

## Profile of Medicolegal Autopsy Cases at Tertiary Care Centre in Bagalkot, Karnataka

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### Abstract

**Background:** The profile of medicolegal autopsy cases is important in order to know the death statistics in a region due to unnatural causes and also help to address the demographic needs according to the mortality statistics specific to that area. **Material and Methods:** The present study is a retrospective study of autopsies performed at the tertiary care centre, S Nijalingappa Medical College, Bagalkot, Karnataka India. Data collected from department of medical records and department of forensic medicine from January 2016 to December 2017 comprising 64 cases. **Results:** Out of 64 cases maximum number of the postmortem were in the age group of 21–30 years, majority of victims were males (61%), in identified bodies 88% were Hindu, 8% Muslim, 4% were others. In our study 57.5% were rural residents and only 34.5% were urban. In 8% cases religion and residential status could not be determined. Death due to burn injuries and its complications formed majority of cases (37.5%) in our study followed by RTA (22%) and poisoning (15.5%). **Conclusions:** In our hospital based study of medicolegal autopsy cases- majority were in 3<sup>rd</sup> decade of life, males constituted more in number as compared to female, rural residents were more in number, Hindus being majority in number formed bulk of cases, burns, RTA and poisoning were seen as leading cause of death in medicolegal autopsies.

**Keywords:** Autopsy; Natural Deaths; Unnatural Deaths; Road Traffic Injuries; Burns; Hanging.

### 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. Postmortem (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 postmortem examination [1].

The objective of medicolegal 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 be determined [2]. The term "postmortem examination" is often used as a simile for "autopsy." Basically, it is not [3]. A postmortem 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 [4]. 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 [5].

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### Material and Methods

The present study is a retrospective study of

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medicolegal autopsies performed at S. Nijalingappa Medical College, Bagalkot, Karnataka, India, from January 2016 to December 2017. Permission was not taken from IEC as it was a record based study without involving any live subjects or experimentation. During the study period 64 medicolegal autopsies were performed by dept of Forensic Medicine. Data were collected using a pre-designed format from postmortem registers/records; Inquest papers and Post mortem reports maintaining at most confidentiality.

## Results

From the Table 1- Out of total 64 cases 61% were Male and 39 % were Female. A significant number

i.e. 26.5% were in the age group of 20 – 30 years and least number of cases (1.5 %) were seen after 70 yrs of age.

From the e Table 2- 92% were Identified, 8% were Unidentified. Of the identified 88% were Hindu, 8% Muslim, 2% were others. In 8% cases Religion could not be determined as they were unidentified bodies.

From the Table 3- 34.5% were Urban and 57.5% were Rural residents.

From the Table 4- highest number of cases seen in May to August (40%) and less number in September-December.

From the Table 5- death due to burn injuries (37.5%) was most common cause of death, followed by Road traffic accident (22%), Poisoning (15.5), Railway accidents (08%) and snake bite in 4.5%.

**Table 1:** Age & Sex wise distribution of cases

Age (in years)	Male	Female	Total	Percentage (%)
0-10	01	01	02	03
11-20	03	04	07	11
21-30	07	10	17	26.5
31-40	11	05	16	25
41-50	08	03	11	17.5
51-60	05	01	06	9.5
61-70	03	01	04	06
71-80	00	00	00	0
81-90	01	00	01	1.5
Total	39 (61%)	25 (39%)	64	100

**Table 2:** Distribution of cases according to Religion

Religion	No	Percentage
Hindu	52	88
Muslim	5	8
Others	2	4

**Table 3:** Distribution of cases according to residence

Region	No	Percentage
Urban	22	34.5
Rural	37	57.5

**Table 4:** Month wise distribution of cases

Months	Total	Percentage
January - April	23	36
May - August	27	40
September-December	14	24

**Table 5:** Distribution of cases according to cause of death

Cause of Death	No. of Cases	Percentage
Burns	24	37.5
RTA	14	22
Poisoning	10	15.5
Railway accidents	05	08
Snake bite	03	4.5
Hanging	02	03
Unknown	02	03
Fall from height	01	1.5
Honey bee	01	1.5
Operational death	01	1.5
Natural	01	1.5

## Discussion

During the study period a total of 64 cases of medicolegal autopsies were performed by department of forensic medicine department. Out 64 cases maximum number of the postmortem were in the age group of 21-30 years which is the most productive year in ones life (Table 1). Findings of our study are consistent with findings of other authors [2,3,6,10,11].

