

## Profile of Pedestrian Deaths in Road Traffic Accidents.

Dr.H.T Khubchandani\* , Dr.G.G Kothari\* , Dr.J.C Jadav\*\* , Dr.R.Y Padmraj\*\* , Dr.K.A Shah.\*\*\*Dr.D.H Vora\*\*\*\*

\*Assistant professor, \*\*Associate Professor, \*\*\* Professor,\*\*\*\*Tutor, Forensic Medicine Department, B.J Medical College, Ahmadabad.

**Abstract:** Introduction: Pedestrians deaths in automobile road accidents in frequently encountered. Pedestrian deaths constitute a high percentage of all road fatalities. Material & Method: Out of total 367 accident death postmortem examinations, 87(23.70%) were pedestrians. The present study aimed at analyzing pattern of 87 pedestrian deaths; out of these 73 were male victims. Results: Majority of pedestrian accidents occurs at 10AM-2PM (27 cases) followed by 6 PM-10PM(25 cases). The pedestrians were hit by heavy vehicles in 31 cases, two wheelers in 20 cases, car & jeep in 16 cases Head injury is responsible in 67 pedestrian death cases followed by chest injury in 40 cases, abdominal injury in 28 cases. [Khubchandani H et al NJIRM 2013; 4(3) : 103-105]

**Key Words:** Pedestrian, Road traffic accidents, Road safety.

**Author for correspondence:** Dr.Jagdeep Jadav ,Associate Professor, Forensic Medicine,B.J Medical College, Civil Hospital,Ahmedabad-16 E-mail : jagdeepjadav@gmail.com

**Introduction:** Most people are pedestrians at some point in their daily activities. Pedestrian deaths constitute a high percentage of all road fatalities. Due to urbanization & increase in population, roads are congested and encroached by human activities .with increasing road traffic, it is observed that in developing countries pedestrians are common road users & incidence of pedestrians deaths are also increased. Lax enforcement of laws on traffic regulations and road safety contribute to increase motor vehicular accidents which increases pedestrian deaths. The present study is aimed at examining pattern of pedestrians deaths brought to civil hospital Ahmadabad mortuary.

**Material & Methods:** The present study was conducted at Forensic Medicine Department, B.J Medical college, Ahmedabad prospectively & retrospectively of the duration of 3 years from January 2003 to December 2006. Out of total 367 accident victims, 87 were pedestrians. The information was recorded from police inquest papers, hospital records, relatives. The medico legal postmortem examinations were carried out as it is mandatory by law The present study aimed

analyzing the pattern of pedestrian deaths. The results were analyzed.

**Result:** Out of 87 victims 13(14.94%) were female and 74(85.05%) were male. Majority of pedestrian deaths were encountered in the age group of 31-40 years(18.39%) followed by the age group of 21-30 years(17.24)

**Table 1: Age wise distribution of cases**

Age group(in years)	Number of Pedestrians death (%)
1 – 10	5 (5.75%)
11-20	7 ( 8.04%)
21-30	15 (17.24%)
31-40	16 (18.39%)
41-50	13 (14.94%)
51-60	10 (11.49%)
61-70	14 (16.09%)
71-80	3 ( 3.44%)
81-90	3 ( 3.44%)
91-100	1 (1.15%)

**Table 2: Time of occurrence**

6AM-10 AM	10AM-2PM	2PM-6PM	6PM-10PM	10PM-2AM	2AM-6AM
10 (11.49%)	27 (31.03%)	16 (18.39%)	25 (28.73%)	7 (8.04%)	2 (2.29%)

According to occurrence of accidents , majority of pedestrians accidents occurs at 10AM-2PM(27 cases) followed by 6 PM-10PM(25 cases).The

pedestrians were hit by heavy vehicles in 31 cases, two wheelers in 20 cases, car & jeep in 16 cases. Majority of pedestrian fatalities (46 cases) were found in city roads, followed by rural roads (23 cases)& highways(20.69). Majority of pedestrian death occurred in first less than one hour (26

cases), followed by 14 death cases in first 1- 6 hours.

