

Severe Traumatic Injury and its Association with Age and Gender in Central India, Chhattisgarh

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Abstract

Objective: The main objective of the present study was to investigate the severe traumatic injury and its association with age and gender. *Sample:* The study was conducted at the trauma center under the department of general surgery, Pt. J.N.M. Medical College & Associated Dr. B.R. Ambedkar Memorial Hospital, Raipur, C.G. A total number of 77 cases presenting to the acute trauma ward were included in the present study. *Research Design:* Observational study design was used in the present study. *Result:* The present study shows that the 21-30 years of age group is highly affected with severe traumatic injury than other groups. Male were affected more (83.31%) with a severe traumatic injury compared to female (11.68%). The mortality was higher in male (91.66%) than the female (11.11%). *Conclusion:* Finding of the present study concluded that the people with age group of 21-30 years and male gender was exceedingly affected with a severe traumatic injury.

Keywords: Severe Traumatic Injury; Age and Gender.

Introduction

Trauma is the fourth leading cause of death in India and accounts for 10.1% of all deaths (Haagsma, Graetz, Bolliger, Naghavi, & Ameh, et al, 2016; Almassi, Schowalter, Nicolosi, Agrawal, Moritz, & Hammermeister, et al, 1997); furthermore, it is one of

the major causes of disability worldwide. As per world health organization report (2004) it is predicted to be the third leading cause of death in the country by 2020.

It is estimated that in India around 5,00,000 deaths result from trauma annually with 80,000 deaths a year from road traffic accidents alone. It is a leading cause of death and disability in the younger age group which results in significant economic losses (Chinabhai, 2014). As per WHO SEARO, January, (2001); Trauma victims occupy nearly 10-38% of hospital beds in the country. The burden of road traffic injuries alone amount to Rs. 55,000 crores or 3% of GDP through direct and indirect socio-economic losses (Hsiao, Malhotra, Thakur, Sheth, & Million Death Study Collaborators et al, 2013; India Injury Report, 2005).

In addition to road traffic accidents, burns, occupational injuries (including agriculture-related), suicide and assault injuries are also rated as major injury problem in India. Trauma care systems in India are at a nascent stage of development. Industrialized cities, rural town, and village coexist with a variety of healthcare facilities but they are almost completely lacking in organized trauma care (Gururaj, Uthkarsh, Rao, Jayaram & Pandurangath, 2016).

In India injuries are the seventh leading cause of mortality and highest numbers of deaths are registered in 15-24 years age group to the extent of 24.6% (World Health Organization, 2015). During 2011, a total of 4,97,686 road accidents were reported by all States and the proportion of fatal accidents in the total road accidents has consistently increased since 2002 from 18.1 to 24.4% in 2011. The severity of road accidents measured in terms of persons killed per 100 accidents has also increased from 20.8 in 2002 to 28.6 in 2011 (Ruikar, 2013). First "National consultation on trauma system development in India"

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was held in Ahmedabad on 10-11 February 2005. The purpose of the consultation was to review the current status of the trauma care in the country to suggest appropriate strategies for improvement to meet the challenge of increasing trauma.

Objective

The main objective of the present study was to investigate the severe traumatic injury and its association with age and gender.

Research Design

The present study used observational study design.

Method

Sample

The study was conducted at the trauma center under the department of general surgery, Pt. J.N.M. Medical College & associated Dr. B.R. Ambedkar Memorial Hospital, Raipur, C.G. Out of 81 cases 4 subject were excluded and total 77 participants were included in the present study.

Sample Inclusion Criteria

Patients with a head injury, chest injury, and abdominal injury, who sustained their trauma within 24hrs of admission and within the age group of 10-82 years, were included in the present study.

Sample Excluded Criteria

The patients who were suffering from any concurrent medical illness (on the basis of history obtained from a relative of the patients) were excluded.

Statistical Analyses

The purpose of present study descriptive analyses was used.

Result and Discussion

The present study was conducted at Pt. JNM Medical College and Dr. BRAM Hospital in the Department of Surgery. Total 77 patients with severe injuries of head and body were involved in the present study. The observations made are shown as follows-

Table 1 Reveal that the majority of the people enrolled in the study (33.7%) were at the age group of 21-30 years followed by Age group of <20years (20.77%) and 31-40 years (18.18%). The age group of >50 years of age suffers least number (11.68%) of severe injuries. Our findings are in line with studies conducted by Eustace and Wei (2010) and Gulliver, Begg, Brookland, Ameratunga, & Langley, (2013) who found similar results and concluded that the 21-30 years of age group is the most productive age group, wherein people perform strenuous jobs, enjoy taking risks, and drive fast. Study by Yadukul & Gururaj, et al, (2016) also stated that the age group of 21-30 years age is more prone to trauma or injuries just because of thrill or because of occupational compulsions.

Table 1: Showing Age wise distribution of participants

S.N.	Age Group of Years	Number of Cases	Percentage
1	<20	16	20.77
2	21-30	26	33.76
3	31-40	14	18.18
4	41-50	12	15.58
5	>50	9	11.68

Table 2: Showing in Gender Wise Distribution of Participants

S.N.	Gender	Number of cases	Percentage
1	Female	9	11.68
2	Male	68	88.31

Table 3: Showing in the Female Participants an Age Wise Distribution

S.N.	Age Group in Years	Number of cases
1	<20	1
2	21-30	1
3	31-40	1
4	41-50	4
5	>50	2

Table 2 shows the gender-wise distribution of the total patient it reveals that the three-fourths of the patients (83.31%) were male while the remaining (11.68%) were female; it means male suffers the higher amount of severe injury compared to the female. Leute & Ciritsis, et al, (2015) reported that the ingestion of alcohol & drug abuse is the most common risk factors for trauma in the young male group. However study conducted by Sharpe & Croce, et al, (2014) in more than 36,000 blunt trauma patients, gender was not found to be significantly associated with mortality.

Table 3 shows age wise of distribution of female people and it reveals that the female within the age group of 41-50 was sustaining more injuries than the other age group of female.

Table 4 shows Age wise male injury cases are seen more common in 21-30 years age group, this age group is more enthusiastic and taking the risk.

Table 5 shows The proportion of gender wise the mortality is higher in the male peoples (91.66%) than the females people (11.11%).

Table 4: Showing in the Male Participants Age Wise Distribution

S.N.	Age Group of Participants	Number of Cases
1	<20	15
2	21-30	25
3	31-40	13
4	41-50	8
5	>50	7

Table 5: Showing in the participants in mortality

S.N.	Gender	Total Number of Cases	Expired Number	Percentage
1	Female	9	1	11.11
2	Male	68	11	91.66

Conclusion

The finding of the present study concluded that the people with age group of 21-30 years and gender male was exceedingly affected with severe traumatic injury as they are enthusiastic and often involved in risk-taking behaviour.

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