

# Study of Pattern of Death in Unclaimed Dead Bodies Autopsied in a Tertiary Care Hospital: An Autopsy Based Cross Sectional Study

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**How to cite this article:** R. Senthil Kumar, A. Gokulakrishnan. Study of Pattern of Death in Unclaimed Dead Bodies Autopsied in a Tertiary Care Hospital: An Autopsy Based Cross Sectional Study. Indian Journal of Forensic Medicine and Toxicology/Volume 18 No. 3, July - September 2024.

## Abstract

Article 6 of universal declaration of Human Rights states that "Everyone has the right to recognition everywhere as a person before the law". Identification means the determination of the individuality or recognition of that person or dead body based on certain physical characters unique to that individual. It may be complete or partial. Complete identification means the absolute fixation of the individuality of a person, while partial identification means ascertainment of only some facts like race, sex, age and stature. Visual identification is not reliable in majority of the cases, therefore two important identification marks should be noted in live and dead cases. The description should contain anatomical land mark, size; colour either raised or not raised from surface and if no distinct mark is available left thumb impression may be taken. Other points which are considered in establishment of identity are race, religion, sex, age, and other age related changes, acquired peculiarities like mole, tattoos, and congenital deformity. In decomposed and mutilated cases accurate identification is needed for establishment of corpus delicti after homicide. The identification of cadavers is a crucial issue in forensic setting, but the official extent of this problem is still poorly known in most countries. The fact that an underestimated problem of unclaimed decedents exists can be seen from the very small number of published articles on the topic.

**KEY WORDS:** Pattern of death, unclaimed dead bodies, fingerprints, DNA, identification.

## Introduction

The determination of the individuality of a person is called Identification.

In other term it is defined as recognition of that person or dead body based on certain physical characters unique to that individual. Complete or partial identification are two types of identification. The absolute fixation of the individuality of a person

is called complete identification. Only few features like race, sex, age and stature are assessed in Partial identification.

Dead bodies whose identity is not known are unidentified dead bodies. There is none to claim these dead bodies. There is none to perform the last rites. Simply to say they are orphaned dead bodies without legitimate disposal. Unknown male persons or unknown male dead bodies in USA and United

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**Submission date:** January 26, 2024

**Revision date:** April 1, 2024

**Published date:** July 17, 2024

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Kingdom are called John Doe (male). Unknown female persons or unknown female dead bodies in USA and United Kingdom are called Jane doe (female).<sup>1</sup> In India the dead ones are simply referred to as unknown or unidentified bodies.<sup>2</sup> In both living and the dead identity should be established for civil, criminal and ethical purposes and not only for forensic investigation. Many civil procedures will become incomplete without identification.<sup>3</sup> Investigating officers and Forensic Doctors are helpful in establishing identity.<sup>4</sup> Identification becomes difficult in case of a body recovered in skeletonised or in mutilated state. It is an emerging social problem that has to be taken in concern in developing countries.<sup>5</sup>

### Materials And Methods

#### STUDY DESIGN:

Present study is a cross sectional study of 100 unclaimed dead bodies autopsied at the Department of Forensic Medicine and Toxicology, Government Stanley Medical college, Chennai during the year

2019. All the data related to the unclaimed cases were analysed, paying particular attention to demographics to make a comprehensive study. Standard autopsy protocol was followed and relevant samples/viscera were subjected to chemical analysis, histopathological examination and visit to scene is undertaken in specific cases so as to arrive at conclusion regarding cause and manner of death. A standard form was used to collect information from materials.

### Results

**TABLE 1: SEX RATIO OF UNCLAIMED CASES**

TOTAL NO OF UNCLAIMED CASES	MALES	FEMALES
206	180	26
100%	87%	13%

This table shows sex ratio of unclaimed cases. In that 206 unclaimed bodies 180 cases (87%) were males and 26 cases (13%) were females. This shows the more number of male sex cases in the unclaimed dead bodies.