In our study majority of victims were males (61%), similar findings are seen in following studies. Murthy et al [5] studied 150 cases out of which 123 (82%) males and 27(18%) were females. Singh et al [6] studied 200 cases with 170 (85%) males and 30 (15%) females. Bhullar et al [7] and Sharma et al [8] found 66.5% males and 33.5% females. Similarly Singh et al [9] studied 74.8% males and 24.2% females in their study and KV Radhakrishna et al [10] in which males were 69%. The reason being that as males are bread earners and females usually doing house hold work, which makes the males more vulnerable to accidents, violence and stress and also males predisposed for addiction and risk taking behaviour.

In our study of the identified 88% were Hindu, 8% Muslim, 4% were others. Similar findings are observed in studies by other authors [2,3,6,10]. This difference may be due to prevailing population dynamics across India.

In our study 57.5% were rural residents and only 34.5% were urban. This finding is contradicting to results of other studies in which urban residents were in majority [2,3,6,10,11]. This difference is due to our centre is attached with rural police station of Bagalkot and in other studies with city police stations and also our hospital serves mainly rural population and hospital deaths form bulk of autopsies performed. In 8% cases Religion and Residential status could not be determined.

Death due to burn injuries and its complications formed majority of cases (37.5%) in our study followed by RTA (22%) and poisoning (15.5%). But in other studies [2,3,6,10,11] RTA was seen as most common cause of death followed by suicide by hanging next most common. This difference may again be due to most autopsies at our centre being from admitted cases of burns and poisoning being most common method employed by rural population. In month wise distribution findings of our study showed more cases in the period between May to August and similar findings are seen in a study by Patel et al [11].

## Conclusions

Study conducted at SN Medical College Bagalkot to know the profile of medicolegal autopsies during a period one year from January 2016 to December 2017 comprising. A total cases comprising 64 medicolegal autopsies were included in the study, in our study we found following - majority were in 3<sup>rd</sup> decade of life, males constituted more in number as compared to female, rural residents were more in number, Hindus being majority in number formed bulk of cases, Burns RTA and poisoning were seen as leading cause of death in medicolegal autopsies. Maximum number of cases were recorded in the period between May to August.

## References

1. Perper JA. Time of death and changes after death: Part 1: anatomical considerations. In: Spitz WU (ed) Spitz and Fisher's Medicolegal investigation of Death, 3rd edn. Charles Thomas Publisher, USA. 1993.p.14-50.
2. Kannan K, Mathiharan K. Ed. In: Modi-A textbook of Medical Jurisprudence and Toxicology. 24th Ed. LexisNexis Butterworth's Nagpur: 2012.p. 293, 295,297, 360.
3. Curran WJ. The Medico-legal autopsy and Medico-legal investigation. Bull N Y Acad Med 1971 July; 47(7): 766-75.
4. The Punjab Medical Manual, 2nded. 1933. Superintendent, Government Printing, Punjab, Lahore; App. XXXVII: CII, Chapter X, p. 154, Para 595.
5. Murthy MSN, Dutta BN, Ramalingaswami V. Coronary atherosclerosis in North India (Delhi Area). J PatholBacteriol 1963; 85:93-101.
6. McClure GMG Recent Trends in Suicides amongst the young; British Journal of Psychiatry 1984; 144: 134-138.
7. Bhullar DS, Oberoi SS, Aggarwal OP et al. Profile of Unnatural deaths (between 18-30years of age) in GMCHPatiala, (India) JFMT 1996; XIII(3):5-8.
8. Sharma BR. Trends of Poisons and Drugs used in Jammu JFMT 1996; XIII(2) 7-9.
9. Singh Prabjot. Alarming rise in fatalities The Tribune, 2000 Aug 19: 1 & 22.
10. Radhakrishna KV, Makhani CS, Nikhil Sisodiya, Sachin Chourasia, Sarala M, Khan RN. Profile of medicolegal autopsies conducted at tertiary medicolegal centre in southwestern India. International J. of Healthcare and Biomedical Research, 2015 Jan; 3(2):70-75.

11. Patel JB, Chandegara PV, Patel UP, Parkhe SN, Govekar G. Profile of autopsy cases at New Civil Hospital, Surat: a retrospective study. Int J Med Sci Public Health 2016; 5:10-13.
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