
Profile of Autopsy Cases at District Hospital, South India in Pandemic Year 2020

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Abstract

Autopsy profile is one of the essential inputs for National Statistics. It gives an insight into the prevailing unnatural causes of death in the vicinity and subsequently helps stake holders take appropriate measures to prevent the same. The present study was conducted in district hospital, South India in the pandemic year, 2020. A total of 808 medico legal autopsies were conducted in Government District Hospital, Tumkur which is high in spite of pandemic and lockdown in place. Among them majority of victims were male constituting 78.85% and females attributing to 21.15% of total cases. Manner of death was analysed and accidental deaths formed the major chunk of cases comprising of 351 cases (43.44%). Suicidal deaths comprised of 35.87 % of cases and homicide deaths accounted for 3.71% of cases. Among males maximum number of cases was recorded in fourth decade with 147 cases. While in females maximum cases fell in third decade of life with 51 cases. Road traffic accident was the prime most cause of death with 241 cases comprising of 30% of total cases. Second most common cause was hanging with 137 cases comprising 17% of total cases. Surprisingly natural deaths constituted third most common cause with 125 cases comprising of 15% of the cases. Majority of cases were reported in middle age group 21-50 years which form the bread winner group. With adequate safety precautions and counselling these unnatural deaths could be prevented.

Key words: Profile, Pandemic, Unnatural death, autopsy

Introduction

Medico legal cases form an integral part of hospital admission. Commonly encountered medico legal cases are poisoning, road traffic accidents, asphyxia and homicide. Autopsy has to be performed in case of death occurring in above cases. Unnatural causes form majority of medico legal autopsy conducted. Study of autopsy profile throws light on demographic distribution of cases, various causes of

death and help in contributing to vital statistics of the nation. Unnatural mortality form 10.3% of total deaths in India with greater incidence among population aged 10-45 years. Unnatural mortality rate in India is 0.67 per 1000 population, 0.84 among males and 0.49 among females¹. Unnatural deaths claim majority of lives in India with most of the victims in productive age group. According to accident death report, Karnataka reported 6.1% share of total deaths due to accidents in India and is categorised under high

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risk area². Autopsy profile study can enlighten us regarding most common unnatural causes plaguing the region with gender vulnerability and hence give suggestion to policy makers for implementing effective strategies to reduce mortality.

Aim

To study the profile of autopsy cases at District hospital, South India in the year 2020.

To suggest effective strategies to prevent unnatural deaths in the region.

Material and Methods:

The present retrospective study was conducted in Government District hospital, Tumkur, Karnataka. Period of study was from 1st January 2020 to 31st December 2020. Data was collected from Inquest report form 146 (i)&(ii), autopsy register, post-mortem reports and information given by relatives of the deceased. Autopsy profile was tabulated according to manner of death, gender distribution and cause of death.

Results

A total of 808 medico legal autopsies were conducted in Government District Hospital, Tumkur in the year 2020. Among them majority of victims were male with 637 autopsies which constitute 78.85% and 171 autopsies were conducted on females attributing to 21.15% of total cases. Manner of death was analysed and accidental deaths formed the major chunk of cases comprising of 351 cases (43.44%). Suicidal deaths constituted 35.87 % of cases i.e. 290 cases and homicide deaths accounted for 3.71% of cases i.e. 30 cases.

Most of the victims were in fourth decade of life which constitutes 183 cases. Next age group which forms majority of cases is third decade comprising of 179 cases. Nearly half of cases were in these two age groups. Among males maximum number of cases was recorded in fourth decade with 147 cases. While in females maximum cases fell in third decade of life with 51 cases. Least cases were recorded in extremes of age group, 1.35% in first decade and 0.37% in ninth decade.

Road traffic accident was the prime most cause of death with 241 cases comprising of 30% of total cases. Second most common cause was hanging with 137 cases comprising 17% of total cases. Surprisingly natural deaths constituted third most common cause with 125 cases comprising of 15% of the cases. Burns represent least number among cause of death.

In gender distribution, road traffic accident was most common cause of death among both genders followed by hanging. In males, burns and in females electrocution was least common.

Distribution of cause of death among different age group was studied and majority of cases were observed in middle age group between 21 to 50 years.

