

Fatal Road Traffic Accidents in Karachi

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ABSTRACT

Objective: Fatalities due to road traffic accidents are a major cause of mortality all over the world. The aim of our study is to look at socio-demographic profile of such cases in order to find some remedial measures to minimize the brunt.

Study Design: Retrospective / observational study.

Place and Duration of Study: This study was conducted at the Emergency Department, Sir Syed Hospital, Qayyumabad, Karachi from January to June, 2013.

Materials and Methods: Study was based upon 56 victims of RTA. It includes all those who died during treatment or found dead on arrival in the emergency department. The demographic data of these cases was recorded.

Results: Males victims were 71% & maximum number of victims (37.5%) was in age group 30-39 years. Most of the accidents (38%) took place between 1200hrs & 1800hrs. Most of the injuries were found on the head (66%) and then chest 14%, lower extremities 21%, upper extremities 19%. The most common external injuries were abrasions, bruises and lacerations. Skull was the most common bone to be fractured (44%). The head injury constituted major cause of death (53%) followed by hemorrhagic shock (35%). Pedestrians and two wheeler riders were mostly affected individuals followed by cyclists, drivers of three wheeler, light and heavy motor vehicles.

Conclusion: The incidence of traffic accidents is at rampant. The accidents risks can be minimized by enhancement of road visibility, good traffic control with properly working road traffic signals. Fatalities of Traffic accidents victims can be reduced by providing good pre-hospital care, establishment of well equipped emergency trauma centres in all big hospitals.

Key Words: Road Traffic Fatalities, Vehicles, Injuries, Karachi.

INTRODUCTION

Accidents are very common in big cities as there are many modes of transport and roads are overburdened. We hear as well as read in newspapers about such happenings almost daily. These accidents often result in loss of life and material. These are caused by the carelessness / negligence of the drivers and their ignorance about the traffic rules.

Like most cities, road accidents are also a problem in Karachi, Pakistan. It is the largest city in Pakistan in terms of area and population and it is significantly facing the issue. According to WHO, road traffic accidents will be the 3rd greatest cause of the fatalities by 2020¹. Fatal RTAs for about 90% occurs on the roads of developing countries despite that the number of vehicles they have are less than half of the globe vehicles². WHO reports that India has the highest score of deaths due to RTAs in the world ranking. According to data for 2007, the number of people died in India due to RTAs is 114,590 and the next in this ranking is China with 89,455 deaths³. According to a WHO report in 2009 in Pakistan road traffic injuries lead to 25.3 deaths per 100,000⁴.

The patient logs of the two largest government hospitals in Karachi were studied between December 1993 and February 1994 to identify those persons most likely to

be injured in a road traffic accident and to identify the vehicle types which were most likely to be involved. The 18% of people involved in accidents died. Pedestrians and motorcyclists were the most common victims accounting for 46% amongst all injured and 51% of all deaths. Although buses and trucks were less than 4% of the registered vehicles in Karachi but they were the striking vehicle among 49% of all injured and 65% of all died. Road traffic accidents disproportionately affect wage earners. Specific interventions to improve the road safety concerning trucks and buses is needed⁵.

According to official data compiled by the Accident Department of Karachi Traffic Police, a total of 97 fatal accidents were recorded during January-April this year (2013), which is lower than the corresponding period of last year⁶.

By latest information RTA is the main cause of injury, disablement & mortality all over the world which perplex a great burden on natural health system⁷. RTAs are also the leading cause of mortality in young & adults less than 45 years of age and more so in males. The consequences of injuries substantiated in RTAs depends on variety of reasons including venturous driving location & condition of the roads (roads without speed breakers, cat eyes, sign boards etc.), type of vehicle, condition of the driver, time of accident &

below standard safety designs^{8,9}. Head injury is the main cause of death in RTAs.

In Pakistan epidemiological data on RTAs have been reported from emergency departments, intensive & surgical care units of some particular hospitals & police stations⁸. Necessary medical care in the 1st hour after an injury to the victim can reduce the number of deaths from RTAs & increase the probability of survival. According to research in Europe about 50% of the deaths from RTAs occur at the place of accidents or on the way to the hospital, 15% victims die within 4 hrs after an accident & 35% die after 4 hours⁹.

MATERIALS AND METHODS

This Observational retrospective study was carried out in the emergency department of Sir Syed Hospital Qayyumabad Karachi. This hospital is located in a thickly populated area & is traversed by 2 busiest roads in the city. This hospital is a 350 bedded hospital and is the main public hospital in Qayyumabad and most of the residents are taking medical facilities from this hospital. The study was based on deaths due to RTAs during period from January 2013 to June 2013.

