Research Article

Pattern of road traffic accident cases in Karad – Three years retrospective study

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Abstract

Introduction: A traffic collision, also known as a traffic accident, motor vehicle collision, motor vehicle accident, car accident, automobile accident, road traffic collision, road traffic accident, wreck (USA), car crash, or car smash (Australian) occurs when a vehicle collides with another vehicle, pedestrian, animal, road debris, or other stationary obstruction, such as a tree or utility pole. **Material and Methods:** In this 3 years retrospective study done from Jan 2010 to Dec 2012, totally 2698 road traffic accident cases which have been registered in the casualty of Krishna Institute of Medical sciences were analyzed at the Department of Forensic Medicine and Toxicology, KIMS, Karad. During this study several epidemiological observations and their results were considered. **Results and Discussion:** In the present study, maximum number of cases belongs to 21-30 years age group, with male: female ratio is 2.1:1. According to study done by Badrinarayan M, among 360 RTA victims, most cases 138 (38.33%) were in the age group of 15–30 years. A high percentage of both fatal 30 cases out of total 66 (45.45%) and non-fatal 108 out of total 294 (36.73%) cases were observed from the same age group. Mobile males (85%) outscored the domicile females (15%) with a ratio of 5.66:1. **Conclusions:** Research suggests that the driver's attention is affected by distracting sounds such as conversations and operating a mobile phone while driving. Many jurisdictions now restrict or outlaw the use of some types of phone within the car.

Keywords: RTA, Head Injuries, upper and lower limb injuries.

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Received Date: 25/08/2014 Accepted Date: 09/09/2014

Access this article online

Quick Response Code:

Website: www.statperson.com

DOI: 16 September 2014

INTRODUCTION

A traffic collision, also known as a traffic accident, motor vehicle collision, motor vehicle accident, car accident, automobile accident, road traffic collision, road traffic accident, wreck (USA), car crash, or car smash (Australian) occurs when a vehicle collides with another vehicle, pedestrian, animal, road debris, or other stationary obstruction, such as a tree or utility pole. Traffic collisions may result in injury, death, vehicle damage, and property damage. The World Health Organization use the term *road traffic injury*[1], while the U.S. Census Bureau uses the term *motor vehicle accidents (MVA)*[2], and Transport Canada uses the term "motor vehicle traffic collision" (MVTC)[3]. The incidence of accidental deaths has shown an increasing trend during the period 2003 -2012 with an increase of 51.8% in the year 2012 as compared to 2002; however 0.2% decreases was observed in 2003 over previous year 2002. The population growth during the period 2003-2012 was 13.6% whereas the increase in the rate of accidental deaths during the same period was 34.2%. A total of 3,94,982 accidental deaths were reported in the country during 2012 (4,098 more than such deaths reported in 2011) showing an increase of 1.0% as compared to 2011. Correspondingly, 0.3% increase in the population and a marginal rise of 0.9% in rate of 'Accidental Deaths' were

How to site this article: Sunil C Aramani, Shakuntala S Aramani, Vijay Kumar A G, Patil D T, Anand Patil. Pattern of road traffic accident cases in Karad – Three years retrospective study. *International Journal of Recent Trends in Science and Technology* September 2014; 12(2): 350-352 http://www.statperson.com (accessed 17 September 2014)

reported during this year as compared to 2011. If it is any solace, the state's roads are less deadly than those of Tamil Nadu and Andhra Pradesh, which account for 10.8% and 10.6% of road fatalities, while 9.8% of them occur in Maharashtra. Based on the research by its transport research wing, the report by the ministry of road transports and highways highlights that five states — Maharashtra, Tamil Nadu, Madhya Pradesh, Karnataka and Andhra Pradesh — account for over 50% fatalities in road accidents. In 2011, about 1.47 lakh people were killed in 1.21 lakh road accidents across the country, of which 12,500 deaths occurred in Maharashtra, a figure which has now crossed 13,000.

MATERIALS AND METHODS

In this 3 years retrospective study from Jan 2010 to Dec 2012, total of 2698 road traffic accident cases which have been registered in the casualty of Krishna Institute of Medical sciences were analyzed at the Department of Forensic Medicine and Toxicology, KIMS, Karad. During this study several epidemiological observations and their results were considered.

RESULTS

Table 1: Age wise distribution of cases

Age(yrs)	No of cases
1-10	250
11-20	269
21-30	735
31-40	623
41-50	428
51-60	204
61-70	135
70-80	44
>80	10

Average age-34.4 years. Maximum no of cases seen in the age group: 21-30 yrs.

Table 2: Sex wise distribution of cases

Sex	Cases
Male	1843
Female	855
Total cases	**2698**

Sex Ratio- 2.1:1

Table 3: Outcome of cases

No of Cases	Improved	Unchanged	Death
2698	2276	329	93

Totally 2276 cases have improved and 93 cases have expired.

Table 4: Type of injury

Type of injury	No of cases
Isolated head injury	2274
Combined injury	424

Isolated head injury has been accounted in 2274 cases.

