

*Case Report*

Execution & Concealment...The Electric Way...

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*Received: 01/07/2015**Revised: 16/07/2015**Accepted: 20/07/2015*

ABSTRACT

Homicide is a catch-all term meaning "the killing of a person," whether justified, accidental, or felonious and killing of a human being is one of the most serious or major crimes. Assailants are very keen to conceal crime by different methods, so there may be wrong interpretation by inexperienced autopsy surgeons and hence it may lead to injustice. So it is important that our keen observation and opinion should be conclusive for the administration of justice. Generally, there are various means and modalities of homicidal deaths and deaths caused by strangulation concealed by electrocution are one such uncommon way. Strangulation by ligature is a form of violent asphyxia deaths in which there is obstruction of air passages and blood vessels of the neck by external compression with the help of ligating material other than the weight of the body whereas electrocution is the passage of a substantial electrical current through the tissues which can cause skin lesions, organ damage and death. Nearly all electrocution deaths are accidental deaths, with suicides are rare and homicides even rarer, as compared to strangulation deaths which are mostly homicidal unless proved otherwise. In this paper we are presenting here an uncommon case which was brought to our department by police as a case of accidental electrocution. After scrupulous autopsy it was turned out to be of homicidal manner as the perpetrator, the husband of the victim killed his wife by ligature strangulation and later on tried to conceal the crime by electrocuting the deceased. The present paper highlights the importance of scrupulous autopsy for determination of cause and manner of death.

Key words: Homicidal, ligature strangulation, Post-mortem electrocution, conceals.

INTRODUCTION

Killing of a human being is one of the most serious or major crimes. Death as a result of violence constitutes a large group in medico-legal autopsies. Specially, deaths due to asphyxia are one of the most important causes in violent deaths. [1] Closing of the blood vessels and air passages of the neck by means of external pressure such as ligating material on the neck can cause asphyxial death which is also known as strangulation. In ligature strangulation, the pressure on the neck is

applied by a constricting band that is tightened by a force other than the body weight. Virtually all cases of ligature strangulation are homicides. [2]

Deaths due to electrocution are infrequent; virtually all such deaths are mostly accidental in nature with suicides much rarer & homicides least common. [3] Homicidal electrocution is caused by placing live wire at some place which the victim is expected to touch. [4] The mentality of assailant after causing injury to their victims is to hide the crime by disposing of

the dead bodies by burning, burying, throwing them into water or concealing them in distant places in most of cases, electrocution, hanging and throwing the dead body on railway track, or infliction of injuries which appears to be accidental.

CASE REPORT

This paper presents a case of a 28 year old married female who was brought dead to casualty of district general hospital, by her husband with history of sudden unconsciousness after accidental electrocution while cooking food in the morning. The police also suspected the same due to electrical injuries over hand. When the body was sent for postmortem examination, the doctor conducting the postmortem observed a ligature mark over the neck. As the alleged history was found to be suspicious the doctor referred the case to our institute for detailed postmortem examination. In our department, when we inquire about the alleged ligature mark, the husband of the deceased female replied that it was inflicted accidentally a day earlier when the dupatta of the deceased was caught in the window of moving bus. The history told by the deceased husband found to be confusing, but after scrupulous autopsy it appeared to be a case of homicidal strangulation by ligature with a postmortem electrocution injury.

Autopsy Findings:

External examination: A female body having a length of 166cm was found to be wrapped in a white colour cloth. It was wearing a half sleeve red coloured kameez with purple margins and a purple coloured salwar. Both the eyes were closed and mouth was also closed. Rigor mortis was in passing off stage. Post mortem staining was present over the back except the pressure points. Multiple old healed linear scar marks running almost parallel to each other present over radial border of left forearm. The marks

were of size 2-4cmx0.5cm and were present 5cm below the elbow joint and 3cm above the wrist joint. It was present over an area of 16x7cm² over left forearm. The conjunctivae were congested and face and neck were suffused. Greenish discoloration was present over the anterior abdominal wall over the right iliac fossa. Blood tinged secretions present around the nose. The right hand of the deceased was smudged with dried up white colour doughy material and the epidermis of the palm of hand found to be loosened. On external examination following injuries were present over the body:-

