



PROFILE OF MEDICO-LEGAL AUTOPSY CASES AT RURAL MEDICAL COLLEGE IN KARNATAKA- A FIVE YEAR RETROSPECTIVE STUDY

Forensic Medicine

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ABSTRACT

BACKGROUND: The profile of medico legal autopsy cases serves an essential tool for knowing the death statistics in a specific region. Such understanding is helpful to take necessary preventive measures to reduce such deaths.

OBJECTIVE: This study aimed to assess the factors contributing to death in cases undergoing medico-legal autopsy and describe the socio-demographic profile of the study subjects.

MATERIAL AND METHODS: A retrospective study of autopsies performed at the Department of Forensic Medicine and Toxicology, Sri Adichunchanagiri Institute of Medical Sciences, BG Nagar, Mandya, Karnataka, India was undertaken for the period between January 2014 to December 2018.

RESULTS: Out of 786 cases, majority of the victims were males. Highest number of victims belonged to the age group of 20-59 years amounting to 567 cases. In our study, 69% of the individuals belonged to rural background and remaining 31% hailed from urban area. 89.8% of cases were of unnatural death; amongst which road traffic accidents was the most common cause amounting to 345 cases. Head injury was seen in 163 cases which was the most common cause for death among the victims of road traffic accidents. Natural cause of death was reported in 10.2% of autopsies. Maximum number of deaths due to natural cause were due to pneumonia followed by coronary artery disease.

CONCLUSION: In the present study, the maximum number of individuals belonged to age group of 40- 59 years. Male preponderance was noted and majority of them hailed from rural area. Road traffic accident and poisoning were found to be the leading cause of death.

KEYWORDS

Medicolegal Autopsy, Profile, Unnatural deaths, Road Traffic Accidents.

INTRODUCTION

Mortality data is one of the most informative ways of assessing the effectiveness of a country's health system. Even though the medicolegal autopsy is done for legal purposes to assist the course of justice, the profile of these cases can serve as a crucial tool for knowing the death trends in a specific region. It helps to understand the nature of deaths occurring due to unnatural as well as natural causes which help in designing necessary precautions and preventive measures. Hence the present study was conducted to estimate the burden and the determinants of death in medico-legal autopsies, so that suitable remedial measures are identified and implemented to bring down such incidences.

MATERIAL AND METHODS

A retrospective descriptive study was conducted after getting the clearance from the institutional ethical committee at Department of Forensic Medicine and Toxicology, Sri Adichunchanagiri Institute of Medical Sciences, BG Nagar, Mandya, Karnataka, India from January 2014 to December 2018 for a period of 5 years. Total number of cases studied were 786. The data was collected regarding sociodemographic profile, manner, cause of death and type of injuries. Data was entered in microsoft excel sheet 2019 and analysed using descriptive statistics like mean, percentages etc. The above statistical analysis and interpretations were performed by using statistical package IBM SPSS statistics – 20.

RESULTS

Most of the victims were male in the present study constituting 77.6 % of the cases. Majority of the individuals belonged to the age group of 20-59 years (Table No.1). Table No.2 depicts the manner of death of studied cases. Profiling of cases with respect to type of case revealed that road traffic accident constituted majority of the cases followed by poisoning as seen in Table No.3. Among the victims of traffic incidents, injury to the head was most encountered (Figure 1). Table no 4 shows the causes of death registered in natural death cases.

Table 1: Distribution of cases based on age group

Age group	Frequency	Percentage
< One year	4	0.5
1-19 years	64	8.1
20-39 years	273	34.7
40-59 years	294	37.4

> 60 years	151	19.2
Total	786	100.0

Table 2: Distribution of cases based on manner of death

Manner of Death	Frequency	Percentage
Natural	80	10.2
Unnatural		
Suicide	260	33.1
Accidental	418	53.2
Homicide	16	2.0
Iatrogenic	1	0.1
Unknown	11	1.4
Total	786	100.0

Table 3: Distribution of cases based on causes of death

Reasons for causing death	Frequency	Percentage
Road Traffic Accident	345	43.9
Poisoning	166	21.1
Natural death	80	10.2
Hanging	71	9.0
Drowning	41	5.2
Snake Bite	26	3.3
Burns	17	2.2
Assault	15	1.9
Electrocution	9	1.1
Bee sting envenomation	2	0.3
Lightning	2	0.3
Complication of Surgery	1	0.1
Unknown	1	0.1

Fig 1: Distribution of road traffic accident cases based on type of injuries

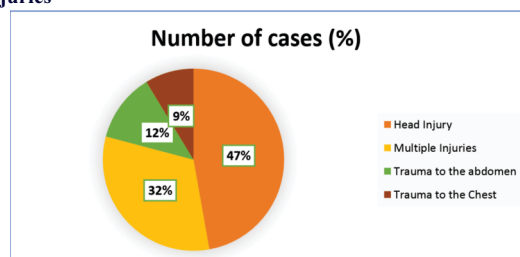


Table 4: Distribution of natural death cases based on various natural causes causing death

Natural Causes	Frequency	Percentage
Pneumonia	28	35
Coronary artery disease	20	25
Sepsis	13	16.3
Pulmonary Tuberculosis	8	10
Myocardial Infarction	6	7.5
Chronic liver diseases	5	6.2
Total	80	100.0

DISCUSSION

Unnatural mortality in India is reported to be upto 10.3% of total deaths and it is documented that the age group of 10 to 45 years are more vulnerable.¹ Our study revealed that highest deaths occurred in the age between 20 -59 years, the findings are in unison with the aforementioned study. We found that male victims were predominant, which is comparable to the findings reported by most of the studies.^{2,3,4} In a study conducted at Delhi⁵, Road Traffic Accident (RTA) was reported to be the most prevalent cause of unnatural death, similar observation was made in our study. RTA is predicted to be seventh leading cause of death, which is projected to contribute to about 2.6% of total world deaths by 2030.⁶ Head injuries are significantly associated with RTA.⁷ Among the individuals dying due to road traffic accidents in the present study, 47 % had sustained head injury. Among the cases of sudden natural death undergoing medicolegal autopsy, cardiovascular pathology followed by diseases affecting the respiratory system are reported to be the major cause.^{8,9} We found that pneumonia was the most common cause of death in natural death cases, the next being coronary artery disease. Knowledge on mortality trends in a particular population is beneficial for the public health officials to develop and implement preventive strategies with a comprehensive approach to reduce such fatalities.

CONCLUSION

Road traffic fatalities continue to be the major bulk of unnatural deaths even in rural areas. This reiterates the need for strict implementation of traffic laws, improved infrastructure in terms road safety management and public awareness about safety measures which could be helpful to reduce preventable deaths.

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Conflict of interest - Nil

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