

A Retrospective Study of Pattern of External Injuries in Road Traffic Accidents- at HAH Centenary Hospital New Delhi

Shahina¹, Amit Sharma²

Abstract

The study was conducted in HAH Centenary Hospital of Hamdard Institute of Medical Science & Research New Delhi, India. It is retrospective study so the cases entered in Medico legal case register during the period January 1st 2014 to 31st December 2014 were considered. Patients with alleged history of road traffic accidents were included in the study. Road Traffic Accidents (RTA) are in increasing trend now a day's throughout the world causing great burden of morbidity and mortality among people. The present study is conducted to know the pattern of injuries, age, sex and time of incidence in patients of RTAs.

Keywords: RTA; Injuries; Vehicle.

Introduction

An accident has been defined as "an unexpected, unplanned occurrence which may involve injury". Motor vehicle accidents rank first in many countries, among all fatal accidents. During 2002 there were almost 1.19 million deaths from road accidents in world. In addition to this there are as many as 50-100 minor injuries and 10 - 20 serious injuries, which require long period of expensive care and treatment [1]. In today's busy life the use of automobiles is increasing day by day, along with this ignoring the traffic rules and poor road condition leads to increased rate of accidents. By the year 2020 the road traffic accidents are expected to take third rank of disease burden [2]. In world Indian ranks as one of the highest rates of traffic accidents, with increase in both casualties as well as death rates due to traffic accidents in the country. 80,000 get killed and 340000 get injured every year due to traffic accidents in India. In India there occurs

an accident in every 1 mint and in every 8 mints there is a death caused by road traffic accidents [3].

Methodology

The study material for this project was taken from the medicolegal register of HAH Centenary Hospital of Hamdard Institute of Medical Science & Research New Delhi, of year 2014. The details of RTA cases were taken from 1st January 2014 to 31st December 2014. The details like age, sex, residence, type and site of injury and time of incidence were taken down. The total 251 cases were studied.

For the purpose of this study, the nature of injuries was taken into consideration, bases on radiological examination and external examination which was required for diagnosis. The injuries over head covers the injuries present over face, scalp and neck. Injuries of upper limb indicates injury present over arm, forearm, hand and shoulder. For lower limb includes injuries over hip joint and foot, Thoraco-abdomen includes injuries over front chest, and abdomen and injuries over spine includes injury over entire back from neck to sacrum.

Observation and Results

A total of 251 road traffic accidents were studied. Different parameter were considered, age, sex, time of incidence and region of the body involving injury.

Author's Affiliation: ¹Assistant Professor ²Professor & Head, Department of Forensic Medicine & Toxicology, Hamdard Institute of Medical Science and Research, Hamdard Nagar, New Delhi, Delhi 110062, India.

Corresponding Author: Amit Sharma, Professor & Head, Department of Forensic Medicine & Toxicology, Hamdard Institute of Medical Science and Research, Hamdard Nagar, New Delhi, Delhi 110062, India.

E-mail: dr_amitsharma@hotmail.com

Received on 27.03.2018, Accepted on 05.05.2018

Table 1: Depicts the sex wise distribution of cases.

	Number of cases	percentage
Male	184	73.3%
Female	67	26.7%
Total	251	100%

Based on the above table 1 the males are more prone for accidents comprising 184 (73.3%) cases out of 251 cases and females comprises 67 cases (26.7%)

Table 2: Depicts the age wise distribution of cases.

Age range in years	Number of cases	percentage
1-10 years	30	11.9
11- 20 years	57	22.7
21-30 years	91	36.2
31-40 years	28	11.1
41-50 years	19	7.6
51-60 years	9	3.6
61-70 years	17	6.8

The most vulnerable group is 21-30 years followed by 11-20 years (Table 2).

Table 3: Depicts the distribution of cases based on time of incidence.

Time of incidence	Number of cases	Percentage
7am-10am	82	32.7
11am-2pm	24	9.6
3pm-6pm	60	23.9
7pm-10pm	56	22.3
11pm- 2am	18	7.2
3am- 6am	11	4.4

The above tables 3 shows that highest no. of accidents occurs between 7am to 10 am followed by 3pm to 6pm.

