

STUDY OF AUTOPSY BASED SUICIDAL HANGING

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ABSTRACT

Introduction: Hanging is one of the most commonly used methods for suicide in most countries. Commission of suicide by hanging is increasing in the people of Bangladesh. Suicidal hanging is detrimental to social health. Appropriate measures to prevent it are essential.

Objectives: To find out the demography, cause and nature of suicidal hanging.

Study design: It is a cross sectional type of descriptive study.

Setting: Data was collected on predesigned proformas from postmortem reports recorded by the students of DFM and MD in Forensic Medicine at Dhaka medical college during their course.

Subject: Autopsy performed on the cases of suicidal hanging at Dhaka Medical College Morgue from September, 2011 to June, 2013.

Result: Out of 100 cases, eighty two (82%) were female and the most commonest (50%) age group were from 11-20 years. In 18(18%) cases Dopatta were the commonest material used for hanging. Quarrel with husband 12(12%) were the predominant cause to destroy life. In ninety (90%) cases had complete suspension where the most commonest situation of gap was on the back (38.89%). During autopsy of suicidal hanging there were injuries on the body of deceased in few cases. But these injuries did not result in death of the victim.

Key words: Dhaka Medical College Morgue, Autopsy, Hanging, Suicide.

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INTRODUCTION

Suicide means self murder. Attempted suicide is an unlawful act and the person is held responsible for the immediate consequences of the act.¹ Knowledge on suicidal phenomenon is constantly increasing.² The method used to commit the index suicide attempt classified as soft or hard. 'Hard' were the methods imagined to cause death through pain, tearing the body to pieces, bleeding to death, choking, i.e. hanging oneself, throwing oneself under a train or out of a window, shooting oneself, poisoning, inducing an embolism. The 'soft' methods instead were swallowing medications, cutting one's veins, abandoning oneself to the current to the point of drowning, suffocating with a plastic bag, and turning on the gas. All these 'soft' methods can be atrocious.² Hanging is one of the most commonly used methods for suicide worldwide. Its incidence has increased over the last 30 years.³ Hanging is a process in which the body is suspended with

a ligature around neck which causes constriction of the air passage preventing exchange of air between the atmosphere and the alveoli of lungs, leading to asphyxia and death.⁴ The constricting force is either the weight of the whole body or weight of head alone.⁴ Hanging is usually suicidal.⁵ Cause of death are asphyxia, venous congestion, combined asphyxia and venous congestion, cerebral ischemia, shock, fracture or dislocation of the cervical vertebrae.⁴ It is very unusual for the cervical spine to be broken in suicidal hanging unless there has been an unusually long drop.⁶ Causes of suicidal death in our country regarding the risk factors are low status in society, lack of decision making, marital conflicts, chronic illness, mental illness. Suicide among unmarried women of reproductive age may be linked to extramarital sex-forced or consensual and subsequent unwanted pregnancy.⁷

MATERIALS AND METHODS

This study was conducted on 100 cases of suicidal hanging at Dhaka Medical College Mortuary. Data was collected on predesigned proformas from autopsy

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reports recorded by the students of Diploma and MD course in Forensic Medicine at Dhaka Medical College from March 2011 to June 2013 with their verbal consent. We collected demographic data, cause, type of hanging, nature of ligature material used, situation of gap on the neck and any injuries on the other parts of the body. The collected data was entered in SPSS software (12 versions) and analyzed. The obtained data were checked, verified and edited before tabulation. Results were presented in diagram and tables keeping in mind the objectives of the study.

RESULT

Out of 100 cases, eighty two (82%) were female (Figure-1). It is observed that age of the victim was between 1 to 55 years. Among them age group 11-20 years were most predominant 50(50%) followed by ages from 21-30 years 40 (40%) Table-1. Mean age of 22.20 year and a standard deviation of 7.01 year. In most cases 18(18%) dopatta were the commonest material for suspension of the body. Rope 10(10%), Sharee 8(8%), other9 (9%) were also used as ligature material and in 55(55%) cases nature of materials were not mentioned (Table -2). Quarrel with spouse 12(12 %) was the commonest cause. Family disharmony 2(2%), other 9(9%), not mentioned in 77(77%) cases. (Table-3). In 90(90%) cases had complete suspension and 02(2%) were of incomplete/ partial suspension and 8(8%) were not mentioned (Table-4). Considering the location of gap most were situated on the back 35(35%) followed by left side of neck 29(32.22%). Chi-Square test was done but not significant. A p-value of less than 0.05 was considered as statistically significant.

