Case Report

TRAUMA AND HANGING- AN UNUSUAL CASE OF COMPLICATED SUICIDE

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Abstract
Suicidal deaths are very frequently encountered by forensic experts in day-to-day practice. Here, we shed light on an unusual complicated suicide case, with features of hanging, head trauma and traumatic asphyxia. Allegedly, a dead body of a 65 years old man was found stuck in a shaft between the elevator and a wall, in a multistorey building, with ligature material placed around his neck. The ligature material was torn in two parts and the other part was found tied over the railing upstairs, in proximity to the elevator shaft, in front of his room. Suicide notes were found with the body. During the autopsy, two loops of faint ligature marks were present on the neck and on further exploration, extravasation of blood was present over the strap muscles of neck and carotid sheath. Upper part of the body was congested and there was a clear line of demarcation. Head injury was also present with skull fractures and cerebral haemorrhages. Signs of asphyxia were seen on the internal organs. This case, illustrating a peculiar pattern of injuries is reported for future reference of pathologists to help in identifying and anticipating such injuries in similar cases of suicide.
Key words- Suicide, Hanging, Head injury, Complicated suicide, Traumatic asphyxia

Introduction

Suicidal deaths are very frequently encountered by forensic experts in day-to-day practice. Usually, suicides comprise of a single method. However, there are rare instances where more than one method comes into play. These are classified as complex suicides and complicated suicides.[1]

Complex suicides are where the victim employs more than one method, simultaneously or consecutively to ensure death[1]. These could be planned or unplanned. In planned complex suicides, multiple methods are applied simultaneously to make sure that death will occur even if one method fails. Sometimes, the chosen mode fails or is too slow or painful and then the victim switches to another. These are unplanned complex suicides.[2][3]

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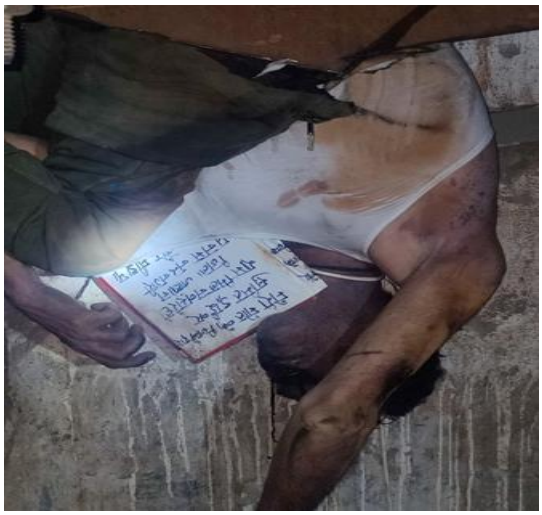
There are some peculiar forms of suicide in which the first mode chosen by the victim fails and death occurs accidentally due to a secondary, external, and unpredictable factors. These are called complicated suicides. These are different from unplanned complex suicides as there; the victim makes a conscious decision to switch the method of dying unlike in complicated suicides where the secondary method is completely accidental[4].
This is an unusual case of complicated suicide, which presented a very unique set of findings, for the enrichment of literature on this topic.

Case report
A 65-year-old man was found dead in an elevator shaft, with upper half of the body stuck in the narrow space between the lift and the wall. Around his neck, was a ligature in form of a piece of white cloth. Another part of the ligature material was tied around a railing, up above, with torn edges. The investigative authorities concluded that the ligature broke during a failed attempt at hanging. A diary was found in the victim's clothes, chronicling the circumstances leading up to his suicide, including a confession of the suicide, thus eliminating any suspicion of foul play. (Fig 1)
The deceased was brought to the casualty of GTB hospital, Delhi and was declared dead on arrival.

Fig 1- The dead body at the crime scene. The diary containing the suicide note can be seen. Ligature can be seen around the neck.

