

Original Research Article

A study of unclaimed bodies autopsied at AIMS, B.G. Nagara: a retrospective study

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ABSTRACT

Background: An unidentified dead body always presents a challenge for forensic specialists and investigating officers. However, when a deceased person is found in a disfigured, skeletonized or decomposed state, the identification process becomes significantly more difficult and stressful for forensic professionals. The objective of this study was to examine the demographic patterns in cases of unidentified bodies found in and around AIMS B.G. Nagar, India.

Methods: A retrospective cross-sectional study was performed on 84 cases of unidentified deceased individuals brought for post-mortem examination at the department of forensic medicine and toxicology, AIMS, in B.G. Nagar, Karnataka, between January 2021 and December 2024. To maintain consistency in data collection, a standard proforma was utilized, focusing on unidentified bodies and excluding identified cases.

Results: Over the study period, 796 necropsies were performed, of which 84 cases (10.55%) involved unidentified bodies. Of these, 25 cases (29.76%) were identified, while the remaining cases stayed unidentified. The highest number of deceased individuals were in the 41–50 age group, with the majority being male. November saw an increase in deaths, accounting for 11 cases (13.1%). Additionally, 39 cases (46.4%) were found at bus stops, highways and roads. The primary cause of death was natural, with disease and pathological conditions responsible for (60.7%) of the fatalities.

Conclusions: This study highlights the common causes of death in the study area and emphasizes the necessary public health measures to be taken.

Keywords: Cause of death, Identification, Unidentified bodies

INTRODUCTION

Identification in the medico-legal context refers to a person's individuality being determined and it proves essential in both criminal and civil proceedings. Identification is done on both living and deceased individuals.^{1-4,10,11} In circumstances when the deceased are unknown, identifying them is one of the main goals of medico-legal autopsies.^{5,9-11} While the police are typically in charge of establishing full identification, they may need the assistance of a medical officer or a forensic expert to collect the required information when the deceased are unknown, in cases of mutilated and putrefied bodies, as well as in skeletal remains. This mutilation might be done

by animals as a post-mortem artefact or with the criminal aim to erase all evidence of identity. Additional frequent occurrences of dead bodies discovered in deteriorated or disfigured forms include mass calamities such as earthquakes, bomb blasts, train accidents, aircraft crashes, tsunamis, etc.^{4,5,7,9,10,12}

Determining the cause and identity of death becomes a challenge in these situations. The goal of the current study is to obtain a profile of unidentified dead corpses in terms of age, sex, the proportion of unidentified dead bodies, cause and manner of death, as well as to determine the location from where the greatest numbers of dead bodies are taken for autopsy.

METHODS

Study design

It was a retrospective, and descriptive study.

Study place

The current investigation was carried out at the mortuary of the Department of Forensic Medicine & Toxicology at the Adichunchanagiri Institute of Medical Sciences (AIMS), B. G. Nagara, a teaching hospital with tertiary care, situated in Nagamangala, Mandya, Karnataka.

Study duration

This study was conducted from November 2024 to January 2025.

Sample size

Total number of 84 unknown cases during the period of January 2021 to December 2024.

Inclusion criteria

Unidentified bodies that were brought to the mortuary of the department of forensic medicine & toxicology for post-mortem examination over the course of five years, from 2021 to 2024, made up the study's material.

Exclusion criteria

Skeletonized or severely degraded corpses were excluded from the study.

Data collection

This Retrospective study was carried out at the Department of Forensic Medicine & Toxicology, Adichunchanagiri Institute of Medical Sciences, B. G. Nagar, Mandya, Karnataka and was based on post-mortem examinations. We looked through every file of inquest documents, autopsy reports and FSL reports on unknown fatalities from January 2021 to December 2024. A standard pro forma was established to gather the information to guarantee uniformity for the complete sample.

Ethical approval

The study was approved by the institutional ethics committee of Adichunchanagiri Institute of Medical Sciences, B. G. Nagara.

Statistical analysis

The data collected was entered into an excel spread sheet. Descriptive statistics such as mean, frequency and percentage were calculated using the SPSS Version 22

software. The results of the analysis were then displayed as relevant tables and Figures.

RESULTS

A total 796 autopsies were conducted during the study period of five year and amongst them 84 cases (10.55%) were found unidentified. Out of 84 victims it was observed that 73 (86.90%) victims were male and 11 (13.09%) were females as shown in Figure 1.

