

Medicolegal, Legal and Social Issues in a Case of Hanging

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Death due to hanging is one of the common methods of suicide. We report here a 19 years old female who committed suicide by hanging from ceiling fan with orna round her neck. The victim girl was unmarried and emotional. Repeated failure in examinations, dependent upon others and teased by them made her more emotional and she could not balance herself and committed suicide by hanging. Medico-legal autopsy was done at Khulna Medical College Morgue to confirm the cause, mode and manner of death. Medico-legal, legal and social issues needed to be considered in case of hanging are discussed.

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Introduction

Death by hanging is not uncommon and occurs in all parts of the world. Hanging is that asphyxia which is caused by suspension of the body by ligature which encircles the neck, the constricting force being the weight of the body.¹ When body is fully suspended and no part of the body touched the ground then it is called complete hanging, where constricting force is weight of whole body. On the other hand in incomplete hanging or partial hanging, the body is partially suspended, the toes or feet touching the ground or are in a sitting, kneeling, lying down, prone or any other posture with only head and chest off the ground.² On the basis of position of knot, hanging can be classified into: typical hanging, where knot of ligature should be at the nape of neck on the back and a typical hanging, where knot of the ligature may be at any site other than the nape of the neck. Hanging could be a postmortem hanging or post mortem suspension and antemortem hanging. Postmortem hanging only is done in order to conceal or mislead a case of homicide as suicide.³ Hanging is always suicidal in nature until proved otherwise. Partial hanging is taken to be diagnostic of being suicide in nature. In case of hanging

suicidal is most common and there must be a motive such as failure in love or examination, familial quarrel, poverty, unhappy conjugal life, battered wife, mismatched socio-economic status of husband and wife etc. Accidental hanging can also take place at times. However, the most common accidental hanging occurs in the sexual asphyxia. Homicidal hanging is extremely rare. In case of hanging different types of ligature material are used, such as orna, rope, electric wire, lungi, sharee, dhoti, shoelash etc. which is available during emotion. The post-mortem findings depend on type and site of hanging, nature of the material used, and time of suspension. Site of hanging may be anywhere like from branches of tree, light post, pipe of

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bath room, in the ceiling hook, ceiling fan etc. Causes of death due to hanging are asphyxia, apoplexy, cerebral anaemia, reflex vagal inhibition and fracture and dislocation of cervical vertebrae.⁴ The commonest causes of death due to hanging are combined asphyxia and apoplexy.

Case History

The history was taken from the brother-in-law of the deceased. The deceased 19 years old was residing at Daulatpur, Khulna with her brother-in-law and sister. She was secondary school certificate examinee under Jessore education board. She took part in such examination for several times but was unable to success. She felt burden on her brother-in-laws family. On the day of occurrence at 8 PM, when she was taken her dinner with other members, her brother-in-law teased her regarding her failure in the examinations. At this reason, without dinner she went to bed. At about 8:10 AM on the next day, the deceased did not wake up, nor did she respond to any sort of shouting. Then her brother-in-law contracts the police station. Investigating officer came with a few police men and broke the door at 9 AM. The deceased was found hanging from ceiling fan with orna round her neck at centre of her room with a chair horizontally placed in the floor which was taken as platform of hanging.

Autopsy Finding

After making the inquest the body was brought by a constable to Khulna Medical College mortuary at 11-30 AM and post-mortem examination was carried out at 2:00 PM.

External examination

The deceased was a girl of fair complexion, well build and well nourished, wearing Salwar and Kamiz. She had black scalp hair 20-25 inches in length on an average. Mouth

was partially opened, mouth cavity was healthy and total 28 teeth in the jaws, which were normal and healthy. The crown-heel length was 150 cm. Body weight was 110 lbs. Rigor mortis was present in all limbs. The ears were normal. Blood stained frothy mucus was coming out from nose. The eyes were partially closed. Sub-conjunctival haemorrhage was seen in right eye. Face was congested. Knot of ligature was present at left side of upper neck just behind the left year. The ligature mark was oblique, non continuous and high up inverted V-shaped from right side of neck above the thyroid cartilage measuring 2 cm in diameter and about 5 cm gap at left side. The skin beneath the ligature was brown and parchment like. The nail bed of fingers and toes were also bluish in color. Axillary and pubic hair was unshaved. There was dried mark of saliva extending from right angle of mouth downwards.

Internal Examination

Scalp, Skull and Brain: Scalp was healthy. There was no fracture in skull. The meninges were intact. There was no intracranial haemorrhage. Brain was congested and oedematous. The weight of the brain was 1200 gm.

Neck and face: The subcutaneous tissues revealed a white glistening area, corresponding to the parchment like skin under the ligature. Apart from the ligature mark on the neck no other injury was found. There was no extravasation of blood in muscles and glands. The jugular vein and carotid arteries did not reveal any abnormality or intimal injury. No injury was found in the hyoid bone, thyroid cartilage and cricoid cartilage. The trachea showed slight congestion with little froth within it. There was no injury to cervical vertebrae.

Thorax: There was no contusion in the thoracic muscles. No fracture of the ribs and sternum was found. The lungs were congested with oedema. The weight of the right lung was 230 gm. and that of left lung 200 gm. There was no contusion or any other injury to the heart. The coronary arteries were found to be normal. The pericardium, myocardium and endocardium showed no abnormality. The valves were normal. The weight of the heart was 300 gm. The great vessels were normal. There was some mucous in the oesophagus.

