

Research Article

Knowledge towards post-mortem examination and reasons for not specialising in morbid anatomy: study among medical undergraduate students

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ABSTRACT

Background: The use of autopsy in medical education has been declining just as autopsy rate has been falling worldwide. This is further worsened by the prevention of medical students from attending autopsy sections in some areas. Aim of the study was to ascertain the knowledge of medical students towards autopsy and post-mortem examination. An additional objective was to assess reasons for not specialising in morbid anatomy.

Methods: The present cross sectional study was carried out among students of a medical college in Uttar Pradesh in the month of February 2016 using pretested self-administered questionnaire. The study population consisted of undergraduate medical students who were currently studying the forensic medicine and toxicology. A detailed proforma containing 20 questions was framed for the purpose of capturing socio-demographic information of the study participants, questions concerning knowledge about the post-mortem and reasons for not specializing in morbid anatomy.

Results: 82.2% were aware that post-mortems are conducted to know the cause and manner of death. Three students (3.3%) opined that the post-mortem is to harass the relatives of the deceased. Almost all the students were having a fair knowledge about the gross procedure involved in the post-mortem examination. Majority of male students would not wish to specialize in morbid anatomy because it deals with death, while most of female students said either they had made up their mind to specialize in some other fields or they do not want to touch and dissect dead bodies.

Conclusions: Students possess a reasonable knowledge about post-mortem but knowledge alone may not be enough for increasing the post-mortem/autopsy rate, unless they acquire the skills required for the procedure as currently they are not provided with any training during their medical curriculum.

Keywords: Autopsy, Medical students, KAP study

INTRODUCTION

The autopsy can be divided into medico-legal and academic autopsies. The medico-legal autopsy plays an

important role in the administration of justice. The use of autopsy in medical education has been declining just as autopsy rate has been falling worldwide.¹ This is further worsened by the prevention of medical students from

attending autopsy sections in some areas.² It is when students attend an autopsy section that they can appreciate the large number of conditions in different patients.³

The autopsy and post-mortem has played a vital role in the accumulation of medical knowledge.⁴

The value of autopsy has been proven in its elucidation of the cause of death, clinical quality control, medical auditing and in medical education. It is an indispensable examination tool in the medico legal investigation of unnatural and unexplained deaths.

It is, however, a procedure burdened with a variety of misconceptions, myths, and emotions by lay people as well as by physicians.⁵ There has been a steady decline in the autopsy rate and decline in the rate of obtaining permission for autopsy as well, worldwide in recent decades and is matter of concern.⁶

Fear of litigation, shortage of pathologists, concern about costs, failure to obtain consent from patient or relatives in spite of having substantial information about patients before their demise and knowledge of the medical professionals are some of identified reasons for this decline.⁷⁻⁹

Various studies have been conducted to assess the attitude of deceased family members and medical professionals in order to identify factors related to such decline.

Medical students occupy a privileged position and act as an interface between the laymen and the qualified professional and would play a central role in improving autopsy rates in any country, the desired goal.⁵

Therefore present study was conducted to ascertain the knowledge of medical students towards autopsy and post-mortem examination. An additional objective was to assess reasons for not specialising in morbid anatomy.

METHODS

The present cross sectional study was carried out among undergraduate students of a medical college in Uttar Pradesh, India in the month of February 2016 using pretested self-administered questionnaire.

The study population consisted of undergraduate medical students (MBBS) who were currently studying the Forensic Medicine and Toxicology subject. Students are taught paraclinical subjects namely, Pathology, Microbiology, Forensic Medicine and Toxicology and Pharmacology during the 2nd year of MBBS curriculum.

Those students who could not be retrieved even after the third visit to classes were excluded from the study.

Students were explained about the nature and purpose of study and requested to fill the questionnaires which were distributed by authors in the classrooms just after the completion of classes.

A detailed proforma containing 20 questions was framed for the purpose of capturing socio-demographic information of the study participants, questions concerning knowledge about the post-mortem and reasons for not specialising in morbid anatomy.

The questionnaire was pre tested on 10 students and amended for clarity with the addition of some answer options and was modified accordingly.

The study adhered to the tenets of the Declaration of Helsinki for research in humans. Informed consent was obtained. Ethical committee approved the study. The collected data was coded and entered onto SPSS (Statistical Package for the Social Sciences) version 20.

The results were expressed as proportions using appropriate graphs and tables. For comparison across the groups, Chi square test was used and $p < 0.05$ will be considered statistically significant.

RESULTS

During different visits made by the authors to classes, 95 students were present. Out of which 93 completed and returned the questionnaires giving an overall response rate of 97.9%.

Three proforma were discarded during data analysis. Finally data of 90 subjects were compiled and included in the study. The mean age of students was 19.53 years with a standard deviation of 1.24. The socio demographic profile of the students was almost similar.

Three hundred and two students (82.2%) were aware that post-mortems are conducted to know the cause and manner of death.

Three students (3.3%) opined that the post-mortem is to harass the relatives of the deceased. Almost all the students were having a fair knowledge about the gross procedure involved in the post-mortem examination (Table 1).

The majority of students (77, 85.6%) would, however, not specialise in Forensic Medicine, Pathology (Morbid Anatomy) out of which 45 were males and 32 were females.

