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Original Research Article

Qualitative Assessment of the Awareness of Dissection Skills and Tools Session in Preparing First MBBS Learners for Cadaveric Dissection

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Abstract

Aim: Awareness of dissection skills and tools session in preparing first MBBS learners for cadaveric dissection in medical College a qualitative analysis.

Material and methods: This prospective cross-sectional study was carried out in the Department of Anatomy, Government Medical College, Bettiah (W.Champaran), Bihar.Total 150 I MBBS learners in Anatomy department, of which only 100 participated in answering the questionnaire. The study tools used were General lecture, demonstration with audio-visual aids, validated questionnaires.

Results: The results of pre and post analysis tests of 100 students are tabulated in Table 1 overall knowledge of dissection skills and tools improved after interventional session by 60%. Significant improvement evident by P value <0.0000001 was seen after the interventional session on "Awareness of Dissection skills and tools in preparing I MBBS learners for cadaveric dissection". Most (78%) of learners felt that the session was very useful to them in stimulating interest, in-depth knowledge of the subject, acquiring dissection skills, performing qualitative dissections and a worthful session to be taken for every batch.

Conclusion: It becomes evident from the present study that such interventional sessions at the initial phase of learning would improve, stimulate, and increase the learners' participation in dissections with perfection and ease. This would also help the learner to acquire better independent surgical skills and understanding in clinical phases of learning and therefore would recommend it in early phase of I MBBS Anatomy.

Keywords: Dissection, Skills, Tools, Awareness.

Introduction

The medical students are first exposed to the anatomy during their undergraduate studies in India. The same is true for the other paramedical courses. Learning anatomy is said to be the basic pillar of the learning of all the medical sciences[1]. A Greek word meaning "to cut up" is the derivation of the modern term anatomy. In

ancient times, the word anatomize was commonly used than the word dissects[2]. The cadaveric dissection is said to be an essential component to the anatomy curriculum. It provides hands – on view to understand the various parts and system of the human body and also makes the medical students familiar to it[3]. A meticulous knowledge of human body architecture is considered to be a base for a successful medical or surgical practice. The human cadaveric dissection plays a pivotal role for this[4]. The basic purpose of studying anatomy is to get accustomed to the normal body architecture and structures so that when they are disrupted or altered by any disease, injury or syndrome, the knowledge of these alterations can be used for taking important clinical judgments[5].

In my observation for over past years most of the learners do not have sufficient knowledge of dissection tool kit, how to use the tools (for example how to insert the scalpel blade into the handle, how to wear gloves and the ways of using instruments in the dissection kit) and techniques of doing dissection. Because of this most of the learners in the initial days have injuries, take more time to dissect without knowing proper techniques and get easily fatigued. Some of them lose interest too which may lead to improper dissections. With proper dissection techniques, not only the learner will save time, but also will be able to better find, isolate and mobilize the structures. No existing research was done in this field which stimulated author to do so. Henceforth the main objective of this study is to sensitize the learners with dissection tools and skills so that the learner will be able to perform dissection with ease and enthusiasm. This would also increase the percentage of learners doing dissection effectively.

Material and methods

This prospective cross-sectional study was carried out in the Department of Anatomy, Government Medical College, Bettiah (W. Champaran), Bihar, India

Methodology

Total 150 I MBBS learners in Anatomy department, of which only 100 participated in answering the questionnaire. The study tools used were General lecture, demonstration with audiovisual aids, validated questionnaires. Pre-analysis was done with a validated questionnaire about their knowledge of dissection skills and tools. An interventional session was done after 1 month of entry of I MBBS Learners with General lecture followed by small group teaching with demonstration by trained faculty using projection of videos of how to use instruments, how to wear and remove gloves, how to wear mask, how to wash hands and techniques of doing dissection. The learners were allowed to practice. Later post-test analysis was done with same validated questionnaire. Perceptions of learners were also taken regarding session. The pre- and post- test results were analysed and compared. Chi-square test was used to know the significance of intervention. P value was obtained to know the significance of study.

Results

The results of pre and post analysis tests of 100 students are tabulated in Table 1 overall knowledge of dissection skills and tools improved after interventional session by 60%.

Significant improvement evident by P value <0.0000001 was seen after the interventional session on “Awareness of Dissection skills and tools in preparing I MBBS learners for cadaveric dissection”.

Most (78%) of learners felt that the session was very useful to them in stimulating interest, in-depth knowledge of the subject, acquiring dissection skills, performing qualitative dissections and a worthful session to be taken for every batch.

Table 1: Pre, post-test scores and percentages with validated questionnaire

	Pre-Test		Post test		Improved	P-value
	Score	Percentage	Score	Percentage		
At what angle is scalpel used?	23	23	86	86	63	<0.001
Enumerate steps of inserting and removing scalpel blade from BP Handle of scalpel.	10	10	82	82	72	<0.001
Will you be able to demonstrate the above one with ease?	7	7	70	70	63	<0.001
Indicate where toothed and Non-toothed forceps are used?	17	17	89	89	72	<0.001
Give indications where hand lens is used in dissection?	3	3	88	88	85	<0.001
Are you aware of technique of wearing and removing gloves?	29	29	82	82	53	<0.001
If so, can you demonstrate the above one?	12	12	75	75	63	<0.001
Do you know how to wear a sterile mask?	34	34	92	92	58	<0.001
Enlist the names of instruments in dissection tool box?	56	56	89	89	33	<0.001
How to keep the dissections moist/ life like?	15	15	87	87	72	<0.001
How to reduce effect of formalin while doing dissections?	17	17	90	90	73	<0.001

Question **The instructor stimulated interest in the subject**	**Excellent /Strongly agree** **70**	**Very good/ Agree** **19**	**Good/ Neutral** **10**	**Fair/ disagree** **0**	**Poor/ strongly disagree** **1**
The instructor demonstrated in depth knowledge of the subject	65	25	7	2	1
This was a worthwhile class	45	30	24	0	1
How do you rate your experience with this session	30	35	10	23	2
Would you recommend this session to your juniors	60	30	4	1	5
Has this session improved your dissection skills	61	25	4	9	1
How do you grade this session?	49	39	10	0	2
Do you think this should be included in anatomy as a chapter	45	30	12	4	9

Discussion

Most of the research were done with respect to efficacy of cadaveric dissection in learning and teaching Anatomy; what can replace or supplement cadaveric dissection due to reduced availability of number of cadavers. This is a unique study and first of kind. No previous studies were seen where learners were primed with knowledge of dissection tools and skills initially, thereby increasing the percentage of learners performing dissection with ease.

In the present study, there was a significant improvement in the knowledge of learner with dissection skills and tools. The learner also had hands on experience and were able to apply it while doing dissections. 80% of the learners opined that the session stimulated interest the learning subject, improved dissection skills and their performance in dissection with ease.

The learners felt it was a worthwhile class and recommend it to be done for their juniors too. The same perceptions were found in the study of Zhang G[6], where learners felt that dissection techniques made them better dissectors. Study conducted by Ilker Selcuk et.al (2019) [7] concluded that proper cadaveric dissections will improve surgical skills of undergraduates, residents and postgraduates.

Conclusion

It becomes evident from the present study that such interventional sessions at the initial phase of learning would improve, stimulate, and increase the learners' participation in dissections with perfection and ease. This would also help the learner

to acquire better independent surgical skills and understanding in clinical phases of learning and therefore would recommend it in early phase of I MBBS Anatomy.

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