

CHAPTER: I

INTRODUCTION

A complex suicide is defined as the use of more than one method to induce death. The planning of several methods for inducing death further permits the classification of suicide into planned and unplanned. In 1974, Marcinkowski et al had considered a general division of methods of suicide. In this classification suicides are divided into simple and complex.^[15] A complex suicide is defined as the use of more than one method to induce death. The combination plan of several methods for inducing death permits the classification of suicide to planned or unplanned. The planning of several methods for inducing death further permits the classification of suicide into planned and unplanned. A distinction can be made between planned and unplanned complex suicides (primary/secondary combinations ^[3]. In unplanned suicide the use of second method occurs when the first method chosen has not achieved the desired effect. Complex suicide is defined as the use of more than one method to induce death. Primary or planned complex suicide is defined as the combination of more than one previously planned methods to prevent first method's failure. In secondary or unplanned complex suicide, the victim employs the second method following the failure of first one Using multiple methods for self-destruction in a single episode occurs very rare. The victim intentionally uses a variety of backup (simultaneously or chronologically) methods to ensure a successful suicide. In planned (or primary) complex suicides, the victim simultaneously uses a combination of methods to guarantee that one of them will at least succeed, whereas in unplanned (or secondary) complex suicides, the individual spontaneously switches to another method after the first method has failed, caused too much pain or has not led to death quickly enough. In planned complex suicides typically two of the generally common methods of suicide (e.g. ingestion of medicines, hanging, use of firearms, drowning, fall from a height) are combined. But also, unusual combinations have been described such as the simultaneous firing of two guns, self-immolation in combination with other suicide methods or shooting oneself while driving a car and also, In unplanned complex suicides self-inflicted injuries by sharp force, especially cuts of the wrists, are often found as the primary act of suicide. In some cases, the suicide switches from cuts to stabs (mostly to the heart region). Other methods often used after the first phase of suicide are hanging and jump from a height.^[7]

According to the forensic literature, complex suicides account for 1.5-5% of all committed suicides.^[2] The differential diagnosis between suicide and homicide can be difficult and may even be impossible in some cases especially if the combination of methods employed is unusual and if the diagnosis is based only on the autopsy findings. When a complex method was used by a victim, even on the best investigation, it cannot be discriminated between suicide and homicide if the subject had died. The scene could reveal features of suicide privacy, farewell letter, and so on. Relatives or friends of the deceased at the scene may provide background information such as history of depression and of previous suicide attempts and marital, social, or financial troubles.

Complex suicide refers to inducing death by a combination of methods. It does not denote only the intricacy of the death mechanism but rather specifies the use of more than one method to induce death. So, the term “complex suicide” is highly different from “complicated suicide”. This latter is characterized by unintentional secondary trauma following the original suicide method. Suicide is a major cause of death in the present world. According to Durham, the French biologist, suicide is death resulting directly or indirectly from a positive or negative act of the victim himself, which he knows will produce this result.

Suicidal behaviour is described as an attitude towards death in the dilemma between life and death. Fatality rate of suicide attempt depends on aim, preparation of the selected method, knowledge of the individual about the selected suicide method, his/her expectations, and sometimes other factors like intervention of other people. Main serious suicide attempt types are using dangerous drugs, organic phosphorus, corrosive materials, hanging, firearms, jumping, and sharp objects. Suicidal behaviour can occur during the course of many psychiatric disorders such as major depressive disorder, personality disorders, psychotic disorder, and bipolar disorder. Sadness, reluctance, and despair constitute the significant signs for suicide. As these are common symptoms of depression, suicide attempts are often questioned by clinicians in depressive patients.

