

ORIGINAL ARTICLE

Pattern of unnatural deaths- A forensic study

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ABSTRACT:

Background: Unnatural deaths of medico-legal importance" are fatalities that take place in dubious circumstances, such as suicide, accidents, or foul play.¹ To ascertain the cause and manner of death, these deaths need to be investigated. The present study was conducted to assess pattern of unnatural deaths. **Materials & Methods:** 80 cases brought for autopsy to the Department of Forensic Medicine of both genders were recorded. Causes of deaths in each case was recorded. **Results:** Out of 80 cases, males were 50 and females were 30. Causes of unnatural deaths were head injury in 41, spinal injury in 5, electric shock in 2, hanging in 15, poisoning in 3, crush injury in 4, polytrauma in 5, blunt injury to trunk in 3 and septic burns in 2 cases. The difference was significant ($P < 0.05$). **Conclusion:** The two most frequent causes of unnatural fatalities were hanging and head injuries.

Keywords: Electric shock, hanging, Unnatural deaths

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INTRODUCTION

"Unnatural deaths of medico-legal importance" are fatalities that take place in dubious circumstances, such as suicide, accidents, or foul play.¹ To ascertain the cause and manner of death, these deaths need to be investigated. The deliberate acts of another person, such as murder or manslaughter, cause homicide deaths.² To find the offender and determine the motive, these cases need to be investigated. Suicide deaths brought on by harm or behavior committed by the suicide victim.³ Suicide determination entails assessing the situation, the person's past mental health, and any indications of purpose. accidental fatalities brought on by unintended injuries, such as falls, drowning, road accidents, or mishaps at work. To ascertain if carelessness or other factors had a role in the death, these instances frequently need to be investigated.⁴

Deaths brought on by ingesting toxic amounts of pharmaceuticals or medications, whether on purpose

or accidentally.⁵ Determining whether the overdose was intentional or unintentional may be necessary in certain situations.⁶ Trends in unnatural deaths are an indicator of the socioeconomic status and mental health of a society. In India, one person is killed in a road collision less frequently than once every five minutes. There is a strong correlation between the crime rate in society and the community's poverty and literacy levels.⁷ The present study was conducted to assess pattern of unnatural deaths.

MATERIALS & METHODS

The present study was conducted on 80 cases brought for autopsy to the Department of Forensic Medicine of both genders. Family members gave their written consent for the study

Data such as name, age, gender etc. was recorded. Causes of deaths in each case was recorded in case sheet. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 80		
Gender	Males	Females
Number	40	32

Table I shows that out of 80 cases, males were 50 and females were 30.

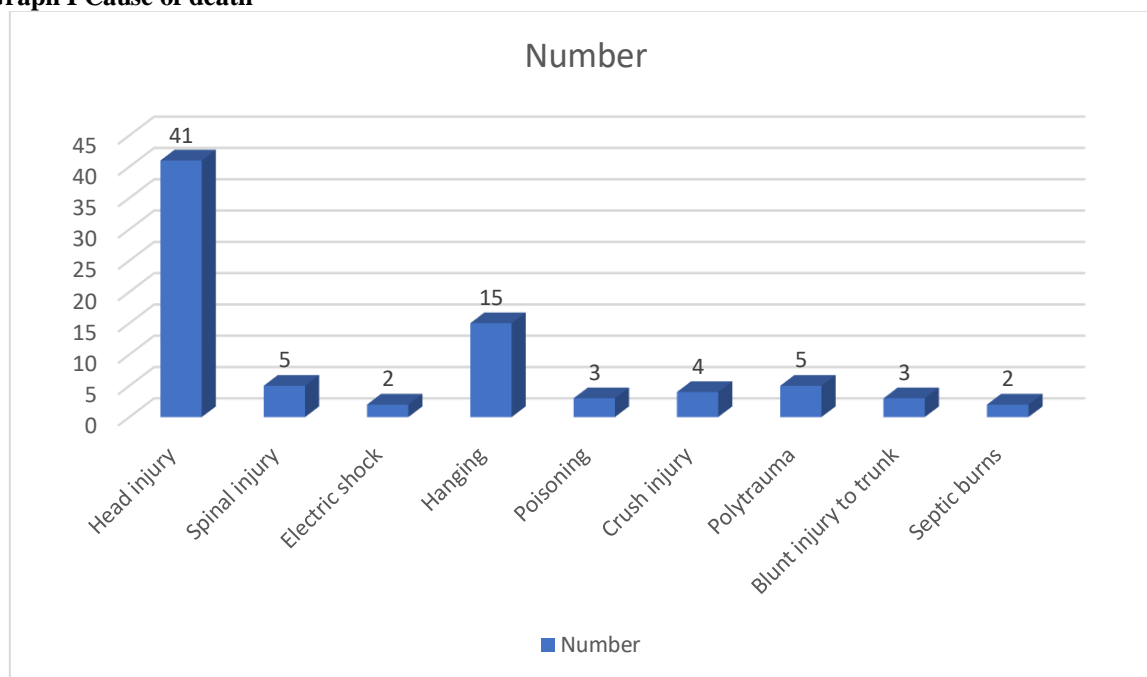
Table II Cause of death

Causes	Number	P value
Head injury	41	0.05
Spinal injury	5	
Electric shock	2	
Hanging	15	
Poisoning	3	

Crush injury	4	
Polytrauma	5	
Blunt injury to trunk	3	
Septic burns	2	

Table II shows that causes of unnatural deaths were head injury in 41, spinal injury in 5, electric shock in 2, hanging in 15, poisoning in 3, crush injury in 4, polytrauma in 5, blunt injury to trunk in 3 and septic burns in 2 cases. The difference was significant ($P < 0.05$).

