



FATAL CUT THROAT INJURY IN A DECOMPOSED BODY: A FORENSIC CASE REPORT

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ABSTRACT

Cut throat injuries are severe and often fatal, most frequently associated with homicide or suicide. Differentiating the manner of death becomes especially challenging when decomposition complicates interpretation. This is a case of medico-legal autopsy of a 35 years old decomposed male body recovered in Government medical college, Mahbubnagar Telangana. The deceased was identified as X, missing for 5–6 days prior to discovery. Autopsy revealed a deep transverse cut throat injury involving trachea, thyroid cartilage, and major cervical vessels, along with evidence of a ligature mark. Internal examination showed fractures of hyoid bone and thyroid cartilage. Toxicological examination of viscera confirmed the presence of alcohol. The cause of death was certified as cut throat injury. This case highlights the importance of meticulous autopsy, toxicological correlation, and cautious interpretation of decomposed bodies in forensic practice.

KEYWORDS : Cut Throat Injury, Homicide, Ligature Mark, Forensic Medicine, Decomposition.

INTRODUCTION

Cut throat injuries represent some of the most gruesome lesions encountered in forensic medicine practice. These injuries are associated with rapid fatality due to massive haemorrhage, air embolism and aspiration of blood. The manner of death may be suicidal, homicidal, or accidental. In India, homicidal cut throat injuries are far more common, often resulting from interpersonal violence or domestic disputes, whereas suicidal cases are usually linked to psychiatric illness or socio-economic stressor. The distinction between homicidal and suicidal cut throat injuries is critical in forensic practice. Typically, suicidal wounds are oblique, located high on the neck, and may show hesitation cuts. In contrast, homicidal wounds are transverse or horizontal, deep, and usually involve the severance of vital neck structures. The presence of associated defense injuries or additional assault marks strengthen the suspicion of homicide. Decomposition adds complexity to medico-legal examination by obscuring external features, altering wound margins, and making interpretation of injury characteristics difficult. Despite these challenges, careful dissection of neck structures, preservation of viscera, Toxicological analysis remain essential in reaching a definitive conclusion. Identification of the person is also very important in this case as facial recognition is not possible due to decomposition. This is a case of fatal cut throat injury in a decomposed male body with co-existing suspicious ligature mark, where meticulous autopsy and toxicological analysis were crucial to determine the cause of death.

Case Report

Case Background

A male, aged approximately 35 years, identified as X was reported missing and later found dead. The body was recovered by local police and subjected to medico-legal autopsy at Government General Hospital, Mahbubnagar on 10 November 2023. In inquest report the history was ascertained that the deceased's wife here in referred to as Person W, was involved in an extramarital affair with Person Y. Upon discovery of this relationship, X (Deceased person) allegedly subjected his wife W to ill-treatment. Aggrieved by this conduct, the person W, in collusion with Person Y, entered into a criminal conspiracy to eliminate him. In furtherance of the said conspiracy, Person Y, along with Person Z, enticed Person X to a secluded forested area under the pretext of providing him alcohol, and subsequently assaulted him with

the intention to cause his death. Upon receiving INQUEST from investigation officer, proceeded for autopsy.

1) External Appearances

Body dressed in blue shirt and black pant soiled in mud and dirt.

Decomposition changes: Face is partly skeletonised and remaining part of body is in advance stage of decomposition. Facial features disfigured. Eyes popped out, Tongue protruding out and clenched between the teeth. Abdomen and scrotum distention present. Various stages of maggots of sizes 0.5- 1cm crawling all over the body. Skin peeling and Skin blebs present over the body. Nails bluish discolored. Post mortem lividity and Rigor mortis passed off.

2) Injuries

A) Ante mortem ligature mark of size measuring 28 cm in length, with a varying width of 0.5–1 cm extending over neck at the level of the thyroid cartilage, placed transversely, present in front and both sides of the neck. The base of the ligature mark is moist, decomposed, parchment with blackening of surrounding tissue noted. Fracture of Hyoid bone and Thyroid cartilage with contusions noted.

B) Incised wound of size 15 cm X 9 cm X Cervical vertebrae deep at the level of C4 - C5. Upper margin is located at 2 cm below thyroid cartilage and lower margin is 1 cm above sternal notch, transversely placed in the front of the neck. The wound is transecting skin, subcutaneous tissue, muscles involving sternocleidomastoid, platysma, and strap muscles with severance of carotid sheath and common carotid artery, nerves, veins. Margins are clean cut, well-defined, regular and undermined, with tailing on the right side. The injury extends laterally with upper margin measuring 6 cm below the right mastoid. Left upper margin is present 5cm below left mastoid, associated with blackening of surrounding tissue noted.



Figure 1:

Injury no 1: Ligature mark seen in front of neck.

Injury no 2: Cut throat injury seen in front of neck, which is single in number and deep in nature upto trachea.



