

Medicolegal cases of Road traffic accidents in Sandeman (Prov) Hospital Quetta

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ABSTRACT

Aim: To analyse the sex variations, distributions and month wise distribution of road traffic accidents victims which were presented in medico-legal department in Sandeman (Prov) hospital Quetta.

Study Design: Observational Cross sectional

Place of study: Data were collected from medicolegal department of provincial Hospital Quetta and study was conducted at Avicenna Medical College, Lahore.

Duration of the study: 01-January-2000 to 31-December 2000

Methods: A total of 1589 medicolegal patients of road traffic accidents have been taken. A proforma was designed to record the date, age, sex, distribution of victims, the manner of injury and the identity of cases brought in.

Results: Data were analysed on using SPSS version 20. Road Traffic accidents results showed, out of 1589 cases males 1274 (80%) and 315(20%) were females. The most frequent cases of road traffic accidents were found at the age of 21-30yrs, 470(29.6%) the most common victims were Rear seat passengers 500 (31.5%) highest percentage of RTA victims admitted to emergency department of Sandman (Prov) hospital Quetta was in June 250(15.7%).

Conclusion: Number of males involved in R.T.A. is more than number of females. Strict implementation of traffic rules and regulations are important measures to avoid R.T.A.

Keywords: Medicolegal, road traffic accidents

INTRODUCTION

Accident constitutes a complex phenomenon of multiple causations. The causative factors classified into human & environmental¹. Road traffic accidents accounts for the majority of deaths world wide². During 1990 RTA was 9th leading cause of death in the world. RTA may become 2nd commonest cause around 2020³. WHO data shows that in 2002 nearly 1.2 million people worldwide died as a result of road traffic injuries. This represents an average of 3242 persons dying each day around the world from road traffic injuries⁴. Countries of South-East Asia are passing through significant urbanization, motorization, industrialization but the lack of safety-related policies and programmes result in increased accidents to the intensity that more than a quarter of injury-related deaths in the world occurred in the

South-East Asia Region in 2000⁵. According to the World Health Organization (WHO) 2011 fact sheet, "over 90% of the world's fatalities on the roads occur in low-income and middle-income countries, even though these countries have less than half of the world's vehicles"⁶. In a 2009 report, WHO estimated that in Pakistan road traffic injuries result in 25.3 deaths per 100,000⁷, which is high by the international organization's standards. In the last 15 years, extensive efforts have been made to collate data about road traffic injuries and mortalities at the city and national levels in Pakistan⁸. Those injured by accidents on the road can be divided into three broad groups: pedestrians, cyclists (pedal or motor) and the drivers and passengers of vehicles⁹. Of these three broad groups, it is the pedestrians that are most often injured, although the proportion of pedestrian victims in the overall statistics varies greatly according to the traffic patterns of different countries⁹. There were a gap between the trends and results which were on medical record, so this study was planned to analyse the sex variations, distributions and month wise distribution of road traffic accident victims which were presented for medico-legal department in Sandeman (Prov) Hospital Quetta.

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MATERIALS & METHODS

This is a descriptive cross-sectional study and data were collected from 01 January 2000 to 31-December 2000. A total of 1589 medicolegal patients of road traffic accidents have been taken. The inclusion criteria were any case of medico-legal road traffic accidents and were brought to the emergency department of Sandeman (Prov) Hospital Quetta. Any other emergency or medicolegal cases were excluded from the study sample. A proforma was designed to record the date, age, sex, distribution of victims, the manner of injury and the identity of cases brought in. Age was categorised into seven groups: Group 1 includes age of the patient from (0-10yrs), Group 2 patients (10-20 years), Group 3 patients comprised of (21-30 years), Group 4 patients included (31-40 years) and Group 5 patients (40-50 years) Group 6 (51-60yrs) and in Group 7 age taken from (above 60 yrs). Road traffic accident victims were classified in to four main groups Pedestrian, Passengers (Front and rear seat passengers of car, mini truck, van, buses), Drivers and motorcyclists/ bike were taken. Statistical analysis was done on SPSS version 20. The frequency and percentages were calculated for all categorical variables—age, sex, identity, distribution of victims and month wise frequency. Ethical approval was obtained from the Ethical Review Committee of the Avicenna Medical College, Lahore.

RESULTS

A total of 1589 medicolegal cases of road traffic accidents were recorded during the study period. Data was analysed on using SPSS version 20. Road Traffic accidents results showed, out of 1589 cases males 1274(80%) and 315(20%) were females. Table 1 showed age of victims ranged from 0 to more than 60 years. The most frequent cases of road traffic accidents were found at the age of 21-30yrs, 470(29.6%) and 2nd most common in age group of 31-40yrs, 400(25.2% and in 3rd most common group was 11-20yrs containing 200(12.6%), which were followed by next age group of 41-50yrs, 169(10.6%). A least pattern were found in 51- 60yrs age group which contained 150 (9.5%) and the remaining age groups including 0-10 yrs & above 60yrs contained very least number of cases 100 (6.3%) each was found. In age group from 0-10yrs the minimum age of the child was 5yrs.

