



A Forensic Autopsy Study of Dead Foetuses and Newborns

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Abstract

Background: The term abandonment refers to babies or foetuses which are found abandoned at various unwanted places such as gutter, rubbish dumps, railway tracts and bushes. It does not refer to live born babies left in places, such as hospitals where care can be given by someone other than the mother. **Aims and Objectives:** To find out the distribution of death cases of newborns/foetuses and to trace its probable reason and its relationship with female foeticide. **Methods:** A retrospective study of all the medico-legal autopsies of foetuses and newborns was conducted in Forensic medicine and Toxicology department, Government Medical College, Amritsar (Punjab) from Jan 1, 2014 to Jul 31, 2021. During this period, 46 cases of fetal and newborn deaths had been studied. **Results:** The dead bodies of known foetuses/newborns is 43.5% cases while total unknown cases were 56.5% cases. 32.6% cases were non viable foetuses while 10.8% cases died as a result of prematurity. All the unknown cases (56.5%) were found from the abandoned places like street, bushes, canal side, water bodies that mainly includes pond and railway tract. **Conclusion:** Despite, the problem is present in every corner of the nation, there is dearth of research studies on this issue. Stringent measures and strict checks are required against antenatal sex determination. The motive behind the abandonment of foetuses can be any, but this grave issue needs urgent attention.

Keywords:- Foeticide, Newborns, Abandonment, Viability, Concealment of Birth.

INTRODUCTION

The abandonment of the newborn/foetus is an important, but often neglected issue. There have been news reports of abandoned foetuses from different parts of India.^[1] The term abandonment refers to babies or foetuses which are found abandoned at various unwanted places such as gutter, rubbish dumps, railway tracts and bushes. It does not refer to live born babies left in places, such as

hospitals where care can be given by someone other than the mother.^[2]

According to The Indian Penal Code, foeticide and intentional abandonment of a child are considered punishable under Sections 315 IPC and 317 IPC. The Pre-Conception and Pre-Natal Diagnostic Techniques (prohibition of sex selection) Act of 1994 is federal legislation that was enacted by the Indian Parliament to stop female foeticides and to arrest the



declining sex ratio in the country. The Act has banned prenatal sex determination, using various diagnostic techniques, yet it has failed to curb the problem of sex selective abortions completely.^[3,4]

As the result of abandonment, many infanticides and neonaticides takes place where the alleged mother leaves the infant or newborn in an abandoned place without protection or shelter, intending to kill the child. Such dead fetuses or newborns are then found abandoned in places.^[5]

Aims and Objectives

To find out the distribution of death cases of newborns/foetuses and to trace its probable reason and its relationship with female foeticide.

MATERIAL AND METHODS

A retrospective study of all the medico-legal autopsies of foetuses and newborns was conducted in the Forensic Medicine and Toxicology Department, Government Medical College, Amritsar (Punjab) from Jan 1, 2014 to Jul 31, 2021. During this period, 46 cases of fetal and newborn deaths were reported in the department. All the data related to medicolegal autopsy of newborn was analyzed for identity, gender, viability at birth, cause of deaths in liveborn, and location of recovery of the bodies. The details of these cases were inferred, in a standard performa, from the post mortem records and the inquest papers of the investigating officer. No permission from institutional ethical committee was taken as

data was collected from the old records of the department.

RESULTS

In the present study, in a total of 46 cases of dead fetuses/ newborns, female preponderance (59% cases) of dead foetuses and newborns is more as compared to males (39% cases). [Figure 1] The Male is to Female ratio is 2:3. The gender of the deceased fetus/newborn could not be ascertained and DNA examination for gender was sent in 2% of cases.

[Table 1] shows that the dead bodies of known fetus/newborns are 20 cases(43.5%) while total unknown cases were 26 cases (56.5%). Among the known cases, 28.3% were males while 15.2% cases were females and in the unknown fetuses/newborns, the number of females(39.13% cases) was much higher as compared to the unknown males(17.4% cases).

[Table 2] shows the cause of death in the bodies brought for post mortem examination. The majority of cases(34.9%) died, were as a result of injuries which includes head injuries, chest injuries and injuries over the face; this mainly constitutes the killing of newborns i.e infanticide or foeticide cases. 32.6% cases were non-viable foetuses, while 19.6 % of cases were dead born and 10.8% of cases died as a result of prematurity. Out of all the cases, 2.1 % cases were still born babies.