Maximum numbers of cases were from age group of 41-50 years with 31 cases (36.9%). This was followed by the age group of 51-60 years with 19 cases (22.6%), 61-70 years with 15 cases (17.9%), 31-40 years with 14 cases (16.7%), 21-30 years with 04 cases (4.8%) and 71-80 years with 1 case (1.2%), as shown in (Table 1).

In the present study the month of November (13.1%) registered the highest number of unknown cases, while January (10.7%) and march (10.7%) followed closely. The lowest number of cases, as illustrated in (Table 2), was documented in June (4.8%).

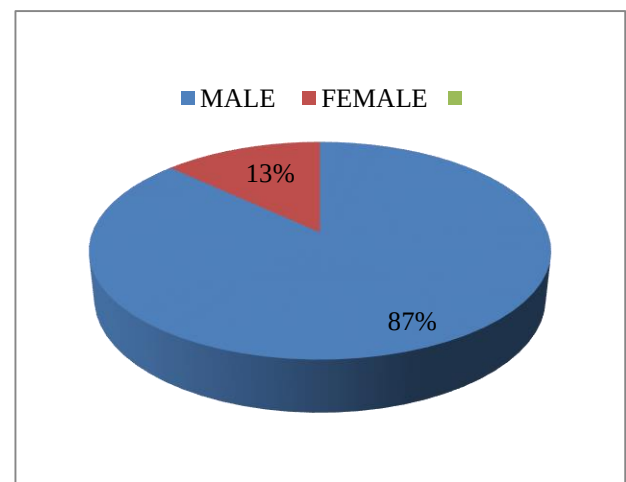


Figure 1: Sex wise distribution of cases.

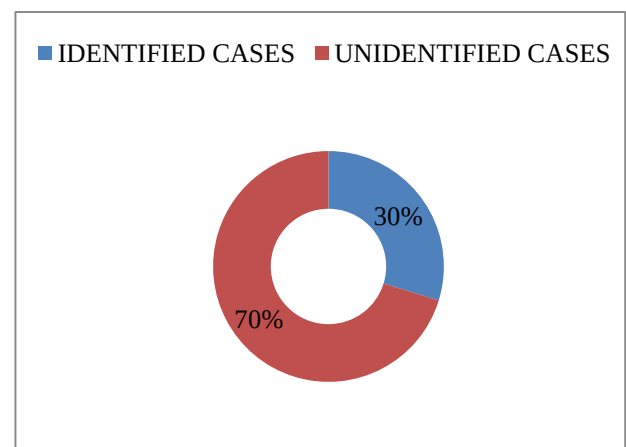


Figure 2: Distribution of identified and unidentified cases.

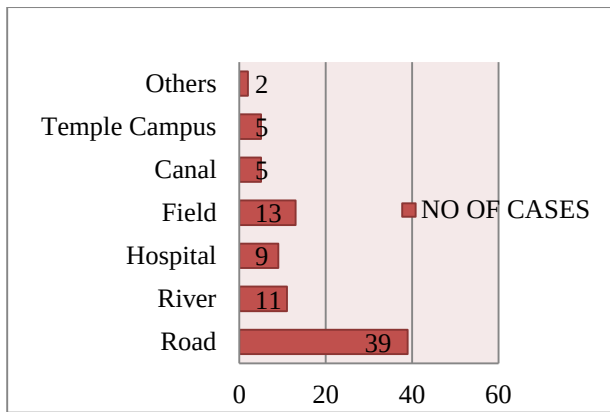


Figure 3: Place of recovery of body.

The study shows that the most unidentified bodies brought for autopsy were found on the road (46.4%), then in the

field (15.5%), the river (13.1%), the hospital (10.7%), the temple and canal (5.6%) and (2.4%) bodies in other places (Chart 2). Following autopsy, 25 (29.76%) of the deceased were recognized in less than a week, while the remaining 59 (70.23%) were left unidentified (Chart 3).

In our study, maximum cases of unidentified dead body were brought in fresh state with 70 cases (83.3%), followed by decomposed state with 14 cases (16.7%) (Table 3).

The most commonly reported cause of death in these cases was natural disease (58.3%), which was followed by drowning (17.9%), head injuries (14.3%), hanging (8.3%) and the least common, poly-trauma (1.2%) (Table 4). Of the total number of deaths, 51 (60.7%) were natural, followed by 19 (22.6%) suicide, 13 (15.5%) accidental and 1 (1.2%) homicidal (Table 5).

Table 1: Age distribution of unknown cases.

Age group (in years)	No. of cases	%
21-30	4	4.8
31-40	14	16.7
41-50	31	36.9
51-60	19	22.6
61-70	15	17.9
71-80	1	1.2

Table 2: Month-wise distribution of cases.

