Case Report

A Drop of Saliva De-Codes the Mystery of Hanging Body

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Abstract

A Forensic Expert sometimes asked to provide his opinion from the documents alone, particularly when the allegations were raised on the investigations, and the postmortem. Spot examinations were carried out by other doctor(s) and Forensic Scientists respectively. In the instant case there were allegations made on the fellow sports student, coach, and the investigating agencies all in connivance to pronounce the death as of suicidal hanging instead of murder. It is well known that the criminals first kill the person and then hang him to simulate it as hanging. Whenever, alcohol is detected in the blood than it creates a lot of doubts, which result into allegations from the relatives. Beside the examination of clothes, the injuries like ligature mark, their shape, size and location etc., thorough reviewing of documents & photographs plays a pivotal role in reconstructing the scene of crime. This has an importance in forming a conclusive opinion as to the cause and manner of death.

In this paper, opinion regarding cause and manner of death to be of ante-mortem hanging was ascertained on reviewing the post-mortem report, photographs showing dribbling of saliva and Forensic Science Laboratory reports.

Key Words: Ligature mark, Hanging, dribbling of saliva

Introduction:

Hanging is a form of death, produced by suspending the body with a ligature around the neck, the constricting force being the weight of the body or a part of the body weight. [1, 3-5] It is not uncommon to kill a victim and then to suspend the body to avert the suspicion. [1] Virtually all hangings are suicidal, accidental hanging is uncommon and homicidal hanging is rare. [2] While giving final opinion regarding the ante mortem hanging, it is necessary to give special attention to the details of the scene and their accurate interpretation, the place, the posture of the body, and the manner in which its clothes should also be noticed. [3]

Whether or not the pathologist has been to the scene of a death, he should take notice of the clothing and other property of the body upon which autopsy is to be carried out. [4] Here, we would like to share with readers, how a drop of saliva solves the mystery of a hanging body.

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Brief History:

The deceased was a coming up famous sportsman living in the hostel along with the coach and other members of the team. One day there was a party; he went to attend it and consumed alcohol. Next day he was found hanging in his hostel room. The news of his death was the head lines of many local as well as national newspapers. His relatives alleged that the coach and other members of the team who were jealous of his success have first killed him and subsequently hanged him to the ceiling fan, in his own room.

The post-mortem examination of the body was carried out at periphery hospital by a board. It gave the cause of death as asphyxia due to hanging and ligature mark was ante-mortem in nature. Considering the allegations of the relatives and media reports the investigation was handed over to State Crime Branch. Then case was referred to Deptt. of Forensic Medicine for analysis and to ascertain whether this was an ante-mortem hanging or not.

Observations:

The following documents were supplied for analysis and reporting:

A. First Information Report (FIR):

Initially on the information of death of their son the relatives thought it as a hanging but later on after knowing all the details of investigations and consequences many allegation like that their son was done to death
and hanged, was made by them, not only against his fellow students, who were his competitors, with connivance of coach but also had put suspicion on the role of involvement of police. 

B. Post-mortem report: 
Dead body was wearing one blue colour jean pant, black baniyan, and blue rubber band on right forearm, shoes with socks. All the cloths were in situ and not disordered. Rigor mortis was present on the body. Eyes were semi open. Mouth was semi open with tongue protruding out. Stools were passed. The external injuries were in the form of a ligature mark of size ½ inches in width up to the uppermost part of the neck. Two divisions of the ligature mark on the right side and on posterior aspect of neck no ligature mark seen. 

On internal examination extravasations of blood and ecchymosis in subcutaneous tissues with bruises were found present. On further dissection hyoid bone was found intact. Stomach was healthy which was containing semi-digested food material. All the organs were healthy and congested. Board of autopsy surgeons opined that “the death was due to asphyxia due to hanging. Ligature mark was ante-mortem in nature. The time between death and post-mortem examination was within 24 hours.”

C. Report of the State Forensic Science Laboratory: 
Chemical analysis report reveals that ethyl alcohol was estimated: 80.5 mg%.

D. Report of scene of crime examination: 
The forensic scientist stated that on the type of knots i.e. single knot around the fan and neck and position of body in the photograph, possibilities of foul play could not be ruled out.

