Mortality among homeless women who remain unclaimed after death: An insight

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ABSTRACT

Background. Some homeless people remain unclaimed after death. Although women constitute a minor proportion among the homeless, they represent a more vulnerable section. We reviewed the major autopsy characteristics and causes of death among women whose bodies remained unclaimed after death.

Methods. We analysed the autopsy records and inquest papers of unclaimed bodies of women for the period 2006–12 at the Department of Forensic Medicine and Toxicology, All India Institute of Medical Sciences, New Delhi.

Results. Most women whose bodies were unclaimed were 21 to 60 years old with a mean age of 45 years. Natural events (53.5%), largely attributable to acute/chronic lung diseases, were identified as the most common cause of death. Accidental deaths were predominant among the unnatural causes. Most bodies of women were found on the footpath besides the road (56.1%).

Conclusion. The problems of physical/sexual abuse, acute chest infections and road traffic accidents are all aggravated in the situation of homelessness. More affordable shelters are needed to preferentially accommodate women. Also, awareness about the existing medical facilities needs to be increased.

Natl Med J India 2016;29:207–8

INTRODUCTION

According to a survey in 2010, nearly 56 000 people are estimated to be homeless in New Delhi. Women comprise only 15% of these homeless.[1] Most of the homeless are migrants from the states of Uttar Pradesh and Bihar. It is usually men in the family who migrate to cities, which possibly explains the variation in gender distribution in this population. Moreover, being migrants they lack acquaintances in the city as a result of which after death their bodies probably remain unclaimed.

As per the Delhi Anatomy Act, 1953, an 'unclaimed body' refers to 'the body of a person who dies in a hospital, prison or public place, which has not been claimed by any near relative or personal friend within such time period as may be prescribed'.[2] According to the police manual, a dead body is declared unclaimed after 72 hours of death and the police are legally authorized to dispose of the body.[3]

Unclaimed bodies pose a challenge for law enforcement authorities as most of these arouse a suspicion of foul play. It is therefore important to understand the common causes of death in such instances. Women constitute a minor proportion among the homeless but represent a more vulnerable and often neglected section. Hence, we aimed to review the autopsy characteristics and causes of death among homeless women whose bodies remained unclaimed after death.

METHODS

The autopsy records of the Department of Forensic Medicine and Toxicology of the All India Institute of Medical Sciences, New Delhi were searched for unclaimed/unidentified bodies. A total of 11 786 autopsies were conducted during 2006–12. Among these, 1455 were of unclaimed/unidentified people. There were 181 (12%) women among all the unclaimed bodies. Neonates and infants were excluded from the study and we analysed 114 such instances. The details were sourced from the autopsy records and the inquest papers of the investigating officer. BMI $\leq$16 kg/m^2 was defined as thin built. Statistical analysis was done using Stata 11.2 version (StataCorp, College Station, Texas).

RESULTS

The mean age of the cohort was 45 years (Table I). Most of the unclaimed bodies of women belonged to the age group of 21–60 years (71%). Nearly 20% were aged $\geq$60 years and only 9% were <20 years. There seemed to be a slight increase in the number in summer compared to winter months. The majority (56%) of bodies were thin built. About 9% bodies were found partially or completely naked. The latter two findings along with signs of self-neglect and poor personal hygiene in most indicated that the deceased were predominantly from the lower socioeconomic strata. Ante-mortem injuries were present in 40 (35%) and were

TABLE I. Demographic and autopsy findings of the cases

Variable	Number
Age (years)	
1–20	10
21–40	41
41–60	40
>60	23
Season of death	
Summer (April–September)	62
Winter (October–March)	52
Built (on appearance)	
Thin	64
Average	47
Obese	3
Clothing	
Fully clothed	104
Partially/completely naked	10
Decomposition changes (at autopsy)	
Mild/nil	90
Severe	24
Antemortem injuries	
Present	40
Absent	74
Body tattoo	
Present	17
Absent	97
Manner of death	
Natural	61
Accidental	32
Homicidal	12
Suicidal	9

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mainly associated with unnatural modes of death. Special identifying features such as a body tattoo were found in only 17 (15%) women. Among these, most of the tattoos were names and located on the ventral aspect of the forearm. One woman aged 25 years was found to be 24 weeks' pregnant. The autopsy revealed that strangulation was the cause of death in this woman.