**TABLE 2: AGE WISE DISTRIBUTION OF UNCLAIMED CASES**

Age group in years	No of cases		Total	Percentage of total unclaimed cases
	Male	Female		
<1	1	1	2	2%
21 - 30	7	0	7	7%
31 - 40	17	0	17	17%
41 - 50	17	3	20	20%
51 - 60	26	4	30	30%
61 - 70	16	0	16	16%
71 - 80	6	1	7	7%
>80	0	1	1	1%

This table shows age wise distribution of unclaimed cases. More number of cases in the age group of 51 - 60 years 30% of total cases. Next to it in the age group of 41 - 50 years 20% of total cases.

Least number of cases in the age group of less than 1 year 2% of total cases and more than 80 years 1% of total cases.

**TABLE 3: RELIGION OF UNCLAIMED DEAD CASES**

RELIGION	NO. OF CASES	PERCENTAGE
NOT KNOWN	85	85%
HINDU	13	13%
MUSLIM	2	2%

This table shows religion of unclaimed dead bodies. The religion was not known in 85% of cases. 13% of cases were Hindu and 2% of cases were Muslims.

**TABLE 4: PLACE OF BODY FOUND DEAD**

PLACE OF BODY FOUND DEAD	NO. OF CASES
HOSPITAL	21
ROADSIDE	16
FOOT PATH	16
RAILWAY TRACK	14
SEASHORE	6
ROAD	5
ABANDONED PLACES	5
RAILWAY PLATFORM	4
TRANSIT	2
HOME	2
BUS STAND	1
DUST BIN	2
METRORAIL STATION	1
POND	1
RIVER	2
TEMPLE SIDE	1
WATER CANAL	1

This table shows place of body found dead. Most of deaths occur in the hospital (21 cases). 16 cases were found dead on the roadside. 16 cases were found dead on the foot path. 14 cases were found dead on the railway track.

**TABLE 5: NATURAL CAUSES OF DEATH IN UNCLAIMED CASES**

S.NO	NATURAL CAUSE OF DEATH	NO. OF CASES
1.	CHRONIC LUNG DISEASE	28
2	CORONARY ARTERY DISEASE	17
3	PNEUMONIC CONSOLIDATION	6
4.	INTRACRANIAL HEMORRHAGE	5
5.	SEPSIS	2
6.	CONGENITAL HEART DISEASE	2
7.	NO DEFINITE OPINION	2
	TOTAL	62

This table shows natural causes of death in unclaimed cases. The cause of death was chronic lung disease in 28 cases, coronary artery disease in 17 cases, pneumonic consolidation in 6 cases, intracranial haemorrhage in 5 cases, sepsis in 2 cases, congenital heart disease in 2 cases and no definite opinion in 2 cases.

**TABLE 6: UNNATURAL CAUSES OF DEATH IN UNCLAIMED CASES**

S.NO	UNNATURAL CAUSE OF DEATH	NO. OF CASES
1.	MULTIPLE INJURIES	26
2.	HEAD INJURY	4
3.	DROWNING	5
4.	HANGING	2
5.	POISONING	1
	TOTAL	38

This table shows unnatural cause of death in unclaimed cases. The cause of death was multiple injuries in 26 cases, head injury in 4 cases, drowning in 5 cases, hanging in 2 cases and poisoning in 1 case.

**TABLE 7: MANNER OF DEATH.**

S.NO	MANNER OF DEATH	NO. OF CASES
1.	NATURAL	61
2.	ACCIDENTAL	24
3.	SUICIDAL	4
4.	UNDETERMINED	7
5.	HOMICIDAL	2
6.	NOT APPLICABLE	2

This table shows manner of death in unclaimed cases. The manner of death is natural in 61 cases, accidental in 24 cases, suicidal in 4 cases, undetermined in 7 cases, homicidal in 2 cases and not applicable in 2 cases.