[Table 3] shows that all the unknown cases (56.5%) were found from the abandoned places like streets, bushes, canal side, water bodies that mainly includes pond and railway tract while among the known cases that are 41.3 % total cases were hospital deaths which include

the cases of negligence, death due to sepsis and also the unknown live infants brought to the hospital for treatment. 2.2% of cases were

deaths at home which were as a result of assault as reported in the inquest papers.

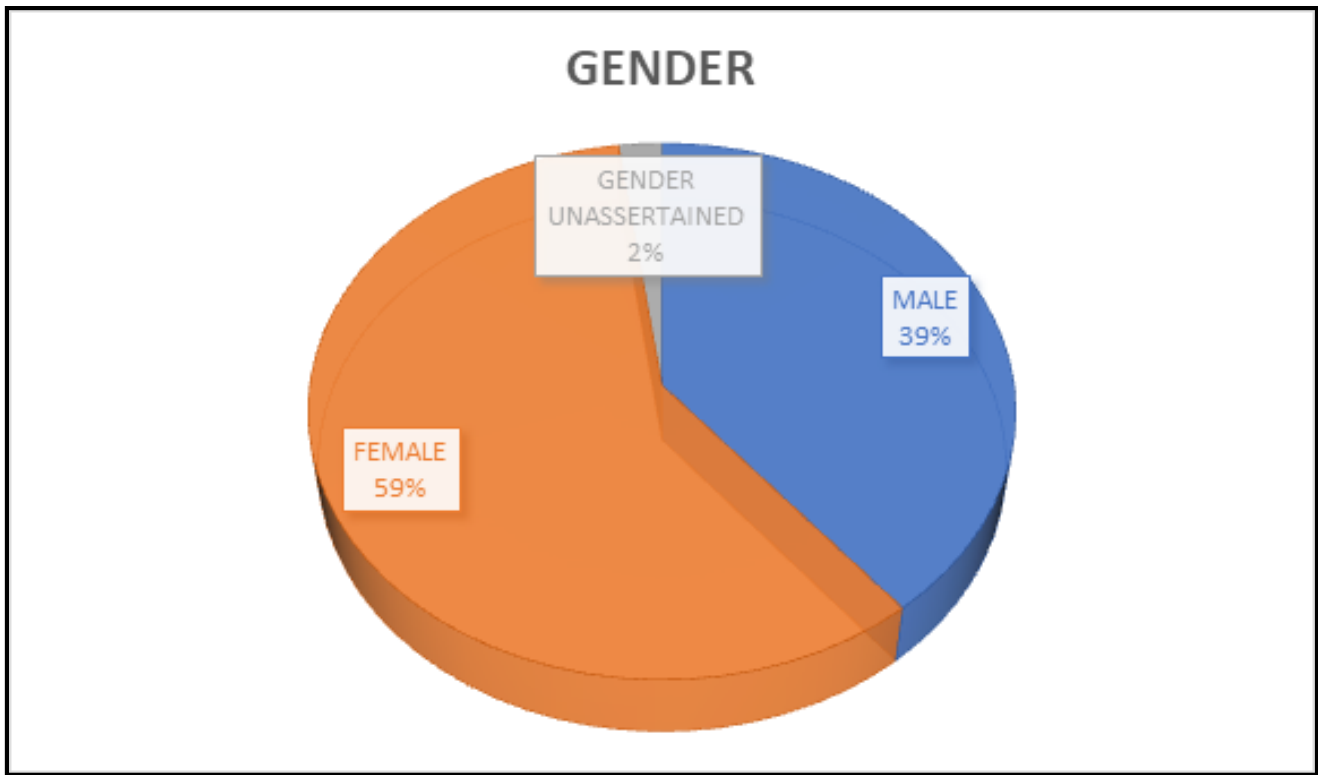


Figure 1: Distribution According to the Gender of the Fetus/Newborn

Table 1: Distribution on the Basis of Known/Unknown

	Male	Female	Total
Known	13(28.3%)	07(15.2%)	20 (43.5%)
Unknown	08(17.4%)	18(39.13%)	26 (56.5%)
Total	21(45.7%)	25(54.3%)	46(100%)

Table 2: Cause of Death in Foetuses/Newborns

Cause of death	Number	Percentage
Injuries	16	34.9 %
Non-viability	15	32.6 %
Dead born	09	19.6 %
Prematurity	05	10.8 %
Still born	01	2.1 %

Total	46	100
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Table 3: Distribution of Place of Finding of Body of Foetuses/Newborns

Place where found	Number	Percentage
Hospital death	19	41.2
Street	08	17.4
Bushes	08	17.4
Canal side	05	10.8
Water body	03	6.6
Railway track	02	4.4
Home deaths	01	2.2
Total	46	100

