INJURY PATTERN AMONG NON-FATAL ROAD TRAFFIC CRASH VICTIMS

Tariq Jabbar Khan, Jibran Jabbar Khan, Parkha Jabbar Khan

ABSTRACT

Introduction: During the twentieth century road accidents have replaced infectious disease as a leading cause of death. Injury is a physical damage to the body, resulting from various kinds of energy (mechanical, thermal, electrical, chemical or radiant) Injury can be categorized into unintentional [i.e. road traffic injuries (RTIs) and drowning] and intentional (i.e. suicide, homicide). This study is about pattern of injuries in road traffic accidents on motorways. Expansion in road network, motorization, and expansion in the country has been accompanied by a rise in road accidents leading to road traffic injuries (RTIs). Today RTIs are one of the primary reasons of deaths,

Objective: To determine Injury Pattern among Non-fatal Road Traffic Crash Victims.at A&E department of North West General Hospital & Research center Peshawar.

Study design: Descriptive (Cross Sectional) Study

Place & Duration of study: Study was conducted in North West General Hospital & Research center Peshawar from July 2013 to December 30th, 2014

Methodology: All patients presenting to the A&E Moderate to severe injuries from all over the city and other parts of the district are referred to North West General Hospital & Research center Peshawar. A total 100 patients were selected carefully by purposive sampling according to inclusion criteria of the study design.

Results: 100 patients were considered eligible for study inclusion. Most of the injured patients were males (91. %) The mean age of males presenting with RTA injuries was 27.1 [standard deviation (SD) 11.3] years. Besides roads 91% of males and 9% of females), were injured. The commonest activity during a RTA injury was motor cycle travelling 47% of males. Second most activities were Pedestrian that was 23%. Few patients (19%) reported to as Passenger. Fractures were the commonest type of injury as a result of a road crash (37%). Dislocation were (47%), and Minor cuts and bruises Were (21%)

Conclusion: The results point to an increased road disease burden in KPK Pakistan which needs immediate attention in the political plan Moreover, these results recommend the need for a widespread system in this city to better recognize road user types, positions and situational reasons tangled in these crashes. The results of this study would be a helpful guide for us to illustrate future research and management strategies.

Keywords: Non-fatal Injuries, Pattern, RTA.

INTRODUCTION

The World Health Organization (WHO) estimates that -approximately 30,000 people worldwide are injured and/or disabled, with more than 3,000 others killed every day in road traffic crashes. This equates to about 1.2 million people each year that are killed and as many as 50 million injured in traffic crashes each year. [1] Low-and middle-income countries account for up to 90% of the disability adjusted life years (DALYs) that are lost globally and more than 85% of deaths. [2] The Global Burden of Disease project by the WHO has estimated that by 2020 road traffic injuries will become the second leading cause of DALYs lost in developing countries and the third leading cause in the developed world, thereby representing 5.1% of the global burden of disease. According to the National Crime Record Bureau (2010), the number of vehicular accidents was 430600 resulting in 133938 deaths and 470600 injuries, thereby accounting for 37.2% of all accidental deaths. The process of rapid and unplanned urbanization has resulted in an unprecedented revolution in the growth of motor automobiles global. The disturbing rise in ill-ness and death owing to road traffic accidents over the past few decades is a matter of great concern globally. Furthermore, about 60% of the DALYs lost globally as a result of road traffic injury occurs amongst adults of useful age, among 15- 44 years. Wounds reason for about one third of the acute patient load in many hospitals in Low income and middle income countries and road traffic injuries constitute the majority of such admissions.[3] Pakistan is a developing country with 6th

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highest population in the world with a total estimated population of 180 Million. Developing countries like Pakistan are struggling to put an adequate infrastructure in place to support an expanding economy. [4] Injuries due to road traffic accidents (RTAs) are a global public health problem [5] that disproportionately affects low-and middle-income countries (LMICs) which account for more than 90% of road fatalities [6.] In the Eastern Mediterranean region (EMR) 30% of all injury-related deaths in 2004 were duel to RTAs [7.]With recent extension in development and ease of obtaining car loans, period from 2001 to 2006 increased by over Pakistan, it is estimated that injuries usually, RTA injuries in specific, may have headed to increased harm of daily adjusted life years [8.]

