

Original Article**Autopsy Analysis of Suicidal Hanging Cases in Sylhet**

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Abstract

Background: Suicide is one of the leading cause of unnatural death in the world. The frequency of suicidal hanging is dramatically increasing over the period of time in Bangladesh.

Methods: An autopsy reports based retrospective study carried out in the Department of Forensic Medicine of Sylhet MAG Osmani Medical College to analysis of suicidal hanging cases during the study period January 2017 to December 2018. After reviewing all postmortem reports, 230 cases of death were found due to suicidal hanging cases during the study period.

Results: The highest number of the victims 76(33.04%) were from the age group 10-19 years, followed by 61(26.52%) from 20-29 years and 126(54.78%) were female. Most of the dead bodies 38(16.52%) were brought from Gowainghat police station and majority victims 32(13.91%) locality were also in Gowainghat. The commonest autopsy findings were skin and subcutaneous tissue underneath the ligature mark found pale, white, hard, glistening 225(97.83%) and cyanosis 208(90.43%). The most common cause of death in post mortem findings was asphyxia 213(92.61%).

Conclusion: A well intended and inclusive programme is needed to reduce the frequency of suicidal hanging, which will ascertain the causative factor and helps in control and prevention.

Keywords: Pattern, Magnitude, RTAs Death, Sylhet, Bangladesh.

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Introduction

Suicidal hanging is one of the common method of suicide in the world.¹ Hanging is a mechanical form of asphyxia, which is caused by a suspension of the body by the neck. Any material capable of forming a ligature can be used for hanging. The pressure of the ligature on the neck is produced by the weight of the body.

The body needs not to be completely suspended, as death may result from hanging even in a sitting, kneeling or half-lying position.²⁻³ The most common causes of death include asphyxia &/or venous congestion, cerebral ischaemia, cerebral anemia, shock, fracture or dislocation of the cervical vertebrae etc.⁴

Suicide by hanging is a foremost leading cause of suicidal death in Bangladesh, specially in urban areas.⁵ It's also observed emerging in other South-East Asian countries.⁶⁻⁷ Suicidal hanging is gradually increasing and its prime cause depression, it's a manifestation of social agitation, the cause of which should be identified and eradicated. Even in developed countries like Serbia, Norway and Hungary suicide by hanging is the frequently observed method.⁸⁻⁹ This study was carried out to evaluate the autopsy analysis of suicidal hanging of the studied victims.

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Methods

Study design and setting

This autopsy reports based retrospective study carried out in the Department of Forensic Medicine of Sylhet MAG Osmani Medical College to analysis of suicidal hanging cases during the study period January 2017 to December 2018.

Data collection

After reviewing all postmortem reports, 230 cases of death were found due to suicidal hanging cases during the study period. Data were collected on socio-demographic characteristics, post mortem findings and causes of death from the post mortem examination reports.

Data analysis

The data analysis was carried out by using descriptive statistics and presented with frequency tables and charts.

Ethical approval

Ethical approval was obtained properly from the institutional ethical committee.

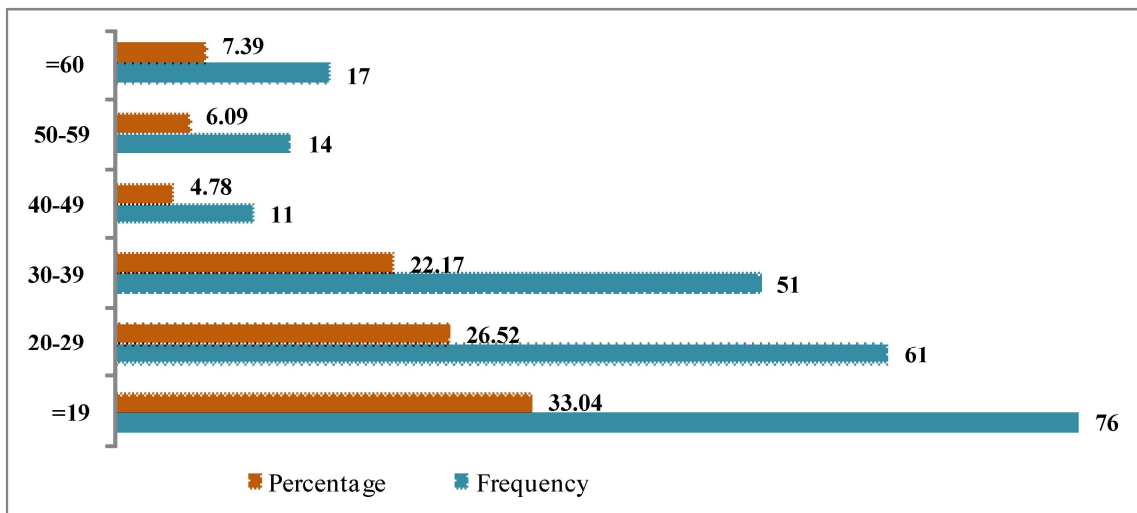
Results

A total of 230 medico-legal autopsy cases of suicidal hanging were reported during the period January 2017 to December 2018. Figure 1

years, followed by 61(26.52%) from 20-29 years. Figure 2 shows that 126(54.78%) were female and 104(45.22%) were male. Table 1 shows the demographic profile of postmortem victims. Most of the dead bodies 38(16.52%) were brought from Gowainghat police station and majority victims 32(13.91%) locality were also in Gowainghat.

Table 2 interprets the distribution of post mortem findings of the victims. Most common autopsy findings were skin and subcutaneous tissue underneath the ligature mark found pale, white, hard, glistening 225(97.83%) and cyanosis 208(90.43%) followed by dribbling of saliva was 133(57.83%), subconjunctival petechial haemorrhage was 109(47.39%) and tongue bite was 41(17.83%).

