



Pattern Of Death In Unknown Bodies Brought At Mortuary Of Tertiary Hospital

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Abstract

Identity of an individual is important in live as well as in death. It is always an important difficult task for forensic expert to determine the identity of the unknown body. Current study was done to establish the parameters to study the cause of death in unknown deceased. Autopsy of an unknown individual is seeming to be simple but it is always a challenging task for the doctors, but many times it often brings no significant results. The causes are uninterested investigating authority, improper and unknown history, decomposed, skeletonized or mutilated body etc. it is also observed that unfortunately, much desired interest is not shown by investigating officer as well as forensic experts for this type of cases, unless and until there is suspicion of foul play or any obvious prima facie evidence suggestive of homicidal manner of death. ADR report, police inquest, Punchnaama provided by the police is playing important role in it which are very important documents. The aim of present study is to obtain a profile of unknown dead bodies with reference to their age, sex, percentage of bodies that remain unidentified, cause and manner of death and to identify the place from where maximum numbers of dead bodies are brought. It was observed that out of one years of study in 2020 unclaimed body were 7.64 % of total post-mortem, most cases were in the 31-40 years age, with male predominance seen. Respiratory illness was the cause of most of the natural deaths which was given after receipt of FSL and Histopathology reports. There is urgent need to form a separate portal or app for unidentified death registration at National level and the site should be easily visible, available and user friendly. This is important that reversal use of Aadhar by use of finger impression may helpful for identification of unknown deceased by preparing the data.

Keywords: Unknown; Decomposed; Investigating officer; Respiratory illness.

Introduction

Identification is the determination of the individuality of a person based on certain physical characteristics, i.e. exact fixation of personality.¹ It establishes the individuality of a person. Identification data includes the sex, age, external peculiarities which was known as identification marks such as malformations, scars, tattoo marks, wounds; anthropometric measurements, fingerprints, teeth. In depth data can be identified by DNA profiling, bone analysis and such other methods.^{2,3} Identity should be established in both alive and the dead.⁴ This isn't a complicated process

though it is heavily taxing for the meticulous data preservation. But after death, the Investigating officer or the Forensic Expert may be unable to identify the unknown body because of improper/inadequate history, destruction, decomposition, mutilated body⁵⁻⁷ due to that forensic experts should consider the scrutiny of such various parameters to confirm the pattern of death.⁸ Geographical surroundings, condition of body with detailed knowledge of unidentified body post-mortem is important while incorporate with these cases. In the urban areas, such

bodies are not hidden from the human eye mostly and thus brought promptly to the Forensic Expert. However, in rural areas, this may not be the case. The bodies may be left to decompose or may be mutilated by animals.⁹ Such kind of bodies when brought for post-mortem pose a challenge for the experts.

Aims and Objectives:

1. To estimate the number of dead bodies which remain unidentified during/after autopsy.
2. To estimate the cause of death in these unknown/unclaimed bodies.
3. To correlate between antemortem and post-mortem diagnosis in admitted unknown/unclaimed bodies.
4. To estimate predisposing socio-economic and other factors contributing to disease and subsequent death.
5. In case of unknown/unclaimed dead bodies, identification of the area/situations from which the deceased is brought.
6. To analyse the 'certified cause of death' given by physicians in unknown/unclaimed bodies.

Materials and Methodology: A descriptive study was conducted at Government Medical College and MBS Hospital, Kota for a study period of 12 months (1st January 2020 to 31st December 2020). Inclusion Criteria:-

1. Cases of unknown/unclaimed bodies brought for post mortem to the Forensic Medicine and Toxicology Department of this hospital during the study period.

Exclusion Criteria :-

1. Bodies which were identified later during the autopsy.

Method: In cases brought for post mortem, ADR report, Inquest, Punchnaama and other documents provided by the police were scrutinized thoroughly. In case of the admitted patients, hospital records, investigations and autopsy findings were noted. Cause of the death was studied. Confidentiality was strictly maintained. Bodies brought for autopsy were treated with utmost dignity, findings carefully documented. Statistical Analysis: The data was

calculated using MS Excel 2013 software for the parameters mentioned below. The percentages were calculated and translated into a graphical format.

