ISSN: 0975-8585

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Autopsy-Based Study of Custodial Deaths in Kolhapur District: Identifying Causes and Preventative Strategies.

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ABSTRACT

Custodial deaths remain a critical concern in India, often raising questions about human rights violations, systemic neglect, and poor custodial management. This autopsy-based study analyzes custodial deaths in Kolhapur district over a three-year period to determine underlying causes and suggest preventive measures. A retrospective observational study of 18 custodial death cases from January 2022 to December 2024 was conducted at the Government Medical College, Kolhapur. Autopsy findings, histopathological analysis, and police records were evaluated to determine the cause and manner of death. Among the 18 cases, 15 (83.3%) were males and 3 (16.7%) were females. Natural causes accounted for 10 cases (55.6%), including myocardial infarction, tuberculosis, and pneumonia. Unnatural causes included suicide by hanging (4 cases), blunt trauma-related death (2 cases), and suspected poisoning (2 cases). Most natural deaths occurred in pretrial detainees with chronic illnesses, while unnatural deaths were seen mostly within 72 hours of custody. The findings underscore the need for early medical screening, mental health assessment, and strict custodial protocols. Implementation of routine health evaluations and mental health support in lock-ups can significantly reduce custodial mortality.

Keywords: Custodial deaths, Autopsy study, Kolhapur, Natural death; Unnatural death

https://doi.org/10.33887/rjpbcs/2024.15.6.60

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ISSN: 0975-8585

INTRODUCTION

Custodial deaths represent one of the most sensitive and challenging issues in the Indian criminal justice system, often leading to allegations of human rights violations, custodial violence, medical negligence, and systemic failure in prison administration. A custodial death refers to the demise of an individual while in police or judicial custody, whether in a lock-up, prison, or during police interrogation [1]. According to the National Crime Records Bureau (NCRB), hundreds of custodial deaths are reported annually in India, many of which remain unexplained or inadequately investigated [2].

Maharashtra consistently ranks among the states with the highest number of custodial deaths, reflecting the urgent need for systemic reforms [3]. The role of forensic medicine in such cases is critical—not only in determining the cause of death but also in establishing the manner of death (natural, accidental, suicidal, or homicidal), which has significant legal and human rights implications [4]. Autopsy-based evidence serves as a cornerstone for transparency, justice, and accountability in custodial settings.

Numerous studies have identified cardiac diseases, respiratory infections like tuberculosis, and liver cirrhosis as the common natural causes of custodial death [5-7]. Unnatural deaths, on the other hand, are often linked to suicide by hanging, poisoning, or physical abuse inflicted during interrogation or confinement [8]. A retrospective analysis by Kuchewar et al. revealed that nearly 30% of custodial deaths were unnatural, and some showed evidence of blunt force trauma suggestive of foul play [9].

The first 48–72 hours after incarceration are considered a high-risk period for unnatural deaths, often due to psychological distress, withdrawal symptoms, or custodial maltreatment [10]. Studies also show that poor infrastructure, overcrowding, lack of medical screening, and untrained custodial staff contribute significantly to preventable deaths in custody [11]. Moreover, the absence of mental health evaluation further exacerbates the vulnerability of detainees [12].

Despite clear guidelines from the National Human Rights Commission (NHRC) on handling detainees, gaps in implementation remain substantial [13]. The NHRC mandates that all custodial deaths be reported within 24 hours and be followed by a magisterial inquiry and forensic autopsy conducted by a board of doctors [14]. However, many of these protocols are either delayed or not strictly followed in practice.

There is a paucity of region-specific data on custodial deaths, especially from smaller districts like Kolhapur, which makes it difficult to assess local administrative lapses or healthcare deficiencies. This study aims to bridge that gap by analyzing 18 cases of custodial deaths brought for autopsy in Kolhapur district from 2022 to 2024. The objective is to determine the cause and pattern of death, assess systemic shortcomings, and propose evidence-based recommendations for prevention.

MATERIALS AND METHODS

Study Design

This is a retrospective, descriptive autopsy-based study conducted at the Department of Forensic Medicine, Government Medical College, Kolhapur.

Study Period

January 2022 to December 2024.

Study Setting

The study was based on medico-legal autopsies conducted at the mortuary of Government Medical College, Kolhapur, which receives all custodial death cases from across the district for postmortem examination.

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Study Population

All confirmed cases of custodial deaths (judicial and police custody) brought for autopsy examination during the study period were included. A total of **18 cases** met the inclusion criteria.

Inclusion Criteria

- All deaths occurring in police lock-ups, prisons, or while in judicial/police custody.
- Cases for which complete postmortem records, police inquest reports, and medical history (if available) were accessible.

Exclusion Criteria

- Decomposed bodies where cause of death could not be established.
- Deaths during hospital stay after release from custody.
- Cases where postmortem was conducted elsewhere.

Data Collection

Information was collected from:

- Autopsy reports (external and internal examination)
- Histopathological and toxicological findings (where available)
- Police case records and inquest reports
- Medical treatment records (if any during custody)

Parameters Analyzed

- Age and sex distribution
- Duration of custody before death
- Type of custody (police/judicial)
- Cause of death (natural vs. unnatural)
- Method of death (hanging, poisoning, blunt trauma, etc.)
- Presence of pre-existing medical illness
- Time interval between custody and death

Ethical Approval

The study was approved by the Institutional Ethics Committee, Government Medical College, Kolhapur. Data confidentiality was maintained.

Results

A total of 18 custodial death cases were analyzed.

