

CASE REPORT

Planned Complex Suicide Involving Phenyl Ingestion and Hanging: A Medico-Legal Autopsy Report

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ABSTRACT

Complex suicide is the use of more than one suicidal method to commit suicide. They are primary and secondary complex suicides depending on the utilization of multiple suicidal methods in a simultaneous or one-after-another manner. We are reporting a case of a planned complex suicide of a 47-year-old male who ingested a floor cleansing agent (phenyl) and simultaneously hanged himself. There was no suicide note at the scene of the incident. History of previous suicidal attempts and depression present. During the autopsy, a pressure abrasion was seen running obliquely above the thyroid prominence, sparing the nape of the neck. The neck structures underneath the ligature mark were intact. All the visceral organs were congested. Petechial hemorrhages were present over both lungs and the heart. The stomach contains 700 ml of pink-colored fluid with a pungent odor, and the mucosa is congested. The toxicology screening of the blood and stomach contents was positive for phenyl. This case report discusses the forensic implications associated with complex suicides by differentiating them from homicide.

KEYWORDS

• Autopsy • Complex suicide • Forensic Pathology • Hanging • Poisoning
• Planned complex suicide

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INTRODUCTION

Suicides are usually divided into simple and complex suicides. Simple suicide is where only one method of suicide is employed. A suicide that involves the use of multiple methods is referred to as a complex suicide.¹⁻⁴ This complex suicide is further classified into planned (primary combined suicide) and unplanned complex suicides (secondary combined suicide). In planned complex suicide, the victim employs multiple methods simultaneously to ensure at least one successful outcome. In an unplanned complex suicide, the individual resorts to a different suicidal method when the first method fails, which could be due to severe agony or a prolonged death process.^{1,5-7} According to the forensic literature, complex suicides make up between 1.5 and 5.0% of all suicides.⁸ The victims of planned complex suicides ranged in age from young to middle-aged, with a noticeable male predominance.⁹ The thorough psychological autopsy in complex suicide cases may disclose prior suicidal tendencies, social interactions, and psychiatric illnesses, such as depression, schizophrenia, and personality changes.^{10,11} This can help narrow down the manner of death since it is challenging to differentiate complex suicide from homicide. We report a planned complex suicide case where the victim ingested phenyl floor cleaner (*Figure 1*) and simultaneously hanged himself. Though the methods employed are common, such cases could be challenging in narrowing the cause of death and formulating the manner of death, as multiple methods of suicide are involved.



Figure 1: Pink-coloured floor cleaners that are frequently used in India

Case report

A 47-year-old male with an alleged history of suicidal hanging was declared dead on arrival at the emergency department (ED). He was last seen by his daughter 1 hour before the incident. Later, he was seen in a state of complete hanging in his room, which was locked from the inside. At the scene of the incident, a chair and a cotton shawl (ligature material) tied to the ceiling beam were found (*Figure 2*), and there was no suicide note. The ligature material had a fixed knot present half a foot from the ceiling beam. The approximate height of the ceiling beam from the floor is 8.5 feet, and the height of the chair is 1.5 feet. There was a history of depression and previous suicidal attempts. He also had an opium addiction.



Figure 2: Scene of the incident showing the ligature material (Green arrow) tied to the ceiling beam with a chair placed beneath it (Yellow arrow showing the height of the ceiling beam from the floor- 8.5 feet)

The body was brought to the Department of Forensic Medicine and Toxicology for postmortem examination. The deceased was of moderate build, weighing 70 kg and measuring 173 cm (5 feet 8 inches) in height. On external examination, the rigor mortis was present throughout the body, and postmortem lividity was fixed. The conjunctivae of the eyes were pale. The dribbling of saliva was seen from

the right angle of the mouth. The fingernail beds were showing bluish discoloration. A pressure abrasion runs obliquely above the thyroid prominence from below upwards from the right to the left side of the neck, sparing the nape of the neck (*Figure 3*). On internal examination, the neck structures underneath the ligature mark, including the hyoid bone and thyroid cartilage, were intact. The brain and lungs were congested. Petechial hemorrhages were present over the anterior surface of the lower lobes and interlobar fissure of both lungs and the anterior surface of the heart. The liver, spleen, and kidneys

were congested. The stomach contained 700 ml of pink-colored fluid with a pungent odor, and the mucosa was congested (*Figure 4*). The histopathological examination of the heart, lungs, liver, and kidneys showed normal architecture with no pathological findings. The toxicology screening of the blood, liver, kidney, spleen, stomach, and its contents was analysed using Gas Chromatography-Mass Spectrometry, which detected a non-fatal quantity of phenyl in blood (18 µg/dL) and stomach contents (Chemical Examiner's report No. FSV-363). The cause of death was attributed to asphyxia due to hanging.