Observations: Out of the 929 bodies brought to the hospital as well as the mortuary in the study period, the number of unidentified cases were 71(7.64%). Out of the unidentified cases, males comprised of 66 in number, 4 were females and 1 were unknown, owing to the fact that all 1 body of foetus without reaching 4 months of IUL. It is also seen that some bords parts also included but meticulous observation revealed the gender.

The age-wise distribution of the cases was peculiar. The maximum number of cases (22) were from the age group 31-40 years, followed by number of cases (14) in the age group of 41-50 years; 9 cases in age group of 21-30 , 6 cases in the age group of IUL for it Hasse's rules included, zero case in the age group of 11-20 years and 1 case in the age group of less than one year, age of 3 deceased unable to commentable as only body parts like leg , foot was there only.

The highest number of cases were brought in the month of July (17.14%) followed by the month of June (15.71%), 14.28 in October, 12.85% in the September.

Autopsy was performed in all cases. The cause of death was formulated after autopsy. In all cases Sample for DNA collected, in 24 cases samples preserved for FSL and in 20 cases histopathology samples taken. Without any investigation cause of death lung disease was given in 6 cases and after receival FSL and Histopathology reports is also observed that most of the deceased died due to lung disease, it is 30 deceased died due to same, which is commonest. 11 deceased died due to head injury and 9 died due to polytrauma and 10 bodies having drowning. There was 2 non-viable foetus and 1 was dead born, 1 case was of strangulation and 2 were of hanging.

The bodies were analysed after the autopsy and a thorough examination of the system suspected in the cause of the death was carried out. Efforts were made by the forensic experts to establish the identity of the individual. In order to do that, DNA was taken in all cases.

TABLE NO 1

YEAR	TOTAL	UNCLAIMED AND UNKNOWN BODIES
2020	929	71 (7.64%)

TABLE NO 2

AGE WISE DISTRIBUTION	2020	%
IUL	6	8.57
0-10 YEARS	2	2.85
11-20	0	0
21-30	9	12.86
31-40	22	30
41-50	14	20
51-60	7	10
MORE THAN 60	5	7.14
UNKNWON AGE	3	2.86
Total	71	100

