ORIGINAL ARTICLE

Retrospective Study of Unidentified or Unclaimed bodies Brought for Autopsies at a Tertiary Care Hospital in Uttar Pradesh

Dode PS,[1] Bhattacharyya PS,[2] Khurana S,[3] Chand S.[4]

Associate Professor,[1] Assistant Professor,[2-3] Professor, and Head.[4]

1,4. Department of Forensic Medicine, TMMC & RC, Moradabad.

2. Department of Forensic Medicine, NBMC & H, Darjeeling.

3. Department of Forensic Medicine, GMC, Haldwani, UK.

Abstract:

Identification is the process of determining a person's uniqueness. Practically in all autopsy centres throughout India, post-mortem examination of unidentified or unclaimed deceased remains a constant concern. There might be many causes for this. Although forensic specialists play a significant part in this identification procedure, investigating agencies are largely responsible for this. This is accomplished by working together using traditional and scientific methodologies. The aim was to study the profile of unidentified/unclaimed bodies in terms of age, sex, cause of death, seasonal variation, etc. The information was gathered from all unidentified/unclaimed deceased corpses submitted to the morgue for postmortem investigation at Teerthanker Mahaveer Medical Institution & Research Centre, a private medical college in Moradabad, Uttar Pradesh, between January 1st, 2018, and December 31st, 2022. From April 2020 to December 2021 autopsy was stopped at this institute because of covid pandemic. 125 corpses in all were taken to the department's morgue for postmortem assessment over the time frame of the research. Males were more in number as compared to females; males – 111 cases and females - 13 cases. The age range of 41–50 years had the highest proportion of cases, followed by that of 31–40 years. Most of the deceased belonged to the Hindu religion. Most of the cases occurred between the January to March period. Most of the cases died because of natural death. In natural deaths, the most common system involved was the lung followed by the heart.

Keywords: Identification; Unidentified body; Uttar Pradesh.

Introduction:

Identification is the process of determining a person's individuality.[1] Practically in all autopsy centres throughout India, post-mortem examination of unidentified or unclaimed deceased remains a constant concern. This might be because of many reasons. Unidentified and unclaimed though look same words but they have minute differences like unidentified means not identified and unclaimed means not claimed. In unidentified no data of the deceased is known whereas, in unclaimed body, partial details like the name and address of the deceased is known but there is no one to claim the body for last rites. Ritter[2] has described this as a "silent mass disaster". Because of modernization and easy transport facility, people travel easily to different cities for jobs or any other reason and if such a person dies in a different city, there is a high probability that he may be labeled as unknown if no identification data is available at the time of death. Although forensic specialists play a significant part in this identification procedure, investigating agencies are largely responsible for this. This is accomplished by working together using traditional and scientific methodologies.[3] After 72 hours of waiting period for relatives, police start the process of the last

ritual of the deceased, usually as per the religion informed by the autopsy surgeon. The process of identification is an everyday occurrence in life, both in civil and criminal cases; be it joining a school/college/job, opening an account/getting a license, etc. In fact, almost every activity in our social life hovers around "identification".[4] In this present study, we tried to understand the profile of unidentified/unclaimed bodies in terms of the cause of death, age, gender, and pathological systems involved and to help police investigative agency to find the identity of the deceased brought for autopsy at Department of Forensic Medicine & Toxicology at Teerthanker Mahaveer Medical College & Research Centre, Moradabad, Uttar Pradesh. The college has permission from State, to conduct autopsy of only unidentified/unclaimed bodies.

Aim and objectives - To study the profile of unidentified/ unclaimed bodies in terms of age, sex, cause of death, seasonal variation, etc. during a period from 1st January 2018 to 31st December 2022. From April 2020 to December 2021 autopsy was stopped at this institute because of covid19 pandemic.

Material and methods:

The information was gathered from all unidentified/unclaimed deceased corpses submitted to the morgue for postmortem investigation at Teerthanker Mahaveer Medical Institution & Research Centre, a private medical college in Moradabad, Uttar Pradesh, between January 1st, 2018, and December 31st, 2022. From April 2020 to December 2021 autopsy was stopped at this institute because of covid pandemic. Retrospective data compilation was done after a thorough analysis of all the

Corresponding Author
Dr. Pramod Suryakantrao Dode
Email: dodepramod@gmail.com
Mobile No: +91 9730158488

Table 1. Showing year wise number of deceased as male and female.

