

ELEMENTARY KNOWLEDGE AND ATTITUDE OF MBBS STUDENTS TOWARDS MEDICO LEGAL AUTOPSY

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ABSTRACT

Autopsy is an important investigating procedure to establish the cause of death. As rules regulated by Nepal Medical Council, a medical student of all medical colleges in Nepal can witness medico legal autopsies in the third year of MBBS. The main objective of this study is to investigate the general attitude of medical students of 3rd, years MBBS towards medico-legal autopsy/Clinical autopsy. In September 2021, a descriptive and cross sectional study was performed in Nepal medical college teaching hospital among 90 students. In this study prepared questioner with several questions were given to the participated students about the knowledge of autopsy and its procedure. These questions also aimed to know the attitude and perception towards postmortem examination. Later, the results were analyzed in detail and were represented in frequency. About 97.78% students agreed that medico-legal postmortem examination is mandatory in all unnatural and suspicious deaths to know the cause of death. Majority 87.78% of the students said they should watch more postmortem examination. None of the students 100% said post mortem examination should be removed from medical education. Nearly 95.56% students said that they should actively participate in performing autopsies. Maximum number of students i.e. 52.22% prefer virtual autopsy. About 80.0% of students said that taking out viscera is necessary for histo-pathological examinations and toxicological analysis in cases of medico legal autopsies. 94.44% students have opinion for not wishing specialization in Forensic Medicine due to interest in other specialties. Medical students must be provided by all the educational and necessary facilities to encourage in this field of forensic medicine.

KEYWORDS

Clinical autopsy, forensic medicine, medical education, medico legal autopsy

Received on: November 23, 2024

Accepted for publication: January 26, 2025

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DOI: <https://doi.org/10.3126/nmcj.v27i1.77484>

INTRODUCTION

Necropsy examination of dead body which has been using for centuries can be categorized into medico legal and clinical autopsy. When medico legal autopsy plays an important part in the administration of justice after all the legal procedure has been performed, clinical autopsy is the final step in the identification of person's illness. In nineteenth century, Virchow and Osler used the autopsy to understand the pathology of fatal disease. Contribution of clinical autopsy to medical field extends beyond confirmation of the ante mortem diagnosis. The importance of autopsy has been proven in cases such as improving the patient centered care, clinical quality control, medical auditing and in medical education.²⁻⁵

The importance of autopsy for medical students is the knowledge that they can get from gross anatomy of disease, clinico-pathological correlation of the human body and diseases, death certification and death statistics.^{2,7} But, despite these importance of autopsy in clinical and legal field, its use and interest among medical students has been falling down worldwide.⁸⁻⁹ Most of the medico legal autopsies are conducted by medical practioners who have undergone training of 2-3 months only resulting in unsatisfactory quality of autopsy reports except in the hospitals which are attached with medical colleges.¹⁰⁻¹¹

Although autopsy so far can be considered as a gold standard educational experience which encourages medical students to take part during post mortem examination, few students find the autopsy procedure disgusting. Although the experience of the students and the procedure itself, the importance of autopsy in education regarding judicial proceedings and understanding of medical uncertainty cannot be ignored.

The importance of autopsy was said by Xavier Biachat¹² in 19th century who declared that no matter how many medical books we read, how many times we visit at the bedside of patient, all our confusion will disappear only after we open a few dead bodies. But the declining rate of autopsy is falling worldwide from developed countries to underdeveloped countries. Out of the total 94,555 coronial autopsies in 2013, 1132 hospital autopsies were done and that is only 1.2% of the total autopsies. If medical students try to debar from attending autopsy, it effects on quality assurance, public health issues, treatment plans, and misdiagnosis and in judicial procedure.¹³

In Nepal, all MBBS students must attend autopsies during their posting in 3rd and 4th year. This is the only time when they will attend autopsy posting due to the lack of curriculum time guided by Nepal Medical Council. In this study we investigated the perception and basic knowledge to perform medico legal autopsy by MBBS students.