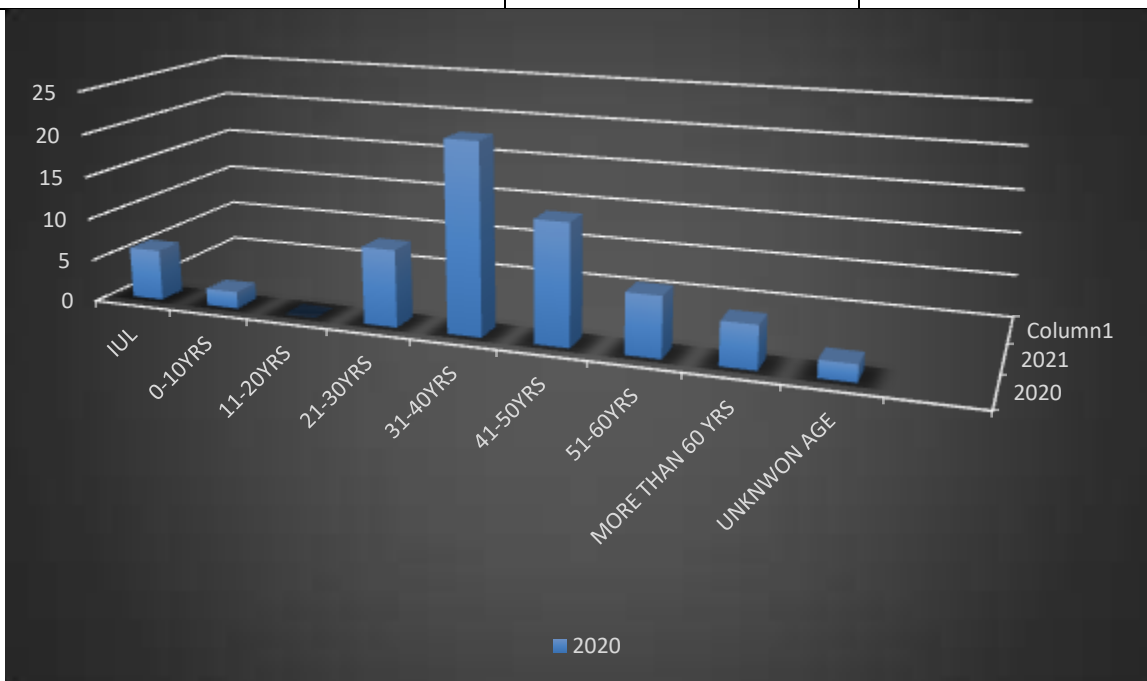


TABLE NO 3

MONTH WISE DISTRIBUTION	2020	%
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JANUARY	6	8.58
FEBRUARY	4	5.71
MARCH	3	4.28
APRIL	1	1.42
May	1	1.42
JUNE	11	15.71
JULY	12	17.14
AUGUST	8	11.43
SEPTEMBER	9	12.85
OCTOBER	10	14.28
NOVEMBER	4	5.71
DECEMBER	3	2.86
Total	71	100

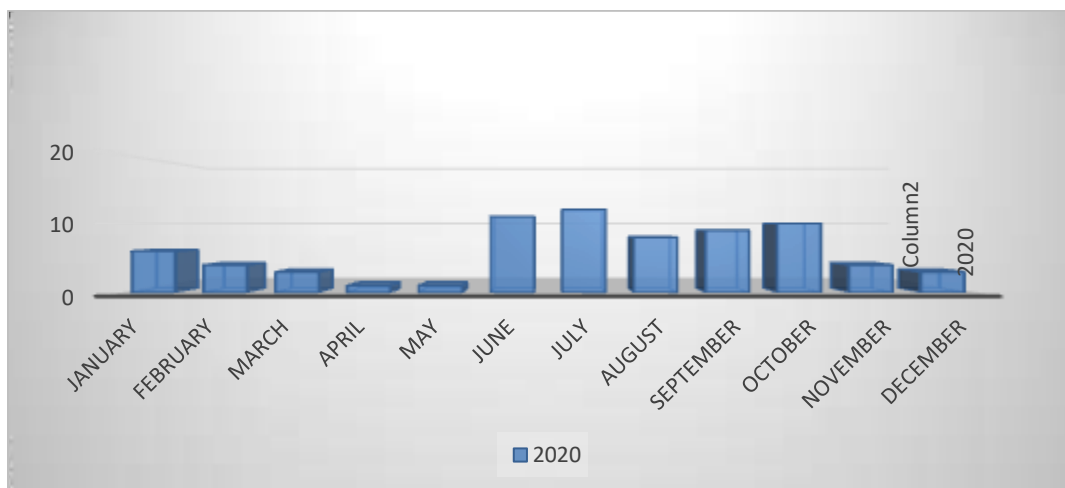


TABLE 4

CAUSE OF DEATH	NO OF CASES 2020	%
LUNG DISEASE	6 + 24 (after HPE)	8.45 +33.80
LIVER DISEASE	2	2.82
SEPTICEMIA	3	4.23
POLYTRAUMA	9	12.67
HEAD INJURY	11	15.50