Worldwide, about 2% of deaths are attributed to suicide. According to the National Crime Report Bureau (NCRB) report, 2014, more than one lakh people die every year due to suicide in India. The definition of complex suicide as the use of more than one method to induce death has been widely accepted in the forensic literature. In the forensic literature, complex suicides have been reported to account for about 1.5–5.0% of all suicides. Generally,

there is a gradation in the use of the different method. In fact, the victim prefers to start with the least lethal and the less painful method before choosing a more serious approach to have less chance to escape death. In cases of complex suicide, the circumstances of death can be unfathomable, and a violent crime might be suspected in the first place. This especially applies to cases where one of the methods is the use of fire, as burning is also often employed in cases of homicide to cover up a crime. Self-immolation is the action of setting fire to oneself and is an infrequent method of suicide method in Western countries. However, burned corpses must be carefully examined because setting fire to a body after death can be a way of covering up a crime. Complex suicides involving self-immolation are rare, but careful analysis is necessary if we are to identify the manner of death. A systematic search of the literature concerning self-incineration in cases of complex suicides was carried out. This covered the age, gender and psychiatric condition of the victims [2,12], any history of previous suicide attempts, the existence of suicide notes, evidence of fire accelerants, signs of vital exposure to the fire, toxicology, the other suicide methods used in combination with burning and the characteristics of the burns. So, there exists lots of combinations in complex suicide.

In this paper we present a statistical report and analysis of complex suicide. different complex suicidal cases, suicidal behaviour and psychiatric disorder of victim, suicide motive and the methods of suicide were examined and identified.

CHAPTER II

LITERATURE REVIEW

Bohnert, Michael. "Complex Suicides." SpringerLink, Humana Press, 1 Jan. 1970 studied the term "complex suicide" refers to suicides in which more than one suicide method is applied. 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. In unplanned complex suicides, injuries by sharp force, especially cutting the wrists, are often found as the primary act of suicide. In some cases, the suicidal changes from the infliction of cut wounds to the infliction of stab wounds (most often located in the heart region)

Toro, Klara, and Stefan Pollak. "Complex Suicide versus Complicated Suicide." Forensic Science International, Elsevier, 25Dec 2008.In complex suicides, two or more methods are applied either simultaneously or one after the other. The purpose of the present study was to distinguish such complex suicides in the proper sense from "complicated suicides", which are characterized by an unintentional secondary traumatization following the original suicide method. The study material comprises 1217 suicides investigated at the Budapest Institute of Forensic Medicine in the period from 2004 to 2006. Among these, 4.43% (n = 54) accounted for planned or unplanned complex suicides, whereas 0.49% (n = 6) were categorized as "complicated suicides". The latter group included four fatalities due to unintended falls from a height (for instance after breaking of the hanging noose), one death from electrocution and one case of drowning. The succession of a failed suicidal act and a secondary ("unforeseen" and therefore "accidental") trauma with fatal outcome may cause problems in determining the manner and cause of death.

Marcinkowski, Tadeusz, et al. “Planned Complex Suicide.” Forensic Science, Elsevier, 13 May 2004. A 23-year-old student committed suicide by hanging himself and giving himself an electric shock at the same time. The contents of farewell letters and an examination of the place of suicide showed that complex suicide had been previously planned. This kind of planned complex suicide must be differentiated from others in which the complex way of committing suicide is a result of failure in the first method of suicide or of several methods and in a short period of time.

Petkovic, Stojan, et al. “Complex Suicide: An Unusual Case with Six Methods Applied.” Wiley Online Library, John Wiley & Sons, Ltd, 3 June 2011. Complex suicides (CSs) are committed by using more than one method. They account for 1.5–5% of all suicides. We present a case of CSs of a 44-year-old man, found dead in the vicinity of his car, in a deserted frozen field. Police investigation excluded homicide, and no medical data confirmed mental illnesses. Autopsy revealed wrist cuts, neck cuts, acid burns in the GI tract, multiple stab wounds to the head by a screwdriver, and several uncertain signs of hypothermia. Toxicology analysis (gas chromatography–mass spectrometry) confirmed ingestion of insecticide. We concluded that stab wounds to the head were the cause of death, while external hemorrhage and hypothermia were contributing factors. This is the first case of CSs reviewed in the literature where six suicide methods were applied. This particular case is interesting because the victim used a screwdriver as a tool for inflicting stab wounds to the head, which is a rare suicidal method.