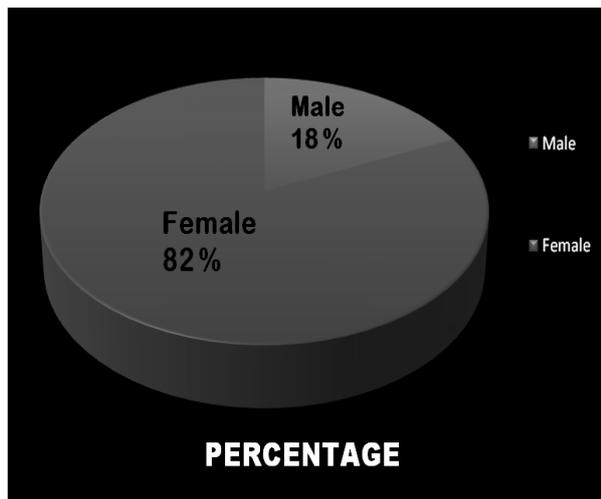


Figure : 1
Showing distribution of patient by sex (n=100).

Table I
Distribution of patient by age (n=100)

Age in year	No	Percentage
0-10	1	1%
11-20	50	50%
21-30	40	40%
31-40	7	7%
41-50	1	1%
51-60	1	1%
Total	100	100%

Table : II
Nature of Ligature material used by victim for hanging (n=100).

Ligature materials	No	Percentage
Sharee	8	8.0
Dopatta	18	18.0
Rope	10	10.0
Others	9	9.0
Undetermined	55	55.0
Total	100	100.0

Table : III
Predisposing cause of hanging (n=100).

Cause	No	Percentage
Undetermined	77	77.0
Quarrel with spouse	12	12.0
Family disharmony	2	2.0
Others	9	9.0
Total	100	100.0

Table : IV
Classification of victim by degree of suspension of the body (n=100).

Type	No	Percentage
Complete	90	90%
Partial	2	2%
Not mentioned	8	8%
Total	100	100%

DISCUSSION

Suicide by hanging is the act of intentionally killing oneself via suspension from an anchor point by a ligature. Hanging is a very simple yet highly effective suicide method. It is one of the most commonly used methods and has high mortality rate.⁸ Among the different modes of suicide in Bangladesh one of the commonest mode is hanging.⁹ Unlike old decades, female are only engaged in domestic work. Moreover they are involved in national and international important activities with great success. Instead of relative improvement of social status, they are not completely free from familial delinmi in our country yet. Therefore opposite picture is revealed in another group of females who are used to be abused for simple mistakes in domestic work, marital conflict in married women and other familial disharmony commonly in low socio-economic society which lead to take desperate decision like suicide to rid her. This study revealed that hanging was the commonest method of suicide in young women, it differs the findings of Lorna Duckworth¹⁰ and quarrel with spouse was the commonest cause of suicidal hanging, this finding corresponds with the study conducted in Dhaka Medical College.¹¹ Owing to lack of experience of the investigating officers in the field of medico-legal work, the inquest reports prepared by them are usually inadequate and incomplete. These deficiencies lead to difficulty in collection of accurate statistical data such as cause and material used were undetermined in some cases in this study. This finding is similar that was found in a study conducted in Dhaka Medical College from the year 1992-1996.¹² Current study revealed that women between 11-20 years were the most affected age group. Emotional factor from different source triggering suicide among these ages. This finding contradict that was found in both the study conducted in Dhaka Medical College and Sir Salimullah Medical College.^{9,11} In this study only one case was found above 50 years and no case was above 60 year. It was observed that Dopatta/Orna was the commonest ligature material used for hanging. Similar findings were observed in the study conducted in Sir Salimullah Medical College.¹¹ The materials required are easily available, and a wide range of ligatures can be used. Because of this, it is considered a difficult method to prevent.⁸ Traditional dress of Bangladesh is Salwar Kamiz and Orna. Easy availability of this material was the reason of its highest percentage among the materials. This finding differs from that study conducted in Forensic Medicine department of Dhaka Medical College and in 24 coroner's jurisdiction of England, where rope was common ligature material in hanging.^{3,9,13} Sometimes people bent on suicide have attempted other methods. Therefore, the body may have cuts and other injuries. There may be other injuries which have been accidental in that the person may have sustained them when throwing himself from a table or a chair.¹⁴ Bruise and abrasion constitute only 3.33% in this study due to impact with surrounding

hard objects. In ninety percent of total cases bodies were completely suspended. Typical method of self-suspension is to attach a thin rope to a high point such as a ceiling beam or a staircase. The lower end is formed into either a fixed loop or a slip knot, which is placed around the neck while the intending suicide stands on a chair or other support. On jumping off or kicking away the support, the victim is then suspended with all or most of his weight upon the rope.¹⁵

LIMITATIONS OF THE STUDY

In our study the greatest drawback was the lack of information about cause and nature of ligature material used in suicide by hanging. These information were not available in inquest reports. Therefore we have to analyze these data with small group subjects.

CONCLUSION

Suicide by hanging is rising among young female in our country. Both government and family have to be cordial to exclude the causative factors and prevent the suicidal behavior before it become worse. Social awareness, education and involvement in encouraging activities of young female may reduce the rate of suicide by developing the emotional stability at this age. Visiting scene of occurrence by Forensic Pathologist and specialized training for investigating officer need to be considered important to achieve more evidence and thus reach our goal.

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