Table 3 reveals that the causes of death in post mortem findings. The most common autopsy finding was asphyxia 213(92.61%) followed by asphyxia and apoplexy combined was 14(6.06%) and delayed complications (Cerebral ischemia, aspiration pneumonia, sepsis etc.) were 07(3.04%).



illustrates the age wise distribution of the victims. The highest number of the victims 76(33.04%) were from the age group 10-19

Figure 1: Age wise distribution of the victims (N=230)

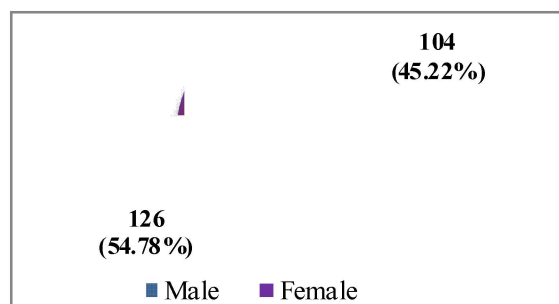


Figure 2: Sex wise distribution of the victims (N=230)

Table 1: Demographic distribution of the victims(N=230)

	Incidences		Total victims (N=230)	Percentage (%)
	2017	2018		
Locality (Police station) of the victims				
Kotwali	12	09	21	9.13
Airport	06	10	16	6.96
Shahparan	08	04	12	5.22
Jalalabad	07	12	19	8.26
Southsurma	04	03	07	3.04
Companygonj	06	08	14	6.09
Gowainghat	12	20	32	13.91
Gulapgonj	03	05	08	3.48
Beanibazar	03	07	10	4.35
Zakiganj	02	05	07	3.04
Fenchugonj	02	03	05	2.17
Kanaighat	04	03	07	3.04
Jaintapur	06	09	15	6.52
Moglabazar	01	03	04	1.74
Biswanath	05	09	14	6.09
Osmaninagor	05	05	10	4.35
Balaganj	02	02	04	1.74
Others	13	12	25	10.87
Postmortem referred from the Police station				
Kotwali	17	17	34	14.78
Airport	06	10	16	6.96
Shahparan	08	04	12	5.22
Jalalabad	07	12	19	8.26
Southsurma	04	03	07	3.04
Companygonj	06	08	14	6.09
Gowainghat	16	22	38	16.52
Gulapgonj	03	05	08	3.48
Beanibazar	03	07	10	4.35
Zakiganj	02	05	07	3.04
Fenchugonj	02	05	07	3.04
Kanaighat	04	03	07	3.04
Jaintapur	08	09	17	7.39
Moglabazar	01	03	04	1.74
Biswanath	05	09	14	6.09
Osmaninagor	06	05	11	4.78
Balaganj	03	02	05	2.17

Table 2: Distribution of post mortem findings

Postmortem findings	Frequency	Percentage (%)
Skin and subcutaneous tissue underneath the ligature mark found pale, white, hard, glistening	225	97.83
Cyanosis	208	90.43
Dribbling of saliva	133	57.83
Subconjunctival petechial haemorrhage	109	47.39
Tongue bite	41	17.83
Injury to subcutaneous tissue underneath the ligature mark	11	4.78
Injury to the neck muscles	06	2.61
Post mortem artifacts	07	3.04

*Multiple responses

Table 3: Causes of death in post mortem findings

Causes of death	Frequency	Percentage (%)
Asphyxia (Respiratory failure)	213	92.61
Apoplexy (Venous congestion)	03	1.30
Asphyxia and Apoplexy Combined	14	6.06
Cerebral anemia	02	0.87
Vagal shock	00	0.00
Delayed complications (Cerebral ischemia, aspiration pneumonia, sepsis etc.)	07	3.04

*Multiple responses

Discussion

The total numbers of autopsies done for hanging cases in the mortuary of Sylhet MAG Medical College between the periods of 2017 to 2018 were 230. In this study, suicidal death occurred in all age group, but more than half of the victims (59.56%) were found for the younger age group (10-29 years). This finding is similar to the studies carried out in Dhaka¹⁰⁻¹¹ (Bangladesh), Visakhapatnam¹² (India) and Basrah province¹³ (Iraq). Suicidal death by hanging which was more in female (54.78%) than male (45.22%) during the study period. Studies conducted in Bangladesh and India revealed that females are more vulnerable to commit suicide.^{10,12} Majorities of victims locality were also in urban areas. In urban area, the most common psychiatric diagnosis observed in who attempt or committed suicide in some form of depression.¹⁴

Regarding the distribution of post mortem findings of the victims, Most common autopsy findings were skin and subcutaneous tissue underneath the ligature mark found pale, white, hard, glistening (97.83%) and cyanosis (90.43%). Other findings were by dribbling of saliva (57.83%), subconjunctival petechial haemorrhage (47.39%) and tongue bite 41(17.83%). Similar findings are observed following studies.^{12,15}

The most common cause of death in post mortem findings was asphyxia (92.61%). Other important findings were asphyxia & apoplexy combined (6.06%) and delayed complications (3.04%). Almost similar observations are made by the studies.^{11,16-17}

Conclusion

In this study, it's observed that young age group is more vulnerable to commit suicide by hanging & among them males predominately sufferer in our country. The predisposing factors like domestic trouble, doubts, quarrels, failure in examination, disappointment in affection & depression in life triggering the suicidal ideation. Suicidal deaths can be prevented by the combined efforts of individual and community participants. To reduce the incidence of suicide, proper counseling at the family level is more effective. Maintaining good family relationships, practicing religious culture and awareness program in the educational institution to maintain sound mental health also play an important role.

Competing Interests: All the authors declared no competing interest associated with this study.

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