

Original Research

Assessment of pattern of abdominal injuries in population- A clinical study

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ABSTRACT:

Background: The present study was conducted to assess pattern of abdominal injuries in population. **Materials & Methods:** 104 cases of abdominal injuries were recorded. Parameters such as mode, mechanism of trauma and treatment given in the pre-hospital phase were recorded. Patients underwent surgery management. **Results:** The mode of injury was road traffic accident in 65, fall in 23, physical violence in 14, assault in 12 and others in 10 patients. The common organs involved was small bowel in 30, spleen in 56, liver in 23, stomach in 14, rectum in 27, large bowel in 12 and pancreas in 9 cases. The difference was significant ($P < 0.05$). **Conclusion:** Abdominal injuries are on rise. Road traffic accident was the leading cause of abdominal injuries.

Key words: Abdominal injuries, road traffic accident, Spleen

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INTRODUCTION

Trauma is a leading cause of morbidity and mortality in today's world. Generally, the people of the most active and productive age groups are involved, which adds a serious economic loss to the community.¹ Abdominal injuries are very common in cases of trauma.²

Abdominal trauma is traditionally classified as either blunt abdominal or penetrating abdominal trauma (PAT). PAT is mostly diagnosed reliably and easily, whereas blunt abdominal trauma (BAT) is often missed because clinical signs are less obvious. Mortality in major BAT reported to be as high as 36%.³ Common people of most productive and active age group are involved in BAT. Delay in diagnosis can be dangerous to the patient and can affect the overall morbidity and mortality. Proper understanding of etiology and pattern of blunt abdominal trauma can help in improving the final outcome.⁴

In general, injury to the abdomen may result from either a blunt force or penetrating objects. In developing countries many factors contribute to heightened

morbidity and mortality including poor pre-hospital care, delayed presentation and treatment, challenges in diagnosis of BAT and associated multiple organs and extra abdominal injuries.⁵ In order to counter these factors, it is necessary to establish proper trauma systems that will expedite treatments in trauma victims.^{6,7} The present study was conducted to assess pattern of abdominal injuries in population.

MATERIALS & METHODS

The present study was conducted on 104 cases of abdominal injuries of both genders. The enrollment of patients was done after they agreed to participate in the study. Ethical approval for the study was obtained from ethical committee.

Data such as name, age, gender etc. was recorded. Parameters such as mode, mechanism of trauma and treatment given in the pre-hospital phase were recorded. Patients underwent surgery management. Results were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS:

Table I Distribution of patients

Total- 104		
Gender	Males	Females
Number	68	36

Table I shows that out of 104 patients, males were 68 and females were 36.

Table II Assessment of mechanism of injury

Mode	Number	P value
Road traffic accident	65	0.021
Fall	23	
Physical violence	14	
Assault	12	
Others	10	

Table II, graph I shows that mode of injury was road traffic accident in 65, fall in 23, physical violence in 14, assault in 12 and others in 10 patients. The difference was significant ($P < 0.05$).

