

Profile of Medicolegal Autopsy Cases Conducted at Tertiary Care Centre, Kalaburagi, Karnataka

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Abstract

Objectives: The profile of medico legal autopsy cases is important in order to know the death statistics in a region due to unnatural causes. The main objectives of the study were: a) To ascertain the various aspects of unnatural deaths, b) To analyze the probable reasons for the same & c) To find remedial measures to bring down the incidence.

Materials and Method: The present study is a retrospective study of autopsies performed at GIMS, District Hospital, Kalaburagi, Karnataka from January 2018 to December 2018. During this period a total of 647 autopsy cases were conducted. Relevant information and subjective data like age, sex, marital status & manner of death have been collected from medicolegal autopsy register from January 2018 to December 2018.

Results: Out of 647 cases analyzed, maximum number of autopsies were in the age group of 21-30 years with 204 cases(31.5%). Majority of victims were males 437(67.5%). Hindus were majority in number with 540 cases(83.4%), married were 432(66.8%) & unmarried were 215 cases(33.2%). In our study 73% were rural residents & only 27% were urban. Accident, Suicide and Homicide deaths were 282(43.6%), 331(51.2%)& 34(5.2%) cases respectively. Natural deaths were seen in 14% cases. Maximum number of deaths were due to road traffic accidents with 212 cases (32.8%) followed by poisoning with 85 cases (13.1%). Out of total 647 cases maximum number of autopsy cases 317(49.1%) were conducted in the month of May to August.

Conclusion: In our present study it is observed that maximum cases were in 3rd decade of life, Males outnumbered females, rural residents were more in number. Hindus being majority formed bulk of cases. RTA, Poisoning & burns were seen as leading cause of death & maximum deaths were in the month of May to August.

Keywords: Medico legal Autopsy, Road traffic accidents, Poisoning

Introduction

Autopsy means (autos=self, opis=view) to see for oneself. Necropsy (necros=dead, opis=view) is most accurate term for the investigative dissection of the dead body, but the term autopsy is commonly used and is more popular. Post-mortem (post= after, mortem=death)

examination is an alternative term used but suffers from lack of precision about the extent of examination. In some countries, many bodies are disposed off after external examination without dissection, in such situation; the procedure is called as post-mortem examination.¹

The objective of medico legal post-mortem examination is to establish the identity of a body, when not known; to ascertain the time since death and the cause of death; and whether the death was natural or unnatural and if unnatural, whether it was homicidal, suicidal or accidental. In case of new born infants, the question of live birth and viability assume importance and should

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be determined.² The term “post-mortem examination” is often used as a simile for “autopsy”. Basically, it is not.³

In 2001 an estimated 1.26 million people died due to road traffic accidents worldwide, 90% of them in low and middle income countries. Mortality rate was 20.8 per 100,000 population. As per UN report Crude death rate between 2015-2020 is 8.1. By 2020 death & disabilities resulting from road traffic accidents in comparison to other diseases will rise from current 9 to 3 spot & the developing nations will account for 90% of world traffic fatalities.⁴

A post-mortem examination means only what it says that the body was examined after death. It can mean and often does mean that the physician merely looked at the body, fully clothed, or that he “viewed” the body at a funeral home or in a morgue. A complete autopsy involves opening all body cavities and all organs of the trunk, chest, and head.⁵ In all cases, a complete and not a partial examination are more necessary in this country on account of the imperfectness of the preliminary evidence as to the possible cause of death.⁶

Material and Method

The present study is a retrospective study of medico legal autopsies conducted at the mortuary attached to

Gulbarga Institute of medical sciences, Kalaburagi, Karnataka, India from January 2018 to December 2018. Permission was not taken from Institutional Ethics Committee as it was a record based study without involving any live subjects or experimentation. Detailed information regarding the circumstances of death was collected from inquest, panchanama, hospital records and post-mortem register. During the study period 647 medico legal autopsies were conducted in the mortuary of district hospital, Kalaburagi. Data was compiled and analyzed as per age, sex, marital status, religion, calendar month, residence, causes of death & manner of death. Causes of death were grossly classified as trauma, thermal injuries, violent asphyxia, poisoning and other natural causes.

Results

A total of 647 medico legal autopsies were conducted during the period of 1 year from January 2018 to December 2018. Males outnumbered females (67.5%) with male to female ratio of 3:1. It was observed in the study that the maximum number of autopsy cases i.e. 204(31.5%) in both sexes were in the age group of 21-30 years followed by the age group of 31-40 years and 41-50 years [Table 1].

Table 1: Age and Sex wise distribution of cases

Age (years)	Male	Female	Total	Percentage
0-10	16	6	22	3.4%
11-20	24	15	39	6.0%
21-30	138	66	204	31.5%
31-40	112	73	185	28.6%
41-50	123	29	152	23.6%
51-60	18	12	30	4.6%
61-70	4	6	10	1.5%
>70	2	3	5	0.8%
Total	437	210	647	100

From Table 2- Majority of cases were seen during the month of May to August, followed by January to April, as shown in table 2.

Table 2: Month wise distribution of cases

Month	No. of Cases	Percentage
Jan-April	215	33.2%
May-August	317	49.1%
Sept-Dec	115	17.7%
Total	647	100

From Table 3- 83.4% were Hindus being majority in number, followed by 14.5% Muslims, & 2.1% cases were other cases in which religion could not be determined as they were unidentified bodies.

Table 3: Distribution of Cases according to Religion

Religion	No. of Cases	Percentage
Hindus	540	83.4%
Muslims	94	14.5%
Others	13	2.1%
Total	647	100

From Table 4- Majority of cases were from rural locality with 73% of cases and 27% cases were from urban locality

Table 4: Distribution of Cases according to Residence

Region	No. of Cases	Percentage
Urban	175	27.0%
Rural	472	73.0%
Total	647	100

From Table 5- Out of 647 cases autopsied, 66.8% cases were married and 33.2% cases were unmarried.

