



ASPHYXIAL DEATH DUE TO PRESSURE OVER THE NECK IN KANPUR NAGAR: AN OBSERVATIONAL STUDY

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ABSTRACT

In general, this research emphasizes the significance of considering age and gender factors in comprehending and avoiding asphyxial death. In essence, further investigation into the causes of these phenomena may have to examine how different elements interlink with each other. The knowledge can be integrated into public health strategies that will facilitate forensic investigations in relation to asphyxia deaths due to pressure over the neck in Kanpur Nagar. Moreover, emergency response policies and medical training practices could benefit from these findings by improving their handling of asphyxia cases. It is possible for those responsible for age and sex-specific risk factors to propose better prevention strategies, thus reducing the mortality rates of people who are prone to death resulting from suffocation. Deaths due to pressure over the neck have become a prominent topic of discussion in recent years, especially in the fields of criminal justice and medical field. This type of fatality, sometimes linked to strangulation, suffocation, or other forms of asphyxiation, involves an intricate combination of physical, psychological, and legal aspects. The effect of this strain on the neck is not only significant but also dangerous, since it can result in swift and permanent outcomes, including fatality.

KEYWORDS : HANGING, STRANGULATION ,PRESSURE OVER THE NECK, ASPHYXIA

INTRODUCTION:-

"Asphyxia" is a Greek term that literally translates to "absence of pulse." Asphyxia, on the other hand, is a situation that is resulting from interference in breathing, which results in insufficient intake of oxygen from the atmosphere, which in turn leads to a deficiency of oxygen in the tissues and an accumulation of carbon dioxide, which ultimately results in unconsciousness, coma, or death. According to forensic terminology, this condition is referred to as "interference with the oxygenation"⁽¹⁾.

Asphyxia, in its simplest form, is defined as a condition in which the body's tissues do not get enough oxygen because the air exchange between the environment and the alveoli of the lungs is blocked⁽²⁾.

When it comes to fatalities that are the result of unnatural causes such as suicide, murder, or accidents, the most common contributing factor is violent asphyxial deaths. Deaths caused by asphyxia may be caused by a variety of violent methods, including but not limited to Suffering from traumatic asphyxia, choking, drowning, hanging, strangling, smothering, and manual strangulation (throttling), as well as suffocation. Among these methods, hanging is the most prevalent and leading method of suicide. The suspension of the body by a ligature material is the primary component of hanging. This material mostly compresses the neck from the outside, and The neck is primarily constricted by body's weight⁽³⁾.

Complete hanging involves fully suspending the body without touching the ground; incomplete or partial hanging, on the other hand, is characterized by partially suspended body parts or feet touching the ground. These two types of hanging have been documented. Both "typical" and "atypical" hanging may be defined according to the location of the knot; the former occurs more often at the occiput, whereas the latter might occur anywhere else in the body⁽⁴⁾.

One further method of death that may be caused by suffocation is strangling. When someone is strangled, the

structures of the neck are compressed as a result of a force that is not the body's own weight but rather a constricting force. The use of force may be accomplished via a variety of methods, including the use of ligatures, the use of the hand, which is referred to as throttling or manual strangling, the use of the elbow, which is referred to as mugging, and the use of bamboos, which is identified as bansdola⁽⁵⁾.

In most circumstances, death by strangulation is regarded to be the result of homicide; nevertheless, it has been observed that instances of accidental strangulation have occurred, such as when police enforcement officers utilize choke holds to primarily restrain suspects, as is the case in wrestling, which is more frequently referred to as mugging incidents. Additional titles for choking games include the "Scarf game," "black out game," "pass out game," and "space monkey." Choking games are also known by other names⁽⁶⁾.

MATERIAL AND METHODS

The observational study was conducted in department of Forensic medicine and toxicology of GSVM Medical College Kanpur Nagar and associated hospitals in April 2023 to March 2024 at mortuary of Kanpur Nagar. Total 2958 cases were brought for post-mortem during 1yr of study and among them 103 (3.48%) cases were studied as per inclusion criteria of all brought dead cases of unnatural deaths due to pressure over the neck.