Kalisz an, Michal, et al. “Complex Suicide by Self Stabbing with Subsequent Drowning in the Sea.” Wiley Online Library, 18 July 2013.The paper presents a unique case of a complex suicide committed by a young man, mostly probably triggered by a disappointment in love. The uniqueness of the suicide lies in the fact that the victim inflicted several deep stab wounds on himself, in the chest and abdomen, while standing partly submerged in the sea and, having done so, he dropped and disappeared in the water. The postmortem examination showed, apart from deep wounds in the trunk, characteristics of drowning that manifested itself in the form of aqueous emphysema of the lungs. Suicide was clearly determined on the basis of the circumstances preceding death, the location, and arrangement of the trunk wounds and the

testimony given by a witness of the incident. The circumstances preceding the suicidal act clearly suggest an underlying undiagnosed mental disorder.

CHAPTER III

AIM AND OBJECTIVES

AIM:

The aim of the study is to do statistical analysis of complex suicides, in and around Kerala.

OBJECTIVES

- To identify the suicidal behaviour of the victim.
- To know the psychiatric disorder of the victim.
- To understand the suicide motive and the method of suicide.

CHAPTER IV

MATERIALS AND METHODOLOGY

MATERIALS REQUIRED

Primary data related to suicide from Kerala police academy and DCRB Kottayam.

METHODOLOGY

This study was based on complex suicide cases brought to the department of Kerala Police Academy and DCRB Kottayam. For the study, data was collected and tabulated. Statistical analysis of different complex suicide cases has been done.

CHAPTER V

OBSERVATION

Cas e no:	gende r	Age	Marital status	occupation	Incident location	Suicid e note	Past suicide attemp t	Psychiatr ic disorder	Suicide motive	Method of suicide
1	femal e	21	married	House wife	House room	+	-	depressio n	Familial problem	Wrist cutting + drowning
2	Male	61	married	unemploye d	courtyar d	-	-		psychiatric	Insecticide ingestion + hanging
3	femal e	70	married	House wife	House room	-	+	depressio n	Psychiatric	Wrist cutting + self-strangulati on
4	male	45	married	Animal husbandry	House Bed room	+	-	-	Economic bankruptcy	Flexor side of left elbow cutting + hanging
5	male	26	married	Prayer leader	Fathers home	-	-	depressio n	Psychiatric	Insecticide ingestion + hanging
6	femal e	30	married	House wife	House room	-	-	depressio n	Familial problem	Medicine overdose+ wrist cutting + hanging
7	male	19	single	student	House room	+	-	-	Unfilled love	Medicine overdose+ wounds to neck, flexor+ rodenticide ingestion
8	male	34	married	transport company	House room	+	+		Psychiatric	Pesticide ingestion +Stabbing wound to the chest
9	male	25	single	farmer	House room	+	-		Illegitimat e	Insecticide ingestion+ sharp

10	male	39	divorced	unemployed	House kitchen	+	-	depression	Psychiatric	Medicine overdose + LPG inhalation
11	male	43	married	worker	street	-	-	-	Bribery	Insecticide ingestion + fall from height
12	female	39	married	House wife	House balcony	+	-	-	Familial Problem	Insecticide ingestion + fall from height
13	male	25	single	unemployed	house	-	+		Psychiatric	Wrist cutting + medicine overdose
14	female	29	divorced	House wife	sea	-	+	depression	Psychiatric	Fungicide ingestion+ drowning
15	male	42	married	tradesman	House garage	+	-		Economic Bankruptcy	Wrist cutting+ self-strangulation
16	female	64	divorced	House wife	House Room window	-	+	depression	Psychiatric	Sharp wound to the neck chest and legs+ fall from height