DROWNING	10	14.08
NON VIABILITY	2	2.82
DEAD BORN	1	1.40
HANGING	2	2.82
STRANGULATION	1	1.40
Total	71	100

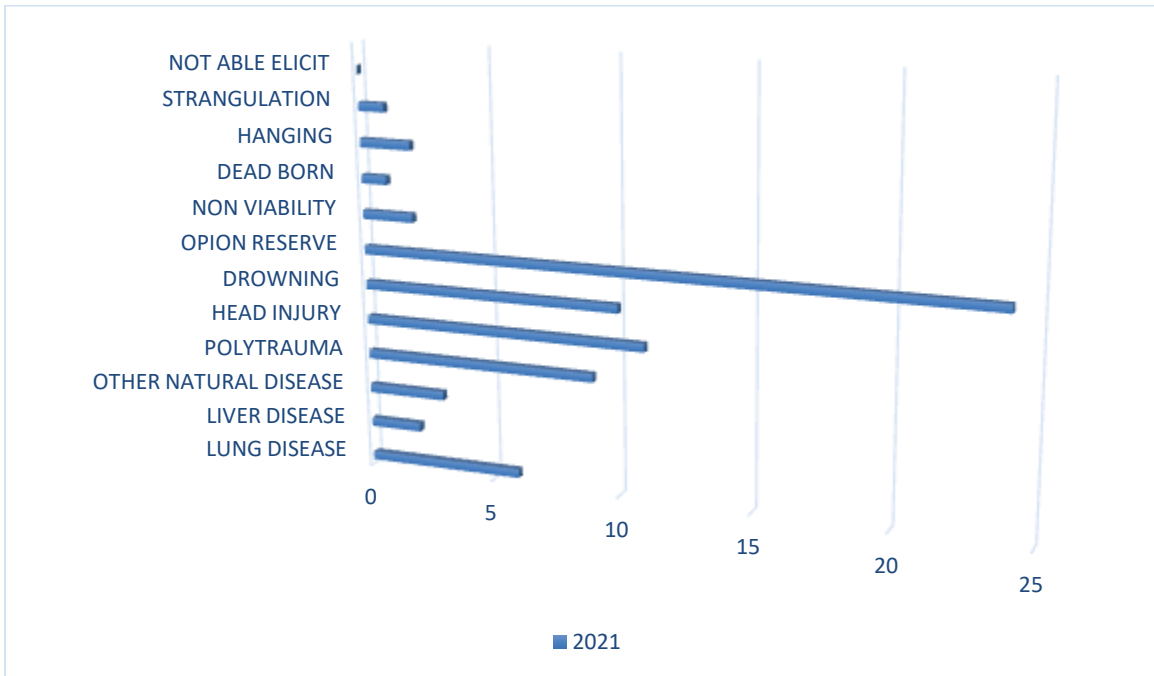


TABLE 5

SAMPLE COLLECTED	No of cases 2020	%
VISCERA	24	33.80
DNA	71	100
HISTOPATHOLOGY	20	28.17

TABLE NO 6

ADMISSION	No of cases 2020	%
BD	68	97.14
WITHIN 2 DAYS OF ADMISSION	1	1.42

MORE THAN 2 DAYS OF ADMISSION	1	1.42
Total	70	100

Table no 7

Religion	No of cases 2020	%
Hindu	60	84.50
Muslim	2	2.82
Unable to elicit	9	12.67
Other	71	100

