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A Prospective Study in Orthopedic Department Of Nishter Hospital, Multan to Know the Extremity and Sequence of Injuries of Bone in Motorbike Accidents

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ABSTRACT

Objective: To observe the structure and severity of limb injuries among the motorcyclist that have suffered from traffic accidents in the orthopedic clinic.

Materials and Methods: This is a prospective study performed in the Orthopedic Department for the period of 1 year from March 2016 to March 2017. The patients included in this study were referred to the Accident and Emergency Service and the remote clinic, who were referred from another part of the province. All the victims of bike injuries in motorcycle accidents were involved in this work. After the evaluation and treatment of the emergency, the patients' data were collected and analyzed statistically with SPSS 11.

Place and Duration: This study was performed in the orthopedic Unit II of Nishter Hospital Multan for the Period of one Year From March 2016 to March 2017 .

Results: In this period, a total of 240 patients (26.56%) were admitted to the orthopedic unit II, which is the victim of motorcycle accidents. These 240 patients had a total of 280 bone-related injuries due to the fact that more than one bone was broken in 25 of these patients. The majority of the victims were male (210 to 240 - 91.17%) and female victims were minorities (240 - 8.82%). Among these patients. The most common cause of injury was collision with another vehicle, of which 215

(63.23%) were observed between the ages of 16 and 35, aged by years. TIBIA fractures were seen in 165 patients and tibia was the most common open fracture, the second most common fracture bone in victims of femur motorcycle accidents.

Conclusion: It is known that motorcyclists are more vulnerable to traffic accidents and that they have been in bed for a long time due to the severity of injuries in the lower extremities and unfortunately become a socio-economic problem. These injuries can be prevented by applying legislation that implements road safety measures.

Key words: Fracture tibia, Motorcycle accidents, Open fracture of Extremity injury

INTRODUCTION

In 2010, traffic accidents caused more than 2 million deaths worldwide. This was the second cause of death between the ages of 15 and 44, and 80% of these deaths occurred in developing countries. By 2020, traffic accidents are expected to be the world's third leading cause of death and disability. In developing countries, traffic accidents affect the age group of 15-44 years of production. Today, due to existence Traffic accidents appeared in developing countries around the world causes lost and disability worldwide is the leading cause of disability 90% of the ninth leading cause of life and the use of motorcycles as economic and useful urban traffic has increased tremendously in recent years. About 80,000 motorcycles are registered annually in Multan. Unfortunately, motorcyclists also make a significant contribution to mortality and morbidity in traffic accidents. Even in developed countries, the risk of motorcycle accidents is 20 times more per kilometer than drivers of other vehicles. As noted in previous studies, head injuries and injuries to lower

extremities accepted in the hospital are very common among cyclists who represent up to 30-80% of motorcyclists. This study was carried out to evaluate the nature and severity of injuries among motorcycles resulting from traffic accidents of the orthopedic service.

MATERIAL AND METHOD: This prospective study was performed in the orthopedic Unit II of Nishter Hospital Multan a Tertiary Care Hospital having 1800 beds for the Period of one Year From March 2016 to March 2017 under the supervision of Head of Department and after the approval from the Ethical Committee of the University. Multan is a cosmopolitan city with 1.80 million people. The persons included in the study were admitted through the accident and emergency services; Applications from other provinces were also accepted in the patient department. The victims of motorcycle accidents with bone injuries were included in the study after approval from the ethics committee.

Open fractures classified into open and closed fractures, open fractures classified according to GASTILO, classification of ANDERSON patients with only soft tissue injuries, head, thoracoabdominal or vascular systemic lesions were included in the study. The management and analysis of the data was done with SPSS version 11.0.

RESULTS: In the Orthopedic Unit II of the Nishter Hospital, Multan accepted 980 patients from March 1, 2016 to March 31, 2017. Of these patients, 240 (26.56%) were victims of motorcycle accidents that had 280 bone injuries. Twenty-five patients had more than one broken bone. 185 patients were between 16-35 years of age. Men are more than women (Table 1).

