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Case Report

Burnt to blazes: homicidal act of strangulation with post mortem burn: A case report

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ABSTRACT

In India, nearly 1 million people got the injury by burn in which 10 percent cases occurs accidentally¹. Post mortem burned body has always been a difficult and challenging task for forensic investigations. This case report consist of homicide involving post mortem burns with aim to abolish the identity and cover up the cause of death of the corpse. The aim of study is to establish the identity in relation to age, sex, time, cause and manner of death in burn corpses by postmortem examination. Body was found burning at the abandoned place absence of vitality signs are factors indicative of postmortem burning following homicide. Post Mortem examination with careful interpretation of all evidences includes clothes, bones and other exhibits found at the crime scene along with postmortem radiography and toxicological analysis can play a key role in every such cases.

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1. Case Report

A nearly completely burnt body was brought at the mortuary for the post-mortem examination which was found burning in the remote area nearby Agra. According to Panchnama report, female was abducted during the morning hours on 29/05/2022, she was suspected to be sexually assaulted under threat and killed, hidden for two days and later the dead body was burned at abandoned place to hide the evidences. Police found the body while burning; they extinguished the fire and sent the body to the mortuary for postmortem examination on 31/05/2022. The body was identified by the clothes to be of a female aged 20 yrs by the close relatives of the deceased.

1.1. On examination

The body was severely burnt with all chest and abdominal organs burnt exposing ribs and the vertebral column bone

up to upper portion of pelvis. Face, upper limbs and trunk were completely charred with involvement of the deep fascia and muscles. Tongue was seen protruded and bitten in between the upper and lower jaw. Severe scarring and facial deformity due to burn was present. Lower extremities was less involved and showed decomposition signs of marbling with burn injury involving up to deep subcutaneous tissue and muscles. Postmortem burn injury showed destruction of body consistent to level 3 of CGS (Crow Glassman scale).¹ There was a 30×1 cm ligature mark extending at the level of thyroid cartilage visible only in the front of the neck. Ligature material, a piece of wire was also found around the neck.

On internal examination, neck subcutaneous and deep tissues were congested and burnt. Hyoid bone was fractured at right end cornu. All internal organs were missing. There was no evidence of soot found at the laryngeal, tracheal or bronchial tubes level nor any other sort of injury to the upper airway or digestive system. Cause of death was suspected to be asphyxia due to strangulation followed by postmortem

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burn.



Fig. 1: Burnt body of a female aged 20 yrs with tongue bitten between in between upper and lower jaw



Fig. 3: Ligature mark



Fig. 2: Exposed vertebral column



Fig. 4: Ligature material obtained round the neck

2. Discussion

Postmortem burning to destroy evidences is a major concern for the medical and legal authorities. In such cases, it is essential to determine antemortem versus postmortem



Fig. 5: Trachea is clean with no soot particles

burn. Unfortunately majority of these cases occur in the home are due to smoking, defective electrical wiring, defective kerosene, stove bursts, attempted suicides by self-immolation, homicidal burns of young women by husband or in-laws as Dowry deaths/bride burning.² Although the antemortem burn injuries are more common but nowadays postmortem burning incidences are increasing, with aim to cover or destroy evidences of criminal actions and to prevent victim identification. Forensic investigation of burned corpses is done to find out whether the victim was exposed to the fire before or after death, apart from burns it is also necessary to examine other injuries contributing to or causing death.^{3,4} Due to burning, it is impossible to identify the body by visual inspection and finger printing is also impossible due to destruction of fingerprint.⁵ In the last few decades, identification by dentitions is promoted for identification of victims in severely damaged corpses.^{6–9}

As in this case female was burnt after strangulation with electric wire to hide the identity and evidences of the victim. Discovering a burned body in an unfamiliar, outdoor or abandoned place, scene or autopsy findings attributable to a violent death, presence of accelerant use and negative vitality signs are factors indicative of postmortem burning following homicide.¹⁰ In such cases, the main task of forensic pathologists is to clarify the manner and accurate cause of death. However, findings of crime scene investigation and postmortem examination might not obviously explain the cause and manner of death. In this respect, a complete scene investigation, a careful and detailed autopsy, histopathological examination, toxicological analysis and exclusion of exposure to the fire or fire fumes before death are of high importance.

CT scan is beneficial for confirming the identification as the research done in France in which pictorial assay helped to establish complete and focused reports in cases of PMCT of burn victims.¹¹ Such technology is very much beneficial in such cases for identification of the corpse. Thus, this study aims to draw attention towards challenges and need of advancement in forensic technologies while performing autopsy examination in postmortem burned corpses following homicide.

3. Conclusion

This case study illustrates the difficulties faced by medico-legal investigators when burned bodies are recovered from fires and autopsy examination suggests of post-mortem burning of bodies. It highlights the need for a careful multi-disciplinary investigation of the scene, consideration of background circumstances including the medico-legal history of the deceased, chemical analysis and post-mortem radiography. Correlation of all of these sources of evidence ensures the most effective means by which the incident can be reconstructed, allowing a hypothesis of the dynamic and reliable conclusions to be drawn regarding the medicolegal issues raised by death. Thus, meticulous autopsy examination with careful interpretation of circumstantial evidence including clothing, bones and other exhibits found at the crime scene assisted with postmortem radiography and toxicological analysis can play a key role in every such cases.⁴

4. Source of Funding

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5. Conflict of Interest


None.

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