



## Analysis of cases of abdominal injuries in study population

Authors

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### Abstract

**Background:** Abdominal trauma is increasing day by day due to increase in the number of vehicles, on the road which are responsible for increase in the road side accidents. The present study was conducted to assess the abdominal injuries in study population.

**Materials & Methods:** The present study was conducted in the department of general surgery on 76 patients. In all patients, abdominal injuries, extraabdominal injuries and operative injuries etc. was noted.

**Results:** Out of 76 patients, males were 36 and females were 40. The difference was non- significant ( $P=0.1$ ). Age group 11-20 years had 10 cases, 21-30 years had 24 cases, 31-40 years had 20 cases, 41-50 years had 16 cases and 51-60 years had 6 cases. The difference was significant ( $P<0.05$ ). Abdominal injuries were stomach (13), duodenum (10), small bowel (12), rectum (8), liver (11), kidney (9) and spleen (7). The difference was non- significant ( $P>0.05$ ). Extra abdominal injuries were head injury (5), chest injury (10), extremity injury (12), pelvis injury (4) and spine injury (2). The difference was non- significant ( $P>0.05$ ). Various operative procedures were splenectomy (10), perforation closure (4), repair of diaphragmatic tear (6), repair of urinary bladder rupture (7) and resection of small bowel (9). The difference was non-significant ( $P>0.05$ ).

**Conclusion:** Abdominal injuries are quite common in all ages. Maximum number was seen in age group 21-30 years. Splenectomy was the most commonly performed operative procedure.

**Keywords:** Abdominal injuries, Stomach, Splenectomy.

### Introduction

In the modern fast life, the road side accidents are increasing. Reports suggest that over the past few years due to excessive enhancement of vehicles, the incidents of accidents have doubled. It has significantly resulted into loss of precious lives and has been known for high mortality and morbidity. Injuries to abdominal organs results in life threatening events which is due to excessive hemorrhage into the abdomen. Patients face temporary or permanent disability. Due to

urbanization and industrialization, the overcrowded road with vehicles and people pose a threat to the life in countries like India.

Abdominal trauma is classified into blunt or penetrating trauma. The diagnosis of blunt trauma poses challenge for the surgeon as compared to penetrating abdominal trauma due to unreliability of clinical features.<sup>1</sup> Person may experience trauma to limbs, fractures of vertebrae, loss of consciousness. Abdominal trauma is most of the cases are associated with other associated injuries

such as injury to spleen etc.<sup>2</sup> In most of the cases, diagnosis of blunt abdominal trauma is more likely to be delayed or altogether missed as symptoms are signs are less pronounced. Blunt injuries predominate in rural areas, while penetrating ones are more frequent in urban settings. Penetrating trauma is further subdivided into stab wounds and gunshot wounds, which require different methods of treatment.<sup>3</sup> The present study was conducted to assess the abdominal injuries in study population.

### Materials & Methods

The present study was conducted in the department of general surgery. It comprised of 76 patients of both genders. All were informed regarding the study and written consent was obtained. Ethical clearance was obtained from institutional ethical committee.

General information such as name, age, gender etc. was recorded. In all patients, mode of injury,

type of management, abdominal injuries, extraabdominal injuries etc. was noted. Conservative treatment was given wherever necessary. Close monitoring of vital parameters of patient in surgical intensive care unit, administration of adequate IV fluids, blood transfusion was done when needed. In cases of failure to respond to conservative treatment, surgical exploration was done. Results were subjected to statistical analysis. P value less than 0.05 was considered significant.

