



Original Article

PREJUDICE OF MEDICAL STUDENTS TOWARDS MEDICO-LEGAL AUTOPSY AS A TEACHING MEDIUM

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ABSTRACT

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Background: Autopsy is a contraption used for research purpose for about many aeon. This study is lugged out to determine the attitude of medical students toward medico-legal autopsy. Autopsy basically typecasts into clinical, medico-legal, mini, negative, virtual and such categories but broadly into clinical and medico- legal autopsy.

Objective: To determine the prejudice of Karachi Medical and Dental College students towards medico-legal autopsy, furthermore after viewing and getting responses of students, emend and amend the set up of autopsy suite.

Methods: The study design is a descriptive cross-sectional study. Two hundred students from Karachi Medical and Dental College of 3rd year and 4th year M.B.B.S, 2014-2015 were selected as they had exposure with the autopsies and medico-legal section at Abassi shaheed Hospital, Karachi. The students were asked to answer anonymously to a questionnaire with reasonable reasoning. The collected data in the form of responses from the students was analyzed in terms of how useful and necessary is autopsy in medical education. Their data was analyzed to determine the frequency distribution of the student's responses.

Results: Among all, 73.5% students agreed on the importance of autopsy in medical education. However, 75% students propounded that they should be allowed to participate actively in performing autopsies while 45% agreed that actual autopsy should be replaced by virtual autopsy. Most of them i.e 81.5% were not in favor of specializing in Forensic Medicine whereas only 17% intended to specialize in this field.

Conclusion: It is concluded that teaching based autopsy teaches valuable skills, which no one can fully learn by literature only. However, avoidable unpleasant aspects of medico- legal autopsy demonstration should be minimized in order to keep and maintain an ideal autopsy atmosphere.

Key Words: Autopsy, medical students, medico- legal, prejudice.

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INTRODUCTION

Autopsy is also known as postmortem examination or necropsy. The word

autopsy means self examination. Postmortem is the examination after death. Similarly necropsy means death and opis meaning view, thus necropsy means viewing after death ⁽¹⁾. Autopsy is a scientific study of dead body ⁽²⁾. The autopsy rates in USA have dropped over the decades from 60% - 41% in 1960s, 22% in 1970s and to less than 10% currently ⁽³⁾. In Northern Ireland the hospital autopsy rate fell from 22% in 1990 to 8% in 1999 ⁽⁴⁾. In China autopsy has been squeezed out of the regular medical education curriculum in order to accommodate increasing amount of modern medicine education during the teaching technique reform. This proclivity has drawn much attention and is worrisome for both medical educators and medical students ⁽⁵⁾.

Just as autopsy rate has been falling all over the world, the mileage of autopsy is seen to be declining ^(6,7). This is further exacerbated by authorities deterring medical students from ministering autopsy sections. Fewer than half of American medical schools require attendance at autopsy but most students baccalaureate without attending a single session of autopsy ⁽⁸⁾. Knowledge of autopsy will broaden the student's mind and embroider a more accurate diagnosis during the sub-sequential years of their clinical practice as doctors. Disciple attendance at autopsies is compulsory in five medical schools in Australia ⁽⁹⁾. Trend to dispose off cases of sudden death without autopsy is un-scientific ⁽¹⁰⁾. Many medical students licentiate without witnessing an autopsy ⁽¹¹⁾.

According to our curriculum, a medical student should signatory a minimum number of medico-legal autopsies in the 3rd year of medical college so that they can interpret various findings which they observe during an autopsy procedure. Brazil students are encouraged only but they

are not obliged to attend necropsies. They are most likely to complete their attendance during the final two academic years ⁽¹²⁾. All through in Turkey, a general practitioner often does forensic autopsies and examines the medico-legal cases because there are very few forensic medicine specialists in Turkey, therefore undergraduate forensic medicine education is must for every medical student in Turkey ^(13,14,15).