Table 1: Age and Sex
Total No. of Patients = 240

Sex		Age	
Female	30 (8.82%)	Below 15	20
Male	210 (91.17%)	16-35	205
		36-45	81
		46-above	34

Table 2: Mechanism of Injuries
Total No. of Patients = 240

1	Accident of motorcycles with other vehicles	215 (63.23%)
2	Turnover of motorcycles accidents	70 (20.58%)
3	Collision with fixed objects like pole	55 (16.17%)

Motorcycle accidents (63.23%) and motorcycle accidents (20.58%) were made with other vehicles (Table 2). Lower extremity injuries represent the predominant type of injury involving 280 bones. 210 (55.25%) had closed fractures. The most common fracture in 105 patients (43.42%) was in the tibia axis. Open fractures of Tibia were observed in 66 patients (63.69%) (Table 3). The average length of hospitalization ranged from 45 days to 5-70 days, and patients with tibial fracture type III open fractures remained in the hospital for a longer period of time.

Table 3: Total No. of Patients = 240
Total No of Bones = 280

		Closed	Open			
			I	ii	iii (a)	iii (b)
Femur	58	28	10	15	5	0
Tibia	105	35	30	25	5	6
Radius–ulna	43	30	7	4	2	0
Hummers	10	7	1	2	0	0
Carpal/ M.C	15	8	2	1	2	2
Tarsal/ M.T	49	28	12	3	2	1
Total	280	144	62	49	16	9

DISCUSSION: Motorcycle accidents are one of the main causes of major health problems in developing countries. Multan is 1.80 million people, a cosmopolitan city where the transportation system is not well established. In recent years, the use of motorcycles has increased dramatically, as it is economical and easy to use during peak hours. Last year, 8,000 traffic accidents were reported in Multan, most of them between the ages of 16 and 24 (Daily Dawn, May 11, 2015). In our study, 60.29% of the victims were in the 16-34 age group and 91.17% were in the males. Kortor reported a 22: 1 ratio of males with a mean age of 43.1 years, reporting 90.7% of the wicking males and 28.8% of the males. Death, the male-to-female ratio was 2.8: 1 and an average age. Shamivo de Jamica at 31.9 years reported 95.2% of men. In our society, women do not use motorcycles. Men are more proof of motorcycle accidents as they are on the way to fulfilling their professional responsibilities. In a survey conducted in Pakistan in 2010, it was observed that 22.4% of men and 6.9 women per 1,000 in traffic accidents were seen in traffic accidents of 1000 people. This study, like other studies, found that victims of motorcycle accidents were exposed to more injuries in the lower extremities, 43.34% of the most common fractures of the tibia and 64.84% of them were open fractures, while M. Zargar tibia fractures were 49.8% 39, Wick 19.7% and Bawu 17.9% reported tibia fracture. Open fracture was reported in 44.21%, Fatmiah reported open fracture in 13.6% and tibia fracture in 43.5%.

Tibia fracture is more common because it is superficial and is more susceptible to direct trauma and lack of protection against legs and poor driving habits such as traffic in and out. Average duration of hospital stay in our study 45 days, open type II open fracture has been in hospital for longer and requires more than one

surgical procedure. Wick reported 35.4 days, Shamir 10 days, Bawu 12 days and Phillipo reported 19.23 days in hospital. The most common injury mechanism was found to be accidental (63.23%) with other instruments reported by other investigators. It points to the poor cyclists driving and impatient skills.

CONCLUSION: In a cosmopolitan city like Multan with large population and heavy traffic, the high incidence of motorcycle accidents causes serious injuries in the lower extremities. Extremely high acceptance rates in orthopedic rooms prolong the length of stay and are a major burden on economic resources. This pain and injury can be avoided if effective rules and traffic laws are strictly enforced.

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