ORIGINAL ARTICLE

Epidemiological Study of Road Traffic Accident Cases

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ABSTRACT

Aim: To determine the ubiquity and epidemiological factors related to the road traffic accidents victims.
Study design: Observational Descriptive study.
Setting: Study was conducted in Allama Iqbal Medical College and data were collected from Sandeman provincial Hospital Quetta.
Duration of the study: 01-January-2003 to 31-December 2003
Methods: A total of 1883 patients of road traffic accidents were admitted in hospital. A proforma was designed to record the age, sex, and distribution of victims and the identity of cases brought in.
Results: Out of 1883 cases males 1533(81.4%) and 350 (18.1%) were females. The most frequent cases of road traffic accidents were found at the age of 31-40yrs, 610(32.4%) and the most common injuries were found on Head & Neck, 670(35.6%).
Conclusion: Males were more commonly affected in R.T.A. as compared to females. Most common age group in RTA was 31-40yrs. Most common region involved was Head & Neck.
Keywords: Epidemiology, traffic accident, head & neck

INTRODUCTION

Injuries and fatalities occur all told sorts of transportation however numerically road traffic accidents account for the nice majority worldwide[1]. In developed countries, they're the foremost common reason for death below the age of fifty years, and in young men this trend is even a lot of marked[1]. The world Health Organisation (WHO) calculable that one.17 million deaths occur every year worldwide attributable to road traffic accidents[2]. A breakdown of the figure indicates but, that regarding 70percent of the deaths occur in developing countries[2]. The explanations for the high freight of road traffic injuries in developing countries are growth within the varietys of motor vehicles; higher number of individuals killed or injured per crash in low-income countries, poor social control of traffic safety regulations; scarcity of health infrastructure and substandard access to health care[3]. In a 2009 report, WHO estimated that in Pakistan road traffic injuries result in 25.3 deaths per 100,000[4], that is high by the international organization's standards. within the last fifteen years, intensive efforts are created to collate information regarding road traffic injuries and mortalities at the town and national levels in Pakistan[5]. There was a spot between the trends and results that were on case history, thus this study was planned to research the sex variations, distributions and monthly distribution of road traffic accident sufferers that were given for medicolegal department in Sandeman (Prov) Hospital Quetta.

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MATERIALS AND METHODS

This is an observational descriptive study and information were collected from 01 Gregorian calendar month 2003 to 31-December 2003. A complete of 1883 patients of road traffic accidents were admitted during a hospital. The inclusion canons were any case of medico-legal road traffic accidents and were dropped at the emergency department of Sandeman (Prov) Hospital Quetta. The other emergency or collection cases were excluded from the study sample. A proforma was sketched to document the date, age, sex, distribution of victims, the way of injury and therefore the identity of cases brought in. Age was classified into seven groups: cluster one includes age of the patient from (0-10yrs), cluster two patients (10-20 years), cluster three patients comprised of (21-30 years), cluster four patients enclosed (31-40 years), and cluster five patients (40-50 years) cluster half-dozen (51-60yrs) and in cluster seven age taken from (above sixty yrs). Drivers and motorcyclists/bike were taken. applied math analysis was done on SPSS version twenty. 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 moral Review Committee of Allama Iqbal Medical College, Lahore.

RESULTS

Table 1: Gender variation

Gender	Frequency	%age
Male	1533	81.4
Female	350	18.6
Total	1883	100

A total of 1883 medico legal cases of road traffic accidents were recorded during the study period. Data were analyzed on using SPSS version 20.Road Traffic accidents results showed, in Table-1 out of 1883 cases males 1533 (81.4%) and 350 (18.6%) were females. Table 2 showed age teams of road traffic accident victims ranged from zero to quite sixty years. The most frequent cases of road traffic accidents were found at the age of 31-40yrs, 610(32.4%)and ordinal most typical age bracket of 21-30yrs, 600(31.9%) , and in third most typical age teams were 11-20yrs, 300(17.5%). The least common age group was found 41-50yrs,153(8.1%), which is followed by second least age groups were 51yrs to 60yrs and more than 60years 65(3.5%) each. And third least age group were 0-10yrs, 60(3.2%) found. In age bracket from 0-10yrs the minimum age of the kid was 7yrs. Table 3 showed out of 1883 RTA victims the foremost common injuries were found on Head & Neck,670(35.6%) and therefore the ordinal most typical injuries were found on trunk 530(28.1%), third common injuries were found on upper limbs, 400(21.2%). Least common region was lower limb, 230(12.2%) found which was followed by abdomen,53(2.8%). Table 4 showed the most common RTA victims were Back seat passengers 790(42%) found .therefore the ordinal most victims were the Front seat passengers 750(39.8%) found. Third common victims were drivers 300(15.9%) found. Least common victims were pedestrians 43(2.3%). Table-5 showed month wise admissions of road traffic accident patients admitted to emergency department of Sandeman (Prov) hospital Quetta. A Highest share of admissions of RTA victims were seen in June month 233 (12.4%), ordinal highest share of RTA patients admissions were seen in August 192(10.2%), third highest share of admissions of RTA patients were seen in February 179(9.5%) that was followed by July,172(9.1%). a awfully least no of admissions of RTA patients were seen throughout November 112(5.9%) followed by January 124(6.6%) and a Least range of admissions was seen in month of May132 (7%), that was followed by March 133(7.1%) and April 138(7.3%).