Autopsy findings provided the bedrock for much of modern medical knowledge ⁽¹⁶⁾. This can only happen when a pupil attends an autopsy section, so that they can appreciate and learn a large number of pathological conditions in contradistinctive patients. The value of autopsy, clinical or medico-legal has been proven in its elucidation of the cause of death, clinical quality control, medical auditing and in medical inculcation ^(17,18).

Modern computer- assisted teaching methods, has seen the pratfall of using autopsies as an educational tool. Still the benefits of attending an autopsy cannot be replaced by these new educational techniques. Medical faculty believed that medical graduates in virtual absence of an autopsy experience would have an incomplete medical education ⁽¹⁹⁾. In both clinical and forensic cases, the autopsy is instrumental in accurately establishing the cause and manner of death. It allows confirmation, clarification and correction of ante-mortem diagnosis along with identification of new and re-emerging diseases, so important in public health and also improving the accuracy of vital statistics ⁽²⁰⁾.

So the essence is, complete autopsy and its knowledge is necessary to corroborate the corroboration of eyewitnesses and the investigations done by the investigating officer, since a poor autopsy can lead to miscarriage of justice ⁽²¹⁾.

CHART 1
INFORMATION ABOUT MEDICO-LEGAL
AUTOPSY

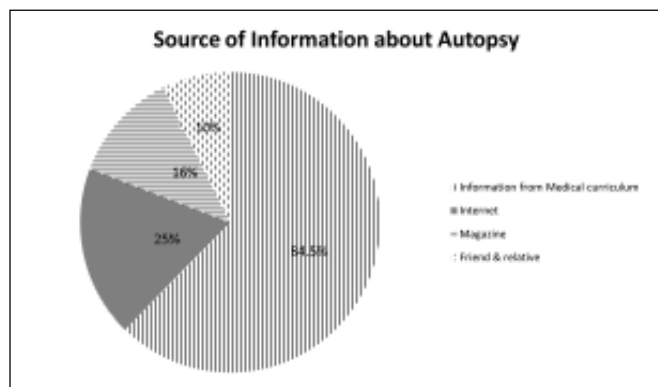
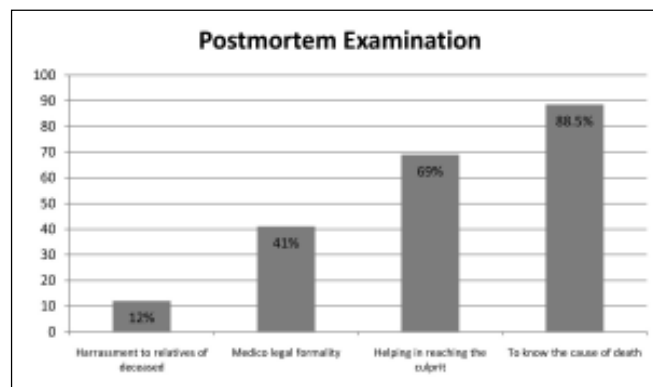


CHART 2
MEDICO-LEGAL AUTOPSY/POSTMORTEM
EXAMINATION



PREJUDICE OF MEDICAL STUDENTS TOWARDS MEDICO-LEGAL AUTOPSY

CHART 3
QUESTIONNAIRE AND RESPONSES OF STUDENTS

S.No	Questionnaire	Male			Female			Total%		
		Yes	No	Ign	Yes	No	Ign	Yes	No	Ign
1)	MEDICOLEGAL AUTOPSY in all un-natural death	22	1	4	148	23	2	85%	12%	3%
2)	Should autopsy be scraped from medical education?	8	19	0	41	128	4	24.5%	73.5%	2%
3)	The reaction of students on first exposure to autopsy Yes = Comfortable, No = Un-Comfortable	14	12	1	59	110	4	36.5%	61%	2.5%
4)	Given a chance, would you choose not to watch autopsy examination at all?	6	21	0	44	129	0	25%	75%	0%
5)	Wished to have autopsy on self/relative, when required?	8	19	0	29	143	1	18.5%	81%	0.5%
6)	Taking out of Viscera for histopathological examination & toxicological analysis for medico-legal autopsy	23	4	0	146	25	2	84.5%	14.5%	1%
7)	Disfigurement by autopsy procedure	8	18	1	122	44	7	65%	31%	4%
8)	Autopsy examination disrespect to human body	14	13	0	117	52	4	65.5%	32.5%	2%
9)	Actual autopsy should be replaced by Virtual autopsy?	15	9	3	75	91	7	45%	50%	5%
10)	Intend to specialize in Forensic Medicine?	6	20	1	28	143	2	17%	81.5%	1.5%

AIM AND OBJECTIVES:

To study the prejudice of Karachi Medical and Dental College students towards medico-legal autopsy.

