Original Research Article

Study of referral cases of autopsy coming to tertiary care center - Analysis of events

Manohar Shelake[1*], S D Nanandkar[2]

[1]Assistant Professor, Forensic Medicine, Government of Medical College and Hospital, Aurangabad, Maharashtra, INDIA.
[2]Dean, RCSGMC and CPR Hospital, Kolhapur, Maharashtra, INDIA.
Email: drmanu0389@gmail.com

Abstract

Background: Lack of medicolegal awareness, reluctance in performing medicolegal work, inability to consult higher authorities, failure in making sincere attempts in preserving evidence and subjecting the body for a distant travel for referral, all these things geometrically contribute to their vicious cycle of making a simple case complex one. **Method:** Total 211 cases were studied those are referred for autopsy from postmortem centers located in nearby sub-urban, urban and rural areas of adjoining districts In the present study information regarding cases brought for postmortem examination is gathered on various points. **Result:** Out of 211 Cases STUDIES, Majority of cases were referred from Civil / District hospitals i.e. 52 (34.67%). Maximum cases were of middle age group males. Prior intimation was not given before referral in 179 (84.83%) cases and was given beforehand on 32 (15.17%) cases only. Before referring the body external examination of dead body was not done in 78 (52.05%) cases by referring MO. In 33 (15.64%) cases investigating officer (I.O.) was not available and in 178 (84.36%) investigating officer was present. **Conclusion:** There are mainly legal provisions which govern the process of performing medicolegal postmortem. These provisions directly cast a duty of punctual, procedurally proper and qualitatively perfect performance of medicolegal work. These duties of course include sense full application of scientific knowledge, following procedures defined by the law and making utmost perfect attempts to collect, scientifically preserve and properly dispatch the evidence material found in these cases. The law expects from the medical officers that they will observe analyze and interpret the medicolegal evidence in a scientific and logical manner. The conclusions drawn by them need to be consistent with the facts observed by them.
Key Word: autopsy.

[*]**Address for Correspondence:**
Dr. Manohar Shelake, Assistant Professor, Forensic Medicine, Government of Medical College and Hospital, Aurangabad, Maharashtra.
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INTRODUCTION

An autopsy is frequently performed in cases of sudden death, where a doctor is not able to certify death or when death is believed to be due to unnatural causes. In academic institutions, autopsies are sometimes also requested for teaching and research purposes. Forensic (i.e. medico-legal) autopsies are autopsies with legal implications and are performed to determine if death was an accident, homicide, suicide or a natural event.Section174 of the Indian Criminal Procedure Code (Cr PC) of 1973 deals with unnatural deaths. It explains procedure of conducting inquest and requesting post-mortems. A post-mortem report is the best evidence in a case of unnatural death due to accidents, suicides and even homicides. All these deaths are inherently important cases for Medico-legal investigations. Hospital Administration Manual, Government of Maharashtra, Volume-I, chapter 12, 12.9, 12.20, 12.23. p 147, 152, 153, 162 Majority of Medico-legal work (i.e. to the extent of 70%) is done by Medical Officers of Health Department. The significant quantum of remaining cases is done at Forensic Medicine Departments of Government Medical Colleges and some work is done at Municipal and Police hospitals. In most of the cases in general, a Medical Officer can arrive at the conclusion as to the Cause of Death. However, in many cases like

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decomposed bodies, drowning, burns, cases with contradictory history it becomes difficult for the Medical Officer to perform autopsy. This is because of lack of awareness and infrastructural facilities available at a particular set up. In this situation, it is necessary that the autopsy should be done at the specialized centre where qualified persons and related infrastructural facilities are available. Cases of deaths of young married women should be done at any postmortem center attached to government dispensary / hospital by team of two doctors or by single Medical Officer if it is not possible. Home Department Circular, Government of Maharashtra, No. MUR.01/80/435/POL-II, dated 30 Sept 1981, Procedure to deal with death of young married women. This study is an attempt to know how cases were referred, reasons for referral, delay in autopsy related prerequisite procedures and inconvenience to the relatives of deceased. The study also desires to highlight the Standard Operating Protocols (SOPs) and procedure to be followed in referring dead bodied. Public Health Department Circular, Government of Maharashtra, Referral Guidelines, DHS/3/5/2013, dated 06/04/2013 and 15/05/2013. Unclaimed and unidentified dead bodies pose a great problem for preservation and disposal. If dead body is referred it adds more burden for long time preservation and delayed disposal by police department. Home Department, Government of Maharashtra, Section 6 of Circular No. CRA-0198/3414/ (47)/POL-4, date 19/8/1999.

