

# Epidemiology of Traumatic Injuries in Patients admitted in a Tertiary Care Hospital: A Descriptive Analysis

Vinod Kumar Singh

Associate Professor, Department of Orthopaedics,  
A. N. M. Medical College and Hospital, Gaya, Bihar, India.

## ABSTRACT

**Background:** The incidence of traumatic injuries is increasing due to increase in means of transportation, poor roads and disobedience of road safety laws, earthquakes, fights etc. Adequate knowledge about the involvement of different parts of the body in trauma will aid planning towards management of these injuries.

**Material and Methods:** The present study was conducted to assess the epidemiology of traumatic injuries in patients over the period of 3 months. Total patients included in the study was 178 patients. Following presentation at accident and emergency unit of the hospital, the biodata of the patients was obtained, history of the injury was obtained, and examination and investigation of the injured part of the body were done. The details of the findings were recorded. Data analysis was done by the Statistical Package for the Social Science version 22.

**Results:** The total participants of the study was 178 in which 104 (58.42%) were males and 74 (41.57%) were females. Motor vehicle (50%) was the main cause of traumatic injuries. Maximum injury occurs to tibia (29.21%) followed by femur (20.78%).

**Conclusion:** Our study concluded that traumatic injuries were prevalent in men. Motor vehicle (50%) was the main cause of traumatic injuries. Maximum injury occurs to tibia (29.21%) followed by femur (20.78%)

**Keywords:** Traumatic Injuries, Motor Vehicle, Epidemiology.


## \*Correspondence to:

**Dr. Vinod Kumar Singh**

Associate Professor,  
Department of Orthopaedics,  
A. N. M. Medical College and Hospital,  
Gaya, Bihar, India.

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## INTRODUCTION

Traumatic injuries pose a significant and increasing challenge to healthcare systems worldwide.<sup>1</sup> According to the World Health Organisation (WHO), traumatic injuries are one of the main causes of mortality in the world, with 90% of the injuries estimated to occur in low-and middle- income countries.<sup>2</sup> A large number of traumatic injuries are orthopaedic in nature. Orthopaedic injuries are injuries that cause damage to the musculoskeletal system, which includes bones, ligaments, joints, tendons, muscles, and nerves.<sup>3</sup> Road traffic injuries (RTIs) are responsible for a substantial proportion of deaths and injuries and are responsible for more years of life lost than most human diseases. Human behavior factors, vehicle factors, and road factors contribute to the causation of road traffic crashes.<sup>4</sup> Musculoskeletal injuries are a major public health problem globally, contributing a large burden of disability, suffering, and mortality.<sup>5</sup>

The World Health Organization (WHO) global burden of disease estimated that the combined rate of extremity injury from fall and road traffic crashes (RTCs) ranged from 1000 to 2600 people per

100,000 per year in low- and middle-income countries.<sup>6</sup> The fraction of global death due to injuries was estimated by WHO to be 9.6%.<sup>7,8</sup> The present study was conducted to assess the epidemiology of traumatic injuries in known patients.

## MATERIALS AND METHODS

The present study was conducted to assess the epidemiology of traumatic injuries in patients over the period of 3 months. All patients who presented with trauma during the study period were included in the study. Total patients included in the study was 178 patients. Before commencement of study ethical approval was taken from the ethical committee. Following presentation at accident and emergency unit of the hospital, the biodata of the patients was obtained, history of the injury was obtained, and examination and investigation of the injured part of the body were done. The details of the findings were recorded. Data analysis was done by the Statistical Package for the Social Science version 22.

Table 1: Distribution according to gender

Gender	n(%)
Male	104(58.42%)
Female	74(41.57%)

Table 2: Etiology of trauma

Types of trauma	N(%)
Motor vehicle	89(50%)
Fall from height	37(20.78%)
Sports injury	21(11.79%)
Gunshot injury	12(6.74%)
Assault	8(4.4%)
Building collapsed	3(1.6%)
Birth trauma	8(4.4%)
Total	178(100%)

Table 3: Types of fracture

Types of trauma	N(%)
Clavicle	5(2.8%)
Humerus	32(17.97%)
Radius and ulna	19(10.67%)
Spine	17(9.5%)
Pelvic	9(5.05%)
Femur	37(20.78%)
Tibia	52(29.21%)
Ankle	7(3.93%)
Total	178(100%)

## RESULTS

The total participants of the study was 178 in which 104 (58.42%) were males and 74 (41.57%) were females. Motor vehicle (50%) was the main cause of traumatic injuries. Maximum injury occurs to tibia (29.21%) followed by femur (20.78%).

## DISCUSSION

The total participants of the study was 178 in which 104 (58.42%) were males and 74 (41.57%) were females. Motor vehicle (50%) was the main cause of traumatic injuries. Maximum injury occurs to tibia (29.21%) followed by femur (20.78%).

A study from Leicestershire, UK, in 1990, for example, reported that the estimated annual incidence of fractures was 0.9%.<sup>8</sup>

The overall fracture incidence at all sites and in all age groups was reported to be 2.28% in Norway in 1990.<sup>9</sup>

Males are more involved than females; this may be adduced to the fact that males are more involved in rigorous and risky activities than females. This finding is similar to those reported by Thanni and Kehinde and Ngim et al. in Nigeria.<sup>10,11</sup>

The study shows that fracture in the lower-limb bone is more common than those of upper-limb bones, and this was against the findings of Ebong in Ibadan where upper-limb fractures were more common than the lower-limb fractures.<sup>12</sup>

Soleymanha et al. reported that the highest frequency of traumatic orthopaedic injuries related to falls (prevalence of 38.3%).<sup>13</sup>

The World Health Organisation (WHO) reported that the likelihood of falls increased with age-related biological change, with a high incidence over the age of 80 years.<sup>14</sup> Older people usually fell due to factors related to their physical environment, which included excessively high or narrow steps, slippery surfaces, darkness or excessive lighting, and random objects on the surface.<sup>14</sup>

## CONCLUSION

Present study concluded that traumatic injuries were prevalent in men. Motor vehicle (50%) was the main cause of traumatic injuries. Maximum injury occurs to tibia (29.21%) followed by femur (20.78%)

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