Figure 2: Trachea visible. With various stages of maggots all over the body



Figure 3:

Cut throat injury / Incised wound of size 15 cm X 9 cm X Cervical vertebrae deep extending in between 2 cm below thyroid cartilage and 1 cm above sternal notch transversely placed in the front of the neck. The wound is transecting through skin, subcutaneous tissue, and muscles involving sternocleidomastoid, platysma, and strap muscles, with severance of carotid sheath and common carotid artery, veins and nerves.

Table 10: Differences between suicidal, homicidal and accidental stab wounds

S.No	Feature	Suicidal stab wounds	Homicidal stab wounds	Accidental stab wounds
1.	Cause	Self-inflicted	Inflicted by others	(1) Falling against sharp objects (glass, nails) (2) Gored by horns of an animal (bull, buffalo)
2.	Position of wound	Accessible parts	Generally vital parts, but can be anywhere	On front or back
3.	Grouping	Well arranged in parallel lines (hesitation cuts)	No definite grouping	May be a single large wound
4.	Number of wounds	Generally one large wound accompanied by several superficial hesitation cuts	Multiple	Generally one
5.	Direction	In right handed persons, from left to right	Any direction	Generally straight inside
6.	Severity	Hesitation cuts are superficial; final fatal cut is deep. More than one deep stabs are generally against suicide	Severe, extensive	Severe
7.	Defense wounds	Absent	Present if attacked during fully conscious stage	May be there, if tried to fend off attack by animals

Figure 4 : Difference between suicidal vs homicidal cut throat injury

Internal Examination

Head : Brain liquefied.

Neck : Vide injury column

Thorax: Lungs and Heart are pale and softened.

Abdomen: Stomach filled with semi digested food particles, mucosa congested with non specific smell. intestines distended with gases. Liver, spleen, and kidneys pale and softened.

Viscera Preserved

Stomach and intestines with contents, liver, kidney, blood (100 ml) and sample preservative (NaCl)

Forensic Science Laboratory (FSL) Findings:

Chemical analysis report :

Result: Alcohol detected.

DNA Matched with Blood Relative



Figure 5 : DNA report for identification of victim.

Opinion

Approximate time since death: 5–6 days prior to autopsy.

Cause of death: Cut throat injury associated with ligature strangulation (Under the influence of alcohol)

DISCUSSION

Cut throat injuries have been widely studied in forensic literature. The majority are homicidal in nature in India, whereas in Western countries, suicidal cut throat injuries are more frequently documented. In this case, the transverse, deep wound severing the trachea, thyroid cartilage, and major cervical vessels strongly indicated a homicidal pattern. The absence of hesitation cuts or superficial incisions further supported this interpretation.

The ligature mark present in this case added complexity, raising suspicion of possible strangulation, staged hanging, or dual assault. However, careful internal dissection showed fractures of hyoid and thyroid cartilage, which are commonly associated with neck compression but can also occur in severe cut throat injuries. The final conclusion was reached by correlating autopsy findings with the toxicological report.

Toxicology plays a pivotal role in medico-legal cases, particularly when decomposition may mask or mimic injuries. In this case, FSL analysis ruled out corrosive, metallic, insecticidal, and narcotic poisons but presence of alcohol detected.

Medico-legal Significance

1. Differentiating homicidal from suicidal cut throat injuries is essential for criminal investigation.
2. Decomposition complicates assessment, but vital tissue reactions, hemorrhagic infiltration, and fracture patterns help establish antemortem nature of injuries.
3. Proper documentation and preservation of viscera ensure reliable toxicological results.
4. Such cases highlight the importance of multidisciplinary coordination between forensic specialists, toxicologists, and investigating officers.

This case contributes to existing literature by demonstrating the challenges of interpreting cut throat injuries in decomposed bodies and emphasizes the need for systematic medico-legal protocols.

CONCLUSION

Cut throat injuries are among the most fatal neck injuries encountered in forensic medicine. This case illustrates the diagnostic challenges faced when advanced decomposition co-exists with suspicious findings such as ligature marks. Despite these difficulties, systematic autopsy and comprehensive toxicological analysis enabled the establishment of the cause of death as a cut throat injury.

The Case Reinforces the Importance of:

- Careful neck dissection in suspected homicidal deaths.
- Differentiation of homicidal versus suicidal wounds based on wound morphology.
- Preservation of viscera and correlation with laboratory findings.
- Maintaining meticulous medico-legal documentation to support judicial proceedings.

Ultimately, this case highlights how thorough forensic evaluation, even in adverse conditions like decomposition, ensures that justice is served by providing reliable medico-legal evidence.

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Authors Contribution

All authors have made significant contributions to writing the manuscript, reviewing, editing and submission.

Conflicts of Interest: None declared.

Ethical Clearance

In Indian legal system, consent of the relatives is not necessary for autopsy performed in medicolegal cases. As these are medicolegal autopsies, the particulars of the deceased are not revealed and kept confidential with the authors. So ethical clearance is not required in this present case report/series.

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