Table 5: Distribution of Cases according to Marital Status

Status	No. of Cases	Percentage
Married	432	66.8%
Unmarried	215	33.2%
Total	647	100

From Table 6- Out of 556 unnatural deaths, deaths due to road traffic accidents(32.8%) outnumbered compared to other causes, followed by poisoning(13.1%) and hanging(8.6%).

Table 6: Distribution of Cause of death cases according to Manner of death

Cause of death	Accidental	Suicidal	Homicidal	Natural	Total	Percentage
RTA	212	--	--	--	212	32.8%
Poisoning	4	81	--	--	85	13.1%
Burns	11	40	--	--	51	7.8%
Electrocution	11	--	--	--	11	1.8%
Fall from height	30	--	--	--	30	4.7%
Snake bite	18	--	--	--	18	2.8%
Hanging	--	56	--	--	56	8.6%
Drowning	--	10	--	--	10	1.6%
Lightening	01	--	--	--	01	0.2%
Assault	--	--	34	--	34	5.2%
Railway accidents	12	36	--	--	48	7.4%
Others	--	--	--	91	91	7.5
Total	299	223	34	91	647	100

From Table 7- Out of 212 cases, maximum number of RTA deaths involved 2 wheeler vehicles (50.0%), followed by 4 wheeler vehicles (20.3%) & Pedestrian (17.4%)

Table 7: Distribution of cases according to Type of RTA cases

Type of RTA cases	No. of Cases	Percentage
Pedestrian	37	17.4%
2 Wheeler	106	50.0%
4 Wheeler	43	20.3%
Heavy Vehicle	26	12.3%
Total	212	100

Table 8: shows trends of deaths, there were 556(85.9%) unnatural deaths and 91(14.1%) natural deaths of total 647 cases autopsied.

Table 8: Trends of deaths at Autopsy.

Cause of death	No. of Cases	Percentage
Unnatural deaths	556	85.9%
Natural deaths	91	14.1%
Total	647	100

Discussion

During the study period a total of 647 cases of medico legal autopsies were performed at District hospital mortuary, GIMS, Kalaburagi. Out of 647 cases maximum number of autopsy cases was in the age group of 21-30 years which is the most productive year in one's life. These findings are in consistency with findings of other authors [2,3,10,11]

In our study majority of victims were males(67.5%). Similar findings are seen in other studies by Murthy et al^[6] who studied 150 cases out of which 123(82%) were males & 27(18%) females. Mugadlimath et al^[7] studied 64 cases out of which 39(61%) were males & 25(39%) females. Bansude et al^[8] studied 722 cases out of which 62.74% were males & 37.26% were females. Bhullar et al^[9] and Sharma et al^[10] found 66.5% males & 33.5% females. Similarly Singh et al^[11] found 74.8% males & 24.2% females in their study and KV Radha Krishna et al^[12] in which males were 69%.

The reason being that as males are bread earners and females usually doing household work, which makes the males more vulnerable to accidents, violence and stress & also males predisposed for addiction & risk taking behaviour.

In our study out of 647 cases autopsied, 83.4% were Hindus, and 14.5% were Muslims, the reason being Hindus are majority in number. In 2.1% of cases autopsied were unknown bodies in which religion could not be determined. Similar findings are observed in studies by other authors^[2,3,12]. Rural residents were 73% and only 27% were from Urban locality. This finding is contradicting to results of other studies in which Urban residents were in majority^[2,3,12]. This difference is due to our centre serves more rural population where in cases are referred to our hospital & hospital deaths for bulk of autopsies performed.

Deaths due to road traffic accidents & its complications constituted majority of cases 32.8 % followed by poisoning 13.1% , hanging 8.6% and burns 7.8% . Similar findings are observed in studies by other authors^[2,3,12,13]. The reason being that in our centre, most of the accident cases and other medico legal cases are referred to our hospital including from rural areas.

According to month wise distribution of cases, findings of our study showed more number of cases between May to August. These findings are in contrast with the studies by Patel et al^[12] and similar findings were seen with findings of Awadesh et al^[13] and Mugadlimath et al^[7].

Maximum number of deaths due to poisoning were suicidal(95.2%) followed by accidental(4.8%) .

Conclusion

Study conducted at Gulbarga Institute of Medical Sciences Kalaburagi, to know the profile of medico legal autopsies during a period of one year from January 2018 to December 2018 comprising a total of 647 medico legal autopsies. In our study we found that majority of cases were in 3rd decade of life, males outnumbered females, rural residents were more in number, Hindus being majority in number formed bulk of cases, RTA, Poisoning, hanging and burns were seen as leading cause of death, among road traffic accidents 2 wheeler accidents were more in number. Maximum number of cases were seen in the period between May-August. This study helps to interpret different types of medico legal autopsy cases, thereby providing an insight to the policy makers, law custodians, and the community to look into the specific aspects of the cases and then to take proper measures accordingly for the benefit of the community people at large of this place. Following measures can be implemented to bring down the mortality rate especially due to road traffic accidents where in strict implementation of traffic rules with special attention to

be paid to drunken drivers, use of mobile phones and smoking while driving, rash and negligent driving and education the general public about road safety measures. The existing stringent laws against dowry death cases need to be further strengthened. Various other socio-economic factors responsible for high incidence of suicidal poisoning need early Government Policies. The sale of agrochemicals and other pesticides should be controlled through strict regulations & implemented by the concerned authorities.

Conflict of Interest- None

Source of funding- Nil

Ethical Clearance- Permission was not taken from IEC as it was a record based study without involving any live subjects or experimentation.

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