

Knowledge and Attitude of Medical Undergraduate Students Towards Medico-Legal Autopsy Demonstrations in A Teaching Hospital in Bengaluru

Karthik SK¹, Nagaraj BM², Mohana Velu J³, Jayaprakash G⁴

Abstract

Autopsy in Greek means “to see with one’s own eyes”. The autopsy has been regarded as a valuable adjunct to undergraduate medical education. Present study is carried out to determine the knowledge and attitude of medical undergraduate students towards medico-legal autopsy demonstrations. 182 students of 2nd and 3rd year MBBS were randomly selected for the study and were asked to respond to a questionnaire containing thirteen questions. 92.3% students were aware that autopsies are conducted to determine the cause and manner of death. Sixteen students (8.79%) opined that post-mortems are conducted to harass the relatives of the deceased. 93.4% students agreed attending post-mortem examinations had educational benefits. 38.46% of students had an unpleasant experience on watching first autopsy. 90.1% of participants were not confident enough to perform autopsies independently. 10.43% students showed interest to specialize in Forensic medicine.

Keywords: Medical undergraduate students; Knowledge; Attitude; Medico-legal autopsy; Medical education; Forensic medicine

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Introduction

Autopsy in Greek means “to see with one’s own eyes”. Autopsy is a scientific study of a dead body and is categorized into clinical and medico-legal autopsies. It plays a crucial role in finding out the cause and the time of death, possible medico-legal issues surrounding death, providing data on disease and injury and also in administration of justice. Doctors with poor knowledge in autopsy may result in injustice.¹ The autopsy sessions provide opportunities to discuss subjects like death certification, Forensic pathology, appropriate attitudes towards

deaths and communication skills essential for giving bad news or seeking consent for autopsy.² It is obvious that knowledge of autopsy will broaden the students’ mind and enhance a more accurate diagnosis during the subsequent years of their clinical practice as doctors. Proper exposure will further narrow the discrepancy between clinical and autopsy diagnosis.³ Today’s medical students are tomorrow’s forensic medicine experts and pathologists. Their knowledge and attitude is bound to affect the autopsy rate in any country, making it important to develop a positive attitude with installation of adequate knowledge and information in them, especially in the present era where existence of the autopsy is being threatened at some institutions.⁴

Materials and Methods

The present study was carried out among second and third year undergraduate students of Dr.B.R.Ambedkar medical college, Bengaluru, Karnataka in the month

¹Associate Professor, ²Professor, ³Assistant Professor, Dept. of Forensic Medicine and Toxicology, ^aDr.B.R.Ambedkar medical college, Bengaluru; ^bRajarajeshwari Medical college & Hospital, Bengaluru.
Correspondence: Dr.S.K.Karthik
E-mail : ssskarthik4@gmail.com
Contact: +919916423593

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of January 2019. Students were explained about the nature and purpose of study and asked to fill the questionnaire given to them after obtaining the written informed consent. Questionnaires were prepared after consulting other authors of the study, going through the literature and day to day interactions with students during autopsy. Participation of students in this study was voluntary and they were asked not to disclose their identity. A total of 182 students participated in the study. Medical students who refused to participate or were

not available on second visit were excluded from the study. Their comments were analyzed on the following aspects – awareness about post-mortem examination, opinion about academic uses and personal views about autopsy, opinion about autopsy and medical curriculum. The results obtained was compared with similar type of the work carried out by other authors and concluded.

Results

Responses of medical undergraduate students to the questions were as shown in Table 1.

