Original Research Paper

Forensic Medicine

PATTERN OF CAUSE OF DEATH IN UNCLAIMED/ UNIDENTIFIED /UNKNOWN DEAD BODIES : A TWO YEAR RETROSPECTIVE STUDY.

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ABSTRACT   **Patna** is one of the largest city (both in terms of population and area) as well as the capital city of Bihar. Every year thousands of people from different regions of Bihar throng to the capital city in search of job. When these people die without any identifying document, it is very difficult to establish their identity and cause of death as their past medical and other histories are not known. The present **2 yrs.** of retrospective study was undertaken to find the cause of death and its pattern in unknown/unidentified/ unclaimed dead bodies brought for autopsy at Nalanda Medical College & Hospital (**NMCH**), Patna, between **Jan 2016 to Dec 2017**. A total of **829** cases were brought for medico-legal autopsy of which **unknown** cases accounted for about 14.95%. The manner of death was certified as **natural** in 32.25% of cases in which chest and abdominal disease combined were mainly responsible with a predominant pathology in the **lungs** (80% cases). Of all **unnatural** deaths (63.70%), road/rail **accident** injuries were most common (21.77%) cause of death followed by drowning (20.96%). There was a clear predominance of males cases (66.93%) over female one. The government should take initiatives at large to prevent unnatural deaths in unidentified or unknown persons. The study suggest an urgent need for creation of a **National Missing Person Database** as well as **DNA database** to aid the identification of unidentified/unclaimed/unknown bodies.

KEYWORDS : Unknown, Unclaimed, Unidentified, Death, Autopsy, Pattern.

INTRODUCTION:

Identification means fixing the individuality of a person. **Unidentified** or **unclaimed** dead body means body of a deceased person , if such body has no relative or if it is not claimed by any of his relatives within **48 hrs.** of his death. As and when a dead body recovered by the police is unidentified or unclaimed, the police officer make inquiry under **section 174(14)** and send it for medico-legal autopsy. The unknown body brought for autopsy is preserved in the mortuary for 72hrs from the time it came to the mortuary. If there is no claim for the body even after **72 hrs.**, the police officers are legally authorised to dispose off the body.

The **aim** of this study is to ascertain the cause of death and other parameters in the unknown/unclaimed victim. However, the problem of finding the cause of death in unknown body get aggravated when the bodies recovered are either in decomposed form or crushed state. Post-mortem examination act as one of the investigative tool that helps in positive identification of the deceased, determination of time since death, cause of death, manner of death, time between injury and death, and to recover clues from the body.

MATERIAL AND METHODS:

Unidentified bodies brought for post-mortem examination to the mortuary of dept. of Forensic Medicine & Toxicology, NMCH, Patna, during the period of Jan 2016 to Dec 2017 comprise material for the study. Data regarding these cases were compiled from PM reports, inquest paper, detailed history elicited from concerned I.O. at the time of autopsy.

OBSERVATION & RESULTS:

A total of **829** bodies (409 cases in 2016 and 420 cases in 2017) were brought for PM examination to the mortuary of FMT dept. NMCH, Patna during the study period of two years (Jan2016-Dec2017). Of these unknown/unidentified cases were **124** (67 cases in 2017 and 57 cases in 2017) comprising 14.95% of total cases (16% in 2016 and 14% in 2017). The present work was done on 124 cases, of which, 103 cases were brought directly from the NMCH Hospital while the rest were referred from nearby hospitals. Gender wise distribution shows, there were 83 cases (66.93%) of male and female contributed 33.06%

(41cases) of the total cases studied. Opinion regarding the cause of death was given at the time of autopsy in 114 cases (91.9%) while in the remaining 10 cases (8.06%), additional investigations were required; so the opinion was kept reserved and viscera was send for histopathology and chemical analysis in the concerned FSL. Till the date, Out of these 10 cases, 5 cases were reported to be positive for the presence of poisonous substances by the FSL while the reports of rest 5 cases were still awaited. On including these 5 confirmed cases of poisoning in the study, there were total of 119 cases, where final opinion to the cause of death were available, of which 40 deaths (32.25%) were natural and the rest 79 cases (63.70%)were that of unnatural deaths. Among all the 40 natural deaths (32.25%), lung disease (acute/chronic) comprising 32 cases (80%) predominated the cause of death followed by coronary artery disease in 3 cases (7.5%) and hepatic disease in 2 cases (5%). The cause of death was others (including heat stroke, hypothermia etc.) in 3 cases (7.5%). Table 3 shows that among 124 unidentified cases studied, road traffic/rail accident were most common (21.77%) cause of death. Strangulation accounted for 13 cases(10.48%), electrocution in 2 cases (1.6%) and gun shot in 1 case(0.8%). Drowning was the cause of death in 26 cases (20.96%)and poisoning and not known account for 5 cases(4.03%) each. Among all unnatural, accidental deaths (including RTA, rail accidents)were most common (55cases,69.62%) manner of death followed by homicidal 19 cases,24.05%{comprising of strangulation(13 cases,13.48%), gunshot(1case,0.8%) & trauma(5cases, 4.03%)} and suicidal 5 cases[6.32%] comprising all cases of poisoning only. The cases from the rural area constitute 62.09% (77cases) whereas the remaining 47cases (37.9%) were belonging to urban area.