Table 5: Body parts involved

Body parts involved	No of cases
H, Upper Limb	154
H, Lower limb	133
H, C	64
H, Upper Limb, Lower limb	34
C	10
H, Upper Limb, Lower limb, Abdomen	9
H, Lower limb, Upper Limb	7
H, Abdomen	5
C, Lower limb	3
H, C, Lower limb	2
H, Upper Limb, Lower limb, C	2
H, Lower limb, Abdomen	1
Total number of cases of combined injuries	424

Incidences of combined injuries have been encountered in 424 cases.

DISCUSSION

In the present study, maximum number of cases belongs to 21-30 years age group, with male: female ratio is 2.1:1. According to study done by Badrinarayan M, among 360 RTA victims, most cases 138 (38.33%) were in the age group of 15–30 years. A high percentage of both fatal 30 cases out of total 66 (45.45%) and non-fatal 108 out of total 294 (36.73%) cases were observed from the same age group. Mobile males (85%) outscored the domicile females (15%) with a ratio of 5.66:1.[4] Insurance statistics demonstrate a notably higher incidence of accidents and fatalities among teenage and early twenty-aged drivers, with insurance rates reflecting this data. Teens and early twenty-aged drivers have the highest incidence of both accidents and fatalities among all driving age groups. This was observed to be true well before the advent of mobile phones. Females in this age group suffer a somewhat lower accident and fatality rate than males but still well above the median across all age groups. Also within this group, the highest accident incidence rate occurs within the first year of licensed driving. For this reason many US states have enacted a zero-tolerance policy wherein receiving a moving violation within the first six months to one year of obtaining a license results in automatic license suspension. No US state allows fourteen year-olds to obtain drivers licenses any longer. In the present study, Out of 2698 cases, 2276 cases have improved and 93 cases have expired. Isolated head injury has been accounted in 2274 cases and combined injury in 424 cases. According to study done by Badrinarayan M, from 360 RTA cases 156 (43.32%) had head injury. Out of 66 fatal cases, 60 (90.90%) sustained head injury. In the group of 204 RTA cases without head injuries, 198 (97.05%) were non-fatally injured. The association of fatality was very significantly associated with the presence of head injury at the time of

accident ($P < 0.001$).[4] In the world, the most common cause of death after trauma is severe brain injury. The incidence of death from head injury is approximately 7 per 100,000, and the severely brain-injured also have the highest mean length of stay and mean hospital costs. In the European Brain Injury Consortium (EBIC) study, 52% of head injuries were related to MVAs. Head injury is a major cause of morbidity in survivors; disability may occur whatever the initial severity of the head injury and surviving patients with brain injury are more impaired than patients with injuries to other parts of the body. In a prospective study of nearly 3000 head injuries from Scotland, patients were stratified according to the Glasgow Coma Score (GCS) on arrival at hospital: mild injury (GCS 13-15), moderate injury (GCS 9-12) and severe injury (GCS 3-8). Of the initial cohort, 2668 had mild injuries, 133 moderate injuries, and 102 had severe injuries. At follow-up after one year, 1397 were still disabled. Of these, 1260 (90%) had been initially assessed as mild injuries.[5,6] In the present study, Upper Limb was commonly inured in 154 cases, lower limb in 133 cases and total number of cases of combined injuries was seen in 424 cases. According to study done by Bayan P et. al., Multiple injuries were most common (54.24%), followed by injuries to the lower limbs (38.67%). Fracture of the bones (71.69%) was the most common nature of injury.[7]

CONCLUSION

Research suggests that the driver's attention is affected by distracting sounds such as conversations and operating a mobile phone while driving. Many jurisdictions now restrict or outlaw the use of some types of phone within the car. Recent research conducted by British scientists suggests that music can also have an effect; classical music is considered to be calming, yet too much could relax the driver to a condition of distraction.

COMPETING INTERESTS

The authors declared that they have no competing interests. All the authors have read and approved the final manuscript.

CONSENT was taken from the institutional ethics committee.

REFERENCE

1. "WHO | World report on road traffic injury prevention".
2. "The 2009 Statistical Abstract: Motor Vehicle Accidents and Fatalities".
3. "Statistics and Data - Road and Motor Vehicle Safety - Road Transportation - Transport Canada".
4. Badrinarayan M, Nidhi DS, Sukhla SK, and Sinha AK. Epidemiological Study of Road Traffic Accident Cases from Western Nepal. Indian J Community Med. Jan 2010; 35(1): 115–121.
5. Murray GD, Teasdale GM, Braakman R, Cohadon F, Dearden M, Iannotti F, *et al*. The European Brain Injury Consortium survey of head injuries. *Acta Neurochir (Wien)* 1999; 141(3): 223-36.
6. Thornhill S, Teasdale GM, Murray GD, McEwen J, Roy CW, Penny KI. Disability in young people and adults one year after head injury: prospective cohort study. *BMJ* 2000; 320(7250): 1631-35.
7. Bayan P, Bhawalkar JS, Jadhav SL, Banerjee A. Profile of non-fatal injuries due to road traffic accidents from a industrial town in India. Int JCrit Illn Inj Sci 2013; 3:8-11.

Source of Support: None Declared
Conflict of Interest: None Declared