

Concealment of homicidal strangulation by various means: A case series



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ABSTRACT

Strangulation injuries indicate a wide range of traumatic events which involve the application of external mechanical force, either by ligature or manual force known as throttling, to the neck and surrounding structures. It is a form of mechanical asphyxial death that can lead to a rapid decrease in cerebral oxygenation and immediate death. It is mostly homicidal in manner; however, cases of accidental and suicidal strangulation were also reported. In many cases, the assailant tried to dispose of the body to conceal the crime by throwing the body in a water canal, by burning the body, by putting the body on a railway track, throwing the body in far-flung areas, by burial, etc. However, in some instances, when some family members and close relatives are involved in the crime, they try to criminate the body by claiming the death as natural. Here, the authors discussing three different cases of strangulation, two by ligature where in one case the accused strangle the deceased and putted the body in the fields and family members tried to criminate the body by claiming death as natural and in another assailant through the body in water canal and one by throttling where the victim was throttled and body was thrown in the fields.

Key words: Asphyxia, Strangulation, Homicide, Concealment of crime

INTRODUCTION

As defined in various literatures, homicide is the killing of one person by another. Over 5 lakh deaths annually all around the world are homicidal in manner.¹ Various ways, such as the use of blunt, sharp, firearm weapons, putting the person in fire, are adopted by the assailant to kill other persons. As finding the body and its identification is mandatory to prove the crime, not finding a murder victim poses challenges for homicide investigators in solving the crime, including determining where to search for the deceased's body. Existing literature focuses on locating offenders through criminal profiling; however, this is largely based on identification through forensic evidence found at the murder site or where the victim was located.² Strangulation is a form of asphyxia which is caused by constriction of neck without suspending the body either by ligature known as ligature strangulation or manually

known as manual strangulation or throttling. It is a form of mechanical asphyxial death; therefore, injuries over the neck due to constrictive force may result in decreased cerebral oxygen delivery either by compression of cervical blood vessels or tracheal occlusion, which may lead to death rapidly.³ Strangulation occupies <1% of all the medico-legal deaths and 5–10% of criminally violent deaths.⁴ Verma and Lal reported that strangulation constitutes 1.17% of cases out of 8385 forensic autopsy cases in East Delhi (India).⁵ Sharma et al., in a 10-year retrospective study on unnatural deaths in northern India (Chandigarh), reported that strangulation constitutes 0.6% of all unnatural.⁶

In many of the cases, the assailant tried to conceal the crime by various means. In some cases, the accused set the body on fire to destroy evidence related to the injury/ies inflicted on the victim and to eliminate the identity of the deceased. In many other cases, after the commission of a crime, the

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accused, through the body of the deceased in the water sources, puts the body on the railway track, buries the body, etc., due to the reasons mentioned above. However, in some crimes, when there is involvement of some family members or close relatives, the family members cremate the body without informing the police by stating death due to natural causes. The manner of death in strangulation is generally homicidal, but sometimes suicidal nature is also reported.^{7,8} A careful analysis of circumstantial evidence, the crime scene, and autopsy findings can help in the final opinion, despite the current lack of specific operational protocols.⁹

Here, the authors discussing three different cases of strangulations, two by ligature where in one case the accused strangle the deceased and putted the body in the fields and family members tried to criminate the body by claiming death as natural and in another assailant through the body in water canal and one by throttling where the victim was throttled and body was thrown in the fields.

CASE 1

A 35-year-old male resident of a village was referred to our institute from the civil hospital of the concerned district for postmortem examination. As per the police inquest report, police received telephonic information that a death had occurred in suspicious circumstances in the concerned village, and family members were going for the cremation of the body. Then the police moved to the spot and took the body into custody. Police recorded the statements of the two brothers of the deceased. The statement of the wife of the deceased was also recorded. All three stated that the death of the deceased was due to a heart attack while working in the fields. The body was sent to the civil hospital of the concerned district by the police for postmortem examination; however, the concerned doctors referred the body to our institute for forensic expert opinion regarding the cause of death. Information furnished by the police regarding the apparent cause of death was "Not Clear." As per police papers, contusion was present over the left side of the neck.