Table 2: Monthly admissions of victims

Valid	Frequency	%	Valid%	Cumulative%
January	124	6.6	6.6	6.6
February	179	9.5	9.5	16.1
March	133	7.1	7.1	23.2
April	138	7.3	7.3	30.5
May	132	7.0	7.0	37.5
June	233	12.4	12.4	49.9
July	172	9.1	9.1	59.0
August	192	10.2	10.2	69.2
Sept.	157	8.3	8.3	77.5
October	151	8.0	8.0	85.6
Nov.	112	5.9	5.9	91.5
Dec.	160	8.5	8.5	100.0
Total	1883	100	100.0	

Table 2: Age variation in RTA victims

Valid – age group (years)	Frequency	%age
0-10yrs	60	3.2
11-20yrs	330	17.5
21-30yrs	600	31.9
31-40yrs	610	32.4
41-50yrs	153	8.1
51-60yrs	65	3.5
More than 60 yrs	65	3.5
Total	1883	100

Table 3: Region of the body involved in RTAs

Valid	Frequency	%age
Head & Neck	670	35.6
Trunk	530	28.1
Abdomen	53	2.8
Upper Limb	400	21.2
Lower Limb	230	12.2
Total	1883	100

Table 4: Distribution of RTAs by road-user type

RTA victims	Frequency	%age
Driver	300	15.9
Front seat passengers	750	39.8
Back seat passengers	790	42
Pedestrians	43	2.3
Total	1883	100

DISCUSSION

Medicolegal cases are an essential fragment of practice in emergency departments of major hospitals[5]. The results of the available study discovered that 1883 cases males 1533 (81.4%) and 350(18.6%) were females, because males are more ambulant due to male supremacy within the area, ,going to work, studies etc. that's why more prone to accident[6,7,8]. Another studies in Asian country additionally supports constant[9,10]. RTAs are the leading reason behind death among youth aged 15-29 years and value the nations concerning 1-3 maximize their gross domestic product[11] i.e., $518 billion within the year 2000[12]. In our study we have a

tendency to found the majority of the victims were seen in 31-40 yrs mature cluster 610(32.4%) followed by 21-30 years mature cluster, 600(31.9%) and results of our study additionally supported by another studies in Republic of India[13,14,15,16,17,18]. The foremost common region concerned in our study was Head & Neck 670(35.6%) and similar results were additionally found in alternative studies[18,20,21]. Traffic overload is that the major contributive issue for R.T.A. Some folks violate the traffic rules and rules and ultimately get entangled in RTA[22]. Hilly, curvy and curving road is another issue for R.T.A[23]. The a lot of common RTA victims were rear seat passengers 790(42%) found that were thanks to overloading of the buses, mini buses and coasters . these accidents most ordinarily seen in month of Gregorian calendar month 233(12.4%) thanks to highest temperature and suffocation throughout movement in buses and coasters. This study has several limitations. Injury scrutiny was performed only in selected tertiary care hospitals. It is possible that RTA injuries of a minor nature or major which happened far from city centres were not considered for. Therefore, we were incompetent to study the current comprehensive injury rates and mortality rates in this district. Moreover, the outcome of injuries was based only on the information available in the Accident and emergency department and patients were not followed up due to the limited resources available for the study. However more comprehensive data about injuries were recorded in this study than are routinely available[20,21].

CONCLUSION

1. Males were more commonly affected in R.T.A. as compared to females.
2. Most common age group in RTA was 31-40yrs. Most common region involved was head & neck.

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