MATERIAL AND METHODS

The present study is prospective study undertaken at Department of Forensic Medicine and Toxicology, Grant Govt. Medical College, Mumbai. The cases were studied at postmortem center attached to department which is a tertiary care referral center. The cases included in the study consist of those which are referred for first or second autopsy from postmortem centers located in nearby sub-urban, urban and rural areas of adjoining districts. These cases are out of the jurisdiction of postmortem center where study has conducted. These cases are forwarded through Police authorities of concerned areas' Police station. The admitted cases from study center do not form the part of this study. Ethical clearance for the present study was obtained from the Institutional Ethical Committee of the same college. Total 211 cases were studied from January 2012 to June 2013. Inclusion Criteria- All cases which were referred to and subsequently undergone medicolegal postmortem examinations at this center. Exclusion Criteria- The cases of death in the study center hospital, which underwent medicolegal postmortem at same postmortem center which were brought by police stations under study center's jurisdiction. In the present study information regarding cases brought for postmortem examination is gathered. The data was collected about each case from the documents provided by police for conduct of autopsy, like Inquest panchnama of the body, spot panchnama, Accidental Death Report (ADR) and requisition to conduct postmortem examination addressed to Medical Officer of peripheral center etc. The authorization letter to conduct postmortem examination at this center with special request regarding samples collection along with various questioners from investigating police officer or in-charge of concerned police station and referring letter of peripheral postmortem center's Medical Officer were also the source of information regarding case. The information regarding referral of the body by the reluctant Medical Officer even when relatives wanted the autopsy to be done at first postmortem center was also noted. This was noted mainly in view of overall tendency of Medical Officer to toss the body for unjustified reasons. Observations regarding total time required for this process from the time of death, cause of death and manner of death concluded at this center also formed the main part of the study. The data thus obtained was recorded in the predesigned and pretested proforma, which comprised relevant data that is concerned with study and analysis was done.

OBSERVATIONS AND RESULTS

Table 1: showing Age wise distribution of cases

Category	Age in years	No. of cases	%
Newborn –Infant	<1 yr	19	9
Children	2 to 8	9	4.27
Preadolescent and Adolescent	9 to 19	14	6.64
Young Adults	20 to 30	74	35.07
Middle Age	31 to 60	83	39.34
Old	> 61	7	3.32
Age not known	NK	5	2.37
Total		211	

Maximum cases were of middle age group (31 to 60yrs) i.e. 83 (39.34%) cases and young adults (20 to 30 yrs) i.e. 74 (35.07%) cases. Infants were also significant in number i.e. 19 (9%) cases The table shows age-wise distribution of cases.

Table 2: showing Sex-wise distribution of cases

Sex	No. of cases	%
Male	130	61.61
Female	77	36.49
Not Known	4	1.90
Total	211	

Male cases were 130 (61.61%) which outnumbered females i.e. 77 (36.49%) cases and even sex was undetermined in 4 (1.90%) cases. In 4 (1.9%) cases sex couldn't be determined.

Table 3: showing prior intimation of referral

Intimation given	No. of cases	%
Yes	32	15.17%
No	179	84.83%
Total	211	100

Prior intimation to tertiary center regarding referral was not given in maximum cases i.e. 179 (84.83%) cases.

Table 4: showing type of PM center from where cases were referred

Cases Referred from	No. of cases	%
Other GMCs	4	2.67
Civil	52	34.67
SDH	21	14
Mc	20	13.33
RH	34	22.67
PHC	19	12.67
Total	150	

Majority of cases were referred from Civil / District hospitals i.e. 52 (34.67%). 19 (12.67%) cases were referred from Primary Health Centers. Few cases were referred from other Government Medical colleges and hospitals i.e. 4 (2.67%) for second autopsy and as per NHRC guidelines. Same dead body was referred to two or three hospitals step by step before reaching referral center in 7 cases.