We need to know more about the numbers and types of injuries and about the circumstances in which these injuries occur. This evidence will specify just how severe the injury problem is and where, exactly, inhibition actions are most immediately needed. Although the death data could be accessible with slight effort but the data on non-fatal victims are difficult to get. Suffering from various types of injuries is very difficult as it depends on to which health care unit the victim reports for treatment. Very few studies have attempted to study the pattern of injuries in non-fatal accident victims in Pakistan.

MATERIALS AND METHODS

This study was carried out in A&E department of North West General Hospital & Research center Peshawar from July 2013 to December 30th, 2014. A total 100 patients were selected carefully by purposive sampling according to inclusion criteria of the study design. Patients were carefully selected on the basis specified criteria as follows;

Non-Fatal Injuries : Severe disability, severe incurable illness or a long term illness actually endangering life, permanent mental illness, complete or a significant loss of ability to work or a permanent disfigurement of the body as well as injuries such as. Fractures, harm of the inside organs, serious cut or irregular wounds.[9]

Road Traffic Accident: History of road traffic accident such In as: collisions between road vehicles; between road vehicles and pedestrians; between road vehicles and animals or fixed obstacles and with one road vehicle alone Collisions between road and rail vehicles. [9]

Injured Person: Any person who as result of an injury accident was not killed immediately or not dying within thirty days, but continued an injury, usually demanding medical treatment,[9]

This study was conducted after approval from the ethical board and research committee of the North west General Hospital & RC center Peshawar. All admitted patients meeting the inclusion criteria were counted in the study. The purpose and benefits of study were explained to the patients and written informed consent was obtained. After ascertaining complete history, thorough clinical examination will be done and a complete set of routine investigations were sent. Injury severity will be defined as mild (minor or superficial such as bruise or cut), moderate (requiring some skilled treatment such as in case of fractures or sutures) or severe (requiring intensive medical or surgical management such as in case of inner bleeding, perforated organs, severe blood vessels)

RESULTS:

Results were entered in SPSS version 17. Data presentation of the 100 patients was done in tabular form. Data were entered and analyze SPSS version 20. Mean and SD will be computed for age and duration of injuries. Frequency and percentages will be calculated for gender Pattern of Non fatal injuries.

Subjects' mean age was 27.1(standard deviation 11.3, range 18–60) years, with 91 male (91%) and 9 female (9%) subjects. Age distribution were categorized 18-25 Years (24) 24%, 26-30 Years (29) 29%, 31-35 Years (19)19%, 36-40 Years (11) 11%, 41-50 Years (12) 12%, 50-60 Years (05) 5% Activities related injuries were included Motor cycle travelling (47) 47%, Pedestrian (23)23%, Passenger (19) 19%, Driver (11)11%. Injury type distribution were categorized as Fracture (37) 37%, Dislocation (29)29%,

Table 1: Descriptive Statistics

Mean age	Standard Deviation	Range
27.1	11.3	18-60 Years

Table 2: Injury Types and Distribution

Valid	Frequency	Percentage
Fracture	37	37%
Dislocation	29	29%
Head injury	13	13%
Minor cuts and bruises	21	21%

Head injury (13)13%, Minor cuts and bruises (21)21%

DISCUSSION:

The present study carried at A&E department of North West General Hospital & Research center Peshawar. Subjects' mean age was 27.1(standard deviation 11.3, range 18–60) years, with 91 male (91%) and 9 female (9%) subjects. Age distribution were categorized 18-25 Years (24)24%, 26-30 Years (29) 29%, 31-35 Years (19)19%, 36-40 Years (11) 11%, 41-50 Years (12) 12%, 50-60 Years (05) 5% Activities related injuries were included Motor cycle travelling (47) 47%, Pedestrian (23)23%, Passenger (19)19%, Driver (11)11%. Injury

