

## Case Report

# Planned Complex Suicide: A Conundrum to Unravel

I.R. Dominic<sup>1\*</sup>, B.K. Gopal<sup>2</sup>, B. Viswakanth<sup>3</sup> and P. Shruthi<sup>1</sup>

<sup>1</sup>Postgraduate, <sup>2</sup>Assistant Professor, Department of Forensic Medicine and Toxicology, Kempegowda Institute of Medical Sciences, Bangalore, Karnataka, India

<sup>3</sup>Assistant Professor, Department of Forensic Medicine and Toxicology, PK Das Institute of Medical Sciences, Vaniamkulam, Kerala, India

\*Corresponding author e-mail id: dodombbs@gmail.com

## ABSTRACT

The definition of complex suicide as the use of more than one method to induce death has been widely accepted in the forensic literature. This article presents two cases of complex suicide. The first was a 33-year-old male who had consumed organophosphorus poison before hanging himself with a cloth. In the second case, a 20-year-old male had consumed kerosene and then hanged himself with a plastic rope. The specific circumstances of the case are described and relevant literature is briefly reviewed. The investigation of scene, the method employed, the autopsy findings and the interview with their relatives altogether pointed towards a suicidal aetiology. Knowledge of varied and sometimes unusual suicide methods is important to the forensic investigator to prevent unnecessary criminal investigation and to reliably and confidently establish manner and cause of death.

**Keywords:** Complex suicide, Poison, Hanging, Autopsy, Ligature mark, Criminal investigation, Death Forensic science laboratory

## INTRODUCTION

The definition of complex suicide as the use of more than one method to induce death has been widely accepted in the forensic literature<sup>[1-7]</sup>. In 1974, Marcinkoski *et al.*<sup>[3]</sup> divided suicides into simple and complex. In this context, a distinction can be made between planned and unplanned complex suicides. In planned complex suicides, two or more methods are employed simultaneously in order to make sure that death will occur even if one method fails. In unplanned complex suicides, several other methods of suicide are tried after the first method chosen failed to gain one's end or when it proved to be too painful. In planned complex suicides, typically two of the generally common methods of suicide (e.g., ingestion of hypnotics or other medicaments, hanging, use of firearms, drowning, jumping from a height) are combined. However, unusual combinations have been described also, such as the simultaneous firing of several guns, self-immolation, jumping from a height or shooting oneself while driving a

car. Other frequently used methods after failure of the first method are hanging and jumping from a height. The literature has reported the use of up to five suicide methods applied one after the other. Differentiation is possible only if autopsy including toxicological analysis is performed and the traces at the death scene are thoroughly investigated, so that the sequel of events can be reconstructed.

## CASE DESCRIPTIONS

### Case No. 1

The deceased is a 33-year-old male who was found to be dead, hanging from a tree with the help of a screen cloth. He was a married man with two children. In recent weeks, he was often found to be depressed as he could not payback huge amount of loans he had taken. According to the police investigation, the man had history of alcohol abuse, a prior suicide attempt and recently expressed continuing suicidal intent.

## POST-MORTEM EXAMINATION

On external examination, the body was 172 cm in length and weighs 75 kgs. The neck showed a ligature mark which abraded on the skin. It was brown and dried with a parchment-like appearance; outside of it there was a narrow band of hyperaemia. The ligature mark was deepest in the back of neck and there was a gap under the chin. The knot was under the chin and an abrasion occurred (1.5 x 1.5 cm) on the right tip of the chin. The ligature mark was directing obliquely upwards to the suspension point. There was neither congestion of the face nor petechiae in skin and eyes. No other injuries other than the ligature mark were present over the body. At internal examination, dissection of the neck revealed hemorrhagic infiltrations of the skin, connective and muscular tissues in relation to the ligature mark. The cervical spine, hyoid bone and laryngeal cartilages were intact. The brain and lungs showed well-marked visceral congestion. Stomach contained 200 ml of greenish fluid with a peculiar smell (Figure 1). Stomach mucosa was congested. Liver, spleen and both kidneys were intact and congested. The stomach and its contents, portion of small intestine and its contents, blood, portion of liver and kidney and the preservative used were sent for toxicological analysis. The results confirmed the presence of organo- phosphorus insecticide in the blood and viscera.

### Case No 2

The deceased was a 20-year-old male who was found dead by his father, hanging by his neck at his residence and a bottle containing kerosene like fluid was lying in

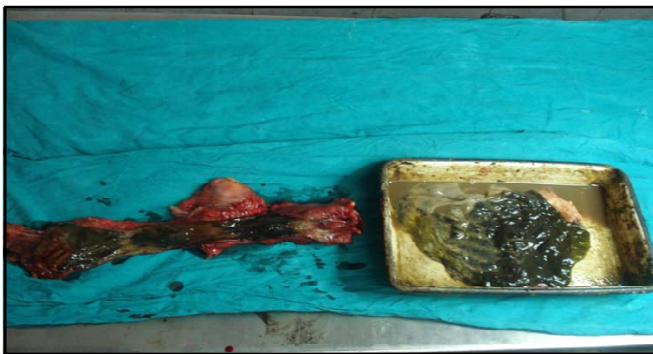


Figure 1: Showing greenish coloured oesophagus and stomach mucosa

the floor. His body was hanging from a metal beam, with the help of a plastic rope, from the ceiling with his feet at only 3 cm from the floor.