Table 1: Responses of Medical Students

Questions	Response		Total
	Yes	No	
Can post-mortem examination determine actual cause and manner of death?	168(92.3%)	14 (7.69%)	182 (100%)
If the case is brought dead to casualty, is it mandatory to send dead body for post-mortem examination?	130(71.42%)	52(28.57%)	182 (100%)
Are post-mortem examinations conducted to harass the relatives of the deceased?	16 (8.79%)	166 (91.2%)	182 (100%)
Can relatives request the doctors for doing autopsy without police information?	26 (14.28%)	156 (85.71%)	182 (100%)
Do you think body can be hand over to relatives without post-mortem examination if the cause of death is known in medico-legal cases?	28 (15.38%)	154(84.61%)	182 (100%)
Post-mortem involves taking out visceral organs for histopathological and toxicological examinations.	159(87.36%)	23(12.63%)	182 (100%)
Do you think attending post-mortem examinations had educational benefits for medical students.	170 (93.4%)	12 (6.59%)	182 (100%)
Did you suffer from any stress or unpleasant experience on watching autopsy?	70 (38.46%)	112 (61.53%)	182 (100%)
Would you suggest that medical students should watch more autopsies in addition to ten as per Medical council of India requirement.	138(75.82%)	44 (24.17%)	182 (100%)
Should medical students actively participate in performing autopsies.	108 (59.34%)	74 (40.65%)	182 (100%)
Are you confident enough to perform autopsy on your own with the knowledge gained by watching autopsies?	18 (9.89%)	164(90.1%)	182 (100%)
Is there a need for casualty posting specifically of Forensic medicine for trauma, poisoning and other medico-legal cases.	159 (87.36%)	23 (12.63%)	182 (100%)
Would you like to specialize in Forensic medicine?	19 (10.43%)	163 (89.56%)	182 (100%)

Discussion

It is observed in this study that 92.3% students were aware that post-mortems are conducted to know the cause and manner of death. However, Inderjit Singh Bagga found 82.2% agreed to the same question.¹

In response to the question, if the case is brought dead to casualty, is it mandatory to send dead body for post-mortem examination, Yes was the opinion of 71.42% students, No is the opinion of 28.57% students. Similar findings were also found in study done by Ashok B Najan.⁵

Very few students (8.79%) opined that post-mortems are conducted to harass the relatives of deceased, thus majority of students were showing a positive attitude towards post-mortem examination.

85.71% students reported that relatives cannot request a medico-legal autopsy without police information and contrary was reported by 14.28% students. Comparable findings were observed in a study done at NSCB Medical college, Jabalpur, MP by Ashok B Najan.⁵

84.61% students were aware that medico-legal autopsy should be done in all medico-legal cases (MLC) even if the cause of death is known. However, 15.38% students felt there was no need for autopsy in MLC cases if the cause of death is known. This is in accordance with the study done by Ashok B Najan and Jadav JC.^{5,6} This finding is in contrast to a study by Bagga IS¹ where 58% of the students were aware that medico-legal autopsy is required in MLC cases.

87.36% students said that they knew post-mortem examination procedure involves taking out visceral organs for histopathological and toxicological examinations, whereas 12.63% students were not aware of this. This finding was supported by other researchers - Devaraj Patil and Bagga IS.^{1,7}

This study showed that 93.4% medical students were of the view that autopsy had educational benefits, not only from medico-legal point of view, but it also helps them to

understand various anatomical relations and pathology of the organs. Whereas G Venkat Rao, Nihal Ahmad, Ravi Rautji and Jadeep C Jadav found that 82%, 96%, 80.7% and 96.5% of the participants agreed for the same respectively.^{6,8-10}

61.53% students reported comfortable experience on the first exposure to autopsy. This is in contrast to study done by Jadav JC, Nihal Ahmad and G Venkat Rao where only 21%, 21% and 36.6% students answered that they were comfortable on the first exposure to autopsy.^{6,8,9}

The majority of medical students (59.34%) suggested that they should actively participate in performing autopsies. Similar observations were made by other authors – G Venkat Rao and Ravi Rautji^{8,10} This is in contrast to the findings of Ekanem who found only 24% favouring active participation in performing autopsies.¹¹

90.1% students reported that they were incapable of performing the autopsy independently. Similar result was also found in a study conducted in Ludhiana, Punjab by Virender Pal Singh¹² where 86.3% students felt themselves incapable or were not sure of their capability.

To the question that is there a need for casualty posting specifically of Forensic medicine for trauma, poisoning and other MLC cases, 87.36% gave positive response. However, 76.66% and 84% gave positive response in the study by G Venkat Rao⁸ and Nihal Ahmad⁹ respectively.