Abdomen and Pelvis: No external and internal injury was seen. Stomach was congested and contained liquid food particles. Small intestine was normal. Large intestine was normal and contained semi solid fecal matter. Liver was congested. The weight of liver was 1000 gm. Bile duct was patent with normal gall bladder. Spleen was congested, weight was 70 gm. Both kidneys were congested with normal size and shape. Capsule were easily removed, no injury or pathology was detected. Weight of right kidney was 150 gm. and that of left kidney was 140 gm. Urinary bladder and urethra was normal. The bladder contains 20 ml urine. The hymen was thick, fleshy and intact. No previous or recent injury was detected. The vagina was normal. White secretion of the vagina collected and swab was preserved for microscopic examination. The os of the cervix was closed. The uterus was normal and non-pregnant. The ovaries were normal. The skeleton was intact.

Investigation reports

Swab from vagina was negative for spermatozoa. Blood test results for alcohol, poisons and drugs were negative. Stomach contents were negative for alcohol, poisons and drugs. Tissues above and below the ligature for histopathology showed vital reaction.

Opinion

By opinion of postmortem examiner death was due to asphyxia as a result of hanging which was antemortem and suicidal in nature.

Discussion

Medico-legal aspect:

Whenever a dead body is found to be in a suspended state by a ligature around the neck and brought for post-mortem examination then certain questions to be answered by the medico-legal examiners.

Was the case strangulation, post-mortem suspension or hanging?

In case of strangulation:

The ligature mark in the neck is continuous, circular and at or below the thyroid cartilage. Injuries to the skin, muscles and deeper tissues, fracture of hyoid bone and laryngeal cartilage are common. But in this case there was no such injury or fracture except ligature mark which was oblique, non-continuous and high up in the neck with a gap on left side which is not consistent with strangulation. All above mentioned features indicate that the death was not due to strangulation.

In case of post-mortem suspension:

There would have been such sign of cause of death other than by hanging, i.e., blunt trauma to the head, or massive injuries to the vital parts of the body, or some poisons or drugs to be given to the victim resulting of death. Detailed musculo-skeletal dissection revealed no such injury. In absence of deliberate trauma and negative toxicological results excluded the possibilities of post-mortem suspension.

In case of hanging:

The principal finding for diagnosis is the ligature mark, which is cause by ligature material that has been used.⁵ In this case, the characteristic of ligature material was consistent with the imprint and ligature was

oblique, high up and non-continuous and there was a gap on the left side. In this case the skin of ligature mark was parchment appearance with abrasion and bruise above and below the ligature mark. The hyoid bone or laryngeal cartilage was free of fracture. All features found here indicate that death was due to hanging not due to strangulation or post-mortem suspension.

Was the hanging accidental, suicidal or homicidal?

Accidental hangings are uncommon. It may occur during play or when at work in circumstances which were essentially accidental. The most of the victims are children rather than adults. The accidental hanging is related to sexual deviation, where the victims are usually adolescent males, usually found nude or wearing female clothing. The history and circumstance revealed the cause of all accidental hanging. Homicidal hangings are extremely rare.⁶ It is very difficult to hang a well-built individual single-handed unless the victim is overpowered by the assailant by some means. It may also be possible if there is a great physical disproportion between assailant and victim or when the victim is under the influence of alcohol or drugs or suffering from a debilitating disease. Homicidal hanging should be suspected when there is sign of violence, the clothing of the deceased is torn or disarranged, and when there are injuries either offensive or defensive. As there was no such sign so this case was not homicidal.

Suicidal hanging is one of the commonest method of committing suicide. In general hanging is suicidal in nature unless otherwise proved and in this case, the deceased was found hanging by Orna was closed from inside. The point of suspension was made accessible to the victim by a chair. The ligature material was also available to the

victim. In this case the history and all findings were in favour of suicide.

Was the circumstance in favor of suicide?

The victim girl was unmarried and emotional. She appeared examination several times but could not be succeeded, it made her more emotional and sorrow and she felt herself inferior. She was living in her sister's house and on that night she was teased by her brother-in-law, which made her more emotional and she could not balance herself and committed suicide by hanging. The door was closed from inside. She used the chair as a platform and there was no associated injury to body so the circumstance was in favour of suicide.

What was the mechanism of death?

In case of hanging death may have occurred in many ways such as by asphyxia, cerebral ischemia, venous congestion, vagal inhibition or fracture and dislocation of cervical vertebrae resulting in injury to the spinal cord.⁷ In this case, face showed congestion and cyanosis was present. Therefore the mechanism of death due to asphyxia could not be excluded. Though veins of the neck were not engorged, congestion was observed in the brain and thereby possibility of death due to venous congestion could not be excluded. In death due to vagal inhibition, there is usually no evidence of congestion of face, cyanosis etc, as in such case there is sudden cardiac arrest causing instantaneous death. So there is no time for asphyxic feature to develop. Therefore, the possibility of death due to vagal inhibition in this case could be ruled out. In the case described here the brain and face were congested. Sub conjunctival haemorrhage and cyanosis were present. The lungs were congested oedematous, so the cause of death was due to combined effects of asphyxia and venous congestion.

Legal aspect

Abetment of suicide and attempted suicide both are offence under the Law of Bangladesh Penal code (BPC). In case of abetment of suicide BPC-306, if any person commits suicide, whoever abets the commission of such suicide, shall be punished with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine. In case of attempt to commit suicide BPC 309 whoever attempt to commit suicide and does any act towards the commission of such offence, shall be punished with simple imprisonment for a term which may extend to one year, or with fine or with both⁸.

Social aspect

Treatment and rehabilitation of victims of attempted suicide is an important social aspect. They could be referred to psychotherapist, or to psychiatric centers for expert management by way of psychotherapy or medication.

Conclusion

Due to development of medical psychology and psychiatry it has been understood that a person trying to commit suicide is of a disturbed mind either acutely or chronically, so before imposing punishment it should be considered, otherwise it would seem to be absurdity. Familial support, rehabilitation and treatment of the person are necessary.

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