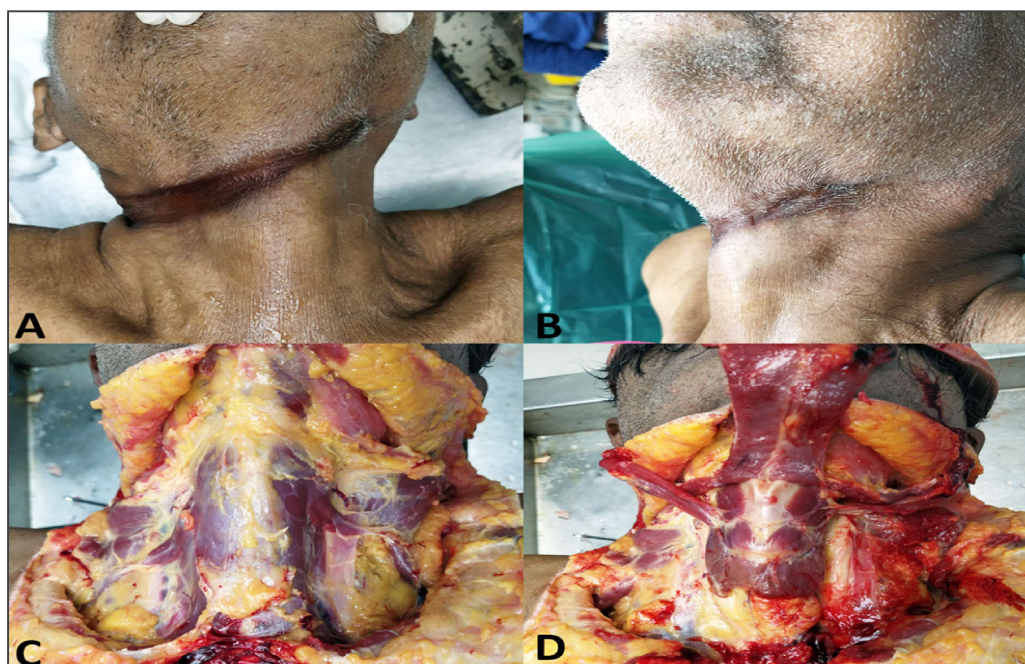


Figure 3: A & B - Pressure abrasion runs above the thyroid prominence from below upwards from the right to the left side of the neck; C - No significant findings noted in the neck structures after removing platysma and sternocleidomastoid muscles; D - No significant findings noted in the neck structures after removing strap muscles

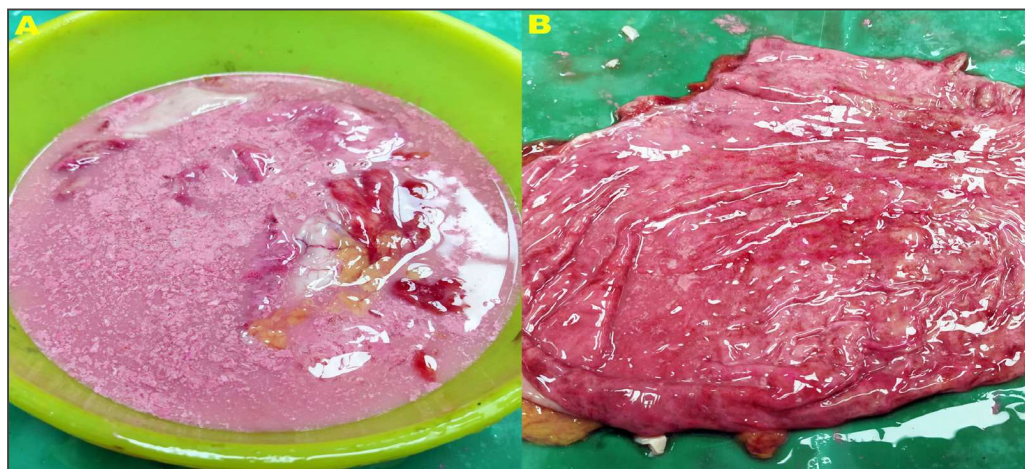


Figure 4: A - Pink-coloured stomach content with a pungent odor; B - Stomach shows congested mucosa

DISCUSSION

In planned complex suicides, multiple suicide methods are simultaneously employed to hasten the process of death or to make sure the death happens and, importantly, to avoid the pain. The use of different methods in combination sometimes happens in such a way that the second mechanism gets turned on only after the failure of the first or previous methods.¹² According to the literature, the most conventional methods used in complex suicides involve ingestion of insecticide, jumping from a tall building, hanging, ingestion of drugs, drowning, shooting oneself, cutting of the wrist, stabbing, and self-strangulation.⁶ There have been reports that the specific methods utilized in complex suicides are the same as those used in simple suicides. Indeed, two commonly used methods for simple suicide are typically used in planned complex suicide as a combination.¹³ In rarer instances, there have been complex suicides involving some unusual combinations like the usage of electricity, self-immolation, ingesting foreign bodies, ingestion of corrosive substances, and vehicular accidents.⁶ Unplanned complex suicides frequently involve injuries from sharp objects, particularly slashing to the wrists. Here, when the first approach fails, the victim employs other methods of suicide, one after the other, to end his life. Sometimes, the person may inflict stab wounds, typically in the vicinity of his heart, instead of a cut injury to the wrist or to any other non-fatal sites.^{4,8} The use of more than two suicide methods is a distinguishing feature of unplanned complex suicides, whereas, in planned complex suicide, the person predominantly uses a maximum of two suicide methods.

