FREQUENCY OF CASUALTIES ASSOCIATED WITH ROAD TRAFFIC ACCIDENTS IN DISTRICT LAKKI MARWAT-KPK

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ABSTRACT

Background: RTA (road traffic accidents) is the most devastating ¸ unforeseen situation which is taking its place in the leading causes of death

Objectives: This study is performed to scrutinized and analyze the figure of RTA caused deaths

Design: Descriptive, Retrospective study.

Setting: THQ hospital Sarai Naurang lakki Marwat.

Period: April 2014 to May 2017.

Material and Methods: 90 cases of post-mortem in THQ hospital Sarai Naurang lakki marwat with history of RTA. The data was collected from a number of sources i.e. post-mortem report, police inquiry reports, dying declaration of patient and statement regarding history recorded from the friends/relatives/siblings of the patient and the DATA was analyzed on SPSS version17.

Results: a total of 90 autopsy cases was scrutinized. Approximately more than half of the cases were belonged to the age group 16-35 years and most of the cases were of male, followed by 40-55 years. Of the total cases, 66(73.33%) cases were of male and 24(26.6%) were of female.

Conclusion: Head injury is the most common cause of death in the cases of RTA. A multi-organization approach is the main stream to decrease the devastating consequences of RTA.

Key words: Post-mortem, Road traffic accidents, Medico-legal autopsies, dying declaration.

INTRODUCTION

Road traffic accidents are the most calamitous situation which is taking its place in the leading death causes in the developing countries. This study is performed to scrutinized and analyze the figures of RTA caused injuries/deaths.

Trustees illustrated accident as "extempore situation causing evident damage while road traffic accident is defined as any accident comprising at least one vehicle bare to community with at least one person is injured or killed, intentional acts and natural disasters are excluded".[1,2]

The first road traffic accident happened on 31st of August 1869 in Ireland in which a very well-known scientist Mary Ward has died.[3] Annually 10 million vehicle collision happening worldwide.[4] Approximately 3500 peoples died every day as a result of road traffic accident, and approximately 1.27 million deaths occurred per annum worldwide.[5]

In World Health Organization 2011 report , "more than 90% of all the accidents on the roads happened in developing countries, although these countries are having less than half of the world's vehicles".[6] There is death rate of 21.5 per 100,000 peoples and 19.5 per 100,000 peoples in low and middle income countries respectively which is quite higher than high-income country (i.e. 10.3 per 100,000).[7] RTA (road traffic accident) took its place at 4rth in the ranking order of causes of death and results in 08% of all the death worldwide.[8] According to a report of WHO in 2009 that 25.3 death per 100,000 population occur in Pakistan,[9] which is very high than international organization's standards.

Nonetheless, globally, while weighing the RTAs the most essential gadget has been the autopsy. The Medico-legal autopsies help in solving a number of mysteries, Queries that leads to a resolved case e.g

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death cause, the duration between RTIs and death, and the time since death,[10] and these evidences & data are acceptable evidence in the court of law.

The main steam of this study is to evaluate the RTA cases in district lakki marwat so that the resident of this area especially the younger age group could educate them about the consequences of the RTA and the safety measures that could decrease the deteriorating after effects.

OBJECTIVE

This study is performed to scrutinized and analyze the figure of RTA caused deaths and by that to educate the people regarding the consequences of RTA, law and order must to be obeyed and hence to establish & implement systematic approach for RTA prevention, control and the deteriorated outcome.

SUBJECTS AND METHODS

This study was retrospective and was done on total 90 cases of post-mortem in THQ hospital sarai naurang lakki marwat, from April 2014 to May 2017, with history of RTA. The data was collected from a number of sources i.e post-mortem report, police inquiry reports, dying declaration of patient and statement regarding history recorded from the friends/relatives/siblings of the patient.

In order to get the proper and relative data, a Questionnaire was constructed to record the details regarding history, epidemiological data, a thorough details of injuries they received as a result of RTA and cause of death etc. Data was categorized and statically analyzed on SPSS version17.

RESULTS

During the period of study progression, a total of 90 autopsy cases was scrutinized. Out of all the victims above 50% of the victims were belonged to the age group 16-35 years and most of the cases were of male, followed by 40-55 years. Of the total cases, 66(73.33%) cases were of male and 24(26.6%) were of female.