Table 1

CHAPTER VI

RESULT AND CONCLUSION

RESULT

16 cases of complex suicide were found from a total of suicides, which represent about 5.33% of all suicides. Ten victims were men and the male: female ratio was of 1.7:1. The ages ranged from 19 to 70 years and the average age of victims was 38.3. Ten victims were married; 3 victims were single; 3 victims were divorced. Six victims were housewives, 4 victims were unemployed, followed by one each victim of student, worker, farmer, tradesman, prayer leader, and animal husbandry lines of business. It was observed that 13 victims realized the suicidal act in the house. Eight of them were observed to have left a suicide note, and 5 victims had previous suicidal attempts. It was determined that 10 victims had psychiatric disorders; one of them had alcohol dependence. Eight victims' suicide motive was psychiatric disorders and 3 victims was familial problems. On investigating the methods of suicide, total 34 methods were used in all 16 cases. It was seen that 9 victims preferred sharp instrument usage; whereas 5 victim's insecticide ingestion; medicine overdose; 3 victims each hanging, falling from a height; 2 victims' self-strangulation; and 1 victim each drowning, Liquefied Petroleum Gas and natural gas inhalation together, fungicide ingestion, rodenticide ingestion. It was determined that 2 victims used 3 methods and the other 14 victims 2 methods in company, to realize the suicide. 2 victims (case 11 and 12) used "insecticide ingestion and falling from height" combinations and analysis showed that the males are mostly committing suicide due to the psychiatric disorder of depression,

