

Original Research Article.

# Assessment of Awareness and outlook of a Pathological Autopsy among Medical Students

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## Abstract

**Aim:** This study assesses the awareness, outlook & knowledge toward Pathological autopsy amongst medical students at tertiary care teaching center.

**Objectives:** To assess medical student's opinions, feelings and attitude towards autopsy and its importance in medical education.

**Material and Method:** We conducted a study of 300 students studying 3<sup>rd</sup> and 5<sup>th</sup> semesters where they taught about the subject. We used questionnaire containing questions relating to autopsy to assess the awareness, outlook & knowledge toward Pathological Autopsy.

**Results:** Amongst the class of 300 students no statistically difference is observed in the views of male and female students on any item in the present study.

**Conclusion:** The Forensic Medicine is important subject for medical profession. Teaching how to perform an autopsy is relevant and plays a positive role in medical education, and autopsy training from both theoretical and practical perspectives must be included in the forensic medicine curriculum. Medical institutes must take responsibility to increase awareness about the effect of media on medical education.

**Key Words:** Medical Students, Pathological Autopsy, Forensic Medicine, awareness and outlook.

## Introduction

The educative value of autopsy is so clearly appreciated by the students and most students agreed that autopsy is an educationally useful and necessary procedure. Over a centuries in a medical education

postmortem examination in one of the important concept. In nineteenth century Virchow and Osler used to understand the pathology of fatal disease like Endocarditis and pulmonary embolism by coordinating the value of pre and post mortem findings.<sup>1</sup>

The autopsy is beneficial in determining, the cause of death, the time of death, various medico legal issues surrounding death, and providing data on disease and injury.<sup>2</sup>

However, the non-forensic or academic autopsy has been broadly considered a "dying art"<sup>3</sup> or a "vanishing" medical procedure<sup>4</sup> mostly because of the

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worldwide dramatic fall in autopsy rates during the last decades.<sup>5</sup>Autopsy as a teaching medium has additional advantage that it provides an opportunity for medical students to come to term with death.

Consented autopsies are conducted at the request of either the familymembers of the deceased or a clinician in cases where the cause of death is known and, although there no additional examination and or investigation are required by law.Consent of the family of the deceased is always required in case of consented autopsies.

Medico-legal autopsies require no consent from the family of the deceased, and there is no mechanism by which families can prevent a coroner’s autopsy taking place.

However, in any aspect of medico-legal autopsy that concern the cause of death of the deceased, such as removal of tissue for testing purposes, can take place only with additional consent given by the relatives. In undergraduate medical training there is no mention of their use.

The use of the autopsy as an educational tool is in diminished and there is evidence suggest that many recent undergraduates students and even junior doctors have never attended an autopsy.<sup>6</sup>

**Aim and objectives**

1) This study assesses the awareness, outlook & knowledge toward autopsy among medical students at tertiary care teaching center.

2) To determine the thoughts, feelings & attitude of medical students towards autopsy & its value in medical education

**Material and Method**

This study approved from institutional Ethical Committee.

This cross-sectional is proposed to be conducted at the tertiary care teaching hospital and research center. The sample size is 300undergraduate medical students of second MBBS of 3<sup>rd</sup>& 5<sup>th</sup> semester for one year duration. All these students will be asked to fill questionnaire and this was voluntary for them. The survey consisted in several questions relating to the autopsy practice, the knowledge of the procedure attitude, various important aspect of the postmortem examination. The responses were made anonymously. Remainders were subsequently given to present this proforma. A valid consent of each student regarding filling all questionnaires was taken. Critical evaluation of the results will be analyzed using SPSS software.

**Results**

Amongst the class of 300 students there were 168 males and 132 females. The age of students range from 21-25 years with mean age of 22 years.

Statistically no difference is observed in the views of male and female students on any item in the present study.All of the medical students attained these questionnaires, their valuable feedback explained in table 1

**Table 1: Questionnaires and feedback**

Pathological autopsy is mandatory in all unnatural and sudden unexpected and suspicious death cases:	Yes=290(96%)
	No. n=7(2.33%)
	Ignorant .n=3(1%)
Taking out of viscera for histopathological examination and toxicological analysis for pathological as well as medico legal autopsy:	Yes. n=295 (98%)
	No. n=3(1%)
	Ignorant=2(0.6%)

**Cont... Table 1: Questionnaires and feedback**

Pathological autopsy examination is:	Done to rule out the cause of death. n=296(98.66%)
	It is a legal formality. n=90(30%)
	Mental harassment of the relatives of the deceased n=20(6.66%)
	Helpful in reaching the culprit of crime. n= 275(91.66%)
The reaction of the students on the first exposure to pathological autopsy procedure n=280(93.33%)	Comfortable. n=80(28.56%)
	Slightly uncomfortable. n=77(27.5%)
	Moderately uncomfortable. n=33(11.78%)
	Very uncomfortable. n=70(25%)
	Indifferent. n=20(7.14%)
Students should watch more such type of autopsies	Yes. n=277(92.33%)
Wished to have pathological autopsy examination on self/relative when required	Yes .n=260(86.66%)
	No. n=40(13.33%)
Given a chance would you choose not to watch more such autopsies	No. n=215(71.66%)
	Yes=85(28.33%)
The utility of such autopsy examination in medical education.	Yes. n=265(88.33%)
	No. n=5(1.66%),
	Should be scrapped from medical education. n=30(10%)
Defacement by pathological autopsy examination. n=248(82.66%)	Yes. n=80(32.25%)
	No. n=168(67.74%)
Pathological autopsy is disrespect to human body	Yes. n=35(11.66%)
	No. n=265(88.33%)
Source of information and knowledge about pathological autopsy	Medical curriculum. n= 290 (96.66%)
	Magazine and newspaper. n=70(23.33%)
	T.V. n=90(30%)
	Internet. n=140(46.66%),
	Friend and relative. n= 25(8.33%).

