Indian Internet Journal of Forensic Medicine & Toxicology
Vol. 12, No. 2 April-June 2014, 39-43
DOI : 10.5958/0974-4487.2014.00872.4

Case Report

An Alleged Case of Dowry Death: Case Report

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ABSTRACT

Dowry death is a big evil prevailing in our society and the incidences of dowry death are not showing signs of decreasing to the level of compliance. Though the criminals have become tricky in committing and hiding the crime, homicidal post-mortem burning holds a good rank in that list. Post-mortem burns are commonly produced to create confusion regarding the cause and manner of death after an obvious crime like strangulation/throttling. Due to post-mortem artefacts, such as reddening and blackening of soot particles on the body, the autopsy surgeons can be misled in determining the ante-mortem or post-mortem nature of the burn and, thus, the real cause of death. Nevertheless, careful external and internal examination of the dead body and confirmatory chemical or/and histological examination can reveal the truth. In a similar case, a dead body of a married female was brought to us for autopsy examination with an alleged history of death due to electrical burns, as per the narration of the in-laws of the deceased and the inquest report of the investigating officer. On examination, 100% superficial-to-deep burns were present on the body, but no characteristic features of electrical burn were seen. Those burns were showing post-mortem characteristics, with the controversial feature of reddening on the posterior parts of the body and the typical internal findings of throttling/strangulation in the neck region, though the external findings could not be seen due to extensive and deep burns over the face and anterior parts of the body. Difference between the electrical and thermal burns, artefacts due to reddening and blackening in the post-mortem burns, throttling/strangulation with homicidal post-mortem burn pattern and their medico-legal significance are discussed in detail in this paper.

Keywords: Dowry death, Ante-mortem burn, Post-mortem burn, Artefacts, Homicide, Strangulation, Asphyxia, Carboxy-haemoglobin

INTRODUCTION

In the present Indian scenario, dowry death is the buzz word because inspite of enormous efforts made in various forms, incidence of dowry death is not on the decline; rather, the frequency of dowry death-related news does make us realise about the alarming situation. Conversely, at present, the phenomenon of torturing has changed to a certain level, wherein for the fulfilment of demands of dowry, either the newly married women is subjected to mental or physical cruelty to such an extent that they commit suicide or they are killed in such a way that the death would look like an accident or a natural reason.[1] The problem is fiercer in the rural areas, where exist a high incidence of violence and crime against females due to their low education and awareness level, more social and economical dependency on their husbands and relatives and much difficult access to law.

The most common evil amongst the various ways used to kill newly married women is 'bride burning'. Now-a-days, in the light of our strong legal system, criminals have become more thoughtful and are trying to commit crime in a way where they can label the death of the women as an accident. At first, they are killed by means of throttling or poisoning and then put on fire to hide the heinous crime under the umbrella of accidental burning.

To the extreme surprise, many times, investigating agencies and autopsy surgeons are misled by the relatives/ in-laws of the deceased by confusing the post-mortem thermal burn with the electric current burn injury. In high-voltage electric burns, such as those sustained from high-

tension grid transmission cables, sparking may occur over large areas. It can cause numerous individual and confluent areas of third-degree burns or red/brown punched-out spark lesions similar to crocodile skin. These exogenous flash burns can ignite the person's clothes, causing flame burns along with singeing of hair. However, Joule burn at the site of entry of the electric current is diagnostic. Joule burns are the endogenous burns, also known as electric burns, and are found at the point of entry of electric current.[2]

It is to remember that whatever be the extent of exogenous flash burn produced by the high-voltage electric current, there is no red line surrounding the burns or reddening of the base at the point of entry or exit.

Post-mortem burns include a variety of artefacts[4] that are introduced into the body after the death of the victims to dispose-off the body after committing the crime or to create confusion regarding the cause of death.

CASE HISTORY AND POST-MORTEM EXAMINATION

A dead body of a 23-year-old Hindu female, married 2 years back and having a one-and-a-half-month-old male issue, was brought to the mortuary of the SRN Hospital, Allahabad, Uttar Pradesh, for autopsy. During inquest, the investigating officer reported the probable cause as death due to accidental electric burn injury to the deceased. However, the family members of the deceased female alleged her husband and in-laws of torturing the bride for unending demands of dowry and when her poor family could not fulfil their demands, they killed the bride! A case was registered against her husband and in-laws under Section 498A/304B IPC 3/4 D.P. Act.