On examination, the body was naked. Both eyes and mouth were closed. A transversely placed reddish ligature mark was observed all around the neck, except for the left mastoid region, where it was faintly visible as shown in Figure 1. Multiple reddish crescentic abrasions of length varying from 0.8 to 0.3 cm were also present over the lateral aspect of the left side of the neck, as shown in Figure 2. On dissection of the neck, soft tissues underlying the ligature mark were found ecchymosed. On further dissection, underlying laryngo-tracheal structures were found deeply ecchymosed and fracture of greater cornue of the hyoid bone and thyroid cartilage over the right side was seen, as shown in Figure 3. Blood infiltration was seen at the described fractured sites.



Figure 1: Showing Ligature mark over the right side of neck



Figure 2: Showing crescentic abrasions over the left side of neck



Figure 3: Showing ecchymosis of laryngo-tracheal structure and fracture of thyroid cartilage

On meticulous examination of the body, a reddish linear abrasion of length 1.5 cm over the right cheek; a reddish contusion of size 3 × 2 cm over the left shoulder area; a reddish abrasion of size 1.5 × 0.2 cm over the left side of

anterior abdominal; a reddish abrasion of size 1×0.5 cm over the posterior aspect of lower 3rd of right arm; a reddish contusion of size 5×4 cm over the medial aspect of lower 3rd of left forearm as shown in Figure 4; a reddish contusion of size 3×2 cm over the middle 3rd of anterior aspect of right leg seen in Figure 5; a reddish contusion of size 5×3 cm over the anterior aspect of left leg in its middle 3rd were also observed on the body of deceased as shown in Figure 5. The cause of death in this case was opined as strangulation by ligature. All the injuries were antemortem in nature, recent in duration, and homicidal in manner.

CASE 2

An unknown female deceased aged about 30–35 years was referred from the general hospital to our department for autopsy. As per the police inquest report, the body was found in the fields. No injury to the neck was mentioned in the report. Information furnished by the police regarding the apparent cause of death was “Not Clear.” The body was wearing a white kamij and red salwar. The clothes were smudged with soil and decomposed tissues in places and were also torn in places. The body was in a stage of putrefaction and not identifiable as shown in Figure 6. Eyes were closed. The mouth was opened with the tongue protruding out. Gnawing effects were present over the left gluteal region and right shoulder region.

On meticulous examination, reddish contusions of size 3×2 cm and 6×4.4 cm were found over the right and left sides of the neck, respectively. On dissection, underlying soft tissue, including laryngo-tracheal structures, was found ecchymosed. On further exploration, the right cornu of the hyoid bone was found fractured, as shown in Figure 7. Manual strangulation/throttling was opined as the cause

of death in this case. No injury was appreciable over other parts of the body. No injury was found over the genital region, excluding the possibility of any forceful sexual



Figure 5: Showing contusion over right and left leg



Figure 6: Showing condition of body (putrefaction)



Figure 4: Showing contusion over left forearm



Figure 7: Showing fracture of right greater cornu of hyoid bone

assault. Described injuries were ante-mortem in nature and recent in duration. The probable time that elapsed between injuries and death was opined as immediate.

CASE 3

A body of 19.5 years old male was recovered from the river. The body was referred to our institute for medico-legal autopsy. The apparent cause of death, as per the police report, was due to drowning. Injury to the neck was not mentioned in the police inquest report. Family members of the deceased were suspicious regarding the death.

On postmortem examination, the body was found in a decomposed stage and not identifiable. The body was wearing a blue T-shirt, blue jeans that were torn over the front of both knees, and red underwear. All the clothes were wet and smudged with mud, water, weeds, and decomposed tissues. On further examination, a reddish brown ligature mark was found over the anterolateral aspect of the neck. On dissection, the underlying laryngo-tracheal structure, more so over the right side of the neck, was found ecchymosed. Muscles surrounding the left greater cornu of the hyoid bone were found deeply ecchymosed. No other injury was found on the body of the deceased. The thoracic and abdominal viscera are softened and putrefied. Strangulation by ligature was opined as the cause of death in this case.