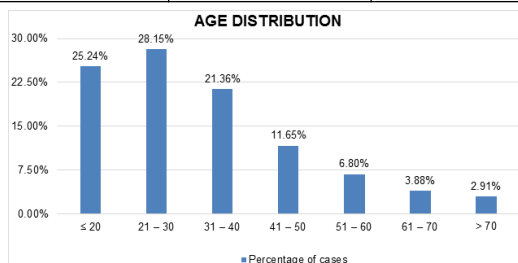
Exclusion criteria were bodies 1. Bodies with unknown cause of death or unidentified individuals 2. Bodies in an advanced state of decomposition 3. Severe injuries or alterations to the body

RESULTS

Table 1: Age distribution

Age (in years)	No of cases	Percentage (%)
≤ 20	26	25.24
21 – 30	29	28.15
31 – 40	22	21.36
41 – 50	12	11.65

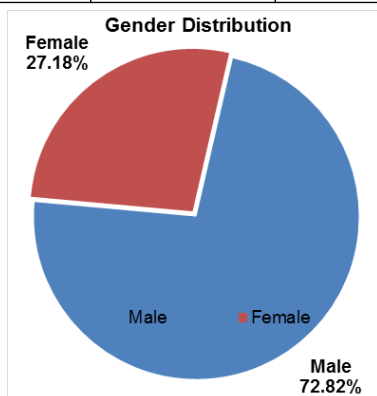
51 – 60	07	6.80
61 – 70	04	3.88
> 70	3	2.91
Total	103	100



The study data consists of 103 individuals with diseases, divided into 7 separate age groups. The age group of individuals over 70 years has the lowest representation, with just 3 individuals out of the whole sample, accounting for 2.91% of the total. The next age group, 61-70 years, has 4 individuals who are sick, representing 3.88% of the overall sample. The range of group between 21 - 30 years has the highest individuals in overall cases, accounting for 28.15% of the entire sample.

Table 2: Gender distribution

Gender	No of cases	Percentage (%)
Male	75	72.82
Female	28	27.18
Total	103	100



The study data includes 103 diseased victims, with a distribution of males and females. The total sample consists of 75 male victims, which accounts for 72.82% of the total. There were 28 female participants, which accounted for 27.18% of the total sample. This gender distribution indicates a higher proportion of male victims than female victims.

DISCUSSION:-

Age

In our current study 6.80% (7cases) cases were observed having age from 51 to 60 years of age followed by, 25.24% (26 cases) cases had age less than 20 years, 3.88% (4 cases) cases had age from 61 to 70 years, 28.15% (29 cases) cases had age from 21 to 30 years, 11.65% (12 cases) cases had age from 41 to 50 and 2.91% (3cases) cases had age more than 70 years of age.

In a study done by Kaushik V and colleague⁴, The age category with the highest number of victims is 21 to 30, with 37 instances. This is followed by the age group of 31 to 40, with 24 cases, and the age group of 11 to 20, with 18 cases.

Gender

In the current study 72.82% cases were male cases where 27.18% were female cases. M:F ratio was 2.67:1.

total participants, female and male cases were 31 and 69 respectively, resulting in male to female ratio 2.22:1.

In a research done by Razal NA and colleagues⁽⁸⁾, 210 individuals (73.2%) were men and 77 individuals (26.8%) were females, resulting in a male-to-female ratio of 2.72:1.

The current research found that the majority of instances of asphyxia-related deaths caused by pressure on the neck occurred during the evening, followed by the midnight, night, afternoon, and morning periods. The majority of instances of asphyxial death resulting from pressure on the neck were seen in individuals aged 21 to 30 years. The majority of instances, over 50%, were seen to have a suicide method of death, followed by homicidal and accidental manners of death.

CONCLUSION:-

To wrap up looking at how age and gender affect deaths from neck pressure in Kanpur Nagar shows key trends that can shape future prevention efforts and actions. Knowing these population details can help focus on high-risk groups and boost public health results in the area. By spotting which age groups and genders face the most danger from these deaths, officials can create targeted education and resources to tackle the main causes of this problem. This fact-based method can lead to fewer deaths linked to neck pressure in Kanpur Nagar.

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