



ROLE OF POST-MORTEM IN DECIDING CAUSE OF DEATH

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ABSTRACT

Ligature marks are those marks made by an item of cord, rope, silk or some such material that has been used for the purposes of strangulation. The appearance at autopsy naturally depends on the nature and texture of the ligature. When there is a pronounced pattern, such as a weave of a cord, or the plaiting of a thong, the same pattern may be imprinted in to the skin¹. Articles used as ligature may include rope, dhoti, saree, chunni, turban, bed sheet, cord of pajamas or dressing gowns, belts, brace, neck tie and towel etc². Sometimes it is very difficult to find out whether ligature mark is antemortem or post mortem.

Key words: Ligature mark, pattern, strangulation

INTRODUCTION

Suicide by hanging is one of the most common ways to end life. To kill any conscious person by hanging is very difficult that in an adult male. Ligature or manual strangulation is the one of the common method to kill any one. Here we are presenting a very interesting case report in which how proper examination changed the direction of investigation and administration of justice.

CASE REPORT

- A body of 35 years old male, was found floating naked in a lake, 10 km away from City.
- Police traced the body as of an Engineer, who lost his job 3 months ago.
- A missing complaint was lodged by relatives two days ago.

P.M EXAMINATION

- Inquest – appears suicide by drowning please give the exact cause of death.
- Body of adult male, moderately built and nourished, E/o tongue bite.
- Postmortem lividity on front of the body, Fixed.
- Rigor mortis – Generalized and well-marked
- S/o immersion seen -

EXTERNAL EXAMINATION

1. Ligature Mark- A reddish coloured ligature mark around neck, at the level of thyroid cartilage, horizontally placed, more prominent on left antero-lateral aspect of neck & running upwards towards right mastoid, deficient posteriorly, measuring 32cm x 1.2cm.
2. Abrasions- brownish coloured abrasions on both wrists and on left knee.

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There was no mention of these injuries in the inquest report given by police officer.



Photograph no 1- Ligature mark around Neck

INTERNAL EXAMINATION

No E/o injury to strap muscles of neck

No E/o fracture of thyroid cartilage, hyoid bone or cricoid cartilage.

No froth in respiratory tract.

Stomach contained 100 ml of pale reddish fluid without any peculiar smell.

Lungs- Lungs enlarged, voluminous. Reddish frothy fluid oozes from cut surfaces of lungs.

When We Enquired Police

On enquiry police submitted following photographs & narrated the story that the body was found floating approx. 40 feet away from bank of the lake, was pulled out from water with help of a local fisherman, by throwing a loop of cotton rope (1.5cm diameter), encircling around neck.



Photograph no 2 – showing how the body was pulled out of water

MATERIAL PRESERVED

Routine viscera preserved for chemical analysis.—report was Negative.

Neck tissue from ligature mark and from control site for histopathological examination---- did not show any inflammatory reaction and hemorrhage.

DISCUSSION

Ligature mark similar to the one observed in persons hanged alive can be produced if suspended within 2 hours or even longer period(?) after death. Besides, a similar mark may also be produced by dragging a body along the ground with cord passed around the neck soon after the death.³

Postmortem strangulation may be caused to bring a false charge of murder against one's enemy.

A dead body while being removed from water e.g. A well, cord may be tied around neck & limbs. And the marks caused by them may wrongly lead to diagnosis of strangulation death.⁴

Experiments of Casper who concluded that a mark of hanging where hanging took place during life can also be produced if the body is suspended within a couple of hours or even longer after death⁵.

Wounds may be found on the external examination of drowned persons such wounds may be produced before, at the time of, or after immersion. Before immersion they may be of accidental , suicidal or homicidal in nature. At the time of immersion they may be produced by the deceased striking hard objects such as rocks or stones⁶.

In Dr. Modi's experience, he had found that 21% out of dead bodies removed from water were such as were thrown in to well, pond, lake, canal or river after the deceased had been destroyed by wounds inflicted on the head or neck or by strangulation, suffocation and poisoning⁷.

When a dead body is found in water it is not safe to assume that the death was due to drowning, because the bodies of victims of murder and poisoning may be thrown into water to avoid detection of crime⁸.

HISTOPATHOLOGY REPORT

The absence of tissue reaction, however would not exclude the antemortem origin for wound⁶.

This investigation would only be of value in case of hanging if the period of time that elapsed before death was sufficiently long for the tissue reaction to develop.

CONCLUSION

The ligature mark which was thought of being antemortem in nature, after detailed postmortem examination and circumstantial evidence was found to be postmortem artefact and hence the cause of death was given as “Asphyxia due to drowning”.

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