**ABSTRACT**

**Introduction:** Death is inevitable, but man and woman always tries to fight against it. He or she in search of ways to avoid the natural courses of life leading to death like ageing, disease process etc. as well as the unnatural ways like mechanical asphyxial deaths. Asphyxia is one of the common mode of death since ancient time. Material and Methods: In this study, we have dealt with the autopsies conducted at the mortuary. The data required for our study were collected from the police requisition form as well as through detailed interviews with friends, relatives and accompanying police personnel. Meticulous postmortem examination was carried out with standard autopsy method followed in our department. The data were collected and analyzed statistically. Decomposed bodies and cases lacking complete history were not included in our study. Results: The total number of autopsies conducted during the study period was 394, out of which 63 were violent asphyxial deaths. Hanging was the commonest cause of asphyxial deaths, comprising 73% of all asphyxial deaths. Drowning (17.5%) was second most common cause followed by strangulation (9.6%). Conclusion: Males and young people population are a lot of vulnerable victims of violent asphyxial deaths. Because of population explosion, economic condition and increasing stress and strain in our lifestyle, we frequently come upon cases of suicides, homicides and accidents. Key words: violent asphyxial, victim, disease, hanging.

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**INTRODUCTION**

Death is inevitable, but man and woman always tries to fight against it. He or she in search of ways to avoid the natural courses of life leading to death like ageing, disease process etc. as well as the unnatural ways like mechanical asphyxial deaths. Asphyxia is one of the common mode of death since ancient time. In mass disaster like earthquake most of deaths occurs due to traumatic asphyxia. According to National crime records burro of India suicide is among top ten causes of death in India. Asphyxia is mode of death without spillage of blood. Death occurs rapidly, without any expenses hence asphaxial mode of death is preferred. Due to population explosion, poverty, stress and cut throat competition in field of employment suicidal tendencies are developing in masses. Asphyxia is painless and inexpensive and sure method of committing suicide. As to existing terminology, the word asphyxia enjoys wide usage, especially in the courts - but in everyday speech, the phrase ‘an asphyxial death’ usually implies one due to mechanical blockage of the air passages. Violent deaths resulting chiefly from asphyxia includes death due to hanging, strangulation, suffocation and drowning. Death is said to have occurred due to asphyxia when, respiratory function ceases first and initiates the process of failure of other two vital systems. In asphyxia, there is prevention of exchange of air between the atmosphere and the alveoli of lungs and there is lack of oxygen supply to the tissues. Asphyxia is a condition caused by interference with respiration due to lack of oxygen in inspired air due to which the tissues are deprived of oxygen (together failure to eliminate CO2) causing unconsciousness or death. Asphyxia is broadly defined as the interference with the intake or utilization of oxygen, combined with the failure to eliminate carbon dioxide. Violent asphyxial deaths have contributed considerably to unnatural homicidal, suicidal and accidental deaths. Violent asphyxial deaths are of common occurrences and classified as hanging, drowning, strangulation, suffocation and traumatic asphyxia. Hanging and drowning are commonly seen in suicidal cases while strangulation including throttling is usually homicidal. In addition to these accidental compression or trauma to chest that prevent in respiratory movement, known as traumatic asphyxia or crush injury is also one of the cause of violent asphyxial deaths. Violent asphyxial deaths have significant contribution to unnatural suicidal, homicidal and accidental deaths. Among various violent asphyxial deaths like hanging, strangulation, smothering, throttling, traumatic asphyxia, choking and drowning, hanging is one of the leading manner of
suicide in which there is suspension of the body by a ligature material compressing the neck externally, the constricting force being the weight of the body.2

MATERIALS AND METHODS
In this study, we have dealt with the autopsies conducted at the mortuary. The data required for our study were collected from the police requisition form as well as through detailed interviews with friends, relatives and accompanying police personnel. Meticulous postmortem examination was carried out with standard autopsy method followed in our department. Then the data were collected and analyzed statistically. Decomposed bodies and cases lacking complete history were not included in our study.

