

Original article

A medico legal study on road traffic accident victims of 100 cases.

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*Shahid F,¹ Islam F,² Khan NT,³ Huda S,⁴ Munmun S,⁵ Mondal MA⁶

Abstract

Background: Road traffic accidents are responsible for the greatest number of injuries and every year. They are rising in an alarming rate and causing increased morbidity and mortality among people. So a study was taken on 100 cases that came to DMC morgue in 2019.

Objectives: To evaluate the present condition of the victims of road traffic accidents about most affected age group, religion, sex, seasonal affect and pattern of injuries.

Method: This retrospective study was conducted in the Department of Forensic Medicine & Toxicology, Dhaka Medical College over one-year duration, from January 2019 to December 2019. A total of 100 cases of RTA was used for this study.

Result: A total number of 5227 people were died in the year of 2019 in Bangladesh due to RTA. Among 100 cases that were referred to DMC morgue, most (21%) victims were between 22-27 years of age, males constituted 79% of the total victims. The greater numbers of accidents took place in the month of January (22%). Intra cranial haemorrhage was the cause of death in most victims.

Keywords: road traffic accident, deaths, victims.

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Introduction

Road traffic accident is a major epidemiological problem that have significant effects on public health concern.

A road traffic accident was defined as any vehicle accident occurring on a public road or highway and which takes place between two or more objects, one of which had to be any kind of a moving vehicle.¹ Hundreds of thousands of people die in road traffic accidents annually all over the world. However the loss is much greater in developing countries largely due to inefficient traffic safety mechanism. Deaths due to road traffic accidents (RTA) are one of the major causes of mortality and morbidity all over the world. Worldwide, every day about 3400 people die due to road traffic accidents (RTA) and predicted to result in the death of around 1.9 million people annually by 2020.² Nearly 90% of world's RTA fatalities are occurring in low and middle-income countries, whereas highly motorized countries contribute very little though they accommodate over 60% of world's vehicles. More than 5000 casualties in RTA across Bangladesh in 2019 marked an alarming rise compared to figures in previous year. At least 5,227 people were

killed while 6,953 injured in 4702 road accidents across the country in 2019.³

The main causes of road accidents in Bangladesh are over speeding, faulty vehicle driving on the road, violation of traffic signal, zig-zag or uneven faulty road, driver's unawareness of traffic rule and under the influence of drug and alcohol while driving, overloading of the passenger, not using the zebra crossing and over-bridge by pedestrians, Lack of awareness and reckless driving habits also result in frequent accidents claiming lives and causing anguish and grief to the affected families.⁴ Road traffic accidents occurs when a vehicle collide with another vehicle, pedestrian, animal, road debris or other stationary barrier, such as a tree or utility pole. The victims injured by accidents on the road are divided into three broad groups: pedestrians, cyclists (pedal or motor) and the drivers and passengers of vehicles. Of these three broad groups, it is the pedestrians that are most often injured.⁵

The usual characteristic injuries in pedestrians are abrasion, bruise, laceration, bumper fracture, crushing of the head, avulsed lacerations of the limbs, blunt trauma

Authors affiliation

1. *Farhana Shahid, Associate professor, Forensic Medicine & Toxicology, Bangladesh Medical College.
2. Farzana Islam, Associate Professor, Forensic Medicine & Toxicology, Ibrahim Medical College.
3. Nashid Tabassum Khan, Associate professor, Forensic Medicine & Toxicology, Z.H.S.W.M.C
4. Sanjida Huda, Assistant professor, Forensic Medicine & Toxicology, Bangladesh Medical College.
5. Sanjida Munmun, Lecturer, Forensic Medicine & Toxicology, Bangladesh Medical College.
6. Mahbub Alam Mondal, lecturer, Forensic Medicine & Toxicology, Bangladesh Medical College

*Address of Correspondence: Dr. Farhana Shahid, Associate professor, Department. of Forensic Medicine & Toxicology, Bangladesh Medical College. Mobile no. 01731920223 Email:

to the chest or abdomen, crush syndrome, fracture of the ribs, hip bone, rupture of the viscera or vital structures.⁶

Objectives of autopsy in case of RTA

- I) To establish the identity of the victim.
- II) To find out whether the victim died as a result of trauma , or due to some natural sudden cause of death.
- III) To search the driver had any disease resulting in loss of control of vehicle.
- IV) To reconstruct the accident.

Results

The present study shows the data about road traffic accident victims who were brought for Medico legal autopsy. Table -1 shows the occurrence of RTA in accordance to months in which most accidents were occurred in the month of June 20(20%) & August 18(18%). This time pattern generally being that of government holidays and peoples tends to visit their hometowns and time of cultural activities.

