

## Study of Medicolegal Aspects of Unknown Cases in P.M.C.H., Patna

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### ABSTRACT

**Introduction:** When people die and their bodies are found with no identifying documentation, it is very difficult for the police to establish their identities. These bodies are labelled as 'unknown/unidentified dead bodies' (UIDB). The body is preserved in the mortuary for 72 hours, from the time it is received in the mortuary. If no one claims the body after 72 hours the police are legally authorized to dispose of the body. The aim of study is to find incidence of unnatural deaths in relation to the age, sex, pattern of injuries and other parameter of the unknown victims and to ascertain the root cause of all types of deaths.

**Materials and Methods:** This prospective study was conducted in the Department of Forensic Medicine and Toxicology, Patna Medical College, Patna, Bihar, India between August 2012 to September 2014. All the medico legal autopsies of unknown/unidentified bodies during this period were included in the study. Information regarding unclaimed bodies with regard to age, sex, cause of death and manner of death was sourced from the autopsy reports and the inquest papers of the investigating officers.

**Results:** Out of total of 5103 autopsies done 401(7.85%) were unknown/unidentified dead persons. 342 cases (85.28%) were of male. Incidence of unknown/unidentified death was mainly in middle age group (30-50yrs) (42.64%). 225 (56.10%) deaths were due to accident/injury. Major cause of death due to injuries were polytrauma. Highest cases were seen in winter season and lowest in Autumn. 279 cases were untreated and 122 hospitalized or treated cases in total unknown cases.

**Conclusion:** Most of the literature available were on the individual body identification or identification of victims of mass disasters. Unknown bodies comprised 7.85% of the total autopsy load of the department. The age group 21-40 years was responsible for 44.85% of total cases. Accident is an important cause of morbidity and mortality in the study area. Males are the most affected population; the common age group affected is 21-40 years. However, more studies are recommended to find the actual cause of accidents and prevalence of homelessness and its health-related effects on morbidity and mortality, which will help in providing health care facilities to the needy.

**Keywords:** Medicolegal Aspects, Unknown Cases, Unknown/Unidentified Dead Bodies.

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### INTRODUCTION

The question of identification and identity is not new, as already the philosophers of the ancient times were engaged in the principle of identity (principium identitatis). Each year, many people from different regions travel to the places in search of a job in order to earn a living. Many of these people move or live alone in the city without any relatives or acquaintances. When these people die and their bodies are found with no identifying documentation, it is very difficult for the police to establish their identities. These bodies are labeled as 'unknown/unidentified dead bodies' (UIDB), and usually they are sent for medico-legal autopsy.<sup>1</sup> Medico-legal autopsy acts as one of the investigative tool that helps the investigators in Positive identification of the

deceased, determination of cause of death, time since death, manner of death, time between injury and death and to discover and recover any clue(s) from the body, that can possibly help.<sup>2</sup> The body is preserved in the mortuary for 72 hours, from the time it is received in the mortuary. If no one claims the body after 72 hours the police are legally authorized to dispose of the body.<sup>3,4</sup> Globally, World Population Data (WPD) sheet, indicates a global population clock of crude mortality due to Unknown/unidentified cases in developing countries is 44 million per year.<sup>5</sup> The aim of study is to find incidence of unnatural deaths in relation to the age, sex, pattern of injuries and other parameter of the unknown victims and to ascertain the root cause of all types of deaths.

**MATERIALS AND METHODS**

This prospective study was conducted in the Department of Forensic Medicine and Toxicology, Patna Medical College, Patna, Bihar, India between August 2012 to September 2014. All the medico legal autopsies of unknown/unidentified bodies during this period were included in the study. Information regarding

unclaimed bodies with regard to age, sex, cause of death and manner of death was sourced from the autopsy reports and the inquest papers of the investigating officers. The age of the deceased and pattern of injury was ascertained with the available data from the investigating officer and was corroborated with anatomical features on the dead body.