Study was based upon 56 victims of RTA. It includes all those who died during treatment or found dead on arrival in the emergency department. The demographic data of these cases was recorded. On admission informed consent was taken from relatives or attendants of those patients who were received unconscious. A detailed medical history was obtained from the persons who survived or from the relatives. From medical charts, type of injury & its severity was assessed; while other details were obtained from medical staff and from police. Definition of road traffic accident used in this study was as follows "A collision involving at least 1 vehicle in motion on a public or a private road that result in at least 1 person being injured or killed"

RESULTS

Total 56 deaths from RTA were registered in Sir Syed Hospital with in the period of study. Male victims were 71% (Table No.1) & maximum number of victims (37.5%) was in age group 30-39 years (Table No.2). Most of the accidents (38%) took place between 1200hrs & 1800hrs. Most of the injuries were found on the head (66%) and then chest 14%, lower extremities 21%, upper extremities 19% (Table No.3). The most common external injuries were abrasions, bruises and lacerations. Skull was the most common bone to be fractured (44%) (Table No.4). The head injury constituted major cause of death (53%) followed by hemorrhagic shock (35%) (Table No. 5). Pedestrians and two wheeler riders were mostly affected individuals followed by cyclists, drivers of three wheeler, light and heavy motor vehicles.

Table No. 1: Sex distribution of cases (N=56)

Sr.No.	Gender	No. of cases	%age
1	Males	40	71.43
2	Females	16	28.57
Total		56	100.00

Table No. 2: Age distribution of cases

Sr. No.	Gender	No. of cases	%age
1	0-9	02	3.57
2	10-19	05	8.93
3	20-29	08	14.29
4	30-39	21	37.50
5	40-49	08	14.28
6	50-59	07	12.50
7	>60	05	8.93
Total		56	100.00

Table No. 3: Distribution of site of fatal injuries

Sr. No.	Site of fatal injury	No. of cases	%age
1	Head	37	66.07
2	Chest	08	14.29
3	Lower extremities	12	21.43
4	Upper extremities	11	19.64

Table No.4: Distribution of fractures in RTA victims

Sr. No.	Site of fracture	No. of cases	%age
1	Skull	25	44.64
2	Ribs	07	12.50
3	Lower extremities	11	19.64
4	Upper extremities	10	17.86
5	Spine	05	8.93

Table No.5: Cause of fatal injuries in RTA victims

Sr. No.	Cause of death	No. of cases	%age
1	Head injury	30	53.57
2	Hemorrhagic shock	20	35.72
3	Spinal cord injury	04	7.14
4	Complications	02	3.57
Total		56	100.00

DISCUSSION

The study was undertaken over a period of 6 months in the emergency department of Sir Syed Hospital, Qayyumabad, Karachi. The study shows that majority of the deceased (71.43%) were males & it is consistent with other studies like that in Kenya or in other low socio-economic countries¹². This is due to more exposure of males to roads because most of their work is outdoor and many of them being the only supporter of their families which causes an adverse economic impact on their families¹³. Majority of victims (37.5%) were in the age of 20-49 years and this is consistent with other studies^{14,15}. Severe injuries by road crashes are also associated with rainy seasons; this finding is

similar to that reported in case-control study in Iran & Hong Kong^{16,17}. The most commonly effected part of the body was head & chest followed by lower extremities, this finding is similar to that finding in New Delhi¹⁸ where the most common pattern of injury was head (18.9%), followed by fractures of lower limbs (17.8%). Majority of fractures were observed in skull in all type of road users. Most of the accidents occurred between afternoons & evening (1200hrs-1800hrs) with the continuance of early night hours, this finding of our study is similar to other studies.^{20,21,22} According to Aygencel et al¹⁹ these hours correspond to the time range that people actively work & travel and then go back to their homes after finishing their work. In late 90s the traffic officers used to visit schools and colleges to guide the students about traffic laws and informing them about the signal system and zebra crossings, but recently this practice has been abandoned.⁶

As the number of vehicles is increasing day by day with the same length and number of roads, lack of attention of drivers and foot travelers and unawareness of traffic rules followed by absence of foot paths and non working of traffic signals and poor traffic control on signals are the main causes of accident. Fast driving at night under the influence of alcohol also increases the number of road crashes.

In our study 64 % victims died on the scene or during transportation. This was the common observation among different researchers²³.

A study by Saha Dev et al²⁴ conducted in New Delhi showed that most of the victims were brought to the hospital alive, a delay in emergency services, shortage of pre hospital teams, absence of nurses or doctors & formalities by police were the possible reasons of fatalities due to RTAs.

The experts have advised the motorcyclists to always wear helmets and desist from over speeding, besides the pedestrian also need to be very careful while crossing the roads.

The deadly roads of Karachi where traffic accidents have become the order of the day happen to be the signal-free corridors. These include Shara e Faisal, Quaidabad Chowrangi, Dawood Chowrangi, Korangi Road, Korangi Crossing, Korangi Double Road, Korangi Industrial Area, Jail Road, Karimabad Signal, Rashid Minhas Road, Sohrab Goth, Sakhi Hasan Chowrangi, New Karachi, M.A Jinnah Road, Numaish Chowrangi to Sea-Breeze Plaza, Mauripur Road, Hub River Road, Garden Road and Abul Hassan Isphani Road.⁶

CONCLUSION

The incidence of traffic accidents is at rampant. The accidents risks can be minimized by enhancement of road visibility, good traffic control with properly working road traffic signals. Fatalities of Traffic

accidents victims can be reduced by providing good pre-hospital care, establishment of well equipped emergency trauma centres in all big hospitals.

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