Month	No. of cases	%
January	9	10.7
February	5	6.0
March	9	10.7
April	8	9.5
May	5	6.0
June	4	4.8
July	5	6.0
August	8	9.5
September	6	7.1
October	7	8.3
November	11	13.1
December	7	8.3

Table 3: Distribution of cases according to body status.

State of body	No. of cases	%
Decomposed	14	16.7
Fresh	70	83.3
Total	84	100.0

Table 4: Distribution of cases based on cause of death.

Cause of death	No. of cases	%
Natural disease	49	58.3
Poly trauma/ crush in	1	1.2
Head injury	12	14.3
Drowning	15	17.9
Hanging	7	8.3

Table 5: Distribution of cases based on manner of death.

Manner of death	No. of cases	%
Natural	51	60.7
Accidental	13	15.5
Suicidal	19	22.6
Homicidal	1	1.2

DISCUSSION

During the study period from January 2021 to December 2024, 796 necropsies were conducted in the department of forensic science and toxicology at AIMS, B. G. Nagar. Amongst them 84 cases (10.55%) were unidentified dead bodies.

A current study found that males accounted for the majority of cases of unidentified dead bodies (86.90%). Similarly, a male predominance was seen in other studies which were done in India.^{3-5,7,9-12} The predominance of men is due to our Indian social system, which promotes males taking care of the family and working. As a result, for the purpose of employment, men move to different places each day as manual labourers sometimes the family is even unaware of the person's place of employment. In the case of his death at such places, his body is brought to the mortuary as unidentified.

In a present study, it was found that the majority of unidentified dead body cases were in the 41-50 years age group (36.9%). Similar findings were observed in the studies conducted by Bardale et al, Ajay Kumar et al and Dr. Ajay Kumar et al.^{4,7,9} This is an age when a person may become mentally and physically weak due to various factors and the neglect they face within the family can lead them to leave home and ultimately become a beggar. Additionally, beggars found in the city were also of old age.

The study found that the majority of cases (13.1%) were reported in November (winter season) due to extreme cold, which may worsen respiratory and circulatory system issues, potentially leading to the death of beggars and patients with respiratory disorders. However, other research indicates that the majority of cases were reported in June Bardale et al, Lad et al, Ajay Kumar et al, Abhishek Yadav et al.^{4,5,7,11}

A total of 39 cases (71.42%) were brought from bus stops, highways and roads. This is because a significant number of homeless persons reside on the sidewalk. Inadequate housing, food and medical attention result in substandard living conditions and they frequently become the targets of infections and other fatal illnesses. Similar findings were observed in the studies conducted by Bardale et al, Lad et al, Gitanjali et al.^{4,5,10} Natural diseases and pathological conditions accounted for the majority of fatalities (58.3%). The majority of those who lived on the streets and had

really bad health were affected by this. as a result of inadequate access to food, housing and healthcare. The findings are consistent with Saurabh Chattopadhyay et al, Bardale et al, Lad et al, Ajay Kumar et al and Abhishek Yadav et al.^{3-5,7,11}

Natural deaths from illness conditions accounted for 60.7% of all fatalities. This is because there are a lot of vagrants or beggars, especially in the vicinity of locations like train stations, places of worship, bus stops and so on. These individuals lack a place to call home, are homeless and are subject to all negative environmental factors, including pollution, temperature, humidity, illnesses and so on. Some of these individuals have a history of substance misuse. These elements collectively indicate that they are predisposed to natural diseases. Similar findings were observed in the studies conducted by Saurabh Chattopadhyay et al, Bardale et al, Lad et al, Ajay Kumar et al and Abhishek Yadav et al.^{3-5,7,11}

CONCLUSION

This study demonstrates that older age groups and men are disproportionately affected, with the majority of cases remaining unidentified. November had the highest number of fatalities and most of the bodies were found on highways, at bus stops and on roads. The primary cause of death was disease and pathological conditions, leading to natural death.

For identification purposes, forensic experts should preserve bone samples for DNA profiling and investigating officers should take color photographs of the deceased and upload them to the district police headquarters website along with a description of the deceased. A national portal for registering unidentified deaths is urgently needed. The site should be easily accessible, user-friendly and accompanied by adequate advertisements and public awareness campaigns. This will help reduce the time required to identify deceased individuals and allow relatives to approach the appropriate police station to claim the body.

The government must make sincere efforts to provide food and shelter to its citizens in order to reduce the number of beggars and homeless individuals.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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