

Deaden talks through Bones about their Final Fate: A Case Report

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How to cite this article: Naveen Sharma, Kuldeep Kumar, Priti Singh et al. Deaden talks through Bones about their Final Fate: A Case Report. Indian Journal of Forensic Medicine and Toxicology 2022;16(3):267-269.

Abstract

Background: Skeletonization of body is a complex process. Solving a suspected crime is multidisciplinary approach, which requires experts from the various specialities. Various methods are employed to commit crimes throughout the world. Many cases of homicide remain unsolved due to misleading, lack of suspicion, incomplete or inadequate investigations.

Methods: In present case post mortem examination of a skeletonised body was conducted by the authors, identification and apparent cause of which after inquest was impossible for investigating agencies. Usually, it is difficult to pinpoint cause, manner and time since death with certainty in the such corpse when body devoid of soft tissue. In present case authors opined the cause, manner and time since death in a skeletonised and partially burnt body. Which will help the investigators to find out the perpetrator.

Conclusion: A post mortem examination of a corpse by the experts is mandatory for the identification, collection and preservation of trace evidences to correlate the victim, accused, scene of incidence and suspected weapon of offence.

Keywords: Skeletal remains; cause of death; identification and charring.

Introduction

Incidence of crimes are increasing throughout the world in a modern era.¹ A critical phase of the death investigation will be a preliminary reconstruction of events that preceded the onset of death.² In India, an unconfined buried body is reduced to a skeleton

within about a year.³ Decomposition rate shows geographical variations. In hot climates, bones on the ground surface may decay in 5 to 10 years.³ Only a careful and detailed analysis of human remains allows collection of all the data necessary to define the biological profile for identification and to establish the cause of death.³ When the object of forensic

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investigation is constituted by skeletal remains, obtaining information is more difficult because of the absence of soft tissues because many injuries that involves only soft tissues without involving bones. Human bones are resistant to environmental insult and made with organic and inorganic components. The cause of death from the bones could be made with certainty in the cases like burns, deep cuts, fracture of the bones, metallic poisons can be detected in bones even after burning.⁴ After about 25, ageing becomes much more difficult as all bone growth has ceased. Despite the fact that changes do still occur in the skeleton, none is of practical use. Additional data can be obtained by radiology of the trabecular pattern in the head of the humerus and femur, which re-models with age.⁵ If all soft tissues are absent, identity depends solely on osteological examination and measurements and the recognition of any pathological or anatomical abnormalities in bone.⁶

Case Report

Authors reporting a case of homicide, which was committed in 2019, where the body was burnt after committing the crime in order to obscure the corpus delicti. A corpse was brought to the authors for post mortem examination and expert opinion regarding the identification, cause, manner and time since death. The human body, almost skeletonized, was recovered from sidewalk of highway in suspicious circumstances.



Figure 1: The skeleton gives information about the circumstances of death and the body's position.

The police was unable to find out the clear apparent cause of death after their inquest and

thorough investigation. On examination, remnants of soft tissue which were adhered firmly and few fibres of remnants muscles were found black and burnt off at places over the bones without any sign of vital reaction.



Figure 2: Bones and body parts least protected by soft tissues.

Skull and face were devoid of skin and soft tissue and underlying bones were visible. Anterior wall of the trunk was missing along with organs of thoracic and abdomen cavity. Mandible, anterior ends of the ribs, right iliac crest and right tibia and fibula bone were burnt off at places and rest were showed gnawing effects. Intercostal muscles showed greenish discoloration as depicted in.



Figure 3: Evidence of charring especially at mandible bone.

On meticulous examination, a depressed comminuted fracture of size 15 x 12 cm was present over the right fronto-parieto-temporal region of skull with pieces of bones impinging the underlying dura matter and brain matter.



Figure 4: Depressed comminuted fracture of skull bones

On exploration, a linear fracture of length 8 cm present horizontally over the left parietal and left frontal bones of the skull situated 8 cm left to midline and 11.5 cm above to left external auditory canal as seen in Figure 5: Linear radiating fracture over right of skull bones.

On opening the skull vault, extradural haematoma without any cherry red or bright red discoloration was appreciable over bilateral temporal region. The hematoma was friable, loosely present over the dura mater suggestive of heat hematoma. The subdural haemorrhage and subarachnoid haemorrhage were present over cerebral hemisphere of the brain. On further dissection and exploration, right frontal and parieto-temporal lobes of the brain were found contused. Facial bones were deformed and found fractured. On exploration, nasal and left zygomatic bones were found fractured through and through at places. All the fractured ends of bones showed infiltration of blood in their bony trabeculae. After the post mortem examination, opinion was formulated after reconstructing the sequence of events and scene of recovery of corpse "it was the dead body of a young adult male individual. The cause of death was cranio-cerebro-facial injuries and their complications which are antemortem in nature, recent in duration, homicidal in manner, caused by hard blunt object and sufficient to cause death in ordinary course of nature. The burns which were found over the remnants of soft tissues adhered to the skeleton were post mortem in nature. The probable duration between death and post mortem examination was opined to be about 3 days.

Discussion

The challenge of a forensic evaluation of burned skeletal remains is not only a methodological one. The fire in fact erases much of the evidence, if not even the entirety of that, when burning is complete.⁷ Most murders remain unsolved due to many reasons like advanced decomposition, skeletonization, inadequate or partial investigation, medicolegal examination by unexperienced hands and unestablished offence, disturbances at the scene of crime and evidences surrounding the deaths. Homicide is one of the crimes by taking one's life. It is usual crime in anywhere but when murder unrevealed and to be continued will

become crime extraordinary. Many such types of bodies were examined by Ali RızaTümer et al. and they found postmortem burning of corpses to cover homicide.⁸

Conclusion

From the above case report and discussion, it is crystal clear that the role of forensic experts become more pivotal, responsible and prudent to solve the crime mystery in cases where the main investigating agencies failed to do so. In this contemporary era of technology, crime become more advanced in term of its methods, and it can only be prevented by the same ways, i.e., field investigations, proper history, meticulous and complete autopsy, reconstruction of scene as well as dead body and their simulation in respect to manner and infliction.

Acknowledgment of Funding Sources: NA

Disclosure and Conflicts of Interest: NA

Ethical clearance: This data is taken from the post mortem examination which was conducted by the authors so no ethical clearance is required in this case.

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