MATERIALS AND METHODS

Before starting the study, written approval from the Institutional Review Committee of Nepal Medical College and written informed consent from the participants was obtained. Questionnaires were prepared, after going through literature and consulting all the faculty members of the department. A questionnaire was made which requested demographic information and students attitudes to autopsy questionnaire also contains several questions relating to the autopsy practice, the knowledge of the procedure and attitude and perception towards postmortem examination. In this study, medical students who refused to take part in this study were excluded from the study. After this exclusion, a total 90 students of Nepal medical college participated who had completed their course in autopsy observation and participation.

The questionnaires were distributed to the students and they were asked not to disclose their identity. The questionnaires were analyzed in detail on the following aspects: usefulness and necessity of autopsy in medical practice and education; their personal distaste for the procedure, whether attendance at an autopsy should remain a compulsory part of medical education, and feelings about autopsies carried out on self or relatives etc. This survey aimed with the evaluation of autopsy activities and the importance of autopsy in the medical field, attitudes towards doing an autopsy independently, first reaction to the autopsy procedure and willingness to perform on near relatives. All the results from this study were represented in frequency in tabular form.

RESULTS

A total of 90 students participated with written consent in this study. Among these students 53(58%) were male and females were 37 (41.11%). To the questions about the first autopsy experience that they witnessed, 62 (68.89%) students were having little uncomfortable and only 1 (1.11%) said it was very uncomfortable but none of the participated students said it

Table 1: Results of the study

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|----|---|---|
| 1 | Sex | Male- 53 (58.00%) Female- 37 (41.10%) Other- 0 (00.00%) |
| 2 | Your reaction during first exposure to medico-legal autopsy | Normal- 27 (30.00%) Little uncomfortable- 62 (68.89%) Very uncomfortable- 1 (1.10%) Disgusting- 0 (0.00%) |
| 3 | Students need to observe more post mortem examination | Yes - 79 (87.80%) No - 11 (12.20%) |
| 4 | Medical students must participate actively in autopsy | Yes - 86 (95.60%) No - 4 (4.40%) |
| 5 | Autopsy is | Just legal formality- 6 (6.67%) Done to know the cause of death- 5 (5.56%) Bad experience to the relatives of the deceased- 14 (15.56%) Helpful in administration of Justice- 70 (77.78%) All of the above- 3 (3.33%) |
| 6 | Procedures to be followed during medico legal autopsy | External Examination only- 0 (0.00%) Internal examination only- 0 (0.00%) Both external and internal examination- 90 (100.00%) |
| 7 | Medico legal autopsy is done in all unnatural, sudden and unexpected death and suspicious death | Yes- 88 (97.78%) No- 2 (2.22%) |
| 8 | Preliminaries to perform medico legal autopsy | Consent of the relatives- 45 (50.00%) Requisition letter from investigating officer- 73 (81.11%) Inquest letter from the investigating Officer- 9 (10.00%) Fee to perform autopsy- 0 (0.00%) None of the above- 0 (0.00%) |
| 9 | In medico legal autopsy, is it mandatory to taking out viscera for histo-pathological and toxicological analysis? | Yes- 72 (80.00%) No- 18 (20.00%) |
| 10 | Tissues for toxicological analysis are preserved in | Saturated solution of common salt- 84 (93.33%) 10%Formalin- 6 (6.67%) |
| 11 | In case of brought dead ,death certificate can be given | Yes- 4 (4.44%) No- 83 (92.22%) Depends upon the circumstances- 3 (3.33%) |
| 12 | After your medical education, will you be able to perform autopsy independently? | Yes- 12 (13.33%) No- 78 (86.67%) |
| 13 | Will you be able to perform autopsy on relative when required? | Yes- 11 (12.22%) No- 79 (87.78%) |
| 14 | What kind of autopsy will you prefer? | Virtual autopsy- 47 (52.22%) Conventional Autopsy- 43 (47.78%) |
| 15 | Do you think disfigurement by post mortem examination is disrespect to human body? | Yes- 25 (27.78%) No- 65 (72.22%) |
| 16 | Do you think post mortem examination education must be removed from medical education? | Yes- 00 (0.00%) No- 90 (100.00%) |
| 17 | What do you think for not wishing specialization in Forensic Medicine? | Due to post mortem examination- 2 (2.22%) No scope- 3 (3.33%) Interested in other specialties- 85 (94.44%) |

was disgusting. Rest of the students 27 (30%) students was feeling normal at that time.

