

The Scenario of Abdominal Wound Victims, Treated and Autopsied at Al-Ameen Medical College Hospital and District Hospital, Vijayapur- Karnataka

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Abstract

Introduction: Even in 21st century in spite of advances in medical sciences threat to human life by abdominal wounds is a challenge to medical man. In an attempt to save the life in medical emergencies, assessment of extent and depth of intra abdominal wounds is not easy.

Materials and Methods: All the cases of abdominal wounds that are treated admitted and autopsies held on the dead bodies at Al-Ameen medical college hospital and District hospital Vijayapur during the period from January 2009 to 31st December 2009 were included in the study. Demographic details, pattern of death and types of injuries were studied.

Results: Out of 101 cases of victims of abdominal wounds, 79 cases (78.21%) were males & 22 cases (21.78%) were females. Most common age group affected was 21-40 years & the main cause of injury was due to road traffic accidents. Liver was the most common organ injured followed by combination of intestines & mesentery. Haemorrhagic shock was the main cause of death.

Conclusion: First 6 hours is the most crucial period as most fatal cases are recorded in that time, which needs prompt transport & improved treatment infrastructure for survival of abdominal injury cases.

Key words: abdominal wounds, fatal, liver, road traffic accident, shock.

Introduction

Trauma-- one of the leading preventable causes of death in developing countries is a major health and social problem. Trauma affects generally the young

people and accounts for loss of more years of life, than lost due to cancer and heart diseases put together¹.

According to the world health organisation by the year 2020, trauma will become the first or second

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leading cause of death over all ages². Abdominal injury is a significant cause of morbidity and mortality; expedient diagnosis and treatment of intra abdominal injuries are essential to prevent morbidity and death³.

The objective of the study was to know: Age & sex of victims, manner of abdominal injuries, pattern & type of injury, common organ involved, associated injuries, and cause of death & duration of survival in abdominal injuries.

Materials and Methods

The present study was conducted at Al Ameen medical college, Hospital Vijayapur, Karnataka from January 2009 to 31st December 2009. Total 101 cases were studied, which included brought dead, treated, survived and died while giving treatment. Clinical history and other relevant data were collected from hospital case sheets and summaries. Detailed description about the pattern, nature of injuries, complications, cause of death and mechanism of death was taken. All the cases other than abdominal injuries were excluded from the study.

Statistical analysis: The data was entered in the Microsoft excel sheet and the statistical analysis was done by using SPSS Software version 21.

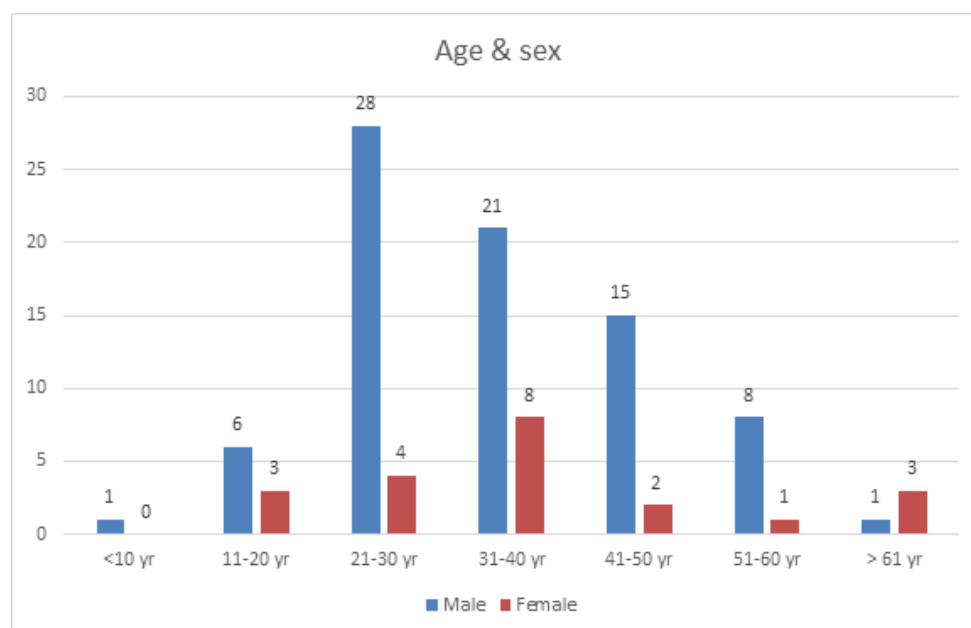
In the present study, out of 101 cases studied was in the age group of 21-40 years only 4 cases in age group >60 years & only 1 case in <10 years age group [Graph:1]. Out of 101 victims 79 (78.92%) cases were males & 22 (21.78%) cases were females [Table:1]. Accidental cases 68 in number are more than assault/homicidal 33 cases and suicidal cases [Graph:2]

