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Available online at: http://www.iajps.com ***Research Article***

INCIDENCE OF MOTORBIKE ACCIDENTS AND PATTERN OF INJURIES PRESENTING IN EMERGENCY IN LAHORE, PAKISTAN

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Abstract: ***Objective:*** *The main aim of our study was to find Incidence of Motorbike and Associated Pattern of Injuries.* ***Duration of Study:*** *This study was carried out in a period of 9 months from February 2018 to October 2018.* ***Place of Study:*** *This study was carried out in accidents and emergency department of Mayo Hospital Lahore.* ***Materials and Methods:*** *Patients between the ages of 6- 70 years were included in this study regardless of their gender and patients had all kind of injuries. All the patients who presented in emergency department with road traffic accidents were selected and following inclusion criteria patients were selected. Injuries were classified according to different regions involved. Complete examination was done on each patient and related investigations were done to find the associated injuries. A pre designed proforma was used to collect the data of the patients. Informed consent was taken from all the patients and ethical committee approval was taken.* ***Results:*** *A total of 2000 patients were studied in a duration of 9 months. Patients were between the ages of 6-70 years with the mean age of 31.4 years. Among these 1588(79.4%) belonged to male gender while 412(20.6%) were females. 1136(58.8%) patients suffered from injuries to lower limbs while upper limb injuries were seen in 544(27.2%) of the patients. Other results are as follows;*

1. Abrasions	*1874 (93.7%)*
2. Bruises	*1040 (52%)*
3. Lacerations	*1362 (68.1%)*
4. Fractures in lower limbs	*450 (22.5%)*
5 Fractures in upper limbs	*272 (13.6%)*

Keywords: *Motorbike accidents, fractures, Abrasions, Injury pattern.*

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INTRODUCTION:

In the urban cities of underdeveloped countries, motorbike is a major mode of transportation. Bike fanatics, low socioeconomic status, type of job forces the individuals to use this mode of transportation.[1] Deficiency of respect for traffic guidelines, escalation of traffic load, enhanced road conditions, rash driving and stunts by bike fanatics and teenagers have increased the incidence of road traffic accidents by a large number. [2] Pattern of injuries associated with bike accidents have been changed because of rash driving and growing passion for stunts while driving by bike fanatics. [3,4,5] It is a nagging problem of national concern and has a great impact on economic conditions, health and life of individuals and communities. [6]

It is a problem that is neglected in the entire world especially developing nations. Characteristic of injury varies from compound fractures to abrasions and other fatal injuries that threats the life of individual. Apart from increased financial load on the family and government, death rate also increases with the increasing severity of injury. [7,8] In causing disabilities and death all over the globe, it is one of the leading cause. [9,10]

This study was carried out to reveal the types of injuries suffered in motorbike accidents. This study will help in development of proper trauma units where man power will be used to manage the patient on urgent basis in emergency department.

MATERIALS AND METHODS:

Patients between the ages of 6-70 years were included in this study regardless of their gender and patients had all kind of injuries. All the patients who presented in emergency department with road traffic accidents were selected and following inclusion criteria patients were selected. Injuries were classified according to different regions involved. Complete examination was done on each patient and related investigations were done to find the associated injuries. A pre designed

proforma was used to collect the data of the patients. Informed consent was taken from all the patients and ethical committee approval was taken.

RESULTS:

A total of 2000 patients were studied in a duration of 9 months. Patients were between the ages of 6-70 years with the mean age of 31.4 years. Among these 1588(79.4%) belonged to male gender while 412(20.6%) were females. 1136(58.8%) patients suffered from injuries to lower limbs while upper limb injuries were seen in 544(27.2%) of the patients. Other results are as follows;

1. Abrasions 1874 (93.7%)
2. Bruises 1040 (52%)
3. Lacerations 1362 (68.1%)
4. Fractures in lower limbs 450 (22.5%)
5. Fractures in upper limbs 272 (13.6%)

Fractures in spine was 28 (1.4%), skull and maxillofacial area 30 (1.5%), ribs 42 (2.1%) and pelvis 82 (4.1%).

DISCUSSIONS:

Accidents are a serious health issue and mostly teenagers are affected. [11] Deficiency of respect for traffic guidelines, escalation of traffic load, enhanced road conditions, rash driving and stunts by bike fanatics and teenagers have increased the incidence of road traffic accidents by a large number. [12,13,14] In old age, less number of injuries are seen but when they do occur they are serious in nature. [15,16,17] The results of our study are comparable to the studies done recently and in the past. It was shown by Khani GM [18] and coworkers that accidents mostly occur in young people. Motorbike accidents are commonly seen in young adults as shown by Khan A.[20] Young children are mostly affected as found by Fouda EY.[13] Enhancing number of motorbike injuries in adolescents are children have been shown by Bevan CA [4].

In Pakistan high incidence is seen in males are they are the ones who drive motorbikes. [19,20] Accidents are more common in male gender as shown by Miki N [26] and similar results were shown by Sharma BR [32]. All these results are in accordance with our study showing males are more commonly involved in road traffic accidents. In females, injuries are mostly seen as a result of dupatta (long scarf) getting stuck in rear wheel causing the bike to slip. [21-23,23] Injuries around the neck are most common due to dupatta around the neck which is pulled when stuck in bike. [34,35,36] In female pillion riders motor bike accidents are more common as shown by Minhas MS [27].

Less number of injuries are seen in females because they are not active riders in Pakistan. Less injuries in females as compared to males is shown by Singh R and co-workers [34]. Lower limbs and pelvis fractures are most common because they are the first parts which touch the ground and are subjected to high amount of force. Enhanced fractures of lower limbs have

been shown by Kaimkhani GM, [18] Hofling [15], and Khan A [20].

The reactionary force provided by the hands to stop further injuries results in injuries to hands and upper limbs resulting in large number of injuries that fall 2nd to lower limb injuries. [25-29] Abrasions, bruises and lacerations occurs because of decreased force suffered due to secondary impact on the ground. Third most common injuries are seen in head and neck areas because helmets are not used by the bikers. [30-31] Injuries to the soft tissues and other viscera are less in number as shown by the study. Strict traffic regulations play a pivotal role in prevention of these injuries.

CONCLUSION:

Incidence of motorbike injuries is much higher in younger males who are bike fanatics. Among all the injuries seen abrasion and fractures of the lower limbs were most common.

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