Original Article

Traditional Teaching Methodology

Reaffirming the Importance of Traditional Teaching Methodology from the Perspective of Faculty of Anatomy

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ABSTRACT

Objective: To reaffirm the importance of cadaveric dissection and prosected specimens in imparting knowledge of Anatomy to medical students from the perspective of faculty of anatomy.
Study Design: Cross sectional study
Place and Duration of Study: This study was carried out in the Anatomy Department of Fazaia Medical College, Islamabad from January 2016 to March 2016.
Materials and Methods: Data was collected from100 faculty members working in the Anatomy department of medical colleges of Rawalpindi and Islamabad having at least 2 years of teaching experience.
Results: In spite of facing certain limitations, 60 % of the faculty considered cadaveric dissection as an indispensable tool for teaching Anatomy while 70% of the participants were of the view that combination of dissection and prosection is the best technique.
Conclusion: The importance of traditional teaching methods in imparting knowledge of Anatomy cannot be undermined.
Key Words: Dissection, prosection, faculty

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INTRODUCTION

Anatomy has always been a backbone and cornerstone of medical education[1, 2] Medical practitioners use their knowledge of Anatomy to examine a patient, formulate differential diagnosis, undertake investigation and to perform a procedure.[3, 4].

The subject of Anatomy is taught traditionally either through dissection on cadavers or using prosected specimens. Dissection is the exploration of a embalmed human cadaver for the identification of structures present in the human body with the objective of learning of gross anatomy by visual and tactile experience.[5] In the process of 'dissection' students are actually involved in performing it themselves while in 'prosection' the students use the specimens dissected and preserved by embalmers and curators[6].

Now we have entered a time of paradigm shift, supported by new technologies where in addition to dissection and prosection, models and audiovisual techniques are also being incorporated for teaching Anatomy[7].

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In the Anatomy departments of numerous medical colleges worldwide prosected specimen and models alongwith newer teaching modalities are being used as their primary learning tool to compensate for scarce resources and limited teaching time[8].

Many studies about the teaching modalities of anatomy have been conducted from student's perspective[9, 10.] We conducted this study to know about the opinion of teaching faculty of anatomy regarding the importance of dissection or prosection to convey knowledge. The purpose of our study is to assess the importance of cadaveric dissection as a basic teaching tool and to know whether prosected specimens can suffice it or not.

MATERIALS AND METHODS

Information was collected from the faculty of Anatomy having teaching experience of at least two or more than two years by using a specially designed questionnaire. The instructors having less than two years of teaching experience were excluded. The faculty was briefed about the questionnaire & asked to respond freely and fearlessly. They were informed that the information furnished by them is for the research and evaluation purpose only and will be absolutely confidential.

RESULTS

The questionnaire was given to the faculty in medical colleges of Rawalpindi and Islamabad region. The group comprised of 100 persons and all of them responded to the questionnaire. The questions and their response can be seen in the table.

Teaching on prosected specimen is considered to be a substitute for dissection by 51.7% of the faculty members while 48.3% were against this idea of complete replacement.

A hands on training on cadavers was supported by 62% of the group while only 38% of the participants gave opinion in favor of prosected specimens.

Dissection was considered as an indispensable tool by 60% of the faculty members. 72% of the faculty was of opinion that non availability of the cadavers and high maintenance cost of mortuary is the main reason for switching to prosected specimens and models.

Dissection is an important tool to enhance thinking in a logical manner as perceived by 75% of the faculty. Combination of dissection and prosection is considered the best teaching modality by 70% of the instructors.

Physical effects like nausea, allergies and lacrimation were experienced by 91.7 % of the contributors while only 45% of the teachers faced psychological problems.

Dissection was not acceptable ethically for 65% of the members but in spite of physiological, psychological and ethical issues 60% were of the opinion that it is still an essential method to teachanatomy.

Table No.1: Questionare

No.	Question	Agreed (%age)	Disagreed (%age)
1	Can teaching on specimen is a substitute to cadaveric dissection?	51.7	48.3
2	Do you think that actual hands on training on cadaver dissection gives better results than demonstration of prosected specimen?	61.7	38.3
3	Do you think that cadaver dissection is still considered important and indispensable in Anatomy learning?	60	40
5	Is nonavailability of cadavers having an impact on switching to new teaching modalities?	71.7	28.3
6	Do you think that dissection enhances the skill of thinking in a logical manner?	75	25
7	Do you think combination of both techniques is the best to teach Anatomy?	70	30
8	Were there any physical effects dissection?(Lacrimation, Nause	91	9
9	Were there any psychological effects of dissection?(Anxiety, Depression)	45	55
10	Do you think that cadaver dissection for anatomical learning is ethically acceptable?	35	65

DISCUSSION

Anatomy is obviously essential for surgeons but also has value for anyone who performs an invasive procedure on a patient; carries out emergency procedures; examines radio-logical imaging; performs a physical examination of a patient; refers a patient to another doctor; or explains a procedure to a patient. These tasks are common to all branches of medicine. One can perform all theseprocedures without having underlying knowledge of anatomy by following protocols and international guidelines. However learning and performing any procedure without baseline knowledge cannot be considered as a proper approach for adequate training of future doctors.

Dissection has been utilized as the best means for teaching anatomy to undergraduate medical students as shown in a study done by Omana et al in 2005.[11,12] Most of the participants (51.7%) in our study were in favor of dissecting cadavers as compared to prosected specimens for teaching Anatomy. This is in accordance with previous work done by Estai and Bunt in 2016[13]

Majority of the participants (91%) experienced physical effects like nausea, allergies and lacrimation while 45% suffered psychological effects like anxiety and depression in performing dissection. Though the faculty went through these difficulties, still 60% of them are in favor of dissection to be used as a major tool to teach anatomy. The medical students went through same difficulties as reported in a research work done by Huma Musarrat Khan[14].

A study done by Dinsmore et all regarding the modality preferred by students to learn anatomy demonstrated that most of the students liked prosected specimen rather than dissection on cadaver[15]. As our study was from the point of view of faculty it showed that most of them (61.7%) were in favor of performing dissection on cadavers.

Korf et al reinforced that dissection is necessary and indispensable for teaching anatomy to medical students in a paper published in 2008[16.] Our results augmented his view as most of the faculty (60%)considered dissection essential for imparting knowledge of anatomy.

Our research showed that 75% of the instructors wereof the opinion that logical thinking is enhanced by dissection in accordance to the previous work done by Izunya et al in 2010[17].

Our data suggested that dissection is an indispensable tool to train medical students in accordance to a study done by Deepa Somnath in 2015[18]. Dissection was ethically unacceptable to 65% of the group members , still they emphasized the importance of dissection. This is in accordance with the previous work done by Morar et al in 2008 and Saha et al in 2015.[19 20]

Our study mainly revolved around the comparison of dissection and prosection. Further research is

recommended to take the opinion of faculty whether dissection can be replaced by modern teaching modalities like models and audiovisual supports.

CONCLUSION

Till to date, no single teaching tool has been found to achieve all curriculum requirements. The best way to teach modern anatomy is by combining multiple resources for the benefit of students. However our study reconfirmed the dissection as an important tool for teaching Anatomy but combination of dissection and prosection is preferred more.

Conflict of Interest: The study has no conflict of interest to declare by any author.

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