During autopsy, we found that the body of the deceased female was in pugilistic attitude and was 100% burnt, including both the soles and the palms. However, the burns were deeper on the anterior parts of the body, especially in the head-neck and the breast, where subcutaneous fat and muscles were involved (Figure 1). Relatively, the burns were superficial, limited to the epidermis and the upper part of the dermis, on the posterior parts of the body (Figure 2). There was no sign of ante-mortem burns, except redness on the back, which was dusky-red in

Figure 1

Figure 2

colour due to the setting-in of decomposition in the dead body. Decomposition was evident by the presence of a disagreeable foul smell, accumulation of enormous gases in the abdominal cavity, loose and easily pluckable hair, swollen face, peeled-off skin with pale base and maggots present over the body. Smell of kerosene oil and blackening of the skin was also noticed, suggesting flame

burns. The eyes were congested, the tongue was protruded and caught between the teeth and the protruded part was burnt (Figure 3). Due to deep burns and charring on the body as well as the setting-in of decomposition, no signs of struggle in the form of abrasions or contusions could be seen, even after cleaning the blackish soot from the body. An irregular- or triangular-shaped tear laceration of a size of approximately 6×4 cm^2 subcutaneous tissue, deep with pale base, clear margins and no sign of inflammation, was present over the right anti-cubital fossa, suggesting that it was post-mortem in nature. No endogenous Joule burns were present in any extremity or elsewhere (Figures 4). On internal examination,

Figure 3

Figure 4

contusions were seen in deeper tissues and muscles of the front and left lateral parts of the neck. After doing a careful dissection and keeping post-mortem artefacts in mind, fracture of the greater cornua of the left side of the hyoid bone with ecchymosis of the surrounding muscles was noticed. The larynx and trachea were congested, but no soot particles were present in the trachea, bronchi or on the cut sections of both the lungs. The heart was full of blood on the right side and empty on the left side, and no petechial haemorrhages were seen. The stomach was empty and the decomposition had started. The small and large intestines were dilated with gases and no faeces and the decomposition had started. The uterus was found to be non-gravid. The brain and the meninges were congested, but no sign of cerebral oedema was noticed. The blood was taken in a sterile syringe from the right side of the heart and two drops of it were mixed in 15 ml of distilled water, which did not turn pink. Next, the Hoppe-Seyler's test was done with this sample of blood using 10% NaOH and the test was negative for carboxy-haemoglobin (COHb). As both the above tests[6] confirmed the absence of COHb in the blood of the deceased, it was sufficient to conclude that the burns present over the body were post-mortem in nature. Finally, the exact cause of death was concluded as asphyxia with cerebral congestion following strangulation, probably throttling.

The crime-scene visit was not possible and the conclusions were made from the statements of the investigating officer, relatives of the deceased and the autopsy findings.

DISCUSSION

Though the exogenous electrical flash burns can simulate thermal burns, nevertheless, 100% superficial-to-deep burns cannot be produced through electrocution. Also, Joule burn is characteristically specific and diagnostic of electrocution, which was not present in this case. The dusky red colour on the posterior parts of the body was a post-mortem artefact. Artefacts produced by post-mortem burns in the form of reddening and blackening are likely to lead to misinterpretation of the autopsy findings and further the manner of death, especially when these burns are caused during the peri-mortem period of death. Artefacts that are produced or introduced at the time of

death are called as 'agonal artefacts'.[3] Reddening over the burnt area has always been a matter of controversy in deciding the ante-mortem or post-mortem nature of burns. While most of the authors[4-7] explain that the reddening over the burnt areas is an indicator of ante-mortem burns, some are of the belief that the reddening over the burnt areas can be noticed even in the post-mortem burns. Here, it is important to note that the reddening in case of ante-mortem burns is usually dark red or pink in colour, whereas in case of post-mortem burns, it is dusky red or saffron in colour; however, the appreciation of this difference is a matter of experience and expertise. In a nutshell, use of reddening is an unsafe index to suggest infliction of burns before the death because the exposed skin surface may be reddened in both ante-mortem and post-mortem burns.[8] As we know, the raised levels of COHb in the blood of the deceased is the best indicator of ante-mortem burns;[6] thus, absence of COHb confirms that the burn was post-mortem in nature. The pattern of distribution of burns over the body parts, being deeper over the anterior parts in comparison to the posterior parts; 100% extent of burns; smell of kerosene; absence of line of redness; absence of soot particles in air passages and lungs; and absence of COHb in the blood sample of the deceased were sufficient to suggest that the victim was dead or not at the time of burning.

