

Hospital based study of clinical profile of blunt splenic trauma

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Abstract

Introduction: Blunt splenic trauma is considered as a life threatening and major trauma. It is a critical issue whenever a patient sustains trauma and has been reported to be the second most frequently affected solid organ in cases of blunt abdominal trauma. Earlier epidemiological research regarding incidence of splenic injury has mentioned that there are variations with respect to geographical area, ethnicity and other factors. Present study describes the clinical profile of blunt splenic trauma cases presenting at the surgery department of our tertiary care hospital in Aurangabad district of Maharashtra. **Methods:** This descriptive study was conducted at Department of Surgery, Government Medical College and Hospital Aurangabad. Study period was of two years from Nov 2013 to Nov 2015. All patients diagnosed to have Splenic injury due to blunt trauma, attending Casualty or OPD or referred from other centres to our tertiary centre were included in the study. The study involved 32 cases of splenic injuries due to blunt trauma. Details like Age and Sex distribution of patients, mode of injury, presenting symptoms and associated injuries were described. **Results and Conclusion:** In our study 19 out of 32 cases (59.37%) have occurred in younger age group of less than 30 years. The study comprised of 29 males and 3 females. Male to female ratio was 9.7:1. Most common mode of injury was road traffic accident (71.87%), followed by fall from height (25%), and assault (3.12%). All the patients presented with symptom of Right hypochondriac pain whereas Left Lower Chest Pain was complained by 13 patients (40.62%), rest of complaints were according to other organs injured. Chest injuries were the most common associated injury seen in 4 patients. Present study gives insight regarding the clinical profile of blunt splenic trauma cases presenting at the surgery department of our tertiary care hospital in Aurangabad district of Maharashtra.


Keywords: Blunt splenic trauma, Road traffic accident, Right hypochondriac pain.

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INTRODUCTION

Blunt splenic trauma is considered as a life threatening and major trauma. It is a critical issue whenever a patient sustains trauma and has been reported to be the second most frequently affected solid organ in cases of blunt abdominal trauma [1-3]. Road traffic accidents are a major cause of trauma leading to splenic injury. Also, it has been observed that the age group affected is young i.e.

second and third decade of life, which is most active phase of life during which motor vehicle use and outdoor activities contribute to a high risk of trauma [4]. Earlier epidemiological research regarding incidence of splenic injury has mentioned that there are variations with respect to geographical area, ethnicity and other factors.^{1, 5, 6} Present study describes the clinical profile of blunt splenic trauma cases presenting at the surgery department of our tertiary care hospital in Aurangabad district of Maharashtra.

METHODS

This descriptive study was conducted at Department of Surgery, Government Medical College and Hospital Aurangabad, Maharashtra. Study period was of two years from Nov 2013 to Nov 2015. The study protocol was approved by the ethics committee of the institution. All patients diagnosed to have splenic injury due to blunt trauma, attending Casualty or OPD or referred from other

centres to our tertiary centre were included in the study. Informed consent was taken from all the participants. The study involved 32 cases of splenic injuries due to blunt trauma. Details like Age and Sex distribution of patients, mode of injury, presenting symptoms and associated injuries were described.

RESULTS

Table 1: Age and Sex Distribution

Age	< 15 years	16 -29 years	30 -49 years	Total
Male	4	12	13	29
Female	2	1	0	3
Total	6	13	13	32

Table 2: Mode of injury

Mode of injury	Number of Cases	Percentage
Road Traffic Accident	23	71.87%
Fall	8	25.00%
Assault	1	03.12%
Total	32	100%

Table 3: Symptoms with which patients presented

Symptom	Subjects	Percentage
Left Hypochondriac Pain	32	100%
Left Lower Chest Pain	13	40.62%
Abdominal Distension	14	43.75%

Table 4: Associated injuries

Associated Injuries	Number of Cases	Percentage
Chest Injuries	4	12.5%
Head Injuries	2	6.25%
Pelvic Bones Fracture	1	3.12%
Liver	1	3.12%
Long Bones	2	6.25%
Kidney And Urinary Bladder	1	3.12%
Caecal Perforation	1	3.12%
Polytrauma	1	3.12%

DISCUSSION

In our study 19 out of 32 cases (59.37%) have occurred in younger age group of less than 30 years. The study comprised of 29 males and 3 females. Male to female ratio was 9.7:1. Most common mode of injury was road traffic accident (71.87%), followed by fall from height (25%), and assault (3.12%). All the patients presented with symptom of Right hypochondriac pain whereas Left Lower Chest Pain was complained by 13 patients (40.62%), rest of complaints were according to other organs injured. The age incidence in younger age group is similar to the reports available in literature. Hussain *et al* [4] study of 30 patients done in Assam state of India reported peak incidence between 15 to 25 years of age with 40% patients falling in this age group. Also, similar to our study results, males were predominant in their study with male: female ratio of 6.5:1. Road traffic

accidents and were the most frequent cause of blunt splenic trauma in their study also with 66.66% cases contributed by it. Study by Soo KM *et al* [1] done on a large sample from Taiwan also mentioned that males were more affected and comprised 73.18% of the patients. They also reported that traffic accidents were the common cause of blunt splenic trauma noted in 32.53% cases. Study by Sinha S *et al* [7] also reported a high percentage of patients of blunt splenic trauma being males with a male: female ratio of 6:1. Road traffic accidents and falls were major causes of blunt splenic trauma in their study. However, their data reflected an important finding which was highlighted by the authors. They mentioned that ‘incidence of splenic trauma has decreased presumably following the introduction of strict traffic rules and the mandatory wearing of seat belts. In a busy general hospital in United Kingdom where the authors were working, they were surprised to identify only 21 patients of blunt splenic trauma over a 7-year period. In our study, Chest injuries were the most common associated injury seen in 4 patients (12.5%). Hussain *et al* [4] study also mentioned that chest injury with rib fracture was the common associated injury noticed in 13.33% cases.

There are limitations of our study like a hospital based and observational study design. Further robust studies should be done to understand the epidemiology and clinical profile of blunt splenic trauma which will help in designing better community based prevention strategies and management options.

To conclude, blunt splenic trauma is a problem affecting mainly young male population and road traffic accidents and falls are the common causes as per the findings of our study.

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