To emend and amend the set up of an autopsy suite.

MATERIAL AND METHODS:

The study was escorted amongst medical students of Karachi Medical and Dental College. Annotation and feedback of disciple of 3rd year and 4th year students were wangled by asking them to answer a questionnaire. Amongst them 176 were female and 24 were male students.

The questionnaire was prepared after consulting each author and going through literature and day to day interactions with docent during autopsy.

Participation in this study was absolutely discretional. However, students were asked not to disclose their identity.

Two hundred students participated in the study. Student's comments were confab and analyzed especially on usefulness and the necessity of autopsy in medical practice and medical education in terms of whether attendance at autopsy should remain a mandatory part of medical education, attitude of mortuary staff and opinion about autopsies carried out on self or relatives and more. Data was entered in a Microsoft Excel spreadsheet and analyzed using SPSS Version 16. The frequency and percentages were calculated for all categorical variables.

RESULT

Two hundred questionnaires doled out, all returned duly filled. Ranges of the participants were between 18 – 22 years attended 10 medico-legal autopsies during their 3rd academic year of medical graduation in the subject of forensic medicine and toxicology.

In the evaluation of response, students get information about

autopsy from medical curriculum (84.5%), internet (25%), magazines (16%), friends and relatives (10%) as presented in chart 1.

Student's view for importance and purpose of autopsy is mentioned in chart 2 and it was observed that 12%, 41%, 69% and 85.5% students considered as harassment to relatives of deceased, medico-legal formality, helping in reaching the culprit and to know the cause of death respectively.

Questionnaire and responses of students are presented in chart 3. They (73.5%) said that autopsy should not be scraped from medical curriculum, 85% say yes for doing medico-legal autopsy in all unnatural death to know the cause of death. Not explicitly, 61% students show an uncomfortable reaction on the first exposure to an autopsy that might be due to an increase in the number of female students, however 75% were saying given a chance they still would choose to watch an autopsy. Amongst all, 81% did not want autopsies on them or their relatives. 84.5% said taking out of viscera for histopathological examination and toxicological analysis helps to know the cause of death. They (65.5%) fumble that inadequate respect had been shown to the dead. They were of the view that autopsy was done very quickly, unnecessary chats and remarks by the attending staff during the procedure, which should be avoided in order to give respect.

Virtual autopsy is an autopsy without giving any incision but on cellular level we have to do an actual autopsy. 50% agreed for actual autopsy and 45% are in favor of virtual autopsy. After and above we have 81.5% students, not interested in specializing in forensic medicine as it deals with death and there is no scope in our country in specializing in this field but 17% made up their mind to specialize in Forensic medicine.

DISCUSSION

Age range of students in this study was 18 – 22 years. As previously mentioned, all the students here witnessed a minimum of ten medico-legal autopsies each. In our result, 75% students are in favor of watching an autopsy. Many of the students were in the opinion that medical students should watch more autopsies because by doing this they can learn more by viewing different pathological conditions, pattern of injuries and postmortem changes. This when compared with the study in India in 2013⁽⁹⁾, 72.3% satisfied with the number of autopsies watched, however 47.7% recommended that medical students should watched more autopsies. This is in contrast to the study by Ekanem and Akhigbe⁽²²⁾ where the figures were 57% and 74% respectively.