Though the deep burns, charring and decomposition could obscure the superficial abrasions and bruises over the face and neck, still, contusions in the deeper tissues and muscles of the neck and the fracture of the hyoid bone were all sufficient to find the truth that the deceased was strangulated first and, while she was unconscious or dead and lying on the ground with the back in contact with the ground, she was set on fire.

The facts in favour of homicide in this case were that the incident happened at home in the late morning when some of the family members, especially the non-working males and females, would have been at home at that time. They could have tried to save the life of the deceased or, at least, lessen the duration and extent of the burn injury. Also, she was married 2 years back and had a male issue who was just one-and-a-half-month old, and the mother did know her importance, company and love that her baby needed at this stage of time. It is difficult to take it for granted that she could commit suicide, leaving behind her baby alone to suffer. Her husband and in-laws were persistently making demands for LPG gas cylinder, stove and air cooler, but the family members of the deceased were not able to fulfil their unending demands; this might have filled the husband and his family with fury and evil thoughts of killing the bride. Also, the cause of death told to the investigating officer and the family members of the deceased was electrical burn injury, which was impossible under the given circumstances.

Absence of characteristic features of electrocution; presence of specific signs and corroborative findings of asphyxia; history of dowry demands; and misleading history given by the husband and the in-laws of the deceased were enough to conclude that the cause of death was strangulation, which was of homicidal manner, and the burns found over the body were post-mortem in nature.

CONCLUSION

History given by the relatives of the deceased and the information furnished by the investigating officer in inquest papers are of paramount importance for autopsy surgeons; however, many times, it can confuse and mislead them too. So, autopsy surgeons should not be biased to the history from the relatives of the deceased and information from the inquest papers, and they should be keen and meticulous regarding studying the cause and manner of the death.

Blackening over the skin due to black soot particles and superficial burnt skin debris may lead to unidentification of vital injuries during autopsy; so, it is essential to clean the vital parts of the body for better visualisation of the injuries and find out various ante-mortem findings.

Reddening can be seen in both ante-mortem and post-mortem burns; so, detection of COHb in blood should be the basis to confirm the ante-mortem burns.

Joule burn is a diagnostic feature of electric burn; so, it should be searched for carefully, whatever be the circumstantial and history-based evidence in favour of electrocution.

This case was used as an opportunity to discuss about the post-mortem burn artefact of reddening and illustrating the cause and manner of death when misleading history and information were served with garnishing artefacts.

REFERENCES

1. Sinha US, Kapoor AK, Pandey SK. Medicolegal aspects of dowry death cases in Allahabad range. Int J Med Toxicol Legal Med 2002; 5: 35-40.
2. Biswas G. Review of Forensic Medicine and Toxicology. 2nd edn. New Delhi: CBS Publishers 2012; pp. 244-5.
3. Vij K. Textbook of Forensic Medicine and Toxicology. 3rd edn. New Delhi: Elsevier 2005; pp. 40-41.
4. Muthiharan K, Patnaik AK. Modi's Medical jurisprudence and Toxicology, Postmortem artifacts. New Delhi: Lexis Nexis Butterworths India 2005; pp. 463-69.
5. Sharma G, Singh H, Mittal S, Chawla R, Sandhu R. Dilemma for Autopsy surgeons. J Indian Acad Forensic Med 2007; 29: 68-71.
6. Reddy KSN. The Essentials of Forensic Medicine and Toxicology. 26th edn. Hyderabad: K. Saguna Devi 2007; pp. 122.
7. Spitz WU. Spitz and Fisher's Medicolegal Investigation of Death. 3rd edn. Illinois: Charles C. Thomas 1993; 41: 348.
8. Knight B. Forensic Pathology. 2nd edn. New York: Oxford University Press; New York 1996; pp. 310-11.