Altun G *et al.* reported a case of planned complex suicide where the body of a 22-year-old woman was discovered hanging from a ceiling beam by her neck. Two opened rodenticide packets were found during the crime scene investigation. She was suffering from bipolar depression with a previous history of suicidal attempts. The chemical analysis tested positive for rodenticide compounds. The cause of death was given as hanging.¹⁴

Similarly, in the present case, though the chemical analysis tested positive for phenyl, it was not a fatal dose because the deceased had ingested the floor cleaner followed by hanging within a short duration, probably less than 4 hours, as suggested by the presence of phenyl in the stomach contents. (as the typical gastric emptying averages 4 hours). The presence of phenyl in the blood and its absence in visceral organs shows that it did not undergo complete metabolism. Thus, the immediate cause of death in this case is asphyxia due to hanging and not poisoning.

Pelissier-Alicot AL *et al.* reported an unusual planned complex suicide, where a 67-year-old woman was found dead in her bathroom in a putrefied state with a cut injury to her wrist. The scene of the incident showed a knife lying underneath the body. The room had short-circuited electrical fuses with the hairdryer submerged in the water. Toxicological analysis tested positive for high levels of tianeptine. Although the cause of death could not be opined due to putrefactive changes, the manner of death was concluded as suicide.¹⁵ Though generally it is difficult to determine the manner of death in complex suicides, thorough analysis of the scene of the incident can help in determining it. In our case, multiple factors pointed towards suicide which including the door being locked from inside, no signs of struggle, the height from the floor level to the heel of the deceased and the ceiling were appropriate, the length from the knot to the point of suspension, and the knot type (fixed knot) were also consistent with suicide (*Table 1*).

Table 1: Comparing the possibilities of complex suicide and homicide

Parameters	Favouring Complex suicide	Favouring Homicide
Injuries	Obliquely placed pressure abrasion on the neck (typical of suicidal hanging).	No multiple injuries or defense wounds noted
Scene characteristics	The room was locked from the inside, no signs of a major struggle	No evidence of forced entry or signs of struggle
Psychosocial Background	Depression, past suicidal attempts	No known history of interpersonal conflict
Toxicology	Positive for phenyl ingestion	No evidence of forcible administration

table cont....

Suicide Note	Absent (may or may not be present)	If history is unclear, the absence of a suicide note may raise suspicion
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In a case reported by Pelissier-Alicot *et al.*, a 42-year-old doctor with depressive syndrome, cocaine addiction, and multiple suicidal attempts in the past was found dead at his home with a catheter inserted in his right femoral artery. The cause of death was ascertained as due to hemorrhagic shock in the context of suicide. The toxicological analysis tested positive for ethanol, cocaine, and its metabolites, and high concentrations of citalopram, hydroxyzine, bromazepam, and lidocaine. Finally, the death was concluded as a planned complex suicide, combining drug intoxication and catheterization of the femoral artery.¹⁶ Similarly, in the present case, the person had an opium addiction and had made previous suicidal attempts; thus, it is also essential to know the psychosocial dynamics of the deceased in establishing the manner of death.

The use of different suicidal methods in complex suicides depends on various factors, such as the commonest suicidal methods used in certain countries, easy accessibility to multiple modes, and occupation of the victim. Firearms are frequently used as one of the suicidal methods of complex suicides in the United States, England, and a few other Western countries, as it is highly available in the typical household.¹⁷ Whereas in India, the reduced usage of firearms and its strict legislative measures lead to lesser usage of such suicidal methods. Since poisoning and hanging are the common methods of suicide in India, such methods are easily preferred by the victims of complex suicides. Also, the easy accessibility and availability of agricultural chemicals, household cleansing agents, and drugs make poisoning a preferred option in India, particularly as the first suicidal method of planned complex suicides, as they are less lethal and less painful compared to the more fatal second method employed, like hanging, falling from height, drowning, etc.

When it comes to complex suicides, it is important to differentiate them from homicide because of the variety of suicidal methods used, particularly when one of the methods is employed in the form of sharp injuries. In the present case, the methods used are commonly

employed in simple suicides, and from the circumstantial evidence, the history of no past suicidal attempts, and the autopsy findings, the possibility of homicide has been ruled out. In addition, whenever we encounter complex suicide cases, a few other things should also be analyzed when formulating the manner of death, such as a thorough examination of the scene of the death, any signs of struggle both in the scene of the incident as well as in the body, suicide note, social, medical, and psychiatric history, injuries in the body and other ancillary investigations like toxicological and histopathological findings.

CONCLUSION

This case report highlights the significance of medico-legal examination in complex suicides; in the absence of such meticulous examination, the mode of death may not be identified as suicide, and the circumstances of death may be inexplicable. Differentiating the complex suicides from homicides plays a significant role in solving medicolegal implications.

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