**Table 1: Age and sex distribution with cause of death in unknown cases in different age group**

	Age group (in years)							Total
	0-10	11-20	21-30	31-40	41-50	51-60	>60	
<b>Male</b>	2 (0.49%)	11 (2.74%)	65 (16.2%)	94 (23.44%)	77 (19.20%)	52 (12.96%)	41 (10.22%)	342 (85.28%)
<b>Female</b>	2 (0.49%)	5 (1.24%)	5 (1.24%)	16 (3.99%)	9 (2.24%)	9 (2.74%)	13 (3.24%)	59 (14.72%)
<b>Injury/Accident</b>	4 (0.99%)	11 (2.74%)	46 (11.47%)	67 (16.70%)	45 (11.22%)	29 (7.24%)	23 (5.73%)	225 (56.10%)
<b>Disease</b>	0 (0.00%)	5 (1.24%)	18 (4.48%)	39 (9.72%)	33 (8.22%)	30 (7.48%)	29 (7.24%)	154 (38.40%)
<b>Opinion reserve</b>	0 (0.00%)	0 (0.00%)	6 (1.49%)	4 (0.99%)	8 (01.99%)	2 (0.49%)	2 (0.49%)	22 (5.50%)

**Table 2: Regional injuries in unknown cases in different age group**

Injuries/age group	0-20 yrs	21-40 yrs	41-60 yrs	>60	Total
Head injury	9(2.24%)	54(13.46%)	31(7.73%)	10(2.49%)	104(25.93%)
Polytrauma	3(0.74%)	60(14.96%)	43(10.72%)	10(2.49%)	116(28.92%)
Chest injury	0(0.00%)	4(0.99%)	7(1.74%)	7(1.74%)	18(4.48%)
Limb injury	0(0.00%)	2(0.49%)	1(0.24%)	1(0.24%)	4(0.99%)
Abdominal injury	0(0.00%)	3(0.74%)	2(0.49%)	6(1.49%)	11(2.74%)
Head and chest	0(0.00%)	3(0.74%)	4(0.99%)	1(0.24%)	8(1.99%)
Head and limb	0(0.00%)	1(0.24%)	1(0.24%)	0(0.00%)	2(0.49%)
Head and Abdomen	0(0.00%)	1(0.24%)	0(0.00%)	0(0.00%)	1(0.24%)
Chest and limb	0(0.00%)	0(0.00%)	1(0.24%)	1(0.24%)	2(0.49%)
Chest and Abdomen	0(0.00%)	1(0.24%)	1(0.24%)	3(0.74%)	5(1.24%)
Limb and Abdomen	0(0.00%)	1(0.24%)	0(0.00%)	0(0.00%)	1(0.24%)
Strangulation	3(0.74%)	1(0.24%)	0(0.00%)	0(0.00%)	4(0.99%)
Burn	0(0.00%)	7(1.74%)	1(0.24%)	0(0.00%)	8(1.99%)
Drowning	1(0.24%)	4(0.99%)	1(0.24%)	0(0.00%)	6(1.49%)

**Table 3: Seasonal variation in unknown cases**

Season/ Sex	Male	Female	Total
Winter (December to March)	94(23.44%)	8(1.99%)	102(25.43%)
Summer (April to June)	71(17.70%)	14(3.49%)	85(21.19%)
Rainy (July to September)	84(20.97%)	14(3.49%)	98(24.43%)
Autumn (October to November)	41(11.22%)	7(1.74%)	48(11.97%)

**Table 4: Accidental deaths (Rail/ Road) in unknown cases in different age group**

Age group (in years)	Rail Accident	Road Accident	Total
0-10	0(0.00%)	0(0.00%)	0(0.00%)
11-20	11(2.74%)	0(0.00%)	11(2.74%)
21-30	36(8.97%)	5(1.24%)	41(10.22%)
31-40	51(12.71%)	10(2.49%)	61(15.21%)
41-50	40(9.97%)	4(0.99%)	44(10.97%)
51-60	23(5.73%)	5(1.24%)	28(6.98%)
>60	19(4.73%)	6(1.49%)	25(6.23%)
<b>Total</b>	<b>180(85.71%)</b>	<b>30(14.29%)</b>	<b>210(52.36%)</b>