## Discussion

In a long history of medical education the word autopsy is obtained from the ancient Greek word “autos” (oneself) and “opsis” (sight); literally meaning “to see for oneself”.<sup>7</sup>

The utility of the autopsy as a tool in both medical practice and medical education has remained well-recognized in more recent times.<sup>8,9,10</sup>

In view of this usefulness, throughout the early and middle part of the last century, the autopsy was widely and regularly used as a teaching tool, and regular attendance by medical students was expected.

Despite the high importance put on the autopsy as a teaching tool in the past, its use in this context has decreased significantly, leading to a situation where many students during their under graduation period will no longer see any autopsies at all.<sup>11,12</sup>

The observation of autopsies by students is elective in some medical schools and college in the world because of religious and cultural ground. Based on this, some students may complete their training in these centers without observing single autopsy.

The degree to which learners were actively promoted seemed to be differ. Particularly where attendance was encouraged, postmortem examination opportunities tended to be based on particular conditions like being on placement and engaging with a patient on whom a postmortem was being conducted and employers attitudes and opportunities.

In view of medico-legal awareness, it was understood that all doctors at some stage in their medical carrier would come into contact with dead patients and that autopsy attendance was given a chance for them to understand the legal system that applies to the dead patient. Particular importance was given to the creation of knowledge of consent issues and the role of legal authority among medical students.

It was seen that attending postmortem exams had beneficial effects on diagnostic and communication skills, potentially improving future patient care.

Some have seen postmortem observation as likely to promote wider differential diagnosis and the related

investigative methodologies for problem solving.

The usefulness of autopsy in the provision of the hidden curriculum in medical education has been highlighted in several studies. Certain aspects of medical practise that cannot be taught by formal teaching sessions, but are subconsciously learned by observing teachers and peers attitudes and activities.<sup>12,13</sup>

Even if other methods have failed to demonstrate a definite cause of death, because their own expertise and experience about the subject is lacking and those students who passed their graduation without autopsy experience would refuse to request an autopsy.<sup>14</sup>

A subset of medico-legal autopsies take place where there is the suspicion of criminal act forensic or special autopsies, and such cases involve the police service and may utilize other professionals such as forensic scientists. Like all medico-legal autopsies, forensic cases require no consent from the family of the deceased, and there is no mechanism by which families can prevent such an examination taking place.

There is no statistical difference in the views of male and female students on any item in the present study possibly because they all had similar educational background and socioeconomic status. Since, this study is based on an academic task this could be why the students responded in almost the same way; efforts of the accompanying faculty to make this meaningful could be another.

In the present study 86.6% of the student answered positive on wished to have postmortem examination on self and or relative when required is favored by Study of Sanner et al<sup>15</sup> in Sweden where 90% of the students would not mind autopsy to be performed on them.

JoonJoon et al<sup>16</sup> indicated 77.5% of the students recommended making autopsy session compulsory during undergraduate medical training.

In our study 92.33% of the students recommended that students should watch more postmortem examination favored by different studies.<sup>17,18</sup>

96% of the students recommended making autopsy session compulsory during undergraduate Medical training in all unnatural and sudden unexpected and

suspicious death cases.

Taking out of viscera for histopathological examination and toxicological analysis for pathological as well as medico legal autopsy reported in 98% in our study.

Only 25% of the students were very uncomfortable for when they were first time exposed to pathological autopsy procedure.

In present study majority of the students acquire knowledge and information about postmortem examination from their medical curricula in spite of development of print, electronic mass media and internet accessibility.

Very few students (11.66%) were of opinion that postmortem examination is disrespect to human body, which is favored by various studies.<sup>17,16</sup>

Just 2.5% of the students felt that postmortem examination was harassment to the relatives of the deceased.

This study showed that the medico-legal autopsy demonstration is still valued by medical students as a learning opportunity. Most students in the current study were aware of the circumstances where medico-legal autopsy and preservation of viscera is mandatory under Indian law for chemical analysis and histopathological examination.

It was also found that attending postmortem examination strengthened the perception of the pathologists function and that of other practitioner in health care.

It helped students to understand the impact of life style, social deprivation, and other socio-economic variables on health, well-being, and death.

A literature review shows that the potential importance of the autopsy in undergraduate teaching is very high, but its significance has declined in recent decades, and medical students can qualify in some schools without even entering a mortuary.<sup>19</sup>

The reasons for this decrease in autopsy based teaching include; insufficient curriculum time, inadequate training of doctors on values of autopsy,

conflicting departmental requirements and insufficient hospital autopsies, an improvement in the medical diagnostic technology available; and difficulties in obtaining consent from relatives.<sup>20, 21</sup>

## Conclusion

The Forensic Medicine is important subject for medical profession. Teaching how to perform an autopsy is relevant and plays a positive role in medical education and autopsy training from both theoretical and practical perspectives must be included in the forensic medicine curriculum. It must be duty of Medical institution to raise awareness about the effect of media on medical education.

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