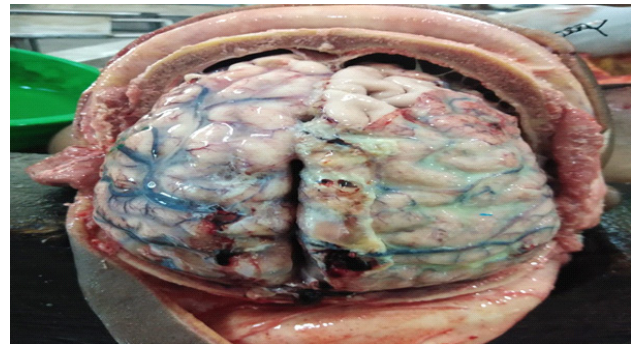
**TABLE 8: EFFORTS TAKEN BY INVESTIGATING OFFICER**

S.NO	EFFORT	DONE IN NO. OF CASES
1.	LOCAL INQUIRY	100 (100%)
2.	PHOTOGRAPHS OF BODY, CLOTHS, CRIME SCENE TAKEN	100 (100%)
3.	CLOTHS, PROSTHESIS, POCKET CONTENTS IF PRESENT NOTED	100 (100%)
4.	SCARS/MOLES IF PRESENT NOTED	85 (85%)
5.	TATTOOS IF PRESENT NOTED	21 (21%)

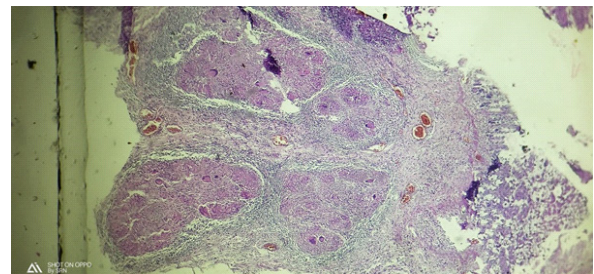
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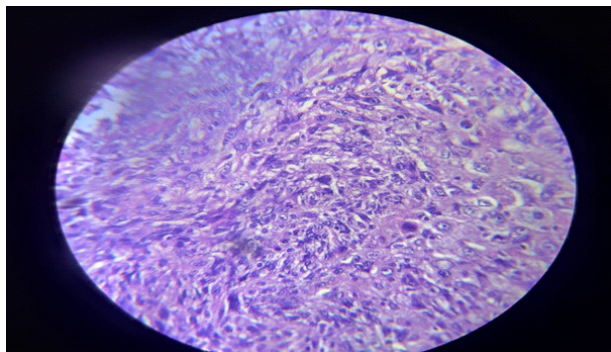
6.	FINGERPRINTS TAKEN	94 (94%)
7.	SPECIMEN FOR DNA ANALYSIS	16 (16%)
8.	ADVERTISEMENTS IN PRINT MEDIA, MESSAGE TO ALL POLICE STATIONS IN CHENNAI AND DGP OFFICE FOR INFORMATION	100 (100%)

This table shows efforts taken by investigating officer. Local inquiry in 100% cases, photographs of body, cloths, crime scene taken in 100% of cases, cloths, prosthesis, pocket contents if present noted in 100% of cases, scars/moles if present noted in 85% of cases, tattoos noted in 21% of cases, fingerprints taken in 94% of cases, specimen for DNA analysis taken in 16% of cases and advertisements in print media, message to all police stations in Chennai and DGP office for information in 100% of cases.

**FIGURE 1: COLOUR PHOTO SHOWING A CASE OF SUBDURAL EMPYEMA.**

A case of subdural empyema.

**FIGURE 2: PICTOMICROGRAPH OF TUBERCULOSIS LUNG SHOWING TYPICAL MULTIPLE WELL FORMED EPITHELIROID CELL GRANULOMA WITH LANGERHANS GIANT CELLS AND NECROSIS.**



**FIGURE 3: PICTOMICROGRAPH OF SYNOVIAL SARCOMA SHOWING SPINDLE CELL PROLIFERATION IN FASCICLES AND SHEETS WITH ATYPIA.**

### Discussion

During our routine medico-legal activities we come across a number of unfortunate individuals who meet accidental deaths, foul play or other sudden death among strangers. Though they display many characteristics by which relatives, friends may identify them, no central body ever knows of them. This is the fate in almost all countries<sup>6</sup>. The dead body is kept for 72 hours or so, awaiting someone to claim it, when no one turns up, the governmental agency with reluctance, makes frugal experience towards the disposal of the dead. Finally, the remains of the unknown individual lay permanently buried in the earth and the body will be labelled as unknown. The relative or the loved one of the dead person will be waiting somewhere for his or her return<sup>7</sup>.