Year	Male	Female	Fetus	Total
2018	48	03	00	51
2019	37	07	01	45
2020 (up to March)	06	02	00	8
2022	20	01	00	21
Total	111	13	1	125

Table 2. Shows the age group-wise number of deceased.

Age Group	Number of deceased
0-10	2
11-20	2
21-30	18
31-40	36
41-50	38
51-60	19
61-70	06
71-80	04
>80	00
Total	125

Table 3 Shows the religion-wise number of deceased.

Religion	Hindu	Muslim	Unknown	Total
Number of deceased	86	34	5	125

Table 4. Showing season wise number of deceased.

Season wise	Number of deceased
January to March	43
April to June	21
July to September	35
October to December	26
Total	125

Table 5. Shows the number of deceased according to the manner of death.

Manner of death	Natural	Unnatural	Pending	Total
Number	74	34	17	125

Table 6. Shows the number of deceased according to the system involved in natural causes of death.

Primary System involved in natural cause of death	Number of deceased
Lung	29
Heart	26
Liver	2
CNS	4
Other	13
Total	74

postmortem examination reports, inquest documents, case histories, during the time of the autopsy, and information gathered from the investigating police officers.

Inclusion Criteria - All cases brought for autopsy as unidentified/unclaimed bodies by the Police.

Exclusion Criteria - Skeletonized Body.

Observation and Results:

The number of autopsies conducted between the year 2018 to 2022 is mentioned in Table 1. In the year 2020 autopsies were conducted up to March only. From April 2020 to December 2021 no autopsy was conducted at this institute. Before covid era, a maximum number of autopsies was noted in the Year 2018 i.e. 51, followed by 2019 i.e. 45.

Table 2 shows the maximum number of deceased belonged to the age group 41-50 years, followed by 31-40 years. The youngest deceased was a fetus of 5 months and the eldest person of the age group was 80 years. The age of the deceased was calculated by anthropological data only and information provided by police.

Table 3 shows the religion-wise distribution of deceased, in which the maximum number belongs to Hindus followed by Muslims. In 5 bodies religion was not identifiable as one body is of 5 month fetus and 4 were of females without any tattoo or sign supporting religion. Religion identification is done by the presence of any feature like circumcision, tattoo names, etc.

Table 4 shows the seasonal variation of the number of deceased and the maximum number is from January to March followed by July to September, the reason being January to March is the period in which temperature falls to a minimum and in July to September temperature rises to maximum, means in both extremes of climate number of deceased were maximum, considering the fact in 2020, number of deceased were absent in hot climate also supports that peak in number of deceased will be in extremes of climate. In extreme winter, dense fog increases the chances of accidents leading to an increase in the number of unnatural deaths. The thermoregulation mechanism gets hampered when unknown/beggars sleep in extreme climates leading to increased chances of death.

Table 5 shows the manner of death as unnatural or natural. Unnatural deaths again were not divided into accident, suicide, or homicide as there was no way for its confirmation. Maximum deaths were natural followed by unnatural. In 17 bodies, nothing evident was found hence opinion was reserved pending for accessory examination reports e.g. histopathological and chemical analysis.

Table 6 shows system involvement in natural deaths, of which the most common was respiratory just followed by cardiac. In 13 cases, generalized debility was noted.

In all autopsies, necessary samples were preserved. For DNA examination, bone pieces and tooth were preserved, and the viscera was preserved in suspected poisoning cases and sent to the Forensic Science Laboratory for chemical analysis. Histopathology samples whenever necessary were preserved in 10% formalin and sent to the pathology department for examination.