In present rumination , only 18.5% agreed to an autopsy

being performed on self or relatives while 81% are in the opinion of not doing so on them or their relative because of religious belief and sentiments . This in contrast to the students by Sanner⁽²³⁾ in Swedan and Jadav c jet al⁽¹⁶⁾ in which 90% and 82.5% of students agreed for autopsy to be performed on themselves or their relative respectively in order to know the cause of death and to reach the culprit. This when compared to a study⁽⁹⁾, only 49% agreed to an autopsy being performed on them which is similar to the study⁽²²⁾ in which 34% agreed for that.

“Autopsy is disrespect to human body”, is a comment said by 65.5% of the students as they were of the view that autopsy was done very quickly and un-necessary remarks and chats by the attending staff were made during the procedure as mentioned early which should be strictly avoided, this also cited⁽⁹⁾. Similar feelings were also expressed by students in a study conducted by E W Benbow⁽²⁴⁾ and in a study conducted in Ahmedabad⁽¹⁶⁾, 7.5% expressed the same which is favored by study of Khoo Joon Joon⁽²⁵⁾. However being a student, as they are very young none of them had suggested how the procedure exactly should be modified to improve proper respect. But what we can do at our best is to avoid these things in order to give respect.

Here in our pondering 12% opined that autopsy is harassment to the relatives of the deceased when compared with only 2.5% figure of a study⁽¹⁶⁾. However, this can be relieved by explaining them that the examination is a medico-legal formality as 41% agree to this. Also explains that it is done to know the cause of death as said by 88.5% of the pupils and finally helping in reaching the culprit is agreed upon by 69% of the strength. In present reverie 85% were aware that medico-legal autopsy is required in all cases of unnatural death, but remaining were not agreed in doing autopsy in all un-natural death cases. This compares favorably with the study⁽²⁴⁾. In their view in some cases cause of death is obvious as in road traffic accidents or rail traffic accidents so why is an autopsy is required in that case? But as we know, autopsy's aims and objectives are not only to find the cause of death but it also clears identification, manner, mode and time since death.

In the present contemplation, 73.5% students are in favor that autopsy should not be scraped from medical curriculum compared with the study⁽¹⁶⁾ where 96.5% students agreed that autopsy is necessary in medical education as they learn through this. This compares favorably with the study of Botega et al in Brazil⁽¹²⁾ and in a study conducted in Malaysia where 77.5% students recommended an autopsy session compulsory during undergraduate medical training⁽²⁵⁾.

SUGGESTIONS / CONCLUSION

Mortuary should be well equipped. Modern instruments should replace the primitive ones so that we can build an ideal autopsy suite because due to the poor infrastructure, the chances of reaching a valid conclusion on the cause of death will be poor.

A Concerned autopsy surgeon should be involved during the procedure.

Doctors, technician and other staff are required to be qualified and trained. Un-necessary autopsy should be scrutinized in order to avoid overburden for the staff. Staff should be on rotation.

It is advised for the forensic medicine curriculum to revise itself and incorporate all required topics. Likewise updated textbooks should be included with amended laws.

All students are highly encouraged to come and visit mortuary and watch an autopsy as required and even more as this will groom the literature which they studied. The concerned staff should co-operate with each other and with the students so that they become comfortable with the atmosphere and do not lose but take interest in the field. The mammoth ambition of teaching forensic medicine to undergraduate students is to produce doctors capable of making observations and inferring conclusions in criminal matters or medico-legal cases.

CONFLICT OF INTEREST

Authors have no conflict of interest and no grant/funding from any organization.

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CONTRIBUTION/INPUT OF EVERY AUTHOR

All authors participated in the design of the study, data analysis and preparation of manuscript. Dr Roohi Ehsan and Prof. Dr. Farhat Hussain Mirza conceived the idea, prepared proforma for data collection and analyzed and interpreted the data. Dr. Roohi Ehsan and Dr. Syed Perwez Alam did extensive literature search, review the manuscript and retrieved the relevant references as well. They finally developed and wrote the main manuscript of the article. Prof. Dr. Farhat Hussain Mirza participated in data analysis and writing initial draft of the article. All authors after the scrutiny of the script approved the final version of the article without any conflict of interest among the authors.