



ANALYSIS OF PATTERN OF INJURIES IN ROAD TRAFFIC ACCIDENTS OCCURRED IN MUMBAI –PUNE EXPRESSWAY.

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ABSTRACT

Introduction: 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. It is projected that road traffic injuries will move up to the third position by the year 2020 among leading causes of the global disease burden. They are considerable economic losses to victims, their families, and to countries as a whole. Rather than mechanical, its human factor that contribute significantly to increasing number of road accidents in India. Drunken driving, over speeding, refusal to follow traffic rules, and reckless driving are main reasons for road accidents. Preventive measures that can be taken being wearing helmets for two wheeler riders, setting and enforcing speed limits, alcohol limits and banning drivers from using hand-held mobile phones.

Methods: A retrospective hospital-based study was carried out on total number of 50 patients attending the ER. It was conducted to assess the pattern of injuries among road traffic accident victims registered in Emergency Department at MGM Medical College, Navi Mumbai India, during the month of May 2017. The sample size in the study is 50 patients above 18 years of age including both sexes.

Results: Out of 50 patients in this study, 32 (64%) are four wheeler accidents whereas 18 (36%) are two wheeler accidents. In addition to two wheeler accidents which are 18 (36%), 10 (55.55%) are without helmet whereas as 8 (44.44%) are wearing helmet.

KEYWORDS : Road Traffic Accident, GCS, Head Injury.

Introduction

A Road Traffic Accident (RTA) can be defined as, an event that occurs on a way or street open to public traffic; resulting in one or more persons being injured or killed, where at least one moving vehicle is involved.¹

Every year the lives of approximately 1.25 million people are cut short as a result of a road traffic crash.² Between 20 and 50 million more people suffer non-fatal injuries, with many incurring a disability as a result of their injury.²

If no action is taken, road traffic crashes are predicted to result in the deaths of around 1.9 million people annually by 2020.³ Hence the goal of the United Nations' Decade of Action for Road Safety 2011-2020 is to save five million lives.⁴

In India, the motor vehicle population is growing at a faster rate than the economic and population growth. The surge in motorization coupled with expansion of the road network has brought with it the challenge of addressing adverse factors such as the increase in road accidents.⁵ According to the World Health Organization (WHO), road traffic injuries are the sixth leading cause of death in India with a greater share of hospitalization, deaths, disabilities and socio-economic losses in the young and middle-aged population.⁶ Road traffic injuries also place a huge burden on the health sector in terms of pre-hospital and acute care and rehabilitation.⁷

Most of the epidemiological studies conducted in India have worked and analyse on different patterns of RTIs like patterns, mortality rate, demographic characteristics of the victims, and some other features like costs while less attention has been paid to morbidities, especially those caused by extremity injuries.

Whereas, the people who drive four wheeler have occurred the less

injuries as compared to two wheeler. In two wheeler accident, often have multiple bone fractures. Although most fractures heal with no permanent injury and only disable the injured ones for a short time, there are several complications that can occur with broken bones and may lead to long-life disabilities.

Therefore it has been decided to carry out the present study. "Analysis of Pattern of Injuries in Road Traffic Accidents occurred in Mumbai –Pune Expressway".

Aims And Objective Of The Study

This study has aimed to analyse the pattern of injuries, disability adjusted life with significant morbidities and mortality associated with road traffic accidents. In Addition, study has also aimed to create the awareness related to RTA injuries in general public.

Material And Methods

A retrospective hospital-based study was conducted to assess the pattern of injuries among road traffic accident victims registered in Emergency Department at MGM Medical College, Navi Mumbai India, during the month of May 2017. The sample size in the study is 50 patients above 18 years of age including both sexes. Data was collected on a preformatted data sheet. All the data had been calculated in percentages.

Inclusion Criteria

- 1). Patients equal to or above 18 years of age.
- 2). both genders.
- 3). Patients belonging to any state or region.