TABLE 1:

Manner of death (among unnatural deaths)	No of cases	%
1)Homicidal (strangulation, gunshot, trauma)	13+5+1=19	24.05
2)Suicidal(poisoning)	5	6.32
3)Accidental(RTA+ Rail accidents ,drowning , electrocution)	27+2+26=55	69.62
Total	79	100

TABLE 2:

CAUSES OF DEATHS (Natural)	No of cases	%
1.Lung ds (acute/chronic)	32	80
2. Coronary Disease	3	7.5
3. Hepatic Disease	2	5
4. Others	3	7.5

Table3:

Cause of deaths	No of cases	%
1.Natural	40	32.25
2. Road traffic/rail accidents	27	21.77
3. Gunshot	1	0.8
4. Trauma(head, abdominal, chest injuries)	5	4.3
5. Drowning	26	20.96
6. Strangulation	13	10.48
7. Electrocution	2	1.6
8. poisoning	5	4.03
9. Not known	5	4.03

PIE-CHART 1:

nature of death

PIE-CHART 2:

area wise distribution

PIE-CHART 3:

gender wise distribution
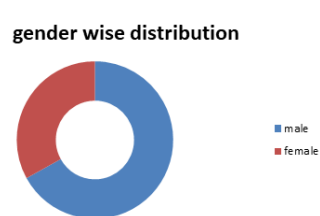
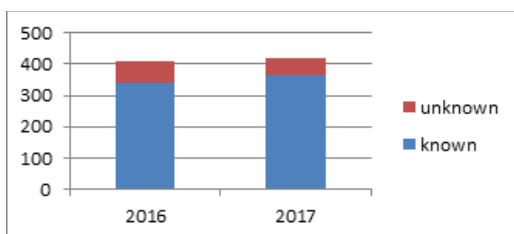**Bar chart 1: distribution of known vs. unknown cases during 2016 & 2017**

DISCUSSION:

Unidentified cases brought for PM examination at NMCH account for although less no of cases but were very significant one. Most of the cases among unnatural deaths were due to road/rail accidents probably because **i) beggers** and destitutes reside at the road side and are usually physically challenged **ii) hit and run** accidents with crushing of head and face, hindering identification **iii)**body being dismem bered when run over by a heavy vehicle or train **iv)**a person being involved in a fatal accident just on arrival in a completely new place **v)** close proximity of the hospital to the National Highway, Gandhi Setu and Patna Junction which because of being in capital are highly crowded. The RTA was followed by drowning which can be attributed to the closeness of the Hospital to the river **Ganges**. Among unnatural deaths , the **lung** pathology predominated and **rural** cases exceeded the urban one.

CONCLUSION:

The findings of our study revealed that **road/rail accidents** is most important cause of mortality in unknown cases in the study area. **Male** were most affected population and most of the cases belong to **rural** area. As far as manner of death is concerned, **accidental** was most common followed by homicidal and suicidal. More deep studies are required to find the actual cause of accident for preventing its effects on morbidity and mortality, which will in turn help in providing better health care facilities to the homeless. Apart from it, effort should also be made by the police to present the unknown/unclaimed bodies for autopsy without delay so that the decomposition and other artefacts do not set in and obscure the valuable findings regarding the cause and manner of death besides the identification. Along with publishing missing notices in dailies by police personnel, the simple technique of preserving records like colour photographs{of dead body as well as clothes}, marks of identifications (at least 2), tattoos, scars, deformities, dental records, whole body radiographs{to reveal old fracture or implants}, fingerprints, DNA analysis(by preserving sternum), blood samples for cross matching, pulp of fingers (preserved in formalin) also help a lot in identifying the deceased even years after their deaths/post-mortem.

DECLARATION OF CONFLICTING INTERESTS:
None declared

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