MAIN CAUSES OF SUICIDE

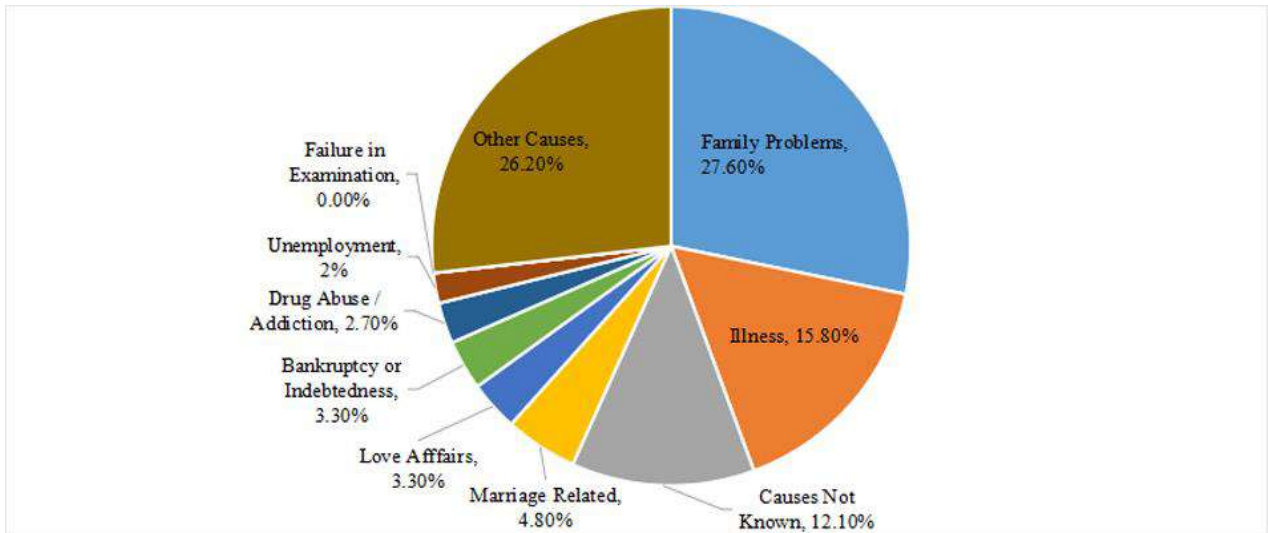


Figure 2.1

MEANS OF SUICIDE

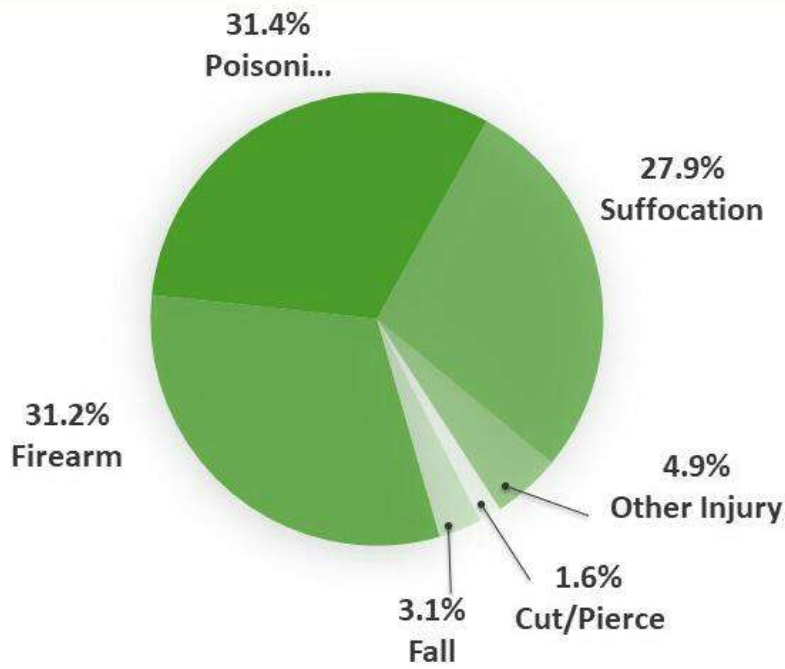


Figure 2.2

CONCLUSION

A planned complex suicide represents a tricky medico-legal case, because the combination of mechanisms concerned in such cases may be complex and homicide could be suspected. Homicide should be carefully ruled out in every case of sharp weapon injury. Only a careful assessment of all the elements, including examination of the scene and post-mortem findings, can reconstruct the lethal chain of events and elucidate the time, manner, and cause of death. When a complex method was used by a victim, even on the best investigation, it cannot be discriminated between suicide and homicide if the subject had died. The scene could reveal features of suicide privacy, farewell letter, and so on. Relatives or friends of the deceased at the scene may provide background information such as history of depression and of previous suicide attempts and marital, social, or financial troubles.

However, recent studies have begun to draw correlations between risk factors in different dimensions by examining psychiatric, family, psychosocial, socioeconomic, and demographic data. Methodological triangulation allows going beyond the more classic approaches to foster dialogue between objective and subjective issues, by integrating theoretical and methodological contributions from different disciplinary fields, correlating trends, structures, actions by subjects, indicators, and micro and macro social factors. Thus, to study suicide in a multidimensional and multi-causal way, we link fragments of classical sociology with the psycho-sociological approach presenting an analytical synthesis.

Suicide and attempted suicide are major public health concerns. In recent decades, there have been many welcome developments in understanding and preventing suicide, as well as good progress in intervening with those who have attempted suicide. Despite these developments, though, considerable challenges remain. The use of new technologies (including social media and naturalistic real-time monitoring via smartphones) to increase understanding of suicidal behaviour and to better identify suicide risk were the most frequently cited new research developments nominated by our contributors. With the proliferation of smartphone ownership globally, in low- and middle-income countries as well as in high-income countries, the growth in interest is not surprising. Given the field's continued inability to predict suicidal behaviour with sufficient sensitivity/specificity, the use of smartphone technologies affords the opportunity to assess risk factors repeatedly, in real-time and in naturalistic settings.