There were no significant yearly variations in the number of cases autopsied. At the time of autopsy, the mean duration since death was estimated to be 7 days. The average duration between recovery of the body and conduct of the autopsy was about 6 days. Among all the cases autopsied, viscera analysis was performed in 24%. Blood and/or bone samples for DNA analysis were collected in 11%.

Natural events were identified as the foremost cause of death and accidental mode of death was predominant among the unnatural causes. Acute/chronic lung diseases contributed to most of the natural deaths. The majority of accidents were road traffic mishaps. Poisoning and asphyxia due to strangulation were the most common causes of suicidal and homicidal deaths, respectively (Table II). The mean age of these women was 53 years compared to 36 years in those dying of unnatural causes. While accidental, suicidal and homicidal modes were common in the younger age groups; natural modes predominated among older women. This difference was statistically significant ($p<0.05$).

Most women were considered to be homeless as they were found on the footpath besides the road (56.1%) or on railway tracks (9.6%). The other common places of recovery were hospitals (8.8%), public parks (6.1%), temples (5.3%), water bodies (4.4%) and forest areas (2.6%). The remaining bodies (7.1%) were found outside bus stands, sewers and abandoned buildings.

DISCUSSION

In our study, the maximum unclaimed bodies of women were in the age groups of 21–40 and 41–60 years. This is in consonance with other reports on homeless people.[4] Most (56%) of the bodies were recovered from the roadside. This is similar to the proportion of homeless reported to be living on the footpath.[1] Most bodies had a low BMI, indicative of malnutrition along with superimposed diseases especially infections that were further aggravated by malnutrition. In addition the attire of the body, any ornaments and certain occupational stigmata such as 'labourer marks' on the hands gave a clue regarding their socioeconomic status. In keeping with the previous literature, natural events were identified as the most important causes of death, acute/chronic lung diseases accounting for maximum mortality.[5–8] Lack of shelter especially during winter months may account for a high incidence of acute pneumonia. Self-neglect, poor personal hygiene and lack of access to medical facilities may further exacerbate the morbidity and mortality due to pneumonia.

We found accidental causes to be the second most common cause of mortality. Among these, road traffic accidents leading to haemorrhagic shock and/or severe head injury accounted for the majority. One explanation for this could be that most homeless people sleep near roads and hence are prone to road traffic accidents. Homicidal and suicidal causes accounted for 11% and 8% of all deaths, respectively. Most homeless women are vulnerable to physical as well as sexual abuse, which makes them more prone to homicides. This is highlighted by the strangulation of a pregnant woman in our study. Therefore, besides safe shelter homes, increased sensitivity needs to be shown towards this vulnerable section of society. Mental distress caused by extreme poverty and physical and/or sexual abuse may account for most instances of suicide.

We tried to ensure meticulous quality in reporting all cases. The police inquest papers along with a thorough postmortem analysis were used for data collection. However, we recognize certain limitations in our study. Visceral analysis was done only in those in whom poisoning was suspected due to visceral congestion and/or any peculiar smell during the gross postmortem examination. Second, although DNA analysis is a routine in western countries, due to limited resources it was done only when the body was decomposed or if identification was difficult due to any other reason.

In summary, bodies of women are a small proportion of all unclaimed bodies. Acute pneumonia was the major cause of mortality in them. Road traffic accident was the most important unnatural cause of death. The problems of physical/sexual abuse, acute chest infections and road traffic accidents are more among the homeless. Hence, more affordable shelters are needed especially to accommodate women. Also, lack of access as well as awareness regarding healthcare facilities may contribute to the high incidence of chest infections. Therefore, awareness of and access to existing medical facilities needs to be increased.

TABLE II. Distribution of the cases according to the manner and cause of death

Cause of death	Number of cases	(%)
Natural (*n*=61)		53.5
Acute pneumonia	40	35.1
Chronic lung disease	12	10.5
Sepsis	7	6.1
Stroke	1	0.9
Meningoencephalitis	1	0.9
Unnatural (*n*=53)		46.5
Accidental (n=32)		
Haemorrhagic shock	17	14.9
Severe head injury	12	10.5
Electrocution	2	1.8
Drowning	1	0.9
Homicidal (n=12)		
Strangulation	5	4.4
Poisoning	3	2.6
Severe head injury	3	2.6
Haemorrhagic shock	1	0.9
Suicidal (n=9)		
Poisoning	5	4.4
Hanging	2	1.8
Drowning	1	0.9
Haemorrhagic shock	1	0.9

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