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RETROSPECTIVE STUDY OF PLANNED COMPLEX SUICIDE CASES: A SINGLE CENTER EXPERIENCE OF TEN YEARS.

Forensic Medicine

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ABSTRACT

Introduction: Suicidal activities are seeing rising trends across the globe. Methods adopted for suicide have also shown wide variation and newer and more complex methods of suicide have been increasingly reported in the last decade. Complex suicide cases have always been challenging for forensic experts and many times simultaneous use of multiple methods for committing suicides raises suspicion in the minds of relatives as well as investigating agencies. **Material And Methods:** It is a retrospective study, where data was gathered from police inquest and postmortem examination reports of confirmed cases of suicidal deaths, from the period of 2011 to 2022, falling in the category of planned complex suicide. **Results:** A total of 10 cases were recorded with the prevalent young adult age group and showing male preponderance. Use of sharp-edged weapons was frequent followed by consumption of poisonous substances. **Conclusion:** A forensic expert must have knowledge about variable presentations of complex suicide cases.

KEYWORDS

primary complex suicide, retrospective study, planned complex suicide, sharp weapons in complex suicide

INTRODUCTION:

Suicide is a major public health issue globally that falls under the causes of death among the non-communicable disease category.[1] Sometimes, the decision to commit suicide is well planned out extensively rather than being impulsive manoeuvring multiple methods known as 'complex suicide'.[2-7]

Overall, in the literature suicides are largely divided into simple and complex types.[8] A complex suicide is defined as the use of more than one method to induce death. [2] In the forensic literature, complex suicides account for about 1.5–5.0% of all suicides.[5,9,10]

Planning and using more than one method at the same time is called "planned complex suicide" or a "primary complex suicide". Complex suicides in which other methods are used sequentially if the first method fails are called "unplanned complex suicide" or "secondary complex suicide".[3] A planned complex suicide is the complex action mechanism, formerly planned to protect the victim of suicide from failure.[4]

To date, the majority of cases of complex suicide have been reported either as case reports or case series, with the exception of a few research articles having a greater sample size. [2,3]

Complex suicides are challenging for forensic experts as these cases raise suspicion in the minds of relatives as well as investigating officers, and hence forensic experts should be well worse with such rare but possible case presentations. Hence in the current study, we are presenting an experience from one center regarding planned complex suicide cases to add to existing literature.

MATERIAL AND METHODS

This retrospective type of study was conducted at the Department of Forensic Medicine and Toxicology, B. J. Govt. Medical College, Pune on the data retrieved from year 2012 to 2022. For the current study, only those cases, where at the end of detailed police investigations manner of death was confirmed as suicide and which fell in the category of planned complex suicide, were taken into consideration. Records of all such cases were assessed and data regarding age, sex, marital status, reason for suicide, suicide note, previous suicide attempts etc. were gathered from police inquest, and post-mortem examination reports, and were tabulated as in Table no. 1.

RESULTS

Overall, ten cases of complex suicide were found in ten years with a percentage of 0.07% among all suicide cases (Table – 4). In the study, all cases were of male sex with a minimum age of 27 years, maximum age of 51 years, and mean age of 37.3 years (Table 3). Six out of ten cases were married. Out of ten only one was unemployed. Suicide note was found in five cases and a history of previous suicide attempt was recorded in four cases. In all cases, there was a combination of two methods, with a total of nine different methods used in variable distributions (Table – 2). Among all methods cut-throat injury and poisoning were the preferred choices in four cases each. While decapitation, wrist slash, and firearm injury were noted in one case each. The use of sharp weapons was frequent and was seen in a total of seven cases.

DISCUSSION

Considering the distribution of sex among cases of complex suicide, literature has shown male preponderance. [2,3,5,11] In the current study all ten cases were of male sex. The mean age of the study population was 37.3 years, which is almost similar to some other previous studies.[2,3] However, in the current study we found that the percentage of complex suicide cases in 10 years was only 0.07%, which is much less than the previously reported research which reported it to be around 1.5 – 5%.[2,3,9] This may be due to the fact that all previously reported cases are from Western countries and have included both planned and unplanned complex suicide cases. While, the current study data is of the Indian population from one center, and only planned complex suicide cases were included.

In the present study, we found that the majority of cases occurred at places other than home, contrary to the findings of previous researchers, who noted that the majority of cases occurred at home.[2,3] It is worth mentioning that other contradicting studies were from foreign countries, where at home one can get a secluded place to commit suicide, which may not be easily possible in the Indian context.

As far as suicide notes are concerned, studies have noted that victims left a suicide note in 20–50% of complex suicides and 15–30% of victims of complex suicides had a history of previous suicide attempts.[2,5,12] In the current study, we found that in five out of ten (50%) cases suicide note was left, and four cases (40%) had a history of previously attempted suicide.

In complex suicides, the existence of a previous suicide attempt has appeared to be less than the suicide note.[3] However, it is a known fact that, in many cases, relatives are reluctant to reveal past history of suicide attempts by the deceased, hence the lesser percentage of previous attempts of suicide in such cases becomes a known fact. This can further be supported by the fact that in the current study in two

cases (Case no. 2 and 7), relatives did not give a history of previous suicide attempts, however multiple healed scars, suggestive of self-inflictions were noted over ventral aspects of left forearms in lower two thirds.