DISCUSSION

In the present study, female preponderance (59% cases) of dead fetuses and newborns is more as compared to males (39% cases) which is consistent with findings A. Krishnajaneyulu et al.^[6] (2021) where female to male ratio is 3:2. In this study, the majority of unknown foetuses bodies are females found in state of advanced putrefaction. The observations in the present study are also similar to the study conducted by C Behera et al.^[7] (2016) where a nearly equal number of males(48% cases) and female(46% cases) dead bodies of foetuses/newborns were brought for postmortem examination while in 8% cases gender was unascertained. However, in another study conducted in North Carolina, United States by Herman-Giddens et al.^[8] (2003) where a total of 58.8% were males and 35.3% were females and 5.9 % of indeterminate due to advanced stage of decomposition. In another study conducted in Pretoria in South Africa by du Toit-Prinsloo L et al.^[9] (2016) which also showed results different as compared to the present study in which dead body of male foetuses was predominant (49%) as compared to females (32%) while in 19% cases, the gender was unascertained. The main

reason for low sex ratios and missing girl child in India and China is strong preferences for son is prevalent.^[10] In a report from South Delhi highlighted the sudden increase in the number of sex selective abortions after antenatal sex determination became freely available in India.^[11] Another report also confirmed the high prevalence of female foeticide in Asian countries like India and China.^[12] According to Bonnet(1993),^[13] which highlights about the newborns were abandoned and left to die. Perhaps reason might be the bias attitude towards males present in the society adds to the increase in number of abandoned female foetuses/newborns.

The findings in this present study are consistent with study of C Behera et al. (2016),^[7] where majority of dead foetuses/newborns were nonviable (36% cases). In foetuses/ newborns that died due to injuries which account for 34.9 % cases in the present study, the findings are consistent with findings of C Behera et al. (2016),^[7] where head injury due to blunt forces was the most common cause of death due to injuries. Abandoned foetuses are majorly found in the

varying stages of putrefaction, along with being subjected to post mortem trauma or predation, making interpretation of trauma difficult. In another study conducted at Pretoria in South Africa by du Toit-Prinsloo L et al. (2016)⁹ findings are consistent with the findings of the present study where the majority of dead bodies of fetuses/newborns (57% cases) brought for post mortem examination.

The majority of the unknown cases in the present study have been found at abandoned places that include streets (17.4%), bushes (17.4%), Canal side (10.8%), water bodies (6.6%) and railway tract (4.4%), these findings are consistent with findings of study conducted at Guntur by A. Krishnajaneyulu et al. (2021),⁶ where majority of infants (56% cases) were abandoned by the parents at hospital probably as child was dead and 44% cases the birth was concealed illegally by disposing off the baby at various abandoned places like drainage canals, dustbins, railway premises and bushes. Such babies probably could be unwanted ones, born to unmarried women, delivered as stillborn or dead born or criminally aborted. Similar findings were found in the study conducted in north Tunisia by Ben Khelil M et al (2019),¹⁴ where the majority of dead bodies of fetuses/newborns were found by the public roads in 40.9% cases. The findings in the present study are also consistent with those of Herman-Giddens et al. (2003),⁸ where majority of dead bodies of fetuses/newborns was found in trash (23.5%), landfills, woods or roadside (23.6%). In a another study conducted by Gheorghie et al. (2011),¹⁵ in Denmark discussed 11 cases of abandonment of babies

from year 1997 - 2008, where the most common means of disposal was in a plastic bag (60%); indicating concealment of birth and abandonment of babies.

Limitations of study

This study provides an opportunity to understand the epidemiology of cases of active and passive killing of new born by their parents. We can safely assume that our study of fetuses/newborn dead bodies is an underestimate as very less amount of similar studies has been conducted in India. Despite, the problem is present in every corner of the nation, there is dearth of research studies on this issue. A prevention is one of the mandatory focus, but the current evidence based on prevention is limited.

CONCLUSIONS

Stringent measures and strict checks are required against antenatal sex determination. Before any criminal charge can be anticipated, clear investigation into number of issues is required for the discovery of discarded remains of foetus or infants. Facilities like special orphanages, and anonymously accepting the newborns of unwanted pregnancies, may help to minimise the problem of abandoned fetuses. Education of young females regarding family planning methods and improving their moral thinking which can avoid unwanted pregnancies thus reducing abandonment of fetuses & concealed birth cases. The motive behind the abandonment of fetuses can be any, but this grave issue needs urgent attention.



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