DISCUSSION

Homicide is one of the most serious consequences of interpersonal violence in every part of the world. The incidence of homicide has been increasing at an alarming rate in India too.¹⁰ Medico-legally, three main types of asphyxia associated with neck compression hold significance: manual strangulation, ligature strangulation, and hanging.¹¹ Manual strangulation is frequently observed in domestic violence cases, sexually motivated homicides, and child killings perpetrated by adults. It is predominantly a male-on-female crime, owing to the significant strength differential typically required.¹² Most important finding is discoid bruises clustered around the neck, fingernail marks, and defensive scratches. The distribution of bruises can suggest the assailant's handedness, although this is not conclusive. In this case series, case no. 2 is manual strangulation. Bruises are present over both sides of the neck, along with a fracture of the hyoid bone on the right side. Similar results were also seen in a study done by Fineron *et al.*,¹³ when a ligating material is used, then it is known as ligature strangulation, and the type of ligature plays a significant role in forensic interpretation, as ligature marks often exhibit patterns corresponding to the material's texture, such as cords, ropes, or cloth. In this case series, cases 1 and 3 are ligature strangulation. No ligating material is present around the neck, nor did the police

bring the ligating material in the cases. The hyoid bone is found fractured in case no. 1 but not in case no. 3. As per Ubelaker, fracture of the hyoid is most common in manual strangulations, in which about 34% of all victims show a fractured hyoid, 34% fractured thyroid, and 1% fractured cricoid. In ligature strangulations, the frequency of hyoid fracture falls to about 11% compared to 32% thyroid and 9% cricoid. Hangings produce only 8% fractured hyoids, 15% fractured thyroids, and 0.00% fractured cricoids.¹⁴

Concealment or disposal of the victim's body is not unusual, although it is an infrequently encountered forensic entity. If the body is disposed of, it is difficult for the police and law officials to prove the offense, as the element of corpus delicti is not established.¹⁵ Furthermore, the concealment may hinder analyzing not only the trace evidence and the identification of the victim but also the determination of the postmortem interval, nature of injuries, and dynamics of the death.¹⁶ Bodies are usually dumped in secluded places such as jungles, canals, or the outskirts of cities, or may be dismembered and kept in small boxes, briefcases, and disposed of or buried in the ground. Cases have been reported where the corpse will be dissolved in containers filled with acid, and the remains will be dumped or transferred in small, convenient transport mediums. Some may be submerged in large water bodies with weight being attached to the body, which are often disfigured due to sea living organisms' attacks; hence, identification is quite a challenge, as well as studying the injury patterns and thus deciding the manner of death. Some will try to dispose of the body by dry heat (e.g., fire), electrocution, mutilation, etc.¹⁷

A careful and systematic approach is required toward every autopsy, unbiased of police history or preconceived assumptions and (all-too-often) appealing circumstances. Mutilation of the corpse does not imply mutilation of the cause and manner of death. Differentiation between different modes of strangulation should be made, whenever possible, based on a careful crime scene interpretation and autopsy findings. Deep laryngeal muscle hemorrhages suggest a violent compression of the neck when taken in an appropriate context.¹⁸ Strangulation, being mostly homicidal, in most cases, there may be the presence of marks of resistance on the body. The most important internal findings lie in the neck. The subcutaneous tissue underneath the ligature mark is contused, often torn at a few places, with gross extravasations. In case of strangulation by ligature, fracture of the superior horn of thyroid cartilage or subluxation between the two sides may be expected.¹⁹ In the present case series, two cases are of ligature strangulation, whereas one case is of manual strangulation. Police history in all the cases is not conclusive. Meticulous autopsy reveals the cause of death. Bodies were in a decomposed state in two cases, but the

neck structures are relatively preserved. This will help the authors to conclude the cause of death. As per our study, marks of struggle were seen in case no. 1 but not in the other two cases, as the body was decomposed, and it is very difficult to explore minor injuries in such cases.

CONCLUSION

The cause and manner of death and identification of the deceased in the case of an unidentified body are essential to establish the crime in every medico-legal autopsy. Further, in the case of a female deceased found in suspicious circumstances, it is also essential to rule out the possibility of any sexual offence, just like we had done in this case, such as looking for any injury near the private part. It is a challenging task to determine the cause and manner of death in cases of a putrefied body and in cases where there is no suspicion of foul play by the family members and police officials. However, a forensic pathologist from meticulous autopsy and considering information related to crime scene and other related circumstances and from careful extraction of the information from the family members or other related person of the deceased regarding the death may decide the cause of death and manner of infliction of injuries and met the objectives of a medico-legal autopsy and helps the investing agency and Hon'ble Courts in deciding the case and delivery of justice to victims.

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