It is hoped that the use of such technologies will better capture the ‘waxing and waning’ nature of suicidal ideation and account for the complex interaction between the risk factors which predict the transition to suicide attempts. If the promise of new technologies is realized, individuals or clinicians may be able to better identify windows of acute risk in real-time (based, in part, on social media and moment-to-moment monitoring), alert others and hopefully receive interventions to alleviate that risk. Needless to say, there are many practical and ethical barriers that have yet to be overcome, but they are not insurmountable.

CASE REPORT

AN UNUSUAL COMPLEX SUICIDE BY PESTICIDE INGESTION AND STABBING

Case Presentation

A 34-year-old man, working as a director in a transport company, was found dead by his wife in the bedroom of his eldest son. There was a strange smell in the room. The agents of police have found a kitchen knife hidden under the bed and an empty strange bottle near the deceased. The investigation of the death scene did not find any disorder in the room. Blood traces were found only instead the bed. The testimony of witnesses revealed the good socioeconomic level of the family and the arrest of the elder son, since one week, for a corruption scandal. The family reports the deceased feelings of self-guilt and shame for his son without any expressed suicidal tendencies. The external examination of the body revealed five deep wounds in the chest under the left nipple measuring 2 to 3 cm in diameter.



Figure 1.1



Figure 1.2

All these wounds have horizontal orientation. In addition, two linear abrasions, measuring 0.5 to 0.7 cm, have been noted in the left side of the chest. Dry blood traces were found in both hands without any traumatic injury in the upper limbs.



Figure 1.3

The autopsy revealed the presence of two wounds in the fourth left intercostal space and three wounds in the sixth one without any rib fractures. A great haemo pneumothorax is found in the left pleural space (3500 ml of blood). Two deep wounds were found in the lower lobe of the left lung. Moreover, a transfixing wound penetrates the left diaphragmatic dome. The stomach contains a blue substance having a particularly irritating.



Figure 1.4

Toxicological analysis performed on samples from blood, urine and gastric contents revealed a low serum cholinesterase activity (480IU/L, NV: 3000-8500IU/L) and an anti-cholinesterase pesticide in significant quantities in the stomach.

DISCUSSION

In the forensic literature, complex suicides have been reported to account for about 1.5% to 5% of all suicides. Furthermore, few studies have concerned complex suicide with self-poisoning combined to stabbing. In our case the deceased would have initially swallowed pesticide (anti-cockroach substance) and then he stabbed himself in the chest

Pesticide ingestion was suspected by the weird smell of the room. Secondly it was confirmed by the toxicological analysis. Pesticide ingestion is one of the leading suicide methods. It accounts for more than one third of all suicide methods each year in the world. It is also known that WHO Class I and II organ phosphorus are the most lethal pesticides in humans. Sometimes, pesticide poisoning poses a problem for the medico-legal diagnosis of death. It may be due to accident, suicide or even homicide. At any rate, the variety of pesticides available in communities is large. Some studies suggest that less than 20% of pesticides used for self-poisoning are bought for the purpose and the majorities are freely available in the home or in the workplace.

On the other hand, suicide by stabbing is extremely rare. Multiple stab wounds raise homicide suspicion until proven otherwise. Although a large number of stab wounds could be found in suicide cases. In 2001 Karger and Veneman report a case of suicide with 92 stab wounds. Other recent suicide cases describe multiple stab wounds in different locations (neck, chest, abdomen...). However, in every case of fatal sharp-weapon injuries a set of arguments is necessary to distinguish between homicide and suicide. According to the literature, as in our case, the medico-legal diagnosis of suicide is only possible by confrontation of data collected from the autopsy findings, the results of toxicology analysis, the study of the circumstances and the study of the scene of death.

Conclusion of the case

In case of complex suicide, the presence of several different injuries can be suspicious as indicating homicide. The study of the circumstances, a careful inspection of the scene of death, a full autopsy and a systematic toxicology analysis are necessary to elucidate the correct mode of death in such cases.

CHAPTER VII

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