Table 1: Distribution of cases among gender

	Cases	Percentage
Male	637	78.83%
Female	171	21.16%
Total	808	

Table 2: Distribution of cases based on manner of death

Manner of Death	Cases
Accident	351
Suicide	290
Homicide	30

Table 3: Distribution of cases based on age

Age	Male	Female	Total	Percentage
0-10	9	6	15	1.85%
11-20	42	15	57	7%
21-30	128	51	179	22.15%
31-40	147	36	183	22.64%
41-50	134	18	152	18.81%
51-60	93	19	112	13.86%
61-70	66	20	86	10.64%
71-80	16	05	21	2.59%
81-90	02	01	03	0.37%

Table 4: Distribution of cases based on cause of death

	Cases	Percentage
Burns	5	0.61%
Assault	30	3.71%
RTA	241	29.82%
Poisoning	120	14.85%
Hanging	137	16.95%
Natural Death	125	15.47%
Railway Accident	28	3.46%
Fall From Height	40	4.95%
Drowning	57	7.05%
Animal/Snake Bite	12	1.48%
Electrocution	13	1.6%

Table 5: Distribution of age based on cause of death

	1-10Y	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90
Burns			2		2		1		
Assault	1	3	12	8	1	2	2	1	
RTA		13	55	50	45	33	32	3	2
Poisoning	1	7	31	33	17	15	13	1	
Hanging	2	14	46	63	23	8	7	3	1
Natural Death	1	2	10	18	40	32	23	5	2
Railway Accident	1	1	5	6	6	2	5		1
Fall From Height	2	3	3	6	10	9	2	1	
Drowning	3	11	8	17	5	7	3	3	
Animal/Snake Bite	1		2	3	2	2	1	1	
Electrocution	2	2	1	7	1				

Table 6: Distribution of cause of death among gender

	Male	Female
Burns	2	3
Assault	19	11
RTA	200	41
Poisoning	93	27
Hanging	98	39
Natural Death	105	20
Railway Accident	22	6
Fall From Height	37	3
Drowning	39	18
Animal/Snake Bite	6	6
Electrocution	12	1

Discussion

A total number of 808 autopsies were conducted at Government District Hospital, Tumkur from January to December 2020. Magnitude of cases was still high considering implementation of lockdown owing to pandemic. Reason may be increase in suicides due to pandemic and relaxation of lockdown in parts. Most of the victims were males, which is consistent with earlier studies conducted at other district hospitals, Belagavi³, Bikaner⁴, Bagalkot⁵ and Lucknow⁶. Most of the autopsies conducted on males belonged to age group of 31 to 40 years which is contrast to earlier studies done at Belagavi³, Bikaner⁴, and Bagalkot⁵ where third decade was mostly affected. Male predominance in cases is known fact that they are the bread winners who venture out for a living. In females third decade had more number of cases similar to earlier studies.

In our study death due to road traffic accident formed majority of cases which is in accordance with study findings at Belagavi³, Bikaner⁴, Lucknow⁶, but in contrast to study at Bagalkot where burns was most common cause of death. Road traffic accidents constituted majority of cases as Tumkur being District Headquarters and surrounded by highways on either side, accidents are common feature and victims are shifted to tertiary care centre for management. After road traffic accident, death due to hanging was second commonest cause of death which is in contrast to earlier studies where hanging is distant third cause. Surprisingly natural death was third most common cause in autopsies conducted. Probable reason may be due to stress of Pandemic and also hesitancy to seek medical attention in spite of being sick due to fear of Covid.

Accidental deaths formed major chunk of cases followed by suicidal deaths and homicidal deaths which is in consistent with finding of previous study at Belagavi³. Poisoning cases was placed at distant fourth in terms of number of cases in contrast to other study³ where it was second most common cause. Hanging was most common method adopted for suicide among both sexes.

Conclusion

Unnatural deaths share an important portion of death statistics in any part of country. The present study conducted in District hospital, South India, being a tertiary care centre; throw light upon profile of autopsy cases done in Pandemic year 2020. Most of the victims were males with third and fourth decade being more vulnerable to unnatural deaths. Road traffic accidents claimed dubious distinction of being leading cause of death. From this what we can infer is that precious young lives are being lost who are bread winners for the family due to unnatural deaths. Even though lockdown was in place for several months due to pandemic, the amount of unnatural deaths is painfully more. This can be prevented by effective safety precautions like wearing helmets; following traffic rules. Suicidal deaths claimed 35% of total

unnatural deaths. It may be attributed to pandemic anxiety, loss of near ones and loss of employment in unpredictable situation. Another interesting feature was natural deaths emerging as third commonest cause of death in autopsy which may be due to stress of Pandemic and also hesitancy to seek medical attention in spite of being sick due to fear of Covid. I would like to stress upon adequate safety measures must be employed to avoid accidents. There is also scope for prevention of suicidal deaths through identifying vulnerable population and effective counselling especially in this testing period of Pandemic.

Conflict of interest: NIL

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