Exclusion Criteria

- 1). Paediatric cases
- 2). Pregnant females

Observation & Results

Out of 50 patients in this study, 32 (64%) are four wheeler accidents whereas 18 (36%) are two wheeler accidents. In addition to two wheeler accidents which are 18 (36%), 10 (55.55%) are without helmet whereas as 8 (44.44%) are wearing helmet. Injuries these patients sustained were:

- **Cat A:** 13 patients (26%) sustained injuries like shoulder dislocation, proximal radio ulnar joint dislocation and Femur dislocation.
- **Cat B:** 12 patients (24%) sustained severe head injuries like sub arachnoid haemorrhage (SAH), sub dural haemorrhage (SDH), traumatic intra cerebral bleed (ICH) and one sustained C3-C4 dislocation accounting to spinal cord injury.
- **Cat C:** 14 patients (28%) sustained fracture injuries like proximal radius fracture, distal ulna fracture, femur neck fracture and tibia fibula fracture.
- **Cat D:** 1 patient (2%) who sustained fracture neck femur developed post-operative complication of pulmonary embolism leading to death.
- **Cat E:** 1 patient (2%) went into respiratory failure after cervical cord injury with severe splenic laceration grade IV and died due to massive blood loss and hypovolemic shock.
- **Cat F:** 9 patients (18%) sustained abrasion injuries or no injuries at all.

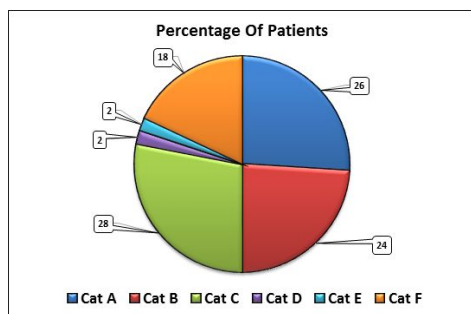


Figure No 1: Different Categories of patients sustaining different injuries as per the data stated above in results.

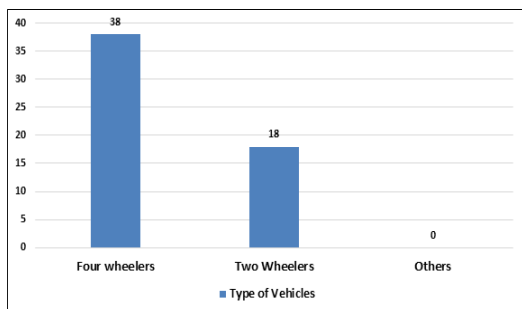


Figure 2: Shows that which type of vehicles patients had driven. According to graph 38 patients (76%) were driving four wheelers; on the other hand 18 patients (36%) were driving two wheelers.

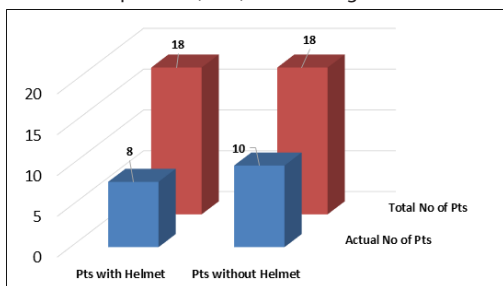


Figure 3: showed that number of patients who drove two wheelers were wearing helmets. Graph showed that out of 18 patients, only 8 patients (44.4%) were wearing helmet and 10 patients (20%) are without helmet.

Conclusion

- Follow the One golden rule: Never Drink and Drive and never talking on phones or putting headphone while driving.
- Another tip to avoid Road traffic accident is by follow the rules of road like traffic signals, speed limits, lane crossing and overtaking.
- Know about your vehicle is the most important key: like seat belts, proper helmet, brake system, tyres, forget to lift your side stand of two wheeler.
- Manufacturer should advertise and focused on the safety guideline.
- Government should made strict rules and identify local problem regarding to the safety for the public like proper speed breakers, avoid holes, proper mark for diversion, frequently road inspections.
- Government should mention frequently the telephone number for ambulance if possible on every read light, so if anything happens on the road, the patient or other people can call the ambulance, to save the time for the patient to reach the hospital.
- Government should conduct program like road safety tips at least once in a month to create awareness in general public.

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