Discussion

Moradabad is one of the major cities in Uttar Pradesh. It is also called Brass City where brass-related and other factories are in large numbers. Many workers, unskilled & skilled laborers, orphans and beggars from neighboring villages migrate to the towns to earn a livelihood. Many times they are living alone, so when there is sudden death, the body is usually labeled as unidentified/unclaimed. Usually, bodies are kept in the morgue for 72 hours as a waiting period in the hope someone will come and identify or claim the deceased,[5] but this increases the cost of maintenance of the freezer. Any problem with the power supply may lead to the risk of decomposition of the body. The burden of unsolved crimes in society would be greatly reduced by identifying unclaimed dead bodies.[6] A sizeable collection of unidentified remains are brought in for postmortem assessment at

any institution. Different procedures are used in accordance with protocol to determine the deceased person's identity. Police provide information on the dead, including images, physical characteristics, clothing details, etc., to the media and on social media. Fingerprints and DNA samples are kept for confirmation. An autopsy surgeon can provide comprehensive data obtained from a careful examination and body dissection. Based on his observations and the results of the lab, he must also provide an opinion on the manner, cause, and nature of death. In our study, most of the deceased were males. This is similar to a study done in Maharashtra.[7] Mostly being the earning member of the family, males stay away from home in search of jobs. The most common age-group in this research were 41 to 50 followed by 31 to 40 years mostly because this is the common earning age group working outside. In unnatural deaths, the most common cause was accidents, as the general age group involved in driving is 30 to 50 years and young ones have a tendency for rash driving & higher risk-taking capacity for adrenaline rush. Season wise most cases coincide in January to March followed by July to September as the temperature was extreme in these periods. Most of the people who died as unidentified/unclaimed had decreased immunity because of inadequate food and unhygienic conditions. Among these people, the beggars were staying by the side of the road and some laborers stay near the factory in an open environment. Extreme hot or cold climate poses a risk factor that fastens death. Sometimes, beggars/laborers who were living alone, when become unconscious or about to die, there is no one to point out the situation and due to this reason, many of the bodies were brought to the mortuary in early decomposition state. Among unnatural deaths, the most common cause was hemorrhagic shock due to multiple injuries, mostly because of accidents as the medical college lies on a national highway.

Conclusion:

125 bodies in all were taken to the department's morgue for postmortem assessment over the time frame of the research. Males were more in number as compared to females. Males – 111 cases & females - 13 cases. The age group 31–40 years had the 2nd -highest percentage of cases, followed by the 41–50 age group. Most of the deceased belonged to the Hindu religion. Most of the cases belonged to January to March period. Most of the cases died because of natural death. In natural deaths, the most common system involved was the lung followed by the heart. Necessary samples like viscera, and tissue bits for histopathology were reserved in cases where cause of death was pending. Bone pieces and teeth for DNA examination were preserved in all cases.

Suggestion: 89.2% of the Indian population has Aadhar data recorded. However, it is still difficult to identify a person when they pass away.[8] The early spread of information about unknown deceased is the crux of identification. The information utilizing photographs of the deceased, of clothes, tattoo marks, scars, deformities, etc. should be spread as early as possible by police officers on social media and in all possible ways. ZIPNET[9] (Zonal Integrated Police Network) is a real-time platform for crime sharing and criminal information among its member states which includes Haryana, Delhi, Rajasthan, UP, Chandigarh, Punjab, Uttrakhand, and Himachal Pradesh, it would be far better if it includes all states and the information of unidentified/unclaimed should be available on it as early as possible. The Central Fingerprint Bureau (CFPB) exclusively maintains a criminal fingerprint database using Facts.[10] This powerful fingerprint identification technology is called (Fingerprint Analysis and Criminal Tracking System). The primary database/repository does not include the fingerprints of unclaimed remains (which may not be criminals), since this database only contains records of criminals.[6] There should be designated display boards in all cities for missing or found dead persons. "Missing Persons Registry" should be maintained uniformly in every major city. This information should be spread by a designated government office on a website so even a common person can also look for their loved ones, pan nation. If state or law permits, police should be allowed to use Aadhar-based STQC (Standardization Testing and Quality Certification) Certified fingerprint scanners for the deceased, by which fingerprints can be quickly used to check identity. The concept of a data bank can play a role if it is functioning in all states. In all facilities where an autopsy is conducted, an "Unknown case Register" with all concerned information should be maintained/stored. The pilot project UMID by AIIMS, New Delhi[10] should be expanded involving all autopsy stations across India and all centers where unidentified bodies are handled so identification by DNA will be done rapidly. The autopsy surgeon and the police officer should work as a team so that unknown and unclaimed will have a dignified last ritual after being identified by their loved ones.

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