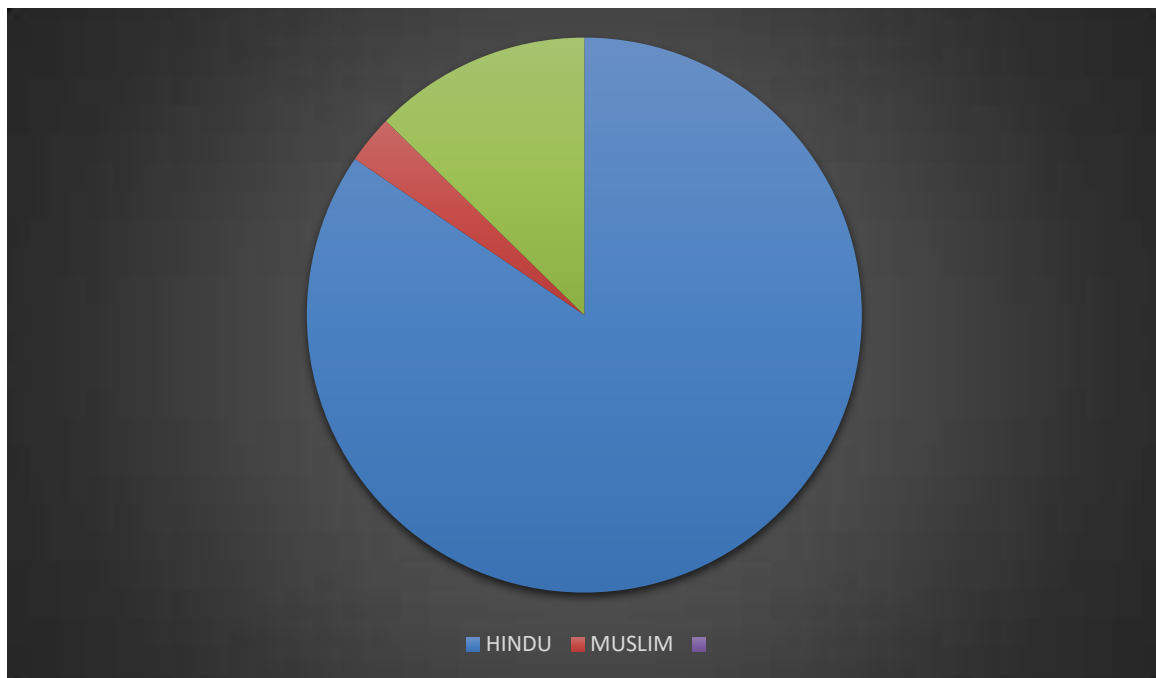
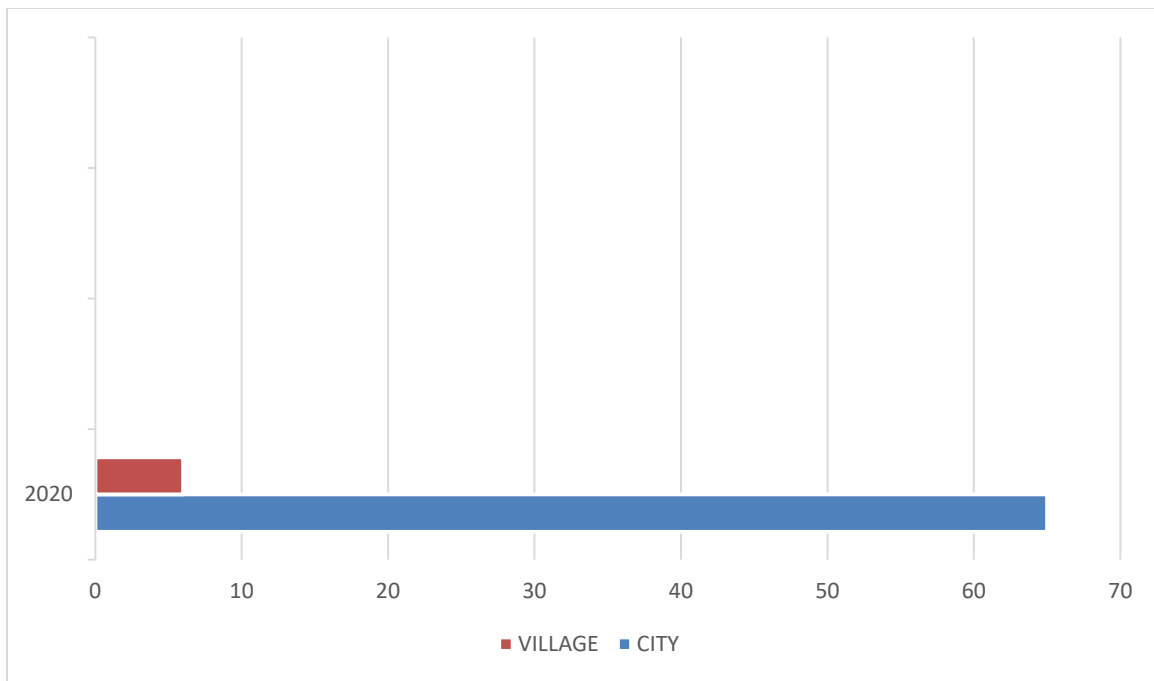


