution of subjects according to aetiology**

Gender	Frequency	Percentage
Road traffic accident	152	76
Fall from height	19	19
Assault	5	5
<b>Total</b>	<b>200</b>	<b>100</b>

**Table 4: Distribution of subjects according to abdomen distension**

Abdomen distension	Frequency	Percent
Absent	41	20.5
Present	159	79.5
<b>Total</b>	<b>200</b>	<b>100</b>

**Table 5: Distribution of subjects according to haematuria**

Haematuria	Frequency	Percent
Absent	182	91
Present	18	9
<b>Total</b>	<b>200</b>	<b>100.0</b>

**Table 6: Distribution of subjects according to chest X- ray Abdomen with air under diaphragm**

Parameter	Frequency	Percent
Absent	176	88
Present	24	12
<b>Total</b>	<b>200</b>	<b>100</b>

**Table 7: Distribution of subjects according to hematemesis**

Hematemesis	Frequency	Percent
Absent	184	92
Present	16	8
Total	200	100.0

## DISCUSSION

Trauma is still the most frequent cause of death in the first four decades of life, and it remains a major public health problem in every country, regardless of the level of socioeconomic development. The abdomen is the third most common injured region, with surgery required in about 25% of civilian cases. Abdominal trauma is traditionally classified as either blunt or penetrating. Penetrating abdominal trauma can usually be diagnosed easily and reliably, whereas blunt abdominal trauma is often missed because clinical signs are less obvious. Blunt abdominal injuries predominate in rural areas, while penetrating ones are more frequent in urban settings. Penetrating abdominal trauma is often subdivided into stab wounds and gunshot wounds, which require different methods of treatment.<sup>6-9</sup> Hence; the present study was conducted for assessing the profile of patients reporting with blunt abdominal.

Mean age of the patients was 38.6 years. 94 percent of the patients were males. Road traffic accident was the etiology in 76 percent of the patients. Abdominal distension was seen in 79.5 percent of the patients. Giannopoulos GA et al evaluated the feasibility and safety of non-operative management (NOM) of blunt abdominal trauma in a district general hospital with middle volume trauma case load. Demographic, medical and trauma characteristics, type of treatment and outcome were examined. Patients were divided in 3 groups: those who underwent immediate laparotomy (OP group), those who had a successful NOM (NOM-S group) and those with a NOM failure (NOM-F group). NOM failure occurred mainly in patients with splenic trauma. According to our experience, the hemodynamically stable or easily stabilized trauma patient can be admitted in a non-ICU ward with the provision of close monitoring.<sup>10</sup> Howes N et al analysed patients who required a laparotomy for blunt torso trauma at a busy metropolitan trauma service in South Africa. A total of 926 patients were treated for blunt trauma by the Pietermaritzburg metropolitan services during the period under consideration. The mortality rate was 26% (18 patients). There were 6 deaths from massive bleeding, all within 6 hours of operation, and 3 deaths from renal failure; the remaining 9 patients died of multiple organ failure. There were 8 negative laparotomies (7%). CT scans were done in 25 patients. In 20 patients the systolic blood pressure on presentation was <90 mmHg and in 41 the pulse rate was >110 beats/min. In 16 patients there was a base excess of <-4 on presentation. Laparotomy is needed in less than 10% of patients who sustain blunt abdominal trauma.<sup>11</sup>

Haematuria was seen in 9 percent of the patients. According to chest X- ray Abdomen with air under diaphragm was seen in 12 percent of the patients. Hematemesis was seen in 16 percent of the patients. Sreeramulu PN et al evaluated the results of an operative and conservative management of 55 patients with liver injury treated in a single institution. The patients were categorised according to the mode of treatment received. Group I: Conservative management; Group II: Operative management. Variables analyzed included demographic data, cause of injury, grade of injury, associated injuries, vitals, haemoglobin values, mode of treatment and complications. A total of 55 patients were analyzed. 16 patients had sustained severe injuries. Mean pulse rate in conservative and operative group was 92 and 102 beats/min respectively. Mean blood pressure in conservative and operative group was 110/70 and 90/60 mmHg respectively. Conservative treatment is an adequate treatment in mild to moderate liver injury patients. Failure of conservative treatment did not show a higher incidence of complications or mortality but it should be performed in centres with experienced surgeons.<sup>12</sup>

## CONCLUSION

Unlike penetrating abdominal trauma, where management is largely determined clinically, the diagnosis of blunt abdominal injury by clinical examination is unreliable, particularly in patients with a decreased level of consciousness.

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