RESULTS
The total number of autopsies conducted during the study period was 394, out of which 63 were violent asphyxial deaths. Hanging was the commonest cause of asphyxial deaths, comprising 73% of all asphyxial deaths. Drowning (17.5%) was second most common cause followed by strangulation (9.6%) as shown in Tables 1 and 2.

Table 1: Gender-wise Distribution of Various Methods of Asphyxial Deaths.

<table>
<thead>
<tr>
<th>Methods</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Hanging</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>44.4</td>
<td>18</td>
</tr>
<tr>
<td>Drowning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>11.1</td>
<td>4</td>
</tr>
<tr>
<td>Strangulation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3.2</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>61.9</td>
<td>34</td>
</tr>
</tbody>
</table>

Table 2: Manner of Asphyxial Deaths.

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Suicidal</th>
<th>Homicidal</th>
<th>Accidental</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N.</td>
<td>%</td>
<td>N.</td>
<td>%</td>
</tr>
<tr>
<td>Hanging</td>
<td>4</td>
<td>72.8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Drowning</td>
<td>4</td>
<td>6.4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Strangulation</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>7.6</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>79.2</td>
<td>5</td>
<td>7.6</td>
</tr>
</tbody>
</table>

DISCUSSION
In the present study, we found that the total number of autopsies conducted during the study period was 394, out of which 63 were violent asphyxial deaths, incidence of violent asphyxial deaths was 15.98. This incidence rate closely resembles to the study conducted by Reddy et al.8 and Azmak,9 but contrasts with the study by Singh,10 and Chaurasia et al.11, who found lower rate of incidence in their respective studies. Variations of geographical location, culture, ethnicity etc. are the reasons for the difference in incidence rate. Hanging was the commonest cause of asphyxial deaths, comprising 73% of all asphyxial deaths. Drowning (17.5%) was second most common cause followed by strangulation (9.6%). Hanging was found to be commonest cause of violent asphyxial deaths by Singh et al.13, Azmak,9 and Chaurasia et al.11 in their studies on the similar topic.

The present study gender and age findings which is indicating preponderance of asphyxial deaths in young individuals in our society. Similar findings found to the study of Copeland13, Auer14, Majumder15, Lahwani et al.16, Chaurasia et al.11 and Patel et al.17 Teenage and adulthood are the most active phases of life wherein exposure to anxiety, stress, strain and various adverse circumstances occur. Economic problems, unemployment, failure in love, alcohol addiction, and emotional instability were the alleged reasons for committing suicide in this age group.

About 79.2% of total violent asphyxial deaths were suicidal, followed by accidental deaths due to asphyxiation. All the cases of strangulation were found to be homicidal. Hanging as the method of suicide, was found to be more prevalent among all suicidal deaths; the reason being it is painless, materials required are easily available, wide range of ligatures can be used and has a very high mortality rate. The results of present study was similar with the findings of Davidson and Marshall18, Majumder15, Lahwani et al.16, Azmak,9, Kanchan et al.19, Chaurasia et al.11, Patel et al.17 and Mohammed et al.20. The high rate of suicides may be attributed to the increasing number of
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population resulting in all round deficiencies of food, shelter, educational and health facilities, job opportunities which put the population of the present society at risk of all sorts. Violence in this area has increased due to unemployment, low socio-economic status and marital discord which has demanded responsibility particularly from those who handle these aspects of death to investigate on scientific basis, so that miscarriage of justice is avoided. We have, therefore, conducted this study to find out the exact frequencies of violent asphyxial deaths with gender and age vulnerability.

CONCLUSION
Males and young people population are a lot of vulnerable victims of violent asphyxial deaths. Because of population explosion, economic condition and increasing stress and strain in our lifestyle, we frequently come upon cases of suicides, homicides and accidents. This avoidable loss of valuable manpower causes huge harm to India’s social, cultural and economic stability and progress. More over these cases of suicide ought to function an eye fixed opener for organizations working for socio economic justice in our country.

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