Unclaimed bodies brought for post-mortem examination comprise a very significant and important group of cases in every autopsy surgeon's career. These cases really test the skill and expertise of the specialist and the investigative agencies. 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>8</sup>.

A forensic medicine specialist can contribute very much by giving detailed data gathered from a thorough examination and dissection of the body.

A thorough search of the literature did not yield much information regarding the identification.

There are many legal, financial and social implications that stem from the number of unclaimed bodies<sup>9</sup>. It is therefore imperative that research into this matter be conducted, that protocols and methodology be established in order to address the problems associated with unclaimed bodies, and to limit the economic and social impact thereof.

There are many problems which are encountered while dealing with unclaimed bodies in India. In our country, death investigation is primarily done by the police. Many of the functions initially performed by the police at the scene of crime actually fall within the realm of Forensic Medicine Service. It is here that many problems are encountered as there is no service level agreement between the two departments regarding the specific functions to be performed by each<sup>10</sup>.

One of the primary objectives of medico legal autopsy is identification of the deceased in unclaimed cases. Establishment of identity in all such cases needs team work whether the autopsy surgeon collects data for identification<sup>11</sup>. In addition, finger prints, forensic photography, DNA analysis and superimposition help to achieve the goal of victim identification. Investigation into the identity of an unknown body at the autopsy room often falls by the wayside as the investigating officer no longer collect data at the scene of offence that may assist in identification. The investigation into death of a person is thus no longer handled by a single agency but involves cooperation of multiple government departments<sup>12</sup>.

Unidentified bodies in the forensic setting constitute a global problem<sup>13</sup>. Though it is of great concern to many governments, very little data on the extent of this phenomenon is available in international literature. The present study is a cross sectional study to ascertain the cause and manner of death in unclaimed dead bodies in Government Stanley Medical College Hospital during the year 2019.

In the year 2019, 2026 cases were registered for autopsy in the department of Forensic Medicine, Government Stanley Medical College, Chennai. Of them 1820 cases were registered as known cases, whereas 206 cases were registered as unknown cases.

This number is high when compared to international literature. Determining the true extent of this phenomenon in Chennai is therefore important, as these unclaimed bodies have many social and economic consequences. Not only are families unaware that their loved ones have passed away, but they are also unable to bury and mourn them.

### Conclusion

A man is borne with an identity and deserves to die with the same. This is the fundamental right of being born a human. However, due to natural calamities, mass disasters, intentional/unintentional acts of fellow human beings, a number of "unclaimed bodies" come to fore<sup>14</sup>.

Death under any circumstance is unwanted and painful. The number of unclaimed deaths in the city of Chennai is quite alarming. A large number of the deaths were due to a disease condition, road traffic accidents, railway accidents were avoidable. Hence, the results may not be comparable with those of the developed countries.

Sincere efforts from the government are required to provide food, shelter, employment, proper implementation of road and railway safety measures, welfare programmes and maintaining a register for migrants and CCTV surveillance in bus, railway stations to reduce the burden of such deaths<sup>15</sup>.

Prompt and better identification methods along with coordinate efforts of the law enforcing agencies would help in establishing the identity of such individuals<sup>16</sup>. Advancement in the field of computers, genetic engineering including DNA analysis etc have led to development of new methods of identification.

Little is known about the levels and cause of death among the homeless people in India<sup>17</sup>. They are too often overlooked by public health scholars. People living on the margins are usually absent from public health surveys and epidemiological studies to know the gravity of this problem and form preventive measures. What is eventually required is a sympathetic, humane and scientific approach to the whole problem to find a suitable solution for establishing the identity of the dead.

**Conflict of Interest:** Nil.

**Source of Funding:** Self.

**Permission taken from Department:** Yes.

**Ethical clearance obtained from** Institutional Ethical Clearance Committee (Government Stanley Medical College & Hospital Chennai) dated 19.12.2018.

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