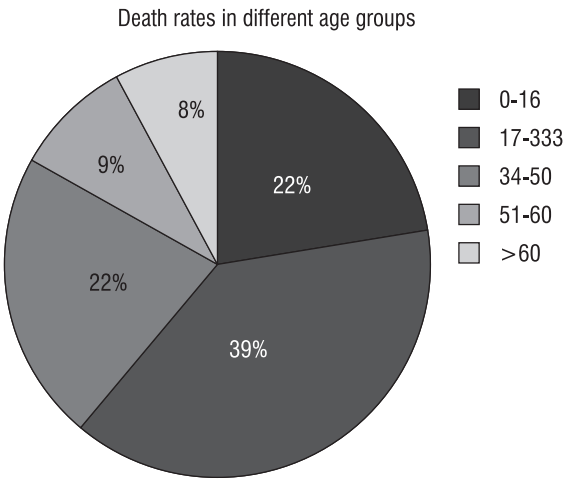
Maximum number of accidents happened during the day time 7am and 6pm especially in the evening i.e. between 4pm to 6pm. More than half of 5/6th of the patients 75(83.33%) died on the spot while 15 patients died in the hospital and none of them survive more than 24 hours. Two wheeler caused most of the road traffic accidents 61(67.77%) followed by the four wheeler light vehicle 22(24.44%) followed by heavy wheeler vehicle which is 7(7.77%).

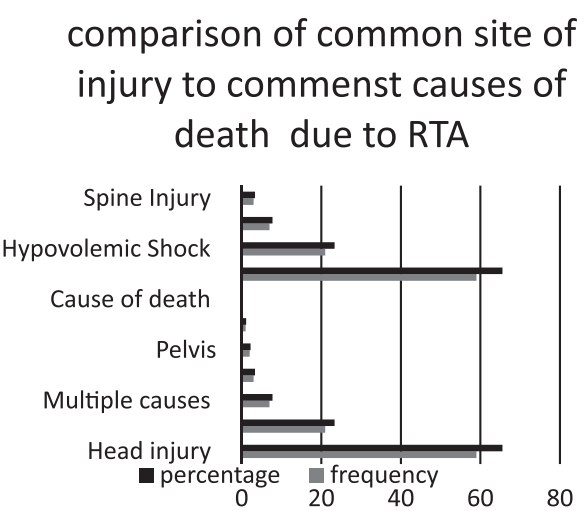
Majority of the victims died within the first 24 hours or immediately. 3/4 of the victims 68(74.44%) died on the spot as compared to deaths 16(17.77%) in hospitals and 6 victims (6.66%) died on the way to hospital.

Age groups(in years)	Male	Female	Total	Gender ratio
0-16	13 (14.44%)	7 (7.77%)	20 (22.22%)	1.85:1
17-33	24 (26.66%)	11 (12.22%)	35 (38.88%)	2.1:1
34-50	17 (18.88%)	3 (3.33%)	20 (22.22%)	5.6:1
51-60	7 (7.77%)	1 (1.11%)	8 (8.88%)	7:1
>60	5 (5.55%)	2 (2.22%)	7 (7.77%)	2.5:1
Total	66(73.33%)	24(26.6%)	90(100%)	2.75:1

Table-II. Tabulated design of site of injuries and root cause of death in RTA cases

Site of injury	Frequency	Percentage %
Head	61	67.77
Chest	14	15.55
Abdomen	7	7.77
Limbs	5	5.55
Pelvis	2	2.22
Spine	1	1.11
Cause of death		
Head injury	59	65.55
Hypovolemic Shock	21	23.33
Multiple causes	7	7.77
Spine Injury	3	3.33





Approximately the frequency of the sufferers who had head injuries 61(67.77%) is more than 2/3, followed by chest injuries 14(15.55%) and abdomen 7 (7.77%) in decreasing order of frequency. In most of the sufferers 59 (65.55%) the cause of the death is declared to be injuries of the head. The Second common cause of death was found to be hypovolemic shock due to excessive loss of blood 21 (36.2%) shown below in the Table-II.

In the chart given below I compare the common site of injury with the common causes of death due to RTA.

DISCUSSION

As we previously described that the accident is the unforeseen situation with the most devastating consequences.

In this current study we analyzed the data we get from 90 autopsy cases and it was found that the most of the sufferers were belonged to the younger age group 16-35 year age group(61.1%) i.e. more than half the victims and most of the sufferers were male. We divided the victims in different age groups and data was collected for each group separately. 20/90 victims were in 0-16 year age groups and comprises 13 male and 7 female. In 17-33 year age group there was total 35 victims and comprises 24 male and 11 female, in 34-50 year age group there was total of 20 victims containing 17 male and 3 female, in 51-60 year age group there was 8 victims comprising 7 male and 1 female and in the last group which is of .60 year there was 7 victims involved comprising of 5 male & 2 females. Of all the victims total there was 66 male and 24 females with the male to female ratio 2.75:1