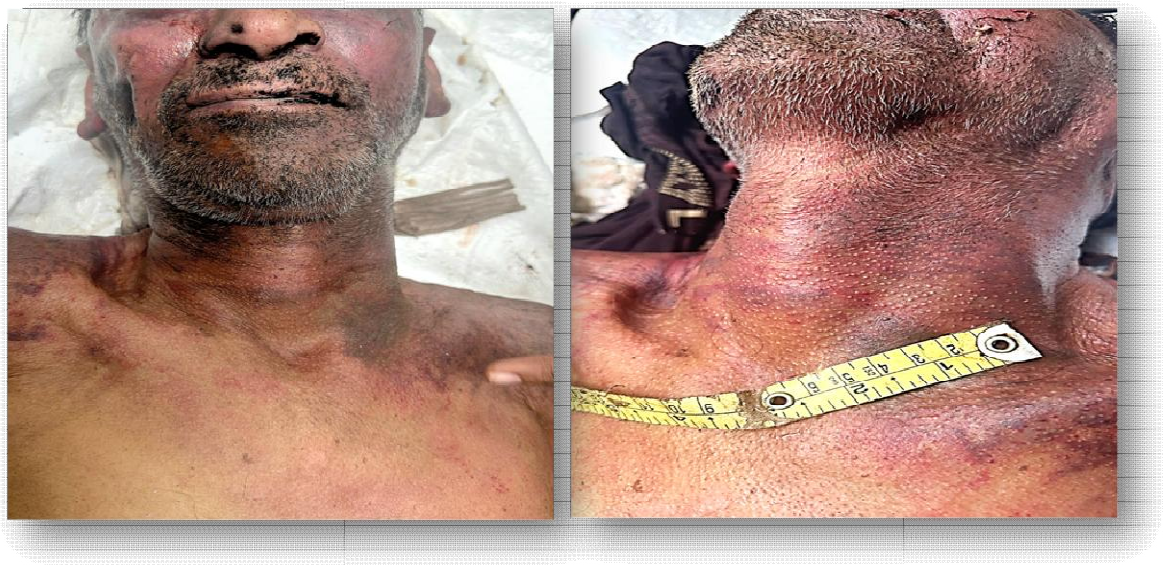


External examination
During autopsy, on external examination, subconjunctival haemorrhage was seen in the left eye. Dried blood stains were present in both nostrils. Face, neck and upper chest were congested with a clear line of demarcation between the congested and normal area, indicating the level of compression (Fig 2). Bluish discolouration, suggestive of cyanosis, was seen on the fingernails. Dependent areas of the back of the body displayed postmortem staining which was fixed.

Two faint ligature marks were seen encircling the neck, obliquely and incompletely above the level of thyroid cartilage. They were reddish brown in colour and parchmentized at places. A pressure abrasion was present on the under surface of the left side of the chin suggestive of the knot of the ligature. (Fig 3 and 4)
A swelling with underlying haematoma, measuring 13.0 cm x 7.5 cm was present over the right temporal region of the head. A bruise was present on the back and multiple abrasions, of varying sizes were present on the body.

Fig 2 showing line of demarcation between the congested and normal area.

Fig 3 (Right and Left) showing ligature mark and the pressure abrasion on the under surface of the chin.



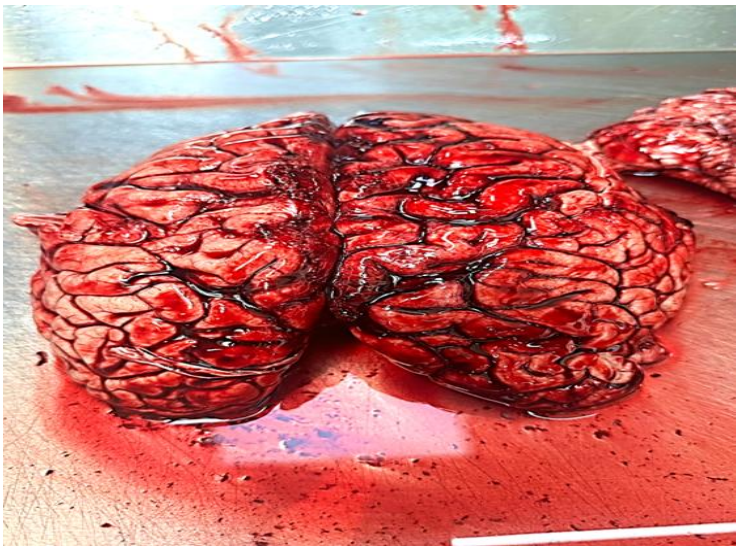
Internal Examination

Extravasation of blood was present all over the scalp. Multiple linear fractures were present over the skull vault and the base of the skull, with extravasation of blood indicating their antemortem nature. (Fig 5)

Fig 5 showing linear fractures over the vault and the base of the skull

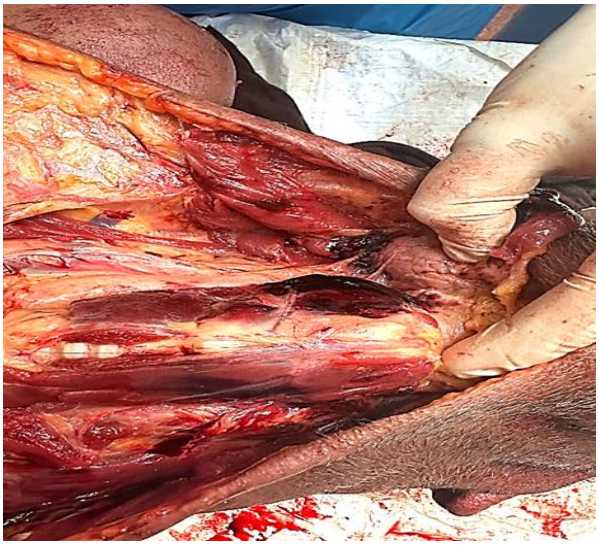
Subdural haemorrhage was seen bilaterally, more over the right side. Sub arachnoid haemorrhage was present over the right cerebral hemisphere diffusely and over the left fronto-temporal region patchily (Fig 6). Multiple haemorrhagic contusions of varying sizes were present over basal surface of bilateral frontal and temporal lobes. Pontine haemorrhage was also present.

