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"MEDICO-LEGAL PROFILE OF BROUGHT DEAD CASES AT TERTIARY LEVEL IN CENTRAL CHHATTISGARH" - A RESEARCH STUDY

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ABSTRACT

As per provisions of Registration of Births & Deaths Act 1969, registration of birth & death is compulsory and should be done within 21 days. Earlier the medico-legal services was restricted only for postmortem examination as per the common belief of the society. Now a days the medico-legal issues are not only restricted in finding the cause of death but has widened the prospective in all the cases where law and medicine merges. This has provided the basis for evolution of clinical forensic medicine.

With the establishment of the Clinical forensic medicine unit at majority of tertiary levelers, the medico-legal cases are dealt first hand in the casualty/emergency department without any delay. As such a delay can result in loss of valuable evidences. Among the various types of medico-legal cases, brought dead cases are one of the most frequently encountered in the department of emergency. This retrospective study deals with the cases brought dead over a period of last two year. The present study was carried out to understand the various epidemiological aspects, pattern and other medico-legal issues regarding the brought dead cases.

It was observed in this study that, out of the total 170 cases, 22.94% cases were female and 77.06% cases were male. Maximum 40 cases were in the age group of 21-30 years. 38.82% were of death due to natural diseases or pathology while in 104 cases 61.18% deaths were due to some unnatural cause.

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INTRODUCTION

With the establishment of the Clinical forensic medicine unit at majority of tertiary levelers, the medico-legal cases are dealt first hand in the casualty/emergency department without any delay. As such a delay can result in loss of valuable evidences. Among the various types of medico-legal cases, brought dead cases are one of the most frequently encountered in the department of emergency.

As per provisions of Registration of Births & Deaths Act 1969, registration of birth & death is compulsory [3]. Cases labeled as brought dead are the ones found to be clinically dead on arrival at emergency department by the examining doctor. In such cases a death certificate cannot be issued by the treating physician as the cause is not yet established. Thus a police intimation regarding the same is sent to the police station and the body is subjected to autopsy examination. These cases are mostly of natural death due to some underlying disease conditions brought directly from the home or referred from some other medical facility. Our institute, being a premier institute in the region receives many referral cases of terminally ill patients. Many of the times dead bodies of spot deaths as in Road traffic and railway accidents, decomposed

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and mutilated bodies are also brought by the police which are in such a condition that they need not be certified as dead and can be immediately sent to the mortuary. Sometimes the old age cases are brought merely to obtain a death certificate, which can be of use for further death related claims and settlements, by the relatives.

MATERIAL AND METHODS

In the present work we retrospectively studied the cases received as brought dead at DEPT of Trauma and emergency at AIIMS, RAIPUR and then subjected to autopsy examination over a period of 2 years from 13.08.2016 to 20.09.2019. Data like age, sex, time of arrival and places brought from, were extracted from the hospital records. Information regarding the cause, nature and manner of death is concluded with the detailed history from relatives, police and analysis of autopsy reports.

RESULTS

Total 170 cases were studied in the present study.

Table no 1 Distribution of cases based on sex.

SL NO.	SEX	TOTAL NO.
1.	MALE	131(77.06)
2.	FEMALE	39(22.94)

Out of the total, 22.94 % cases females and 77.06 % cases were male.

Table 2 Distribution of cases in different age groups.

SL. NO.	Age Group(IN Years)	TOTAL NO.
1.	0- 10	4(2.35%)
2.	11-20	17(10%)
3.	21-30	40(23.53%)
4.	31-40	32(18.82%)
5.	41-50	34(20%)
6.	51-60	26(15.29%)
7.	> 60	17(10%)

Out of 170 cases, maximum 40 cases(23.53%) were in the age group of 21-30 years of their followed by 34 cases (20 %) in 41-50 years of age group.

Table no 3 distribution of cases based upon time of arrival at the casualty dept.

Sl No.	Time of Occurence	Total No.
1.	00 AM - 6 AM	21 (12.35 %)
2.	6 AM – 12 PM	44 (25.88 %)
3.	12 PM - 6 PM	52 (30.59 %)
4.	6 PM - 00 AM	53 (31.18 %)

As the above table shows, most number of cases ($31.18\,\%$) were brought between evening 6 pm to 12 am in the midnight.

Table no. 4 Distribution of cases based upon the nature and manner of death.

