A STUDY ON LEARNING EXPERIENCE OF FIRST YEAR MBBS STUDENTS ON SUPPLEMENTED LAB TEACHING METHOD IN A CASE OF JAUNDICE

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ABSTRACT

Other than during their orientation classes, first year MBBS students are not exposed to the clinical set up. From second year, they are directly posted in wards for their clinical postings. Students find it difficult to correlate their basic medical sciences with clinical knowledge. As per early clinical exposure, the students can be exposed to clinical practice in the first year itself for integrated teaching and learning. Clinical Biochemistry topics, renal function and Liver Function tests were taught by traditional class room teaching. For Liver Function Test topic in addition to class to teaching, a jaundice case was shown and discussed for patient complaints, clinical history, signs and symptoms, with lab reports in small groups of 25 first MBBS students. Feedback forms got for both type of teaching. An MCQs test and written class test was conducted immediately after the classes and two weeks later respectively to test their recall and retained knowledge. The students felt that clinical teaching was more useful for their learning and provoked their interest towards the subject. Statistical analysis also proved the results to be significant when compared between class room teaching and clinical teaching. First MBBS students should be exposed to clinical setup at least in the second six months of their course. Mere class room teaching alone will not be sufficient and basic sciences should be taught with the thought of training future clinicians and medical teachers.

Keywords: Liver function tests, classroom teaching, lab teaching, early clinical exposure.
INTRODUCTION:

Other than during their orientation classes, first year MBBS students are not exposed to the clinical set up. From second year they are directly posted in wards for their clinical postings. Students find it difficult to correlate their basic sciences [Anatomy, Physiology and Biochemistry] with clinical knowledge