**Table 5: Treated and Untreated unknown cases in different age group**

Age group (in years)	Treated	Untreated
0-10	0(0.00%)	4(0.99%)
11-20	8(1.99%)	8(1.99%)
21-30	21(5.23%)	49(12.21%)
31 -40	28(6.98%)	82(20.44%)
41-50	24(5.98%)	62(15.46%)
51-60	18(4.48%)	43(10.72%)
<60	23(5.73%)	31(7.73%)
<b>Total</b>	<b>122(30.42%)</b>	<b>279(69.58%)</b>

## RESULTS

A total of 5103 cases were brought for medico-legal autopsy into the department during the study period. Out of total of 5103 autopsies done, 401(7.85%) were unknown/unidentified dead persons. Table 1 shows that out of 401 medicolegal autopsies done, 342(85.28%) were of male. 42.64% of unknown/unidentified death was mainly in middle age group (30-50yrs). 225 (56.10%) deaths were due to accident/injury, 154(28.40%) deaths were due to natural causes and in 22 (5.50%) cases opinion about cause of death could not be given. Table 2 shows that major cause of death due to injuries were polytrauma (28.92%) followed by head injury (25.93%). Maximum injuries leading to death (46.63%) were in working age group i.e. 20 to 60 years. Table 3 shows that highest cases were seen in winter season (25.43%) and lowest in Autumn (11.97%). Table 4 shows that major causes of death in unknown cases were accident (52.37%). Out of 210 cases, 180 cases were due to rail accidents. Table 5 shows that 279 (69.58%) cases were untreated and 122 (30.42%) hospitalized or treated cases in total unknown cases. Highest number of treated/untreated cases were seen in age group 31-40 years (20.44%) and lowest (0.99%) being in 0-10 years age group.

## DISCUSSION AND CONCLUSION

Unknown dead bodies brought for autopsy consist of small but a very significant and important group of cases in every autopsy surgeon's career. Most of the cases require time consuming formalities, as required by the law, viz., a waiting period of 72 hours, publication of photographs and details of the deceased in the leading dailies, interactive pooling of data from various agencies all over the country.<sup>6</sup> Most of the literature available were on the individual body identification or identification of victims of mass disasters.<sup>7-9</sup> In the present study, unknown bodies comprised 7.85% of the total autopsy load of the department during study period which is in concordance with other studies done in the past.<sup>10,11</sup> Male predominance accounted for 85.28% of total cases which is lower in comparison to a study done in Chandigarh<sup>6</sup> and similar to a study done in Kolkata.<sup>12</sup> The age group 21-40 years was responsible for 44.85% of total cases which is similar to other studies done in the past.<sup>6,12</sup> Prevalence of death due to accident, disease and opinion reserve were found similar to study done by Kumar S.<sup>13</sup> Maximum numbers of unknown deaths were reported during the winter season which is in contrast with a similar study done by Kumar et al.<sup>14</sup> Most of the cases among accident group were due to rail accidents probably because of majority of population belonging from the low socioeconomic strata.

The findings of our study indicate that accident is an important cause of morbidity and mortality in the study area. Males are the most affected population; the common age group affected is 30–50 years. However, more studies are recommended to find the actual cause of accidents and prevalence of homelessness and its health-related effects on morbidity and mortality, which will help in providing health care facilities to the needy.

## RECOMMENDATIONS

1. Unknown dead bodies should be sent for autopsy without any delay, so that decomposition and other possible artifacts do not obscure the findings of the postmortem examination.
2. Data for identification collected during investigation should be digitalized, so that can be handled easily.
3. In cases of mutilated/ disfigured body, required material should be preserved for DNA analysis.
4. To prevent unknown death, Government authorities should take a positive approach to make shelters for the homeless.

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