Fig 6 showing Sub arachnoid haemorrhage over the right cerebral hemisphere and the left fronto-temporal region.



In the neck, on layered dissection, the tissues underneath the ligature mark were dry, whitish and glistening in appearance. Extravasation of blood was present over the musculature of neck, on both sides (Fig 7). Bilateral carotid sheaths also showed extravasation of blood. All the osteo-cartilaginous structures of the neck were intact.
Multiple petechial haemorrhages were present on the surfaces of both lungs and over the epicardial surface, including the base of the aorta, of the heart. All internal organs were congested.
Cause of death was determined to be a combined effect of asphyxia (traumatic) and craniocerebral damage.

Fig 7 showing Extravasation of blood was present over the musculature of neck.



Discussion

Complicated suicides are rare events and can pose a significant challenge in the field of forensic medicine. In these, the manner of death can remain unclear and ambiguous even after a thorough crime scene investigation and autopsy. The intent is to commit suicide but death occurs due to a secondary accident, so whether to call these deaths suicidal or accidental is the age-old question.

In the present case, only the presence of a detailed suicide note clued in the investigative authorities as to the actual chain of events, who, otherwise, would have been baffled by the peculiar circumstances in which the body had been found.

This case is also unusual as the opinion regarding the cause of death could not be definitive, considering the findings of both traumatic asphyxia (wedging) and head trauma were present. Hanging was safely ruled out since, as evident from the antemortem injuries over the body, the deceased was probably alive when the ligature snapped. But considering the position the body was found in, half wedged between the wall and the lift surface, and the signs of asphyxia present externally and internally, including the clear line of demarcation on the chest, indicating the level of compression, traumatic asphyxia (wedging) could have killed him as well as the multiple head injuries. [5]

Gentile, published a case of complicated suicide, similar to this, in Milan, Italy concerning an elderly man who, after killing his wife by cutting her throat, tried to hang himself by tying a rope to a heater and jumping from the window located over the heater itself. However, the rope suddenly snapped and he fell to the ground. Careful investigation of the crime scene showed that the rope had not been tampered with and the possibility of homicide was ruled out. The autopsy examination confirmed multiple blunt, traumatic injuries, especially located at the head. as well as neck injuries related to hanging. Injuries of the chest, abdomen, and pelvis were also seen. All the injuries were characterized by haemorrhagic infiltration, and thus, all occurred when the man was still alive. Death was attributed to skeletal and visceral injuries due to falling from a height.[6]

Toro and Pollak in Budapest studied 1217 suicide cases, among which 54 were complex suicides and 6 were complicated suicides. Two were similar to the present case. In one case

the balcony collapsed, in the other the rope which was attached to a tree branch broke and death occurred due to the blunt injuries sustained from the fall.[4]
Barranco et al in Genoa (Italy) studied multiple cases of suicides and found only one case of complicated suicide. The victim died due to fatal head injuries sustained from falling from a height of about 10m after a failed attempt at hanging.[7]
In all the above cases, the cause of death was determined to be trauma and not asphyxia, since all were attempts of hanging in open spaces and all failed. This is unlike the present case where, even though hanging was excluded as the cause of death, traumatic asphyxia (wedging) could not be definitively ruled out.
Failed hangings, resulting in trauma are by no means the only way complicated suicides may occur. Toro and Pollak also reported cases of complicated suicides by various other methods.[4] In one case, the victim climbed an electric pole to touch a high voltage cable, intent on killing himself by electrocution and suffered fatal blunt injuries, when falling from the height after electrocution. Another suicide unsuccessfully tried to hang himself on an electric pole and was killed by the electric current when he accidentally came into contact with one of the power cables. One man who jumped into an elevator shaft, did not die from the fall, but drowned in a pool of water at the bottom. Another victim who had taken an overdose of drugs fell to the ground and sustained a fatal intracranial haemorrhage.
So complicated suicides can take varied and confusing forms and mislead the investigating authorities and forensic specialists alike.
As evident from all the above examples, complicated suicides pose a challenge to the forensic investigator, regarding the sequence of events, cause of death and manner of death. These cases require thorough investigation of the crime scene as well as careful autopsy including the ancillary investigations, to reach a satisfactory conclusion and reconstruct the chain of events.

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