Out of 101 cases studied 88(87.13%) cases were blunt injury & 13(12.87%) were penetrating type injury. Liver is the most common organ involved 31% followed by combination of intestines, mesentery (18%) and Spleen (12%).

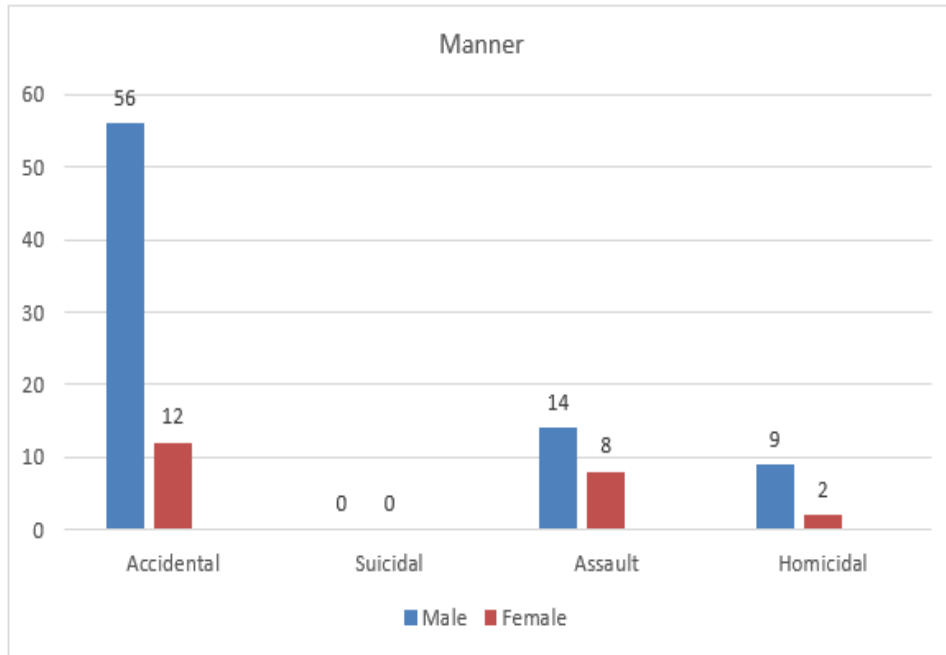
Table 2: shows head is the common single site involvement associated with abdominal wounds in the study 20 (19.80%) cases. However, multiple site involvement was commonest. Table 3: shows commonest cause of death in abdominal wound as haemorrhagic shock in 54 (87.09%) cases, infection 7 (11.29%) cases. Only 1 case died due to neurogenic shock.

Table 4: shows 14 males and 3 females died on the spot, 5 males & 4 females died within 1 hr, 11 males died within 1-6 hr after reaching hospital. Only 1 survived for more than one week. Out of 101 cases 28 males and 11 females got cured and survived showing the fatal phase of abdominal wounds.

Results



Graph 1: Shows the number of abdominal wound cases in relation to Age & Sex.



Graph 2: Shows number of cases of abdominal wounds in relation to manner.

Table 1: Depicts the number of males and females cases with abdominal injury

Sl. No	No of Cases	Percentage
Male	79	78.22%
Female	22	21.78%
Total	101	100%

Table 2: Shows other body regions associated with abdominal wounds.

Body region associated with abdominal injury	Number	Percentage
Head	20	19.80%
Chest	16	15.84%
Limb & Extremities	16	15.84%
Only Abdominal	25	24.75%
Multiple	24	23.76%

Sl. No	Cause	Number	Percentage
1.	Neurogenic shock	01	1.61%
2.	Haemorrhage	54	87.09%
3.	Infection	07	11.29%

Table 3: Shows commonest cause of death in abdominal wound

Table 4: Shows duration of survival in abdominal wound cases in relation to sex.