Table -1: Month wise reported cases of RTA in 2019 (n=100)

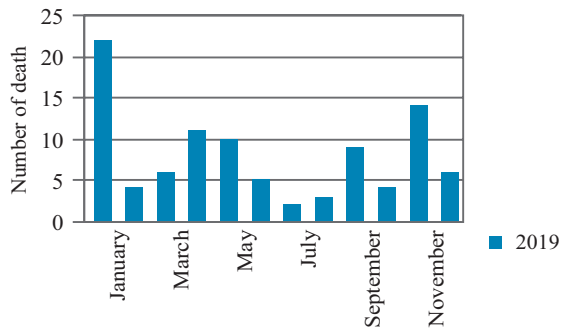
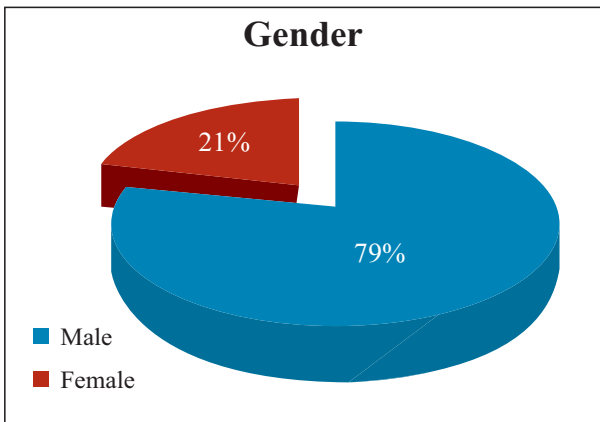


Figure: Month wise reported cases of RTA

Table -2: Distribution of victims of RTA by Gender (n=100)



The sex distribution of postmortem cases revealed that two-third (79%) were males and one-third were female (21%).

Table 3: Demographic profile of RTA postmortem cases (n=100)

Age group (years)	Frequency	(n)Percentage
<10	0	0%
10-15	05	05%
16-21	07	07%
22-27	21	21%
28-33	14	14%
34-39	10	10%
40-45	19	19%
46-51	09	09%
52-57	07	07%
58-63	04	04%
64 and above	04	04%

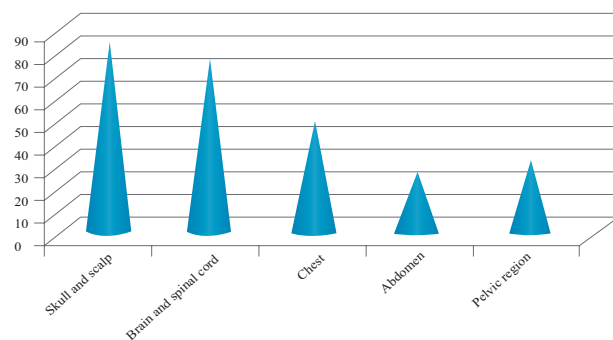
Table-3 shows the demographic profile of RTA postmortem victims. Age incidence was higher (21%) in 2nd decades (22-27 years) age group. More than half (62%) of the postmortem done under the shahbag thana .

Table 4 interprets the magnitude of the type of injuries of the postmortem cases. It was found that almost all cases were suffered from multiple type of injuries. Regarding the type of injuries, bruise and abrasion (98%) were found

within majorities in the cases. There was also skull injuries which include intra cranial haemorrhage, fractures of skull bone. And rupture of abdominal and pelvic organ was found in some cases.

Table No. 4: Distribution of injuries on the body of cases.

Injuries in the body	No. of cases (n=100)
Abrasion and bruise	98
Skull and scalp	84
Brain and spinal cord	76
Chest	48
Abdomen	27
Pelvic region	30



Discussion

There has been an alarming rise of traffic fatalities in Bangladesh over recent years. According to a World Health Organization report, globally RTA causes 1.3 million deaths per year.⁷ A similar statistic in Sri Lanka stated that globally, about 1.25 million people died each year as a result of traffic accidents.⁸ In Bangladesh, traffic accidents are major cause of hospital admissions at primary and secondary facilities.⁹ According to WHO, the economic cost of RTA to developing country is 2-3% of Gross Domestic Product (GDP).¹⁰

Recommendation

Measure that can be taken to improve situation:

1. Modernizing licensing process to enhance skillfulness of the drivers
2. Medical aspects of fitness to drive should be properly formulated and strictly followed. The medical examination to ensure fitness to drive is currently deficient and does not conform to international standards
3. Awareness campaigns for i) drivers of vehicle ii) vehicle occupants' iii) pedestrians
4. Strict implementation of traffic rules
5. To increase pedestrian facilities
6. Improvement of road side environment
7. Road and transportation safety issues to be taught from school level should be incorporated into curriculum
8. Trauma centers should be established along the main highways

Conclusion

Preventive measures should be taken and awareness should be spread among drivers as well as passengers and pedestrians. RTAs

related morbidities & mortalities can be minimized through strengthening of emergency healthcare laws and proper health education, and also emphasize in interventions with the combined efforts from the community, governmental and non-governmental organization. Strict enforcement of traffic law, ensuring good road condition, using seat belts, maintaining fitness of vehicles, driving licenses should be done.

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