Graph I Cause of death



DISCUSSION

The pattern of unnatural deaths typically refers to those deaths that occur due to external causes rather than natural aging or health-related issues. These can include traffic accidents (car, bike, pedestrian), falls (from heights, down stairs, etc.), drowning, workplace accidents (machinery, construction, etc.), fires or explosions.⁸Deliberate acts where an individual takes their own life, often involving methods like hanging, self-inflicted gunshot wounds, or overdosing on drugs.⁹Deaths caused by another person, either intentionally (murder) or unintentionally (manslaughter). This category can include gunshot wounds, stabbings, blunt force trauma, poisoning.¹⁰Overuse of substances like alcohol, prescription medications, or illegal drugs, which can lead to fatal respiratory depression or other complications. The corpse must be examined post mortem if the death was unexpected, suspicious, or unnatural. In order to administer justice, medicolegal autopsies are carried out in compliance with national laws.¹¹ In India, medicolegal autopsies are performed at the request of the police or a magistrate with the primary goal of determining the cause of death and if it is consistent with the hypothesized method of death. "Unnatural death" refers to a person's death brought on by suicide, another person, an animal, a piece of machinery, a car, an accident, or any situation that

raises a reasonable suspicion that someone has committed a crime or engaged in foul play.¹²The present study was conducted to assess pattern of unnatural deaths.

We found that out of 80 cases, males were 50 and females were 30. Singh et al¹³ discovered that 84.2% of the participants were in the 16–45 age range. The bulk of unnatural deaths were accidental (79.3%), followed by homicidal (6%) and suicidal (13.9%) deaths. 94.5% of all unnatural deaths were caused by road traffic accidents (RTAs), burns, poisoning, unintentional falls from a height, and firearm injuries. All causes of mortality showed a male preponderance (73.4%), with the exception of burns, where females (61%) outweighed males (39%). While the number of deaths from fire arms and equipment accidents dropped from 4.5% and 1.2% to 1.2% and 0.4%, respectively, the number of deaths from poisoning and burns climbed from 5.7% and 22.6% to 12% and 24.3%, respectively.

Kumar et al¹⁴ found that the percentage of fatalities from traffic accidents (50.3%) and unintentional falls from heights (6.9%) were relatively constant. The majority of road traffic accident victims (33.3%) were two-wheeler occupants (motorcycles, etc.). The most frequent cause of burn deaths were kerosene oil spilling (36% of dowry deaths) and kerosene oil stove malfunctions and explosions (43.5%). The main

deadly poisons from 1977 to 1987 were barbiturates (33.3%), organophosphates (23.8%), and copper sulphate (14.3%), while from 1987 to 1997, they were organophosphates (45%) and aluminum phosphide (26.5%). Since 1992, the most prevalent toxin has been aluminum phosphide (80%), a fumigant insecticide used to preserve wheat. Suicidal death rates rose from 10.9% in 1987–1992 to 15.7% in 1997–2002, reaching a peak of 18.2% in 1992–1997. We found that causes of unnatural deaths were head injury in 41, spinal injury in 5, electric shock in 2, hanging in 15, poisoning in 3, crush injury in 4, polytrauma in 5, blunt injury to trunk in 3 and septic burns in 2 cases. Rahim et al¹⁵ in their study found 1725 (97%) cases of unnatural deaths by analyzing 1772 cases of deaths. Data gives 18.37% increment in unnatural deaths 77.28% was males and 22.71% females. The frequency pattern of unnatural deaths were 68.92% RTAs, 11.69% homicide, 08.00% suicide and 2.80 natural. Burn, electrocution and others comprise the rest 11.565 unnatural deaths. Males suffer 3.4X more unnatural deaths than females. But RTAs males were 5.31X, in homicide 11.40X, in suicide 1.70X respectively than females. In hanging, female were predominant (1.72X of male deaths). 21–40 years is the age group showing peak frequencies on different types of unnatural deaths though hanging showed peak on 11–20 years. Besides, 95.47% of the unnatural deaths were the Muslims, 4.25% were Hindu and .14% was Christians. Firearms were used in 29.40% cases, blunt weapon in 38.46% cases and sharp cutting weapon in 31.60% cases of homicides respectively.

CONCLUSION

Authors found that the two most frequent causes of unnatural fatalities were hanging and head injuries.

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