Table 5: Showing distribution of cases referred from and referred on request of whom

Sent From	On Request of						Total
	MO	%	R-Po	%	Po	%	
HOSPITALS	124	82.67	18	12	8	5.33	150
POLICE	0	0	7	11.47	54	88.52	61
Total	124	58.77	25	11.85	62	29.38	211

150 (71.09%) cases were referred by Medical Officers and Police referred 61 (28.91%) cases; relatives also played active role in referral of 25 (11.85%) cases by requesting medical officer or police

Table 6: Showing category of referring authority

Referring authority	no of cases	%
ACP + SDPO	4	1.9
Sr PI + PI	94	44.55
API + PSI	73	34.6
ASI,HC,PN	3	1.42
Magistrate	37	17.54
	211	

In maximum cases i.e. 94 (44.55%) higher officers of police station i.e. Senior Police Inspector (SrPI) and Police Inspector (PI) referred cases with requisition and authorization for autopsy. Magistrate ordered autopsy in 37 (17.54%) cases. Very few i.e. only 4 (1.9%) cases were authorized by higher level police authorities like Assistant Commissioner of Police (ACP) and Sub-Divisional Police Officer (SDPO).

Table 7: Showing whether Medical Officer taken consultation of Medico-legal expert and higher administration or not

	Medico-legal Expert		Administrative consultation	
	No. of cases	%	No. of cases	%
Yes	14	9.33	49	31.51
No	136	90.67	101	68.49
Total	150		150	

Out of total 150 cases referred by Medical Officers, In 136 (90.67%) Medico-legal expert was not consulted and in 101 (68.49%) cases body was referred without consulting higher Administrative Authorities.

Table 8: showing whether external examination and/or partial autopsy done before referral

Procedure done	Yes	%	No	%	Total
External Examination	72	47.95	78	52.05	150
Partial Autopsy	4	4.11	146	95.89	150

Before referring the body external examination was done in 72 (47.95%) cases and not done in 78 (52.05%) cases. Partial autopsy was done in 4 (4.11%) cases and was not done in 146 (95.89%) cases.

DISCUSSION

In study time total 211 cases were referred for autopsy from various peripheral postmortem centers. Majority of cases belongs to middle age group i.e. from 31 to 60 yrs age group as this age group is having more responsibilities and strive to fulfill increasing demands of personal, professional and family life. In the age group 20 to 30 years 74 (35.07%) cases noted intense competition in every field of life and unemployment due to recession is making young group vulnerable to mental disturbances. In 19 (9%) cases were from age group of less than 1 year including foetus, newborns and infants. Many of these cases found to be of non-viable fetuses which were unnecessarily referred. Time, money and manpower of police force is wasted in carrying these unknown dead born non-viable fetuses to tertiary center for autopsy which could have been possible at primary center. The deceased with age group more than 61 were 7 (3.32%) cases noted. In older age group associated co-morbid conditions are present. This age group is having limited mobility and interaction to outside environment. Hence deaths were less suspicious and referrals were least in this age group. Male corpses referred for autopsy were outnumbered than female corpses. This is because of paternalistic nature of our society which leads to male dominance on mobility and movement in outside environment, male to male interaction and involvement in crime. In case of females, death of young females under suspicious circumstances gives rise to various predictions and allegations. Death of woman associated with pregnancy is of great concern for government. In majority of cases there was no prior information about referring the deceased body for autopsy to tertiary referral center was given and dead body brought all of a sudden for autopsy. Prior intimation telephonically might have reduced the number of referrals due to trivial problems which could have been solved by discussion with qualified person at referral center. In such cases if autopsy could have been carried out at primary center, it might have been put relatives and police at ease. In this study we found that many cases were referred by Medical officers on their own and various reasons were given by medical officers while referring dead body with referring letter. These reasons include need of forensic expert to carry out autopsy. Even in simple and clear cases of death, medical officers found them incompetent and referred the case to referral center labeling it as complicated one. Few case referred on request of relatives to Medical Officer for referring dead body to higher center. Varied reasons and illogical unscientific thinking of relatives can addressed and autopsy may be done. (*J Indian Acad Forensic Med. October-December 2014, Vol. 36, No. 4;* Perceptions of Relatives' towards Medico-Legal Investigation and Forensic Autopsy: A Survey from Rural Haryana *Shelesh Goel, Pankaj Chikkara,Virender K Chhoker, Abhishek Singh, Anu Bhardwaj, Rajesh DR, Nand Kishore Singh* ; page 371-373) For that, the medical officer must explain the relatives the procedure and its importance along with time bound early autopsy, referral might had been avoided. 61 cases were directly referred to tertiary center by police without taking to primary postmortem center. These cases were referred to referral center directly from spot of recovery of dead boy or from private hospitals after death of admitted patient or brought dead cases to the private hospital. In these cases, in 7 (11.47%) cases request for referral was done by relatives to police. Police referred such cases giving due attention to allegations and requests made by relatives. Relatives having knowledge of law and administration were requested for referral for autopsy at higher center in such casesIn 54 (88.52%) cases police brought dead body directly to tertiary center for autopsy. The law and order problem and tense situation compelled them to refer such cases directly to higher referral center without taking to designated postmortem center of their jurisdiction. In maximum number of cases i.e. 94 (44.55%) authorization was given by Senior Police Inspector (SrPI) or Police inspector (PI) of concerned Police station where death was registered and was under investigation. Assistant Police Inspector (API) or Police Sub-Inspector (PSI) gave the requisition in73 (34.6%) cases Newly recruited officers in probationary period faced problems regarding requisition and authorization due to little orientation regarding technical things. Magistrate ordered autopsy in 37 (17.54%) cases. These cases comprised of jail deaths and custodial deaths. Custodial death is not only the death of a person in possession of police but also death of