**Table 3:Types of roads**

Types of Road	Number of pedestrian deaths(%)
City	46 (52.87%)
Highways	18 (20.69%)
Rural	23 (26.44%)

**Table 4: Survival Period**

Survival Period	Number of Pedestrians deaths (%)
Spot death	24 (27.59%)
Less than 1 hour	2 (2.3%)
1-6 hours	14 (16.09%)
6-12 hours	3 (3.44%)
12-24 hours	6 (6.9%)
24-48	1 (1.15%)
48-72	2 (2.23%)
3-5 days	7 (8.04%)
5-7 days	7 (8.04%)
7-14 days	11 (12.64%)
>14 days	10 (11.49%)

**Table 5: Major Regional Injuries**

Regional injuries	Number of pedestrian deaths(%)
Head injuries	67 (77.01%)
Face & neck injuries	27 (31.03%)
Chest injuries	40 (45.98%)
Abdominal injuries	28 (32.18%).
Hip & thigh injuries	15 (17.24%)
Knees & legs injuries	12 (13.79%)
Ankle & feet injuries	8 (9.19%)
Shoulder & upper limb injuries	19 (21.84%)

Head injury is responsible in 67 pedestrian death cases followed by chest injury in 40 cases, abdominal injury in 28 cases.

**Discussion :** Pedestrian are most common road user but there is no separate track separating them from other automobile vehicles. In present study pedestrian death cases constituted 23.70% of total road traffic accident which is supported by similar observation from the other studies of, Sevitt<sup>1</sup>

,Chandra et al<sup>2</sup>, Galloway and Patel<sup>3</sup>, Srivastava<sup>4</sup>, Maheshwari and Mohan<sup>7</sup>, Tirpude<sup>5</sup> et al. ,Harnam Singh<sup>8</sup>.In present study 31 cases of pedestrian deaths were due to hit by heavy vehicles is supported by Chandra et al<sup>2</sup> and Tirpude<sup>5</sup> where common offending vehicles were heavy vehicles. In present study head injury alone was fatal in majority (77%) of cases followed by multiple and thoraco-abdominal injuries.Thses findings are favoured by the studies of Sevitt<sup>1</sup>, Chandra et al<sup>2</sup>, Ghosh<sup>6</sup>, Tirpude<sup>5</sup>. The present study indicated that majority of deaths occurred in first less than one hour and then 1-6 hours after admission to hospital. Similar

Observations were made by Sevitt<sup>1</sup>Chandra et al<sup>2</sup>, Srivastava<sup>4</sup>and Harnam Singh et al<sup>8</sup> Majority of pedestrian fatalities were found in city roads due to congestion of road by human activities ,lack of proper foot path and presence of commercial activities along the sides of roads and on footpath making pedestrians more vulnerable to offending automobile vehicles running over city roads. In pedestrian death cases various types of multiple injuries were found,

**Conclusion :** Road safety policies in India should be oriented to focus on the various issues to reduce the incidence of road traffic injuries: pedestrians and other non-motorist in urban areas; pedestrians, other non-motorists, and slow vehicles on highways, motorcycles and small cars in urban areas It is high time to have adequate and reliable data collecting procedures so that necessary information is available for scientific analysis. Continuous monitoring and research will be required to establish of road safety. Introduction of traffic education in educational curricula is required for basic awareness as a preventing measure for road safety.

#### References:

1. Sevitt S. Death after road traffic accidents. *Med Sci Law* 1968; 8:271-87.
2. Chandra J, Dogra TD, Dikshit PC. Pattern of cranio intracranial injuries in fatal vehicular accidents in Delhi;1966-76. *Med Sci Law* 1979; 19(3): 186-94

3. Galloway DJ, Patel AR. The pedestrian problem: a 12 month review of pedestrian accidents. *Injury* 1982; 13: 294-8.
4. Srivastava AK, Gupta RK. A study of fatal road accidents in Kanpur. *J Ind Acad Foren Med* 1989; 11 (1): 24-8.
5. Tirpude BH, Naik RS, Anjankar AJ, Khajuria BK. A study of the pattern of cranio - cerebral injuries in road traffic accidents. *J Indian Acad Forensic Med* 1998; 20(1): 9-12.
6. Ghosh PK. Post-mortem study of pattern of injury involving pedestrian victims. *J Forens Med Toxicol* 1991; VIII (3-4): 1-8.
7. Maheshwari J, Mohan D. Road traffic injuries in Delhi: A hospital based study. *J Traffic Med* 1989; 17(3-4): 23-7.
8. Harnam Singh, et,al,A Review of Pedestrian Traffic Fatalities *Journal of Indian academy of forensic Medicine*, 2007 - 29(4).

Conflict of interest: None
----------------------------

Funding: None
---------------