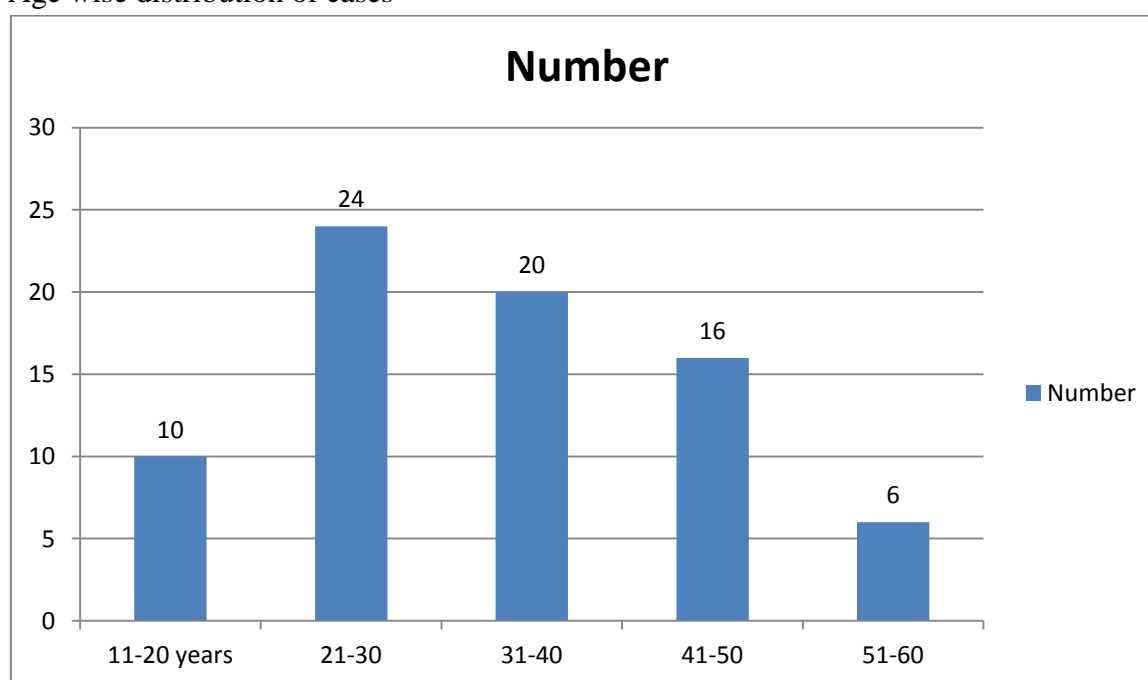
### Results

**Table I** Distribution of patients

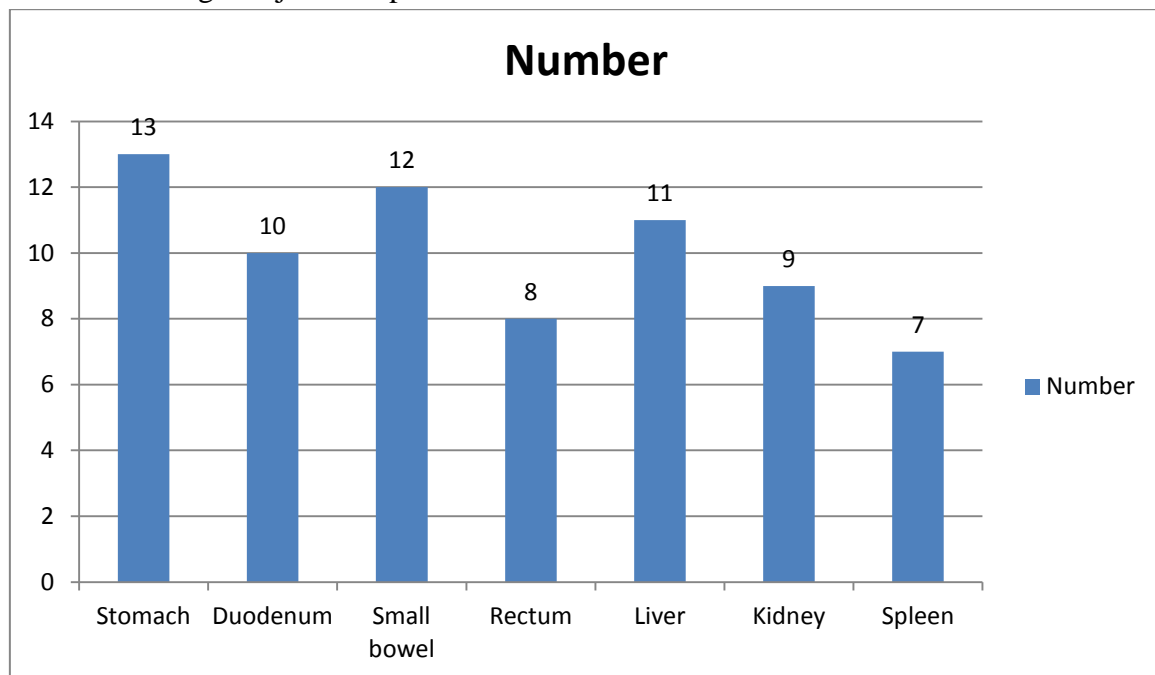
Total- 76		
Males	Females	P value
36	40	0.1

Table I shows that out of 76 patients, males were 36 and females were 40. The difference was non-significant (P- 0.1).