Natural	Unnatural		
	Accidental	Suicidal	Homicidal
66 (38.82%)	74 (43.53 %)	28 (16.47 %)	2 (1.18 %)

Table no 5 Distribution of cases based on the places from where the cases were brought

Home/Residence	e	OUT	SIDE		Reffered
	At work	Road	Railway	Other	
62 (36.47 %)	10 (5.89 %)	50	24	11 (6 470/	13 (7.65 %)
	10 (3.89 70)	(29.41%)	(14.18 %)	11 (0.47%)	,

Table no 6 Distribution of cases in different age groups based on cause of death as natural and unnatural

Age group	Unnatural	Natural	total
A(0-10)	1(0.59)	3(1.76)	4
B(11-20)	15(8.82)	2(1.18)	17
C(21-30)	32(18.82)	8(4.71)	40
D(31-40)	25(14.71)	7(4.12)	32
E(41-50)	24(14.18)	10(5.88)	34
F(51-60)	4(2.35)	22(12.94)	26
G(>60)	3(1.76)	14(8.24)	17
	104(61.18)	66(38.82)	

Table 7 Distribution of cases based on cause of death in different sexes

	Natural	Unnatural	
Male	49(28.82)	82(48.24)	131(77.06)
Female	17(10)	22(12.94)	39(22.94)
	66(38.82)	104(67.18)	

Table no 8 Distribution of cases based on different cause of death

	Cause of death	NO.	% AGE
1.	Road traffic Accidents	39	22.94
2.	Railway Accidents	23	13.53
3.	Cardiac Pathology	30	17.65
4.	Other pathological Conditions	36	21.18
5.	Hanging	19	11.18
5.	Drowning	7	4.12
7.	Poisoning	6	3.53
3.	Assault	1	0.59
9.	Other causes	9	5.28

DISCUSSION

In the present study we retrospectively studied the cases which were brought to the emergency dept of AIIMS, Raipur and on examination they are found to be clinically dead. As it was not possible to ascertain the cause of death in such cases, they were sent for the autopsy examination. The analyzed data was compared with the results obtained by the researchers in the similar studies.

In the present study a total of 170 cases were studied. Out of the total, 39 cases were females (22.94 %) and 131 cases (77.06 %) were males. This is similar to the other studies conducted by Tripude *et al* while Bharati *et al* in Nepal showed the incidence rate of 45 % in females[1,2].

According to the age distribution it was found in this study that the highest no. of cases (40) 23.53 % were in the 3rd decade of their life i.e. 21-30 years followed by 34 cases (20 %) in 41-50 years of age group. Four cases (2.35 %) were in age groupupto 10 years,17 cases (10 %) were in 11-20 yrs age group, 32cases (18.82%) in 31-40 yrs age group, 26 cases (15.29 %) in 51-60 years, and 17cases (10 %) were of more than 60 years. The highest number of cases in the 3rd decade of the life is similar to the study of Disania *et al*, while Tirpude *et al*, which reported highest incidence of cases in their 5th decade of life[4,1].

Distributing the cases on basis of time of their arrival at the emergency department (Table no. 3) it is seen that maximum 53 cases (31.18 %) arrived in the time between 06 pm to midnight, while 52 cases (30.59 %) arrived in between 12 pm to 06 pm , 44 cases (25.88 %) came in between 06 am to 12 pm and 21 cases (12.35 %) came in between 12 midnight to 06 am. This is similar to the study by Bharati *et al.*, receiving maximum no. of case in between 05 pm to 09 pm [2].

As depicted in Table no. 4, 66 Cases (38.82 %) were of death due to natural diseases or pathology, while in 104 cases (61.18 %) deaths were due to certain unnatural causes. Similarly high incidences of unnatural deaths were seen in other studies like Disania *et al*, and Tirpude *et al*[1,4].

As per the Table no.5, 62(36.47 %) cases were directly brought from their home or residence, while 55.88 % (95 cases) were brought from outside. Among the ccases brought from outside, 50 cases (29.41 %) were from roads/footpaths, 24 cases (14.18 %) from railway tracks, 10 cases (5.89 %) were brought from their workplaces, and 11 cases were brought from other places like ponds, rivers etc. In 13 cases (7.65 %) death occurred during transportation, after being referred from some other medical facilities.

On simultaneously studying the age and cause of death (Table no.6), Deaths due to unnatural causes was more common in the younger age group of 21-30 years (18.82 %) while the highest percentage of natural deaths belong to the age group of of 51- 60 yrs age(12.94 %). Similar results were found in the previous study done by Tirpude *et al*[1].

As per the table no. 7, 49 male cases (28.82 %) died of the natural causes while remaining 82 (48.24 %) died due to the unnatural causes. In case of females, out of 39, 10% (17) died of natural cause while 12.94 % (22) died of unnatural causes.

As the table no. 8 shows, the highest number of brought dead cases were those involved in road traffic accidents (22.94 %). Among the natural causes, cardiac pathology alone was the major cause of death in 17.65 % of cases.

CONCLUSIONS

Most of the brought dead victims are young adult males in 3rd decade of their life. In our study road traffic accidents popped out be the most common cause of death in brought dead cases. While deaths due to natural causes are more common after 40 years of age and cardiac pathology is the most common cause in this. In brought dead cases, where history and proper documentation related to previous chronic morbid conditions is present and there is no foul play suspicion, such cases can be certified.

This can be possible if a proper guideline / government resolution is formulated pertaining to above sited issue. This can lower the burden on the medico-legal services which is already having shortness of hand, also bear away the agonising mental trauma of kin of deceased. Good Samaritan initiative, initial knowledge of triage and government referral facilities like (102,108,112 etc.) if these are well formulated among the society, can be of great help in timely referral of cases from public places, in order to save life.

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