Duration of survival	Male number	Percentage	Female number	Percentage
Spot death	14	13.86%	3	2.97%
Within 1 hr	5	4.95%	4	3.96%
1-6 hrs	11	10.89%	0	0
6-12 hrs	3	2.97%	0	0
12-24 hrs	6	5.94%	1	0.99%
1-2 days	6	5.94%	1	0.99%
2-7 days	6	5.94%	1	0.99%
More than 1 week	0	0	1	0.99%
Survived	8	27.72%	11	10.89%

Discussion

In the present study, total 101 cases were studied, 39 cases survived, 16 cases were brought dead and 46 cases died while on treatment.

Out of these 101 cases, males 49(48.51%) cases and females 12(11.88%) belong to the age group of 21-40 years. This age between 21-40 years, subjects lead a more active life & are at the peak of their creativity having the tendency to take risk, thereby subjecting themselves to the dangers of accidents and injuries. The findings consistent with present study were reported by M A B Siddique et. al.⁴, Akash Janjhi⁵, M Sugatha⁶ & B.V.S.Ananda Rao⁷.

In our study out of 101 cases, 79(78.21%) cases were males and 22 (21.78%) cases were females. Indicating that males are more vulnerable than females, probably due to the fact that males are usually the earning members of the families make them more vulnerable to the accidents, industrial mishaps & also risk of violence as compared to females who indulge in household activities. These findings are almost similar to M Sugatha⁶, Ananda Rao BVS⁷, Khajuria et. al.⁸ & Numan Husaini et. al.⁹.

In this study 68(67.32%) cases were accidental accounting for more than 2/3rd of total cases, out of 68 cases, 63(92.64%) were due to road traffic accidents & 3 cases due to fall from height & 2 cases for other reasons. Devi.T.H.Meera et. al.¹⁰, John F.Ferry et. al.¹¹ & Rashid Nehal Khan¹² reported similar findings.

In our study out of 101 cases studied, 88(87.12%) cases are of blunt type and 13(12.88%) cases are of penetrating type. Blunt type is almost more than 4/5th of total cases. Similar studies were done by Rashid Nehal Khan¹², Bowley D & Boffard K¹³.

In our study, 31% cases Liver was the most common organ injured followed by intestines, mesentery in 18% cases & 12% Spleen. Many studies found liver as the most common organ involved. Probably, because of its large size extending from 4th intercostals space down to iliac crest and placed more anteriorly as compared to other solid organ & with less morbidity. This matches with other abdominal trauma studies done by Solanki¹⁴ and Naik BV¹⁵.

Out of 101 cases studied, most common single

site involved with abdominal injuries was head in 20(19.80%), multiple site involvement was found in 24(23.76%) cases, 25 cases had only abdominal injury. These findings are similar to other studies by Krauss et. al.¹⁶, Shubendu K¹⁷ & Bordoni P H C et. al.¹⁸.

Out of 62 fatal cases, Haemorrhagic shock was the main cause of death in 54(87.09%) cases. Similar findings were observed by Frank Hildebrand et al¹⁹ & Kunjan modi²⁰.

Out of 62 fatal cases, 17(27.41%) cases were brought dead. 34.65% of patients died within 6 hours of injury. Almost similar findings are observed by Numan Husaini et. al.⁹. Probably delay in transport, non-availability of blood and treatment within golden period was cause for this.

Conclusion

In the present study, majority of victims of abdominal wounds, both in fatal & non-fatal cases were males. Maximum numbers of victims were in the age group of 21-40 years. Majority of cases were due to accidents i.e to road traffic accidents. Blunt type injury was common than penetrating type. The most common organ involved was liver followed by combination of intestines & mesentery. Deaths were due to haemorrhagic shock followed by infection.

Head injury was the most common associated wound in abdominal wound cases. First 6 hours is the most crucial period as most fatal cases recorded in that time, which needs prompt transport & improved treatment infrastructure for survival of abdominal injury cases. This indicates the need of improvement in vehicular design and usage, transport of wounded as soon as possible and upliftment of infrastructure at tertiary level hospitals.

Conflict of interest: None

Source of Support: Nil

Ethical clearance: Approved by Institutional ethical committee.

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