E. Photographs of the scene of crime: 
Picture 1: The ligature material i.e. a skipping rope, clothing is in order, the blood is seen trickling from right nostril, the drop of saliva is seen slightly right to the mid line over lower lip i.e. the dependent part of the mouth

Picture 2: One tilted bench or stool like structure was seen behind the body; the walls of the room all-around are having posters of boxer, females and few cloths were hanging

Picture 3: Single slippery knot is visible along with the handle of rope. Loss of continuity of ligature mark is also visible on the posterior aspect of neck. Head is drooping downwards

Picture 4: lying on the bed in kneeling (semi sitting) position. Left leg is bent at the level of knee while the Right leg is partially bent. Both hands are resting over the bed

Analysis and Discussion: 
Following points were taken into consideration for critical analysis to ascertain whether it is a suicidal hanging or otherwise. 

a) The body was found in partial hanging from the ceiling fan with the head drooping downwards acting as a constricting force;

b) The clothes were in order and well maintained and in situ buttons, shoes etc., without any mark of struggle both on the body as well as surroundings in the room;

c) The presence of saliva in form of a drop signifies that hanging was ante mortem.

d) Chemical analysis report revealed 80.5mg% of alcohol in blood which indicates that the deceased has consumed alcohol prior to his death;

e) The Post mortem report was depicting the findings suggestive of ante mortem hanging.

The allegations made by the relatives could only be resolved when the answer to the question whether the deceased hanged himself or was hanged by some-one-else is given.

Hanging is one of the most commonly used methods for suicide worldwide. In England and a number of other countries, its incidence has increased over the last 30 years [5] In India, it is a common practice to kill a victim and then suspend the dead body to simulate suicidal hanging. It is, therefore, necessary to find out if hanging was actually the cause of death in a suspended body. [1]

Death by hanging usually results, either from arrest of the arterial blood supply to the brain or obstruction of venous return from it. [9] To make an opinion whether death was caused by hanging, one can safely say that death was due to hanging, if, in addition to cord mark, there was dribbling of saliva, ecchymosis present around the ligature mark, post-mortem signs of asphyxia, besides if there are no evidence of a struggle, fatal injuries or poisoning. [1]

Probably the opinion of the scene of the crime created a doubt in the mind of relatives about the manner of hanging. In fact, in hanging a simple slipknot type of noose is typically used. In the majority of suicidal hangings, the noose consists of a single loop. [3] Study speaks that students who drink or use drugs are much more likely to have suicidal tendencies than those who do not use substances. Suicidal behavior among college students is lower where the price of beer is higher. [6] “Kessler and his associates confirmed the link between alcoholism and suicide in their study: alcoholics were found to be more than three times as likely
to try to kill themselves as people who don't drink. [8]

Many text book of forensic medicine states that the dribbling of saliva is surest sign of hanging having taken place during life, as the secretion of saliva being a vital function can't occur after death. [1] This is due to increased salivation before death due to stimulation of salivary glands by the ligature. And salivation is increased by stimulation of pterygopalatine ganglion. [10] Saliva is often found dribbling from the angle of mouth, opposite to the side of the knot. This may be due to stimulation of salivary glands or congestive hypoxia. Salivation may not occur when the death is due to vagal inhibition or injury to the spinal cord.

Evidence of dried marks of dribbling of saliva is suggestive of ante-mortem hanging but its absence alone will not suggest that the body was suspended after death. Moreover, it is more likely to be noticed at the scene of suspension rather than the autopsy table. [11]

So from the presence of saliva it is clear that it was ante-mortem hanging (Picture-1). When the point of suspension is taken into consideration it is a typical hanging (Picture-3) and kneeling position suggests incomplete hanging (Picture-4).

Suicidal hangings in a sitting, kneeling or even lying position are common. [12]

Conclusion:

The deceased was found partially hanging from the ceiling fan in his own hostel room; without any evidence of struggle. The presence of saliva in the form of a drop which was missed by not only the medical officers but also by the forensic scientists' reports signifies that hanging was ante mortem. The Post mortem report was also suggestive of ante mortem hanging. Chemical analysis revealed that the deceased has consumed alcohol prior to his death. All these circumstances are going in favor of suicidal hanging.

This is how the investigative and reconstructive forensic medicine helped to de-codify the mystery of death of a famous sportsperson (boxer) by saliva found in the form of a drop over the lower lip as observed in the photographs taken from the scene of crime.

References: