ORIGINAL RESEARCH PAPER

Volume-8 | Issue-5 | May-2019 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

STUDY ON PATTERN OF ROAD TRAFFIC ACCIDENT INJURIES

Orthopaedics

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ABSTRACT

Introduction: Road traffic accidents (RTAs) are an emerging global epidemic. One of the main causes of death and disability is road traffic injuries, with an unequal number of incidences in developing countries.

Aims and objective: This study was done to determine the pattern of Road Traffic Accident Injuries Arriving in Emergency/ Orthopaedics Department of our hospital.

Materials and methods: A prospective study was carried out in our hospital over a span of one year in which about 1850 cases of Road traffic accident injuries were evaluated.

Results: The maximum number of RTA injury was recorded in the age group of 21-30 years (54.16%). Male to female ratio was 3.6:1. Two wheeler were the frequent offending vehicles (51.1%) followed by Light motor vehicles (LMV) (38.0%). Majority of the road users had soft tissue injury(78.37%) followed by head injury(31.29%) and fracture and dislocation(26.0%) respectively. The commonest site of fracture was lower limb 186 (38.66%) followed by upper limb 125 (25.98%). Fatality rate was 22 (1.18%).

Conclusion: We conclude that the incidence of RTA is increasing at an alarming rate throughout the world. . Our study looked for the pattern of RTA, thereby aimed at improving the incidence RTA among the young people and male population from developing communities.

KEYWORDS

Road traffic accidents , pattern, injury

Introduction:

Road traffic accidents (RTAs) are an emerging global epidemic.[1] One of the main causes of death and disability is road traffic injuries, with an unequal number of incidences in developing countries.[2] In 2000, RTA were the ninth leading cause of disability-adjusted life years lost and are projected to become third by 2020.[3] Despite the greater burden of RTAs in the developing country, there is a deficiency in the availability of systematic data on the degree of the problem and its multidimensional nature. Only less data are available on the patterns of RTAs throughout the country. Hence the study was done to determine the pattern of Road Traffic Accident Injuries Arriving in Emergency/ Orthopaedics Department of our hospital. This may help in formulating preventive measures to reduce the burden caused by such accidents.

Materials and Methods:

A prospective study was carried out in our hospital over a span of one year in which about 1850 cases of Road traffic accident injuries were evaluated. The cases were thoroughly interrogated, clinically examined and relevant investigations done. Information regarding the particulars of the victim, the date, time and place of accident, type of offending vehicle were collected and the type of injuries and the fatality rate following the injuries were evaluated.

Result and Observations: Age of the patients ranged from 10-90 years. The maximum number of RTA injury was recorded in the age group of 21-30 years (54.16%) as shown in Table 1. The youngest patient was a 15 year old male with multiple injuries and the oldest patient was 75 year male with soft tissue injury. Out of 1850 cases, 1450 (78.3%) were males and 400 (21.6%) were females with a male to female ratio of 3.6:1.

Table 1: AGE AND SEX DISTRIBUTION AGE(in years)

AGE(in years)	MALE	FEMALE
11-20	15	07
21-30	767	235
31-40	475	104
41-50	125	48
51-60	57	01
61-70	10	03
71-80	01	02
81-90	00	00
Total	1450	400

In the present study, two wheeler were the frequent offending vehicles (51.1%) followed by Light motor vehicles (LMV) (38.0%) as shown in Table 2.

Table 2: TYPE OF OFFENDING VEHICLE

TYPE OF OFFENDING VEHICLES	NO OF CASES	%
Truck	25	1.35
Bus	15	0.81
Tractor	30	1.62
LMV (car, gypsy, van, sumo, jeep)	704	38.0
Three wheeler (Auto rickshaw, Rickshaw cycle)	129	6.97
Two wheeler	947	51.1

Majority of the road users had soft tissue injury(78.37%) followed by head injury(31.29%) and fracture and dislocation(26.0%) respectively as shown in Table 3.

Table 3: TYPE OF INJURIES

TYPE OF INJURY	NO OF CASES	%
Fractures and dislocations	481	26.0
Soft tissue injuries	1450	78.37
Head injury	579	31.29
Spine injury	22	1.18
Chest injury	40	2.16
Abdomen injury	37	2.0

A total of 481 fractures and dislocations were noted among the victims. The commonest site of fracture was lower limb 186 (38.66%) followed by upper limb 125 (25.98% . Other sites were skull 30 (6.23%), ribs 25.98 (5.8%) and pelvis 15(3.11%). Fatality rate in our study was 22 (1.18%).

Discussion: In the present study, the highest number of victims (54.16%) was between the age group of 20-29 years. This was in accordance to the study done by Supriya Satish Patil[4] where maximum number of victims involved the same age group. In the present study, males were more commonly involved than females with the ratio of 3.6:1.This was in accordance to the study done by Kh. Pradipkumar Singh et al[5] where it was noted that males (75.13 %) outnumbered the females (24.87%). In the present study, two wheeler were the frequent offending vehicles (51.1%) followed by Light motor vehicles (LMV) (38.0%). Trucks were the most frequent offending vehicles (34.63%) followed by Buses (22.94%) in the study done by Kh. Pradipkumar Singh et al.[5] Majority of the road users had soft tissue injury(78.37%) followed by head injury(31.29%) and fracture and dislocation(26.0%) respectively. This was in contrast to the study done by Suresh Katageri et al[6] where majority of the road users (98%) sustained fracture followed by laceration (94.23%), abrasion (82.69%) contusion (76.92%) respectively. The commonest site of fracture was lower limb 186 (38.66%) followed by upper limb 125 (25.98%). Other sites were

skull 30 (6.23%), ribs 25.98 (5.8%) and pelvis 15(3.11%). Fatality rate in our study was 22 (1.18%). Similar findings were reported by Jha et al.[7]

CONCLUSION:

In recent years the incidence of RTA is increasing at an alarming rate throughout the world posing itself as a major epidemiological as well as medicolegal problem. Our study looked for the pattern of RTA, thereby aimed at improving the incidence RTA among the young people and male population from developing communities. This may help in formulating preventive measures to reduce the burden caused by such accidents.

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