Table 2 showed the distribution in road traffic accidents the most common victims were Rear seat passengers 500 (31.5%) , and the 2nd most common victims were Motorcyclists 389(24.5%) and 3rd common victims were Front seat passengers

350(22%) found. A least victims were Drivers 200 (12.6%), which was followed by Pedestrian 150(9.4%) found. In all above distribution history of incidence showed the mostly accidents were happened while traveling through buses, mini buses, coasters, wagons, cars, jeeps and motor cycles.

Table 1: Age of victims

Valid	Frequency	%	Valid%	Cumulative%
0-10 yrs	100	6.3	6.3	6.3
11-20 yrs	200	12.6	12.6	18.9
21-30 yrs	470	29.6	29.6	48.5
31-40 yrs	400	25.2	25.2	73.6
41-50 yrs	169	10.6	10.6	84.3
51-60 yrs	150	9.4	9.4	93.7
>60yrs	100	6.3	6.3	100.0

Table 2: Distribution of RTA victims

Valid	Frequency	%	Valid %	Cumulative%
Pedestrian	150	9.4	9.4	9.4
Front seat passengers	350	22.0	22.0	31.5
Rear seat passengers	500	31.5	31.5	62.9
Drivers	200	12.6	12.6	75.5
Motor cyclists	389	24.5	24.5	100.0

Table 3: Month wise distribution of RTA victims

Valid	Frequency	%	Valid%	Cumulative%
January	90	5.7	5.7	5.7
Feb.	100	6.3	6.3	12.0
March	95	6.0	6.0	17.9
April	110	6.9	6.9	24.9
May	150	9.4	9.4	34.3
June	250	15.7	15.7	50.0
July	180	11.3	11.3	61.4
August	150	9.4	9.4	70.8
Sept	131	8.2	8.2	79.0
October	130	8.2	8.2	87.2
Nov.	90	5.7	5.7	92.9
Dec.	113	7.1	7.1	100.0

Our results showed in table-3 that the highest percentage of RTA victims admitted to emergency department of Sandman (Prov) hospital Quetta was in June 250(15.7%) followed by July 180(11.3%) . 2nd highest percentage of RTA patients admitted in May, June 150(9.4%) each, followed by September 131(8.2%) & October 130(8.2%). Least no of cases were admitted in December 113(7.1%) followed by April 110 (6.9%) and February 100(6.3%). Very least no of RTA patients were admitted in March 95(6%) followed by January, December 90(5.7%) each.

DISCUSSION

Road Traffic Accidents (R.T.A.) are the worst part of any accident, which has become universal due to traffic overload¹⁰. Entire world is emphasizing over the means to reduce R.T.A. to its minimum level¹¹.

Inadvertent drivers, especially young guys on motorbike are the important vulnerable groups to suffer from R.T.A. Traffic overload is the major contributing factor for R.T.A. Some people violate the traffic rules and regulations and ultimately get involved in RTA¹². Hilly, tortuous and serpentine road is another factor for R.T.A.¹³. The most common age group affected in the study was between 21-30, 31-40 years similar results also found in different studies of India^{14,15,16,17}. The age groups from 21-30 yrs and 31-40 years is the most active phase of life, during which there is tendency to take a risk. As they are economically productive, there is serious financial loss to the community. This is the high risk group, where preventive strategies need to be targeted. The lower proportion of victims below 10 years and above 60 years could be due to general less mobility of this group. Not surprisingly our study shows the overwhelming majority of the victims were males (80%). This is due to greater male exposure on urban and rural streets as compared to females (20%). Similar proportion supports by other studies in India^{14,15,16}. But our study also shows the marked predominance of males, may be due to fact that the victims of fatal R T A were mostly drivers and travelers who are usually males. Rural and urban had almost equal share of fatal R T As due to urbanization and industrialization¹⁷. On the socioeducational front, majority of them had lower level of education and belonged to middle socioeconomic classes and this is similar to results of other studies^{15,18}. This study had several limitations. Injury surveillance was performed only in selected tertiary care hospitals. It is possible that RTA injuries of a minor nature which occurred away from city centres were not accounted for. Therefore, we were unable to present overall injury rates and mortality rates in this district. Moreover, the outcome of injuries was based only on the information available in the A&E department and patients were not followed up due to the limited resources available for the study. Nevertheless, more detailed data about injuries was recorded in this study than are routinely available^{19,20}.

CONCLUSIONS

- Number of males involved in R.T.A. is more than number of females.
- Strict implementation of traffic rules and regulations are important measures to avoid R.T.A.
- Smooth and steady, well controlled driving minimizes R.T.A.

- Improvement of road conditions will be another important measure to control R.T.A.

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