## POST-MORTEM EXAMINATION

On external examination, the dead body was 150 cm in height and 55 kg in weight. The neck showed a ligature mark that abraded the skin, causing a hemorrhagic infiltration, which suggested an intra-vital origin for the hanging. Other external findings were the lividities in sole, facial cyanosis and ecchymosis in the tongue. No other signs of traumatic violence before death were observed.

Remarkable internal findings were the intense odour from the bluish fluid in the stomach, which contained 150 ml of kerosene which was confirmed by sending for chemical analysis (Figure 2). The stomach mucosa was congested. There was punctate ecchymosis in lungs with oedema of both upper lobes. The liver was also congested.



Figure 2: Showing bluish coloured stomach mucosa

## DISCUSSION

In the forensic literature, complex suicides have been reported to account for about 1.5–5.0% of all suicides<sup>[2-5]</sup>. In our study, the rate of complex suicide was determined as 1.8% as compatible with the literature<sup>[2,3,4]</sup>. The main difference between planned complex suicide and those cases defined in medico legal literature as combined suicides lies in the complex mechanism used by the victim as a protection against the failure of one of the mechanisms. The cause of death was given as asphyxia as a result of hanging in both cases and based upon

examination of the scenes and the anatomo-pathological and toxicological data, the manners of death were determined to be planned complex suicide.

The distinction between planned and unplanned complex suicide, being largely based on the victim's intention, is sometimes difficult. Another common problem for the diagnosis of complex suicide is the interpretation of the concentrations of the chemicals. Obviously, a low level would indicate that it was used as a support, whereas a high level would implicate the compound as a direct tool in the death of the individual. Victims can use methods of lesser lethality before opting to use more lethal techniques. The conversion from lesser to greater methods of lethality is most likely associated with pain, anguish and frustration experienced by the suicidal individual<sup>[9]</sup>.

In these cases, second method was applied because the first method either takes too much time or gives pain. In other words, the victim had chosen the second and more lethal method due to the reasons of pain, ache and taking too much time. Consequently, the investigation of death scene and autopsy processes should be performed carefully in complex suicides in which more than one method is used. The presence of suicide note in the death scene, a history of previous suicide attempt, a medical history of psychiatric disorder, the presence of any problems (unfulfilled love, familial problems, economic problems etc.) that may cause a person to suicide can be interpreted in favour of suicide. In addition, using medicine and/or pesticide, wrist and/or flexor surface of elbow cutting may be probably selected as the first method by the victim in an attempt of complex suicide. Afterwards, thinking that these methods are slower and comparatively ineffective, the victim may select a second and more lethal method (hanging, firearms etc.). For this reason, we think that the first method used can be interpreted as autopsy findings which is supporting the manner as a suicide<sup>[10]</sup>.

Many questions may remain unanswered if the scene of death is not visited. The scene may reveal features of suicide privacy, farewell letter and so on. Relatives or friends of the decedent at the scene may provide background information such as history of depression and of previous suicide attempts, marital, social or financial problems.

Even when no evidence of a struggle was seen at the scene, forensic pathologist should collect the specimens for toxicological analyses for alcohol, drug or various poisons at the autopsy. Because, the person who appears to have died from a suicide attempt may have actually killed by somebody, while being under the influence of alcohol or a drug. In these two cases, there were no evidence of a struggle or the presence of drag marks at the scene ruling out homicide<sup>[10,11]</sup>.

There was a narrow zone of reddened hyperaemia at either margin of the mark, hemorrhagic infiltrations of the skin, connective and muscular tissues in relation to the ligature mark at the autopsy, indicating that the ligature must have been applied during life.

## REFERENCES

1. Turk EE, Anders S, Tsokos M. Planned complex suicide: Report of 2 autopsy cases of suicidal shot injury and subsequent self-immolation. *Forensic Sci Int* 2004; 139:35–38.
2. Cingolani M, Tsakri D. Planned complex suicide: Report of three cases. *Am J Forensic Med Pathol* 2000; 21:255–60.
3. Marcinkowski T, Pukacka-Sokolowska L, Wojciechowski T. Planned complex suicide. *Forensic Sci* 1974; 3:95–100.
4. Taff ML, Boglioli LR, Danto BL. Planned complex suicide. *Am J Forensic Med Pathol* 1998; 19:194.
5. Verma SK, Kishore U. Combined suicide: An unusual case of self immolation followed by attempted self-strangulation and successful partial hanging. *Ind Med Gaz* 1999; 133:387–89.
6. Padosch SA, Schmidt PH, Madea B. Planned complex suicide by self-poisoning and a manipulated blank revolver: Remarkable findings due to multiple gunshot wounds and self-made wooden projectiles. *J Forensic Sci* 2003; 48:1371–78.
7. Blanco-Pampin JM, Suarez-Penaranda JM, Rico-Boquete R, *et al.* Planned complex suicide: An unusual suicide by hanging and gunshot. *Am J Forensic Med Pathol* 1997; 18:104–06.
8. Hofmann V, Herber F. Uber kombinierte and protrahierte Suizide. *Kriminal Forens Wiss* 1984; 53:83–88.
9. Racette S, Sauvageau BS, Sauvageau A. Planned and unplanned complex suicide: A 5-year retrospective study. *J Forensic Sci* 2007;52:449–52.
10. Bohnert M. Complex suicides. In: Tsokos M, ed. *Forensic Pathology Reviews*. Vol 2. Totowa, NJ: Humana Press Inc 2005;pp 127–43.
11. E. Lignitz, H. Strauch. Kombiniertes Suizid durch Verbrennen und Sturz aus der Höhe. *Arch. Kriminol* 1986;178:51–53.