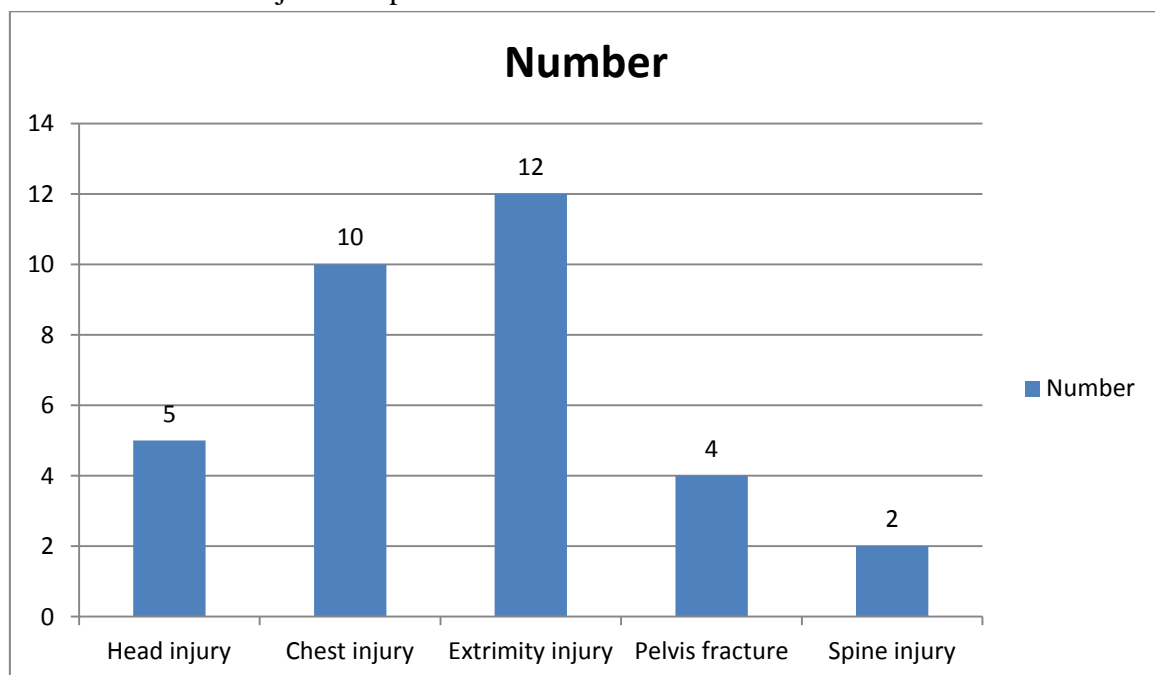
**Graph I** Age wise distribution of cases