person or child under legal care and protection in any institution as ordered by the court of law or child welfare committee. Consultation of Medico-legal expert and administrative authorities was not taken in majority of cases. Consultation from person having sound knowledge of death and changes after death can judge the cost and benefit of referral in particular case. In the study it may be hours to days after actual death in many cases when body was reached to referral center. As the time increases, time bound putrefaction is going to occur in dead body. In addition to it, extra time taken for travel and shifting body from one spot to other will spoil the case. Due to it not only there is loss of evidences but also artefacts may develop causing difficulty in interpretation of actual findings. This may lead to grave consequences as seen in bhandara district girls' death cases and similar other ones. Apart from delay at administrative and procedural level, getting transport facilities like ambulance or hearse van and arranging manpower to accompany dead body to referral center is also a challenging job. It is on record that no attempt is done for cold preservation of body at first center. However we cannot ignore the fact that at many Primary Health Centers, functioning cold storages are not available. In majority cases autopsy was started within 6 hours after receiving body and in few cases the time goes up to the 18-24 hrs. This situation adversely affects the important parameters like postmortem lividity, rigor mortis and cooling of the body resulting in great difficulty in calculating time of death. These postmortem changes also create difficulties in observation and interpretation of matters related to wounds and other vital phenomenon. Reddy K. S. N., The essentials of Forensic Medicine and Toxicology, Published by K Suguna Devi, 2011, 30th edition, p [3,4, 149, 291, 358,432] Before referring the body, medical officer is expected to carry out external examination. External examination was done in 72 (47.95%) cases and not done in 78 (52.05%) cases. Partial autopsy was done in 4 (4.11%) cases which is also a contradictory and objectionable situation. Rigor mortis, postmortem lividity, injuries and its details get affected to a great extent due to time required for transport. If such findings were noted initially when dead body first arrived at primary referral center it would be helpful for forensic experts and police also to interpret findings observed at autopsy. It would have been helpful for calculating and opining upon time since death and age of injuries etc. In spite of availability of technical and procedural guidelines in the civil medical code Civil Medical Code, Government of Maharashtra, 1951, Chapter 13, Chapter 20, 20.3, 20.11, 20.19, 20.20, 20.22, 20.29, and many available standard textbooks, the overall mindset and attitude of medical officers is preventing them from applying simple logic and technically required common sense in performing majority of cases which need no referral. The medicolegal work and postmortem examinations in particular has an integral role in the process of crime investigation and administration of justice.

CONCLUSION

To conclude from the aforesaid discussion, it is pretty clear that the very objective of providing prompt, passionate, positive and qualitatively perfect medicolegal postmortem examination service is defeated because of unjustified and indiscriminate referrals to the higher / tertiary centers. Necessary infrastructure and timely up gradation and continuous update of autopsy services at government hospitals is key factor for providing satisfactory services without need of referral. Directorate of Health Services, Government of India, Circular No. Z-2615/40/2012-MH-I, 20/12/12.- Reforms in the procedure for conducting postmortems. Lack of medicolegal awareness, reluctance in performing medicolegal work, inability to consult higher authorities, failure in making sincere attempts in preserving evidence and subjecting the body for a distant travel for referral, all these things geometrically contribute to their vicious cycle of making a simple case complex one. Maximum care should be taken to conduct the autopsy examination at primary center and unjustifiable referrals should be avoided. However unavoidable referrals should be done in certain cases due care must be taken before the referral.

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