Graph I Assessment of mechanism of injury

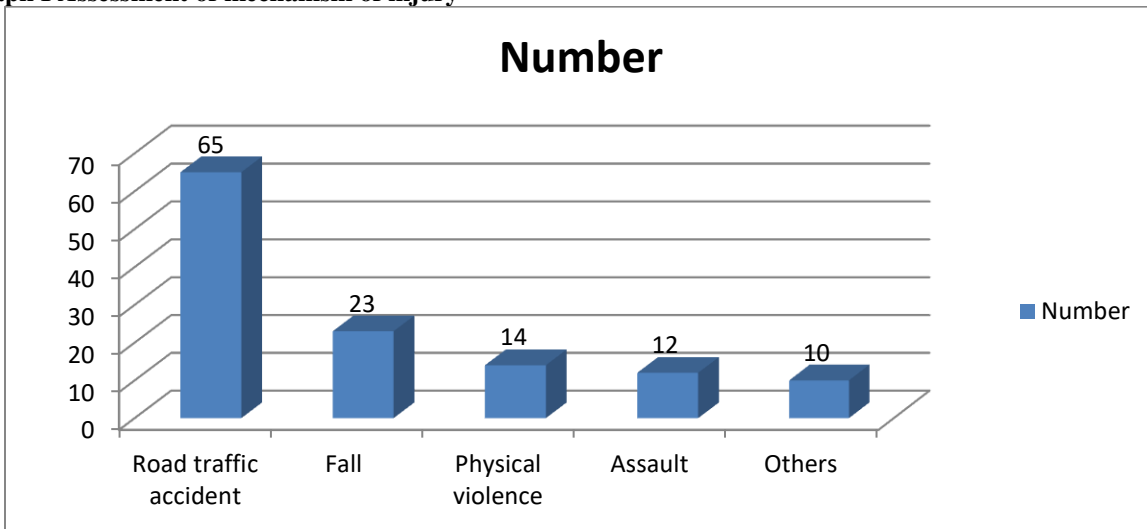


Table III Involvement of organs

Organs	Number	P value
Small Bowel	30	0.05
Spleen	56	
Liver	23	
Stomach	14	
Rectum	27	
Large bowel	12	
Pancreases	9	

Table III, graph I shows that common organs involved was small bowel in 30, spleen in 56, liver in 23, stomach in 14, rectum in 27, large bowel in 12 and pancreas in 9 cases. The difference was significant ($P < 0.05$).

Table IV Management given to patients

Management	Number	P value
Conservative	72	0.001
Surgical	32	

Table IV shows that in 72 cases, management given was conservative and in 32 cases surgical treatment was given. The difference was significant ($P < 0.05$).

DISCUSSION

The incidence of abdominal trauma has been on the increase in most major cities due to favourable social and political factors, leading to civilian unrest, conflicts, and injuries.⁸ Abdominal trauma is a major cause of mortality and morbidity especially with multiple organ involvement. The number of deaths due to trauma is similarly noted to be on the increase.⁹ The present study was conducted to assess pattern of abdominal injuries in population.

In present study, out of 104 patients, males were 68 and females were 36. We found that mode of injury was road traffic accident in 65, fall in 23, physical violence in 14, assault in 12 and others in 10 patients. Kundlas et al¹⁰ found that among total patients, 49% patients were between 21 to 40 years age group. Road traffic accident was the commonest cause of abdominal trauma with 68% cases followed by trauma due to fall from height in 13% cases. Among 153 subjects, blunt injury was found in 87% while penetrating injury was found in 13% of patients. Solid organ injury was found in 86 cases and hollow viscus injury was observed in 29 cases. Among the study group, 100 patients were managed conservatively and 53 patients were managed surgically. In this study, shortest duration of hospital stay was one day and longest duration was 60 days. RTA forms the most common mode of injury in abdominal trauma. FAST is a reliable and quick investigation to diagnose abdominal trauma. Majority of the Blunt injury abdomen cases can be managed conservatively.

We found that common organs involved was small bowel in 30, spleen in 56, liver in 23, stomach in 14, rectum in 27, large bowel in 12 and pancreas in 9 cases. We found that in 72 cases, management given was conservative and in 32 cases surgical treatment was given. Sah et al¹¹ found that there were total 87 cases of abdominal injuries, during the study period. 51 victims were in 2nd to 4th decades of life, 12 in 5th decade, 11 in 1st decade and the remaining 12 patients were in either extremes of age groups. The male to female ratio was 3.3:1. There were 61 cases of blunt abdominal injuries and 26 cases of penetrating injuries. Most commonly injured viscus in blunt trauma was bowel, and in cases of penetrating injuries, spleen. Blunt injuries were caused due to accidents in 57 cases and homicides in 4 cases. Penetrating injuries were also

most commonly caused due to accidents in 16 cases and homicides in 10 the mortality rate was 4.6%.

Sheshe et al¹² conducted a study in which a total of 46 patients were studied; 35 (76.1%) of which had penetrating abdominal trauma (PAT) and 11 (23.9%) had blunt abdominal trauma (BAT). The male: female ratio was 8.2:1 with peak age range of 20–29 years. Stab wounds accounted for 46% and gunshot for 31% of PAT, while road traffic accidents (RTA) accounted for 82% of the BAT group. The intestine (41%), the liver (25%) are the most common organs injured in PAT, while the spleen and intestine each constituting 29% are the most frequent injured in BAT. Ninety-one percent had exploratory laparotomy, while (4) 9% were successfully managed non-operatively. The post-operative mortality rate was 16.7%.

The limitation of the study was small sample size and short follow up.

CONCLUSION

Authors found that road traffic accident was the leading cause of abdominal injuries and the most commonly involved organ was spleen.

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