During the analysis of responses shown in Table 1, most of the students 79 (87.78%) recommended observing and more actively participate in autopsy while rest of the students i.e. 11 (12.22%) had no such opinion. About 70 (77.78%) of students said that autopsy is helpful in administration of Justice in contrast to the opinion of other students 14 (15.56%) who have opinion that it is bad experience to the relatives of the deceased. Out of total 90 students, 88 (97.78%) students agreed that medico-legal postmortem examination is compulsory in all unnatural, sudden, unexpected and suspicious deaths. Total of 45 (50%) said that consent of the relative is mandatory before performing medico legal autopsy. Few students 12 (13.33%) said that they are able to perform autopsy independently. Preference of virtual autopsy among medical students was 47 (52.22%) whereas 43 (47.78%) preferred conventional autopsy. All the students who participate in this study i.e. 90 (100%) had opinion that post mortem examination education must not be removed from medical education. Only few students 5 (5%) answered that they can perform autopsy independently after medical education. But 79 (87.78%) were not ready to perform autopsy on their relatives. All the participated students 90 (100.0%) know that both external and internal examination should be followed during medico-legal autopsy. Majority of students 72 (80.0%) of the students said that taking out viscera is necessary for histo-pathological examinations and toxicological analysis in cases of medico legal autopsies. But very few students only 6 (6.67%) know that 10% formalin is used to preserve the tissues for toxicological analysis.

Most of the students 85 (94.44%) have opinion for not doing specialization in forensic medicine due to the interest in other specialties whereas only few students 2 (2.22%) said that the cause is post mortem examination, while 3 (3.33%) students from the respondents said that there is no scope in forensic medicine specialization.

DISCUSSION

Autopsy has been playing an important role of medical education for centuries in order to establish the cause, mode and time since death. Nowadays, this medical field has been slowly substituting by other types modern medicine education.¹ Despite of the fact that it is very necessary to help in the administration of justice with the help of all the medical knowledge that doctor will apply, the tendency of squeezing

out of the medical curriculum in order to accommodate increasing amount of modern medicine education is very much worrisome in recent days.² After medical education students will go one year clinical internship in different specialties. But nowhere in Nepal is the posting of forensic medicine mandatory.³

Students after internship will have to face will all the medico-legal duties from the very first minute when they start working independently no matter if doctor is only house officer in Emergency room or in admission ward. There are many factors that affects learning and they are beyond the control of educators, such as prior life experience, cultural or religious beliefs, and psychological predispositions. However, an awareness and management of these factors should be advantageous if the attitudes of future practitioners are to be influenced.^{4,5}

The results of present study indicate that medical students had sufficient knowledge about the procedures and had positive attitude towards observing the autopsies. In present study, the majority of the students showed awareness of the situations where medico legal autopsy and preservation of viscera is mandatory. This study showed that majority of the students agreed on the importance of autopsy in medical education and they have an opinion of watching and encouraging medical students to observe and participate in more autopsies. This result was similar to the study done by Punjab Medical College in 2011 and 2012. Majority of students 79 (87.78%) responded that they are not ready to do autopsy on their relatives who showed similar result from the study of Punjab Medical College in 2011 and 2012.¹⁵ Similarly, in this study we found that about 25 (27.78%) students believed that disfigurement by postmortem examination is disrespect to human body which is different from to the finding of Navodaya Medical College, Raichur Karnataka, India.¹⁶ The difference in result may be due to the socio cultural condition.

This study showed that 86 (95.56%) students are interested to actively participate in performing autopsies. This indicates that students are ready to actively participation in performing autopsies rather than only standing and watching as dummy. But this study also showed that majority of students 85 (94.44%) have no interest in choosing forensic medicine as specialization due to the interest in other specialties. This result was similar with result of Punjab Medical College in 2011 and 2012 which were only 6 (2.82%).¹⁵ Very few students 2 (2.22%) also showed post-mortem

examination is the main reason for not doing specialization in forensic medicine.

In conclusion, this study shows that active posting and better practical medico legal training in forensic medicine is necessary in order to encourage medical students to do their specialization in forensic medicine. Proper

information and guidance must be given to the students in order to modify their opinion when they complete their medical colleges. This will help to increase specialist doctors in forensic medicine.

Source of Funding: Nil

Conflict of Interest: Nil

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