1. A reddish brown colour patterned ligature mark present all around the neck circumferentially, of length 33cms. The ligature mark was broad and prominent over the right anterior and middle aspect of the neck where it was situated 6cm below the centre of chin in the midline above thyroid cartilage and 5cm below right angle of mandible with a width of 3-4 cm. It was presented as a thin irregular linear mark of breadth 1-2 cm over left side of anterior aspect of neck where it was situated 6cm below the left angle of mandible, whereas over the back (over the nape of neck) it was situated 5.5cm below the most prominent part of external occipital protuberance. On dissection the underlying neck structures including soft tissues, deep fascia, muscle, laryngotracheal structures, cricoid and thyroid cartilage were found to be deeply ecchymosed.
2. Electric burns present over the palmar aspect of right hand in the form of pale, dry, hard, corny indurated area with size 0.5x1cm over the skin of almost all over the tips of fingers and thenar & hypothenar eminence. The epidermis was loosened off all over the palmar surface. There was no evidence of any

vital reaction or hyperaemia around the injury.



Picture 1: Postmortem electrocution burns present over right hand with loosened up epidermis.



Picture 2: Patterned ligature mark presents over the neck with congestion present over face and neck region.

On internal examination skull and vertebrae were found to be healthy with no indication of spinal cord examination. On thorax examination wall, ribs & cartilage, pleurae, pharynx & oesophagus, hyoid (intact), pericardium, heart and large vessels were healthy. On abdomen examination wall and peritoneum were healthy. Stomach mucosa was pale and contains 100gm of semidigested food material. Small intestine also contains semidigested food material. Large intestine contains faecal matter and gases. Brain, lungs, liver, spleen and kidneys

were congested. Urinary bladder was empty while organ of generation were healthy.

On histopathological examination of the skin sample of the electric burn injury mark, no inflammatory reaction seen, indicating it as a postmortem injury.

Thus after conducting the autopsy, we opined that the cause of death in this case was asphyxia consequent to ligature strangulation which was homicidal in manner with postmortem electric burns. The probable time that elapsed between death and autopsy was opined to be 24-36 hours.

DISCUSSION

Asphyxial deaths are caused by the failure of cells to receive or utilize oxygen. The deprivation of oxygen can be partial (hypoxia) or total (anoxia).^[2] Asphyxial deaths can be grouped into: Mechanical, pathological, toxic, environmental, traumatic, postural and iatrogenic asphyxia.

Strangulation is that form of death which is caused either by exclusion of air from lungs, or oxygenated blood from the brain by means of a ligature round the neck, the constricting force being anything other than the weight of the body.^[5] It is a common form of murder and many of the victims are adult female. Strangulation should be assumed to be homicidal until the contrary is shown.^[6] Pressure on the neck may be affected by constricting all or part of the circumference of the neck by a ligature.^[7] The ligature mark is a vital piece of evidence, especially when the killer has taken away the actual ligature.^[8] Homicidal strangulation may be committed with such silence that even persons in close vicinity may not be aware of the act since sudden and violent compression of the windpipe renders a person powerless to raise a alarm or call for assistance.^[9] Sometimes, homicidal strangulation is feigned by an individual to bring a false charge against his enemy. Strangulation, being mostly

homicidal, in most cases there may be 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. [4]

An electrical injury occurs when a current passes through the body, interfering with the function of an internal organ or sometimes burning tissue. Electrical injuries have become a more common form of trauma with high mortality. They may result from contact with faulty electrical appliances or machinery or inadvertent contact with household wiring or electrical power lines. [10] Electrical burns have a characteristic appearance and pathological findings. There is streaming of the epidermal nuclei at the point of contact with the current microscopic blisters of the epidermis. [11, 12]

In the present case, the significant findings were of ligature strangulation by a dupatta and electrocution was post-mortem. The signs of struggle were absent. The electric injuries were made on the deceased after his death to conceal the crime of homicide. The assailants tried to conceal the crime by electrocuting the deceased after death by strangulation. After thorough examination of the alleged history, findings of autopsy and histopathology examination, it seemed that the victim was killed a night before by her husband after they had a small fight, by strangulating her with a dupatta and in the subsequent morning the assailant tried to conceal the crime by electrocuting the victim's hand by placing it on a room heater.

CONCLUSION

Deaths due to compression of neck are one of the most important areas of investigation of unnatural deaths encountered in day to day medico legal works. The nature of violence over body is

so wide and varied that is challenging task for autopsy surgeon on many occasions. Therefore careful and thorough examination of every case is mandatory to bring out comprehensive / wide varieties of observations in deaths due to compression of neck and also to differentiate the manner of deaths.

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How to cite this article: Tyagi A. Execution & concealment...the electric way... Int J Health Sci Res.
2015; 5(8):720-724.

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