75.82% students suggested that they should watch more autopsies in addition to ten as per Medical council of India requirement. This finding is consistent with other authors – Ashok B Najan, Jadav JC and Virender Pal Singh^{5,6,12} Whereas in a study done by Ravi Rautji¹⁰ and Nihal Ahmad,⁹ 72.3% and 62.3% of the participants agreed that the number of autopsies watched were enough.

Majority of the students (89.56%) did not like to specialize in Forensic medicine. Only 10.43% students reported positive response. Ashok B Najan,⁵ G Venkat Rao,⁸ Ravi Rautji¹⁰ and Ekanem VJ¹¹ found

42.15%, 21.66%, 22% and 66% of the participants favouring to specialize in Forensic medicine.

Conclusion

This study showed that medical students still appreciate the medico-legal autopsy demonstrations as a learning experience. Students felt that the autopsies had helped them to distinguish between unnatural and natural causes of death and to have a better understanding of the various mechanisms of death, so that they would be better equipped to complete cause of death certificates in their future practice. Autopsy demonstrations also delivered a considerable hidden curriculum to students regarding the development of professionalism and attitudes of respect, empathy and compassion and make them prepared for their future encounters with wounded and dying patients and for dealing with their family members.

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References

1. Bagga IS, Goyal V, Singh A, Chawla H, Goel S, Sharma S. Knowledge towards post-mortem examination and reasons for not specialising in morbid anatomy: Study among medical undergraduate students. *Int J Res Med Sci.*, 2016; 4(7): 2792-2795.
2. Charlton R. Autopsy and medical education: a review. *J R Soc Med.* 1994 Apr; 87(4): 232-6.
3. Diegbe IT, Idaewor PE, Igbokwe UO. Autopsy audit in a teaching hospital in Nigeria – the Benin experience. *West Afr J Med* 17: 213-6, 1998.
4. Bharathi M, Loo C, Venkatesan M, Sharma P, Virender K, Chhoker SK, Kaluba D. Current status of perceptions towards autopsy and post-mortem examination among medical undergraduate students. *O Int J Med Soc Sci.* 2015; 1(3):66-71.
5. Ashok B Najan, Vivek Srivastava, Nidhi Sachdeva. Knowledge and Attitude of Medical Students Towards Medico Legal Postmortems at NSCB Medical College Jabalpur MP. *Indian Journal of Forensic Medicine & Toxicology*, 2018; 12(3):75-78.
6. Jadav JC, Patel BN, Shah KA, Tandon RN. Knowledge and attitude of medical students on forensic autopsy in Ahmedabad city. *J Indian Acad Forensic Med.* 2013; 35(1):26-28.
7. Devaraj Patil, Basawaraj Patil. Study of Knowledge and Attitudes of Medical Students Towards Medico-Legal Autopsies. *Indian Journal of Forensic Medicine & Toxicology*, 2016; 10(1):194-196.
8. G Venkat Rao, S Krishna Prasad. Autopsy – Perception and Attitudes of Undergraduate Medical Students in South India: A Questionnaire Survey. *International Archives of Integrated Medicine Journal*, 2016; 3(10):2014-211.
9. Ahmad N, Mohammed F, BC Shivakumar, Akram MDF, Mateen A. Attitude and Knowledge of Medical Students on Practical Aspects of Forensic Medicine. *J of Evidence Based Med & Hlth care*, 2015; 2(27) : 4002-4007.
10. Rautji R, Avishek Kumar, C Behera. Attitudes of Medical Students towards Medico-Legal/Clinical Autopsy. *J Indian Acad Forensic Med* 2013; 35(4):358-361.
11. Ekanem VJ, Akhigbe KO. Attitudes of Nigerian medical students to autopsy. *Turk J Med Sci.*, 2006; 36: 51-6.
12. Singh VP, Biswas G. Knowledge and Attitude of Medical Students and Interns towards Forensic Autopsy. *J Indian Acad Forensic Med.* 2014; 36(1): 9-12.