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PATTERNS OF DEATH DUE TO FATAL ROAD TRAFFIC ACCIDENT IN JODHPUR REGION- AN AUTOPSY BASED STUDY

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ABSTRACT

A road traffic accident (RTA) is any injury due to crashes originating from, terminating with or involving a vehicle partially or fully on a public road. Road transport is the most cost-effective modes of transportation in India both for freight and passengers, keeping in views its level of penetration in populated area. **Aim:** To study the patterns of fatal road traffic accidents in Jodhpur region among cases brought dead to MDM & MG Hospital mortuaries, DR.S.N. MEDICAL COLLEGE, Jodhpur. **Material & Methods:** All cases of RTA brought to mortuary were subjected to medico legal autopsy during the study period were taken into consideration. Through external and internal postmortem examination of road traffic accident victims were done by routine instruments and methods of dissection. **Results:** Out of 100 cases 86 were male, 29 accidents occurred between 06:01 PM to 12:00 AM, 45 were two wheeler occupants, 38 were brought dead to hospital. **Conclusions:** Age group of 21-30 years showed higher incidence. Male sex showed higher incidence than female sex. Higher incidence was observed during evening hours in 6:01 PM to 12:00 AM. Higher incidence of victims observed when brought dead to hospital.

KEYWORDS: Road Traffic Accidents, Head Injury, Blunt trauma chest, Blunt trauma abdomen, Polytrauma.

INTRODUCTION

Amongst all transpiration accidents, road traffic accidents claim largest toll of human life and tend to be most serious problem worldwide, a counter product of modernization and fast life. Road traffic injuries remain a global public health problem.

Road Traffic accidents (RTAs) are the major public health problem all over the world where society and decision makers still accept death and disability at large scale among young people. This human sacrifice is deemed necessary to maintain high levels of mobility and is seen as a necessary "externality" of doing the business.

Road traffic accidents are usually caused by human errors including ignorance, overtaking, rash & negligence driving, use of mobile phones while driving, least knowledge about traffic rules as well as defective roads, poor maintenance of the vehicles, improper light, diminished visibility due to certain atmospheric conditions & violation of the traffic rules also play the Significant role, thus highlighting the strict implementation of the road safety measures.

MATERIAL AND METHODS

The study was carried out at the mortuary complex of Department of Forensic Medicine, Dr. S.N. Medical College and MDM & MG Hospital, Jodhpur.

STUDY DESIGN:- Cross Sectional study.

DURATION OF STUDY:- Present study was carried out in year 2022 (From June 2022 to December 2022).

PLACE OF STUDY:- MDM & MG Hospital, Department of forensic medicine & Toxicology, Jodhpur during which total 918 Medicolegal Autopsies were conducted, out of which 100 Autopsy case of Road Traffic Accident were studied in details.

DATA COLLECTION:- General particulars of each case was taken from interrogating with police personnel accompanying the victims, relatives, Attendants of deceased and other relevant information obtained from inquest panchnama, newspaper reports as well as hospital indoor case papers.

Through external and internal postmortem examination of road traffic accident victims were done by routine instruments and methods of dissection.

Details and autopsy findings of each case were enter in Proforma, statistical analysis done by proportion formula and tabulated further to retrieve relevant data for the purpose of observation and discussion. Results were compared with observation of various authors by scientific discussion.

RESULTS AND DISCUSSION

In the present study, we observed that most affected age group was 21 to 30 years, which have 25 cases (25%) out of 100 cases. This can be explained by the fact that young age people are more mobile, go out for work and take risks. Similar results were observed by Biswas[1], Aggarwal[2], Das[3], Kachre[4], Govekar[5], Jha[6], kochar[7], Dogra[8] in their study. 86 cases out of 100 cases were male. It shows male predominance and suggests that male is more active in various social activities and the sole bread winner for the family. Similar results were observed by Biswas[1], Aggarwal[2], Govekar[5] & Jha[6], in their study.

In our study higher incidence of accident was found during 6:01 PM to 12:00 AM which can be explained by the fact that maximum commuters are in hurry to reach back to home after their job as they exhaust after entire day hard work and excessive traffic on road. Similar results were observed by Biswas[1], Kochar[7] & Ghangle[9] in their study.

In our study, maximum cases of RTA were observed in two wheeler occupants involving 45 cases (45%) which can be explained by the fact that youngsters are more commonly involved with relatively higher speed lead to less stability of the vehicle with poor infrastructure. Similar results were observed by Kochar[7] in his study.

In our study, we observed that the major cause of death in cases of road traffic accident is head injury involving around 58% of cases out of total fatalities, which can be explained by the fact that most of the cranio-cerebral injuries were not the primary impact but due to secondary impact or secondary injuries or both. Similar results were observed by Biswas[1] and Lau.[10]

Table 1: Age & sex wise distribution.

Sr. No.	Age group	No. Of cases (%)	Male	Female
1	0-10 yrs	0 (0%)	0	0
2	11-20 yrs	8 (8%)	7	1
3	21-30 yrs	25 (25%)	21	4
4	31-40 yrs	13 (13%)	10	3
5	41-50 yrs	22 (22%)	20	2

6	51-60 yrs	18 (18%)	17	1
7	61-70 yrs	12 (12%)	9	3
8	>71 yrs	2 (2%)	2	0
	TOTAL	**100**	**86**	**14**

Table 2: Distribution according to time of event.

Sr. No.	Period of event time	No. of cases	Percentage (%)
1	12:01 AM to 6:00 AM	22	22 %
2	6:01 AM to 12:00 PM	26	26 %
3	12:01 PM to 6:00 PM	23	23 %
4	6:01 PM to 12:00 AM	29	29 %
	TOTAL	100	100 **%**

Table 3: Distribution according to the type of victim.

Sr. No.	Category of Victim	No. of cases	percentage
1	Pedestrian	18	18 %
2	Bicyclist	8	8 %
3	Two wheeler	45	45 %
4	Three wheeler	4	4 %
5	LMV (car, van)	16	16 %
6	HMV (Bus, Truck, Tractor)	9	9 %
	TOTAL	100	100 %

Table 4: Distribution according to the cause of death.

Sr. No.	Cause of Death	No. of cases	Percentage
1	Head injury	58	58 %
2	Polytrauma	17	17 %
3	Chest injury	08	08 %
4	Abdominal injury	06	06 %
5	Crushed injury	09	09 %
6	Spinal injury	02	02 %
	TOTAL	100	100 %

CONCLUSION

Major outcome of this study "Accidents don't just happen, they are caused". Therefore preventable, But following major challenges should be taken in to consideration for better results.

Heterogeneous traffic condition means that all multiple modes of transport use the same road without any demarcation.

The Motor Vehicle Act 1988 defines the responsibility of motorized vehicles only, leaving out the non-motorized user from its purview.

Tools, systems of training and political will are lacking. Further, enforcement agencies do not work in coordination. These show absence of traffic engineering as a science.

We have no qualitative information regarding causes and consequences of crashes, without which punitive measures are enforced arbitrarily.

Above mentioned pitfalls conclude that accidents are a complex phenomena of multiple causation, which require inter-sectoral approach to both prevention and care of the injured.

The various measures comprise such as Data collection, Safety education, Promotion of safety measures, Alcohol and other drugs should be avoided; planning, organization and management of trauma treatment and emergency care services, Elimination of causative factors, Enforcement of laws, Rehabilitation services and Accident research.

Conflicts of Interest: None.

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