Table no 8

Police station	No cases	%
City	65	91.54
Village	6	8.46
Total	71	100



Discussion: The aim of our study was to study the pattern of unknown bodies with accuracy and reliability. Only 7.6% were unidentified body which seems to be small figure. It is with great difficulty and a sense of responsibility that an autopsy surgeon has to deal with the unidentified bodies' autopsies. When we extrapolated on a large scale, it puts a great stress on the resources of the nation including burden on investigating authority, mortuary and on forensic experts. It is mentioned that almost all the cases that were brought dead had their Inquest (Panchanama) done after 72 hours as per circular of Rajasthan government. In most of the PHC and CHC there is deficiency cold storage so most of the time body immediately sent to nearest higher centre where cold storage is present. However, communication via telephone was carried out in such cases, to ease the burden of the process. These formalities are the cause of the delay which can be mitigated by a national level web-based interactive tracking application of the unknownbodies by various agencies as well as an intersectoral co-ordination between the law enforcement agencies and the Forensic Medicine department. Maximum number of deaths (30%) occurred in the age group of 31-40, this age group is the important pillars of the development of the society, which used to be in burden to provide wealth to his families, similar results were recorded in a most of the studies specifically study done at Kolkata

by Chattopadhyay et al.¹³91.54% of the cases brought were from the urban areas, portraying the socio-economic imbalance even in the urban setting. As we know these days it is in mind of society that work for earning easily available in urban area comparison to rural so most of the worker shifted to cities most of the time they live alone and send the wealth o respected families. The gender distribution of the unknown bodies is similar to most of the studies, more than 92% of the bodies consisted of the male cohort. This pattern is similar to the pattern observed in a study made in Chandigarh by Kumar A, et al.¹⁴12% cases were registered in the month of July, giving an estimate of the unsymmetrical autopsy load on the department. Lung disease was the cause of death in almost 42.25 % of the cases followed by Head Injury in 15.50% of the recorded cases. Similar results were recorded in a study conducted at Chandigarh by Kumar A et al.¹⁴Unnatural deaths may have several factors involved, like vehicular or rail accidents, drowning, burns, poisoning, violent fights, body run over by cars or trains, etc.^{10,15-22} These cases often involve the beggars or mazdoors and the destitute of the streets. The personal belongings of the bodies play an essential role in establishing the identity of the individual. It can be of help even in cases where long-distance relatives establish the identity of the individual after a long time. Thus, the data collected by the forensic expert was a

cumulative effort of the autopsy and the belongings as well as the visible identification data. Investigations are the pillars of the identification process it is observed that when identification achieved most of time case may solved easily. DNA sample has been taken in all case , long bone or blood on FTA card taken for same. They are helpful in cases when relatives came after the crimination of bodies. Viscera was acquired from 24 and histopathology sample taken in 20 cases. The autopsy fulfils the demands to answer the questions which form the aims and objectives of the study. The cause of death, age-distribution, gender distribution, studied by examination and assessment of the individual during the autopsy and the reports of the samples sent for histopathological and chemical analysis assessed. The Autopsy Protocol was followed.²³ Shortfalls of the study include possible observer bias, arising from the inter-observer variation between different autopsy experts analysing bodies over the period of the study²⁴

Conclusion: The present study has established the pattern of death in unknown bodies brought at the tertiary health centre in the 12-month study period. Most of the cases were in the month of July. Male predominance is seen in the cases. Respiratory disorders were the cause of most of the natural deaths while Head Injury contributed to most of the unnatural deaths. The technical formalities are the cause of the delay which can be mitigated by a web-based interactive tracking application of the unknown bodies by various agencies as well as an intersectoral co-ordination between the law enforcement agencies and the Forensic Medicine Department.

Suggestions: Newer techniques for the autopsy, preservation of the viscera, bone dating to find the time since death, a dedicated section in the Microbiology department for the bacteriological analysis of the specimens should be set up and DNA of each and every specimen should be collected so that the identification is confirmed even after the destruction of the body. A visual record of the autopsy should be documented for future reference. This can be done by a photography of the autopsy.²⁵ As we know in India Aadhaar card is having details Data of address, age, name, residence and it is cross matched with OTP as well as fingerprint and eye scan. If a reverse use is allowed by the government the fingerprint match with data of Aadhar can helpful

for identification.²⁶ the study suggest an urgent need for creation of a national missing person database as well as DNA database to add the identification of unidentified / unclaimed / unknown persons and bodies.

Ethical Clearance: Institutional Ethical Committee clearance was obtained before beginning the study.

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