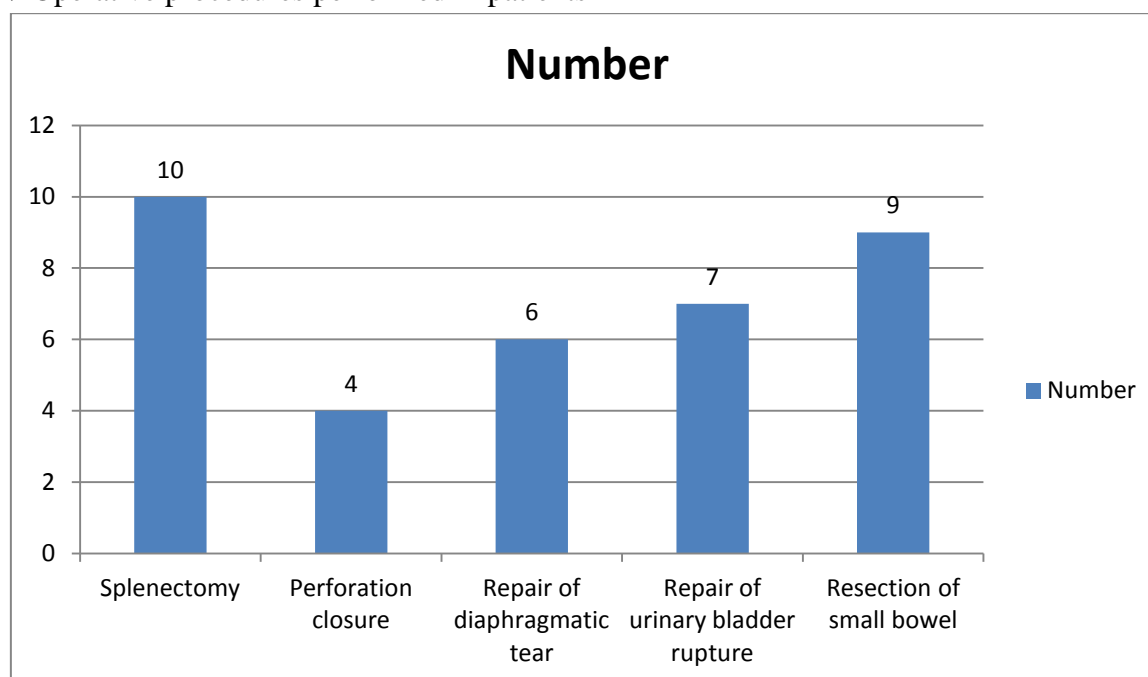
Graph I shows that age group 11-20 years had 10 cases, 21-30 years had 24 cases, 31-40 years had 20 cases, 41-50 years had 16 cases and 51-60 years had 6 cases. The difference was significant (P< 0.05).

**Graph II** Abdominal organ injuries in patients

Graph II shows that abdominal injuries were stomach (13), duodenum (10), small bowel (12), rectum (8), liver (11), kidney (9) and spleen (7). The difference was non- significant ( $P > 0.05$ ).

**Graph III** Extra abdominal injuries in patients

Graph III shows that extra abdominal injuries were head injury (5), chest injury (10), extremity injury (12), pelvis injury (4) and spine injury (2). The difference was non- significant ( $P > 0.05$ ).

**Graph IV** Operative procedures performed in patients

Graph IV shows that various operative procedures were splenectomy (10), perforation closure (4), repair of diaphragmatic tear (6), repair of urinary bladder rupture (7) and resection of small bowel (9). The difference was non-significant ( $P > 0.05$ ).

### Discussion

Road traffic accidents (RTA) are now considered major reason for loss of life and have been known for high morbidity and mortality in today's life. The prevalence of young population in RTA is high as compared to older group. Abdominal injuries are very common in cases of trauma.<sup>4</sup>

We found that out of 76 patients, males were 36 and females were 40. Age group 11-20 years had 10 cases, 21-30 years had 24 cases, 31-40 years had 20 cases, 41-50 years had 16 cases and 51-60 years had 6 cases. This is in agreement with Maurice et al.<sup>5</sup>

Sah<sup>6</sup> in his study reported cases of abdominal injuries. The most common age group was fifth decade (12) followed by first decade (11) and third decade (10). The male: female ratio was 3.3:1. 61 cases of blunt abdominal injuries and 26 cases of penetrating injuries were seen. Bowel was the commonly traumatized viscus in blunt trauma and spleen in cases of penetrating injury. Blunt injuries were caused due to accidents in 57 cases and homicides in 4 cases. Author reported 4.6% mortality rate.

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Collisions of motor vehicle are a common supply of blunt abdominal trauma. Seat belts decrease the frequency of injuries such as head injury and chest injury, but present a risk to such abdominal organs as the pancreas and the intestines. The chances of compression of these organs against spinal cord increases.<sup>8</sup> Children are especially susceptible to abdominal injury from seat belts, because they have softer abdominal regions and seat belts were not designed to fit them. In children, bicycle mishaps are also a common cause of abdominal injury, especially when the abdomen is struck by the handlebars. Sports injuries can affect abdominal organs such as the spleen and kidneys.

Falls and sports are also frequent mechanisms of abdominal injury in children. Abdominal injury may result from child abuse and is the second leading cause of child abuse-related death, after traumatic brain injury.<sup>9</sup>

### Conclusion

Abdominal injuries are quite common in all ages. Maximum number was seen in age group 21-30 years. Splenectomy was the most commonly performed operative procedure.

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