Table 4: Depicts the distribution of injuries based on region involved

Region	Simple	Grievous
Head	63	84
Upper limbs	97	4
Lower limbs	114	3
Thoraco-abdominal	7	9
spine	3	0

The above table 4 explains that head is more prone for injuries followed by lower limb next comes the upper limb. Considering collectively extremities bear the major burden of injuries (Table 4).

Discussion

The increased rates of accidents coincide with the population explosion. The majority of cases are young people mostly in their reproductive and productive age groups leading to a great loss to the nation as well.

The present study showed the male predominance with 184 cases i.e. 73.3% as compared to 67 i.e. 26.7% female cases among 251 cases. The male to female ratio was 2.7:1. The studies conducted by Siddaraman et al. [4] and Dileep et al. [5] showed that there is male predominance. The reason behind this could be that males have outdoor work more than females so they are more prone to come in contact with traffic so more liable for accidents as well.

This study showed 36.2% of cases were in the age group of 21-30 years followed by 22.7% in the age group of 11-20 years followed by 11.9% cases in age group of 1-10 years. these results clearly indicates that the most ambulatory and most enthusiastic age group is more liable for injuries this age is more prone for rash driving least bothered about the traffic rule. Children are also showing a higher values of accidents which is because in metropolitan cities the traffic load is so high that even the small link roads have high traffic load. Present study and its results are in agreement with the study conducted by RV Kachre et al. [6].

The present study shows that the most number of cases occurred during 7am to 10am (82 cases: 32.7%) followed by 3pm to 6pm (60 cases, 23.9%) followed by 7pm - 10pm (59 cases; 22.3), which corresponds with the office hours, but the study conducted by Bairagi et al. [7] mentioned that majority of accidents (30.26%) occurred between 6 PM - 12 midnight.

This study showed head injuries constitutes 147 cases out of which 63 were simple injuries and 84 were grievous, followed by injuries over lower limbs constituting 117 cases then upper limbs forming 101 cases. The study conducted by siddarama et al and study done by Bairagi et al.⁷ showed that extremities are more prone for injuries which is accordance to our study also if we collective consider the lower and upper limbs.

Conclusion

Road traffic accidents are the major health problem all over the world. It not only leads to property loss but human loss as well, it is becoming

one of the major cases of death all over the world as well as with majority of people left handicapped. The major risk is to developing countries where the understanding of traffic rule is less along with the poor condition of roads to curb this problem there is need for strict enforcement of traffic rules, along with this there should be improvement in health care facilities to handle such conditions favorably.

References

1. Park's Text book of Preventive and Social medicine 20th edition. Publ. Banarsidas Bhanot. MP. 2009. p.353-354.
 2. WHO "The Global Burden of Disease"; Projected change in the ranking of the 15 leading causes of death and disease (DALYs) worldwide, 1990-2020.
 3. Patil SS, Kakade RV, Durgawale PM and Kakade SV. Pattern of road traffic injuries: A Study From Western Maharashtra. Indian J of Community Med. 2008 Jan;33(1):56-57.
 4. Siddaramanna TC, Dileep Kumar R. Retrospective Study of Pattern of External Injuries in Road Traffic Accidents. International J of Biomedical and Advance Research. 2014;5(9):451-53.
 5. Dileep Kumar R, Raju GM, Vijayanath V, Shahina. Deaths due to Fatal Road Traffic Accidents: A Retrospective Study. J Indian Acad Forensic Med 2013;35(3):236-8.
 6. Kachre RV, Kachre VH, Asawa SS. Pattern of vehicular accidents in Pravara region: a rural region of Ahmadnagar district of Maharashtra. Journal of Forensic Medicine & Toxicology 2003;20(2):29-32.
 7. Bairagi KK, Barbhuiyan SI, Hazarika N. Injuries in riders and pillion riders of fatal two wheeler road traffic accidents in city of Guwahati. Indian Journal of Forensic Medicine Toxicology 2010;4(2):25-7.
-