A big chunk of students were of the view that they don't want to go to court for any evidences so do not prefer Forensic Medicine as career.

Majority of male students would not wish to specialize in morbid anatomy because it deals with death, while most

of female students said either they had made up their mind to specialize in some other fields or they do not

want to touch and dissect dead bodies ($p < 0.05$) (Table 2).

Table 1: Distribution of subjects according to their knowledge on various dimensions of post-mortem examination.

Knowledge on various dimensions of post-mortem examination	Males N (%)	Females N (%)	p-value
Do you think autopsy is a legal formality?	48 (88.9)	31 (86.1)	0.46
Can post-mortem determine actual cause and manner of death?	46 (85.2)	28 (77.8)	0.36
Are post-mortem conducted to harass the relatives of the diseased?	2 (3.7)	1 (2.8)	0.64
Is post-mortem essential in all cases of death?	3 (5.6)	2 (5.6)	0.68
Is post-mortem essential in unnatural and sudden unexpected deaths?	43 (79.6)	29 (80.6)	0.91
Post-mortem involves examination of dead body internally as well as externally.	54 (100)	36 (100)	NA
Post-mortem involves taking out visceral organs for toxicological, histopathological and other examinations.	53 (98.1)	36 (100)	NA
Do you think the number of autopsies you watched were enough?	32 (59.2)	22 (61.1)	0.86
Do you think that autopsy helps in solving crimes and give important information to police?	50 (92.3)	32 (88.9)	0.40
Can the relatives request the doctors for doing autopsy without police information?	30 (55.6)	27 (75.0)	0.06
Do you think body can be handed over to the relatives without postmortem if the cause of death is known in MLC cases?	34 (62.9)	20 (55.6)	0.48

Males (n=54), Females (n=36)

Table 2: Reasons for not specializing in morbid anatomy.

Reasons for not opting for specialisation in morbid anatomy.	Males (n=45)	Females (n=32)	p-value
Because this science doesn't deal with living persons so i am not willing in this subject.	27 (60.0)	8 (25.0)	0.002*
I have no interest as this subject is not interesting.	5 (11.1)	5 (15.6)	0.40
I do not want to touch and dissect dead bodies.	4 (8.9)	11 (34.4)	0.005*
Autopsy is a dirty procedure.	3 (6.7)	2 (6.25)	0.65
I have made up my mind not to specialise in morbid anatomy	9 (20.0)	12 (37.5)	0.08
I don't want to go to court for any evidences	32 (71.1)	27 (84.4)	0.17

* $p < 0.05$

DISCUSSION

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.^{4,10} Decline in autopsy rate has posed a great deal of concern to pathologists and medical educators. Various reasons have been given for this decline and these include improvement in modern diagnostic technique, inadequate training of doctors as to the importance of autopsy, and failure to obtain consent from relatives.¹¹ It is not uncommon for a doctor to undergo training without observing autopsy.¹² The response rate in the present study was 89%, which is in consistency with British study on medical students. Other studies from Sweden and US reported little lower response rate.¹³⁻¹⁵

It was observed in this study that 82.2% were aware that post-mortems are conducted to know the cause and manner of death. Three students (3.3%) opined that the post-mortem is to harass the relatives of the deceased. Almost all the students were having a fair knowledge about the gross procedure involved in the post-mortem examination.

The data clearly show that the majority students are aware of the needs and usefulness of post-mortem examination. This compares favourably with the study conducted at Ohio (USA) where 85% of the students also said that autopsy should be mandatory for all medical students.¹⁶ But this comes in contrast with the findings of another study which observed that almost one third of the students were ignorant about essentiality of the post-mortem examination in the country.¹⁷ It is worth noting that only 3 students opined that post-mortems are conducted to harass the guardians/relatives thus showing a positive attitude towards this procedure. They observed

in this study that a big chunk of students were of the view that they don't want to go to court for any evidences so do not prefer Forensic Medicine as career. Majority of male students would not wish to specialize in morbid anatomy because it deals with death, while most of female students said either they had made up their mind to specialize in some other fields or they do not want to touch and dissect dead bodies almost 80% of the male students would not mind autopsy to be performed on themselves. This finding tallies with the findings of Sanner et al from Sweden, who reported that 90% of students agreed to autopsy being performed on them.¹⁸

Another study contradicts the observations on this aspect of the study.¹⁹ Wilkes et al from UK reported that several students were willing to request autopsies on their patients, but rejected it on members of their own family.²⁰ It is gratifying to note the positive attitude of medical students on this aspect.

This study has several strengths. First, to our knowledge, assessment of knowledge of medical students towards autopsy and post-mortem examination has not been extensively investigated. Very few similar studies are available in the literature. We also assessed reasons for not specialising in morbid anatomy. This would help us to improve autopsy rates. The study has some limitations as well. This study was done on just 90 students. Large scale multicentric studies are warranted to validate the results.

CONCLUSION

The findings of the present study highlight that medical students possess a reasonable knowledge about post-mortem. But, knowledge alone may not be enough for increasing the post-mortem/autopsy rate, unless they acquire the skills required for the procedure as currently they are not provided with any training during their medical curriculum. Installation of skill in students would help us to raise the autopsy rates.

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