1. Gender

Male	15	83.3%
Female	3	16.7%

ISSN: 0975-8585

2. Age Group

20–30 years	7	38.9%
31–40 years	4	22.2%
41–50 years	5	27.8%
>50 years	2	11.1%

3. Nature of Custody

Type of custody	Number	Percentage
Police Custody	7	38.9%
Judicial Custody (Jail)	11	61.1%

4. Time from Admission to Death

Time Interval	Number	Percentage (%)
Within 24 hours	4	22.2%
1–3 days	2	11.1%
4–7 days	3	16.7%
>7 days	9	50.0%

5. Cause of Death

Cause	Number	Percentage (%)
Natural	10	55.6%
- Myocardial infarction	4	22.2%
- Pulmonary tuberculosis	3	16.7%
- Pneumonia	2	11.1%
- Cirrhosis of liver	1	5.6%
Unnatural	8	44.4%
- Hanging (suicidal)	4	22.2%
- Blunt force injury	2	11.1%
- Suspected poisoning	2	11.1%

DISCUSSION

Custodial deaths remain a pressing medico-legal and human rights concern in India. This study examined 18 cases from Kolhapur district over a three-year period, with findings consistent with national trends but also highlighting regional nuances.

Natural vs. Unnatural Deaths

In our study, natural causes accounted for 55.6% of custodial deaths, while 44.4% were unnatural**,** including suicide by hanging, blunt force trauma, and suspected poisoning. This proportion of unnatural deaths is slightly higher than typically reported in Indian literature.

Kulshrestha et al [15] in Delhi observed 84.4% natural deaths among 45 custodial cases, with only 15.6% due to unnatural causes. Similarly, Shakya et al [16] from Varanasi found 83.9% natural deaths among 93 cases, and Bhullar et al [17] from Patiala reported 92.5% natural deaths. The relatively higher percentage of unnatural deaths in Kolhapur may reflect variations in custodial practices, mental health support, or facility infrastructure.

Common Causes of Natural Death

The most frequent natural causes in the Kolhapur series were myocardial infarction**,** pulmonary tuberculosis**,** pneumonia**,** and cirrhosis of the liver**.** These findings align with those of Ninal and Vincent [18] in Aurangabad, who reported tuberculosis (25%), septicaemia (21.4%), and cardiovascular causes as the major contributors. Shakya et al. also highlighted septicaemia and respiratory infections as leading causes [16].

These observations underscore the prevalence of undiagnosed or untreated chronic illnesses in the incarcerated population. Overcrowding, poor ventilation, delayed access to medical care, and malnutrition further aggravate these conditions.

Unnatural Deaths: Suicide and Trauma

Among unnatural deaths in Kolhapur, suicide by hanging was most common, particularly in police custody and within the first few days of detention. This aligns with several Indian studies, such as Ninal and Vincent, where 4 out of 28 cases (14.3%) involved suicidal hanging [1]. Bhullar et al. also reported deaths by hanging and positional asphyxia [17].

Blunt force trauma, suggestive of possible custodial violence, was identified in two Kolhapur cases. While rare, such findings demand scrutiny. The National Human Rights Commission (NHRC) and studies such as Sharma et al. (2015) have noted that while overt custodial violence is often underreported, physical findings during autopsy can reveal critical evidence [1].

Demographics and Vulnerability

The majority of decedents in Kolhapur were male (83.3%)**,** primarily in the 20–50 years age group. This pattern is consistent across Indian studies. Shakya et al. reported 96% male prevalence [16], while Kulshrestha et al. found 86.7% males [15]. The age group of 20–40 years is particularly vulnerable, likely due to stressors such as economic instability, substance abuse, and prior criminnal history.

Timing of Death in Custody

Half of the Kolhapur deaths occurred after more than 7 days in custody, while 22.2% occurred within the first 24 hours. Studies like that of Kulshrestha et al. reported that **95.6% of deaths** occurred in hospital, indicating progression of chronic conditions rather than sudden collapse [15]. Ninal et al. found that 42.9% were brought dead, while another 42.9% died after medical admission, again emphasizing the delayed recognition or treatment of illnesses [18].

Early suicides in custody, particularly within the first few days, are commonly attributed to acute psychological distress. This is supported by international literature as well, such as the study by Belli et al. in Italy, where 52% of custodial deaths were suicides, mainly occurring early in detention [19].

Preventive Strategies

All studies, including ours, highlight the urgent need for systemic reforms to reduce custodial mortality. Key recommendations include:

Mandatory health screening at entry into custody.
Regular health check-ups, especially for tuberculosis, cardiovascular diseases, and substance withdrawal.
Mental health support and suicide prevention programs, especially in police lock-ups.
Improved custodial conditions, including hygiene, ventilation, and access to timely medical care.
Strict adherence to NHRC and Supreme Court guidelines on arrest, detention, and medical examination.
Use of CCTV monitoring in lock-ups to deter misconduct and ensure accountability.

These strategies are echoed in nearly all Indian custodial death audits, including those by Kulshrestha [15], Bhullar [17], and Shakya [16], reinforcing their relevance and urgency.

CONCLUSION

The Kolhapur custodial death study mirrors national trends, especially in the dominance of natural causes like myocardial infarction and tuberculosis. However, the slightly higher share of unnatural deaths, particularly suicides, calls for enhanced mental health intervention and custodial supervision. Autopsy findings remain pivotal not only in identifying causes of death but also in detecting neglect, abuse, or systemic failures. Timely medical care, adherence to legal safeguards, and structural reforms are crucial in mitigating these preventable deaths.

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