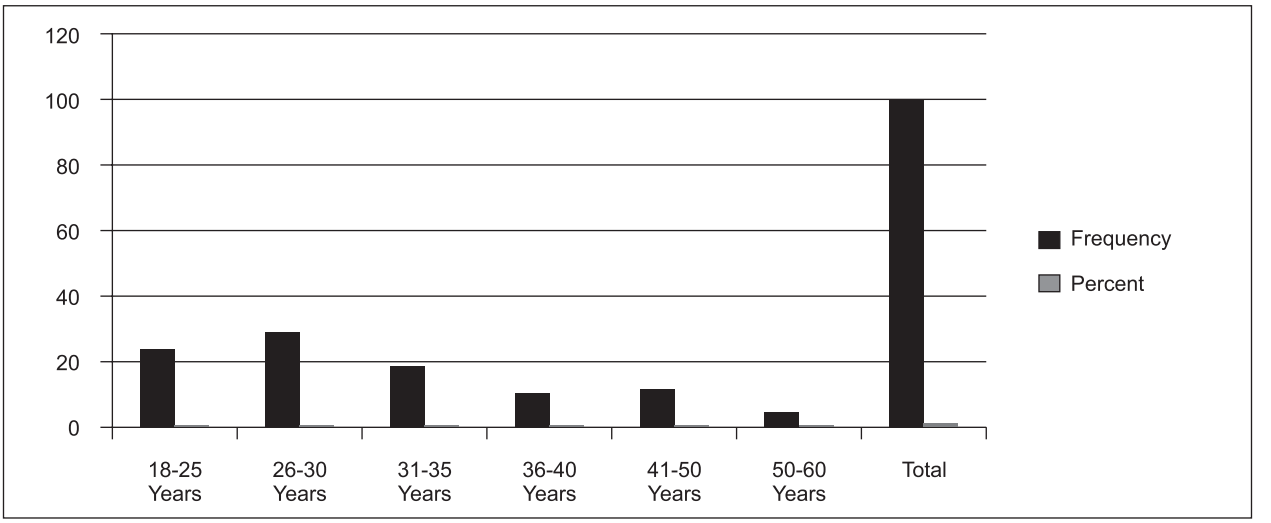

Figure 1: Age Distribution

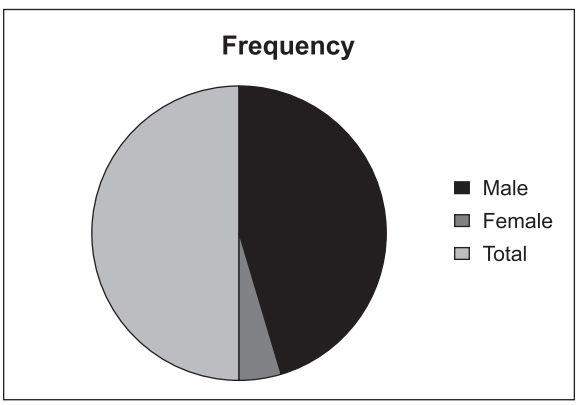

Figure 2: Gender Distribution

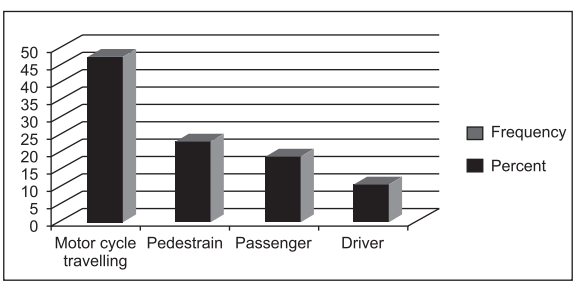

Figure 3: Activitie Related Injuries

type distribution were categorized as Fracture (37) 37%,Dislocation (29)29%, Head injury (13)13%, Minor cuts and bruises (21)21%.RTIs contributed for 38% of fatal and 39% of non-fatal injuries.[10]Road traffic crashes were categories of pedestrians, passengers, drivers, cyclists, motorcyclists. Distribution of the pedestrians comprised the highest percentage (69.7%). The pedestrians were injured while crossing the road (62.5%) and the rest (32.5%) while walking along the road.[10] The pedestrians formed the majority of victims (69.7%) as compared to the passengers (20.5%) in this study. This could be attributed to the fact that in year 2004 there was an introduction and enforcement of legislation that all passenger vehicles install speed 'governors' limiting the speed to 80 km / hr and road worthy inspection of the vehicles before being allowed on the road. This measure reduced the number of passengers injured in buses and minibuses [11].The most common injuries were fractures (69.0%) with fractures tibia/fibula being the most recorded (30.3%). Other studies have reported similar observations.[12]Major injuries i.e., fractures and abdominal injury were reported in 214 (53.4%) of the cases, whereas 187 (46.6%) had minor injuries in the form of cuts, bruises, scratches and exposed injuries. Among the main wounds, Fractures of lower limbs were the most common 105 (26.3%), followed by Fractures of Spine and Trunk 36 (9%) cases. The least number of cases were of Fracture Pelvis 8 (2%) [13].

CONCLUSION:

These results suggest the need for a comprehensive system in this city to better identify road user types, sites and situational factors involved in these crashes. The results of this study would be a helpful guide for us to illustrate future research and management strategies.

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