In our study we found that most of the accidents happened during the day time 7am and 6pm especially in the evening i.e. between 4pm to 6pm. More than half of 5/6th of the patients 75(83.33%) died on the spot while 15 patients died in the hospital and none of them survive more than 24 hours. Two wheeler caused most of the road traffic accidents 61(67.77%) followed by the four wheeler light vehicle 22(24.44%) followed by heavy wheeler vehicle which is 7(7.77%). The most victims died of the head injuries 59(65.55%), followed by the victims died of hypovolemic shock (hemorrhagic shock) 21(23.33%), followed by death due to multiple causes 7(7.77%). Approximately the frequency of the sufferers who had head injuries 61(67.77%) is more than 2/3, followed by chest injuries 14(15.55%) and abdomen 7 (7.77%) in decreasing order. Majority of the victims died within the first 24 hours or immediately. 3/4 of the victims 68(74.44%) died on the spot as compared to deaths 16(17.77%) in hospitals and 6 victims (6.66%) died on the way to hospital. This data is in accordance with Khichi et al,[11] according to his study that most of the sufferers (50.9%) died on the spot of accident, a less number survived up to 6 hours (38.82%) with very less number (1.8%) survived more than 24 hours. Above 50% of the victims belong to younger age group and is in accordance with the previous studies conducted in Pakistan. Mirza,[12] through his study found that 19-40 years age group showed the highest number of emergencies (55.7%) in Karachi while in another study conducted by Bhatti et al,[13] and according to him that 15–44 years age group were the most affected (48%) in Rawalpindi.

CONCLUSION

In this study, 38.88% of sufferers were of the 17-33 years age group with the male to female ratio of 2.1:1. The most victims died of the head injuries 59(65.55%), followed by the victims died of hypovolemic shock (hemorrhagic shock) 21(23.33%), followed by death due to multiple causes 7(7.77%).While keeping in mind the regarding the road safety measures, a multi-organization approach have to follow. A coordination have to establish between the health, traffic rules & regulation enforcement organization. The mortality rates due to RTA can be controlled and the devastating results are

preventable by various measures such as educating peoples properly about the traffic rules and regulation, safety measures i.e. use of seat belts, helmets, consequences of over speeding and one wheeling, and the last but not the least laws for under age drivers and not following the traffic rules; proper construction of well surfaced road; improving the hospital and pre-hospital care system.

REFRENCES

1. Hogarth J, World Health Organization. Glossary of health care terminology.
2. World Health Organization. Road Traffic Injuries." Fact sheet N 358. Geneva, Switzerland: Author. 2015.
3. Arif M, Ahmed M, Rasool SH. ROAD TRAFFIC ACCIDENTS; AUTOPSY BASED STUDY IN MULTAN. Professional Medical Journal. 2015 Sep 1;22(5).
4. Engels D, Chitsulo L, Montresor A, Savioli L. The global epidemiological situation of schistosomiasis and new approaches to control and research. Acta tropica. 2002 May 1;82(2):139-46.
5. P edenM. World report on road traffic injury prevention.
6. Mirza FH, Hassan Q, Jajja N. An autopsy-based study of death due to road traffic accidents in metropolis of Karachi. JPMA. 2013 Feb;63(156).
7. WHO W. Global status report on road safety 2013: supporting a decade of action. Available online: http://www.un.org/ar/roadsafety/pdf/roadsafetyreport. pdf
8. World Health Organization. Road Traffic Injuries." Fact sheet N 358. Geneva, Switzerland: Author. 2015
9. Rodrigues EM, Villaveces A, Sanhueza A, Escamilla-Cejudo JA. Trends in fatal motorcycle injuries in the Americas, 1998–2010. International journal of injury control and safety promotion. 2014 Apr 3;21(2):170-80.
10. Dolinak D, Matshes E. 8 Asphyxia. Forensic pathology: principles and practice. 2005 Apr 8:201.)
11. Khichi Z, Afridi HK, Mateen A, Kahiri GQ. Audit of Thoraco-Abdominal Injuries in Road Traffic Accidents in Larkana–Autopsy Study. Pak J Med & Health Sci. 2013;7(4):1109-12.
12. Mirza FH, Hassan Q, Jajja N. An autopsy-based study of death due to road traffic accidents in metropolis of Karachi. JPMA. 2013 Feb;63(156).
13. Bhatti MA, Ajaib MK, Masud TI, Ali M. Road traffic injuries in Pakistan: Challenges in estimation through routine hospital data. J Ayub Med Coll Abbottabad. 2008 Mar;20(3):108-1