In complex suicides, many case reports report victims with psychiatric disorders including bipolar disorder, schizophrenia, depression, and depressive symptoms.[5,13-16] Banchini et al.[11] associated complex suicide cases with borderline personality disorder, major depression, bipolar disorder, and schizophrenia. Demirci et al.[2] showed that 62.5% of complex suicide cases had been diagnosed with a psychiatric disease, and in 50% of cases suicide motivation source was psychiatric diseases. A history of a previous suicide attempt is one of the basic elements of complex suicide cases; Victims of complex suicide have been reported to be diagnosed with depression, schizophrenia, psychosis, bipolar disorder, anxiety disorders, and antisocial personality disorder.[2,12,17]

In the present study, we found only one case each of diagnosed kidney disease and diagnosed psychiatric illness. However, in India, there is very little awareness about psychiatric illness, and due to social stigma, many patients or their relatives even refrain from opting for psychiatric advice leading to a showcase of a lesser number of psychiatric illness cases.

In planned complex suicides, the victims most frequently preferred to take one or more drugs in lethal or toxic doses as a method of suicide.[3] The same can be seen in the present study, where in four cases victims have chosen the consumption of poisonous substances as one of the methods in conjunction with others.

Studies conducted in Turkey have reported that the most commonly used suicide methods were hanging, the use of firearms, jumping from high places, and taking medications[18,19] However, in the present study we noted the frequent use of sharp weapons for committing suicide in seven of ten cases. In the literature, we could not find any such prevalent use of sharp weapons for committing suicides in cases of planned complex suicide. On the contrary, in India, methods like hanging, poisoning, self-immolation, and drowning are reported to be more prevalent when looking at studies other than complex suicide cases.[20] We could not find any specific reason behind the use of sharp weapons in cases of planned complex suicides in the current study.

In planned complex suicides, two or more methods with high mortality rates are used at the same time to ensure death even if one method fails.[21] The highest number of separate suicide methods used at one time in the literature is six.[22] However, similar to the current study, the majority of studies and case reports suggest the use of two methods as the most common pattern in complex suicide cases.[2,3]

CONCLUSION

Complex suicide cases are predominantly seen in males and are more prevalent in young adults. The use of sharp weapons is more common in cases of planned complex suicides. The overall frequency of complex suicides in the Indian population is very low, but a forensic expert must have adequate knowledge about the presentation of such cases and different methods used in combination to perform suicide.

Conflict Of Interest: Nil

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Table No. 1: Details Of Cases Of Complex Suicide Brought For Post-mortem Examination.

Sr No	Year	Age in years	Sex	Marital Status	Profession	Place of incidence	Suicide Note	History of Previous suicide attempt	Reason for Suicide	Known psychiatric illness	Method of suicide
1	2013	32	Male	Married	Software engineer	Home	Yes	No	Financial Loss	No	Hanging with Firearm injury with a rifled weapon
2	2015	27	Male	Unmarried	Driver	Home	No	No	Not known	No	Stab injury over the abdomen with burns
3	2016	41	Male	Married	Farmer	Temple	No	Yes	Financial loss	No	Stab injury over abdomen with Organo-phosphate poisoning.
4	2015	27	Male	Unmarried	Driver	Home	No	No	Not known	No	Stab injury over the chest with burns
5	2018	48	Male	Married	Software engineer	Water Canal	Yes	No	Marital dispute	No	Cut throat injury with drowning.
6	2020	31	Male	Unmarried	Unemployed	Railway track	No	Yes	Physical illness	Diagnosed case of Chronic Kidney Disease.	Decapitation with rat kill compound poisoning.
7	2021	39	Male	Married	Small scale businessman	Swimming pool	Yes	No	Financial loss	No	Drowning with rat kill compound poisoning
8	2021	48	Male	Married	Electrician	Forest	Yes	Yes	Marital dispute	No	Cut throat injury with phenyl poisoning.
9	2021	51	Male	Married	Labour worker	Lodge room	No	Yes	Psychiatric illness	Yes On antidepressant medications	Cut throat injury with hanging
10	2022	29	Male	Unmarried	Painter	Rented room	Yes	No	Failure in love	No	Cut throat injury with wrist slash

Table No. 2: Distribution Of Cases According To Methods Of Suicide.

Sr No	Methods of suicide	Number of cases
1	Cut throat injury	4
2	Poisoning	4
3	Stab Injury	3
4	Drowning	2
5	Burns	2
6	Hanging	2
7	Wrist slash injury	1
8	Decapitation injury	1
9	Firearm injury	1

Table No. 3: Age Wise Distribution Of Case.

Sr No	Total number of cases	Minimum age	Maximum Age	Mean Age	Standard Deviation
1	10	27	51	37.3	9.32

Table No. 4: Year Wise Distribution Of Cases

Sr No	Year	Number of Planned complex suicide cases	Total number of suicide cases	Percentage
1	2013	1	1228	0.081
2	2014	0	1276	0.000
3	2015	2	1083	0.184
4	2016	1	1261	0.079
5	2017	0	1198	0.000
6	2018	1	1332	0.075
7	2019	0	1389	0.000
8	2020	1	1376	0.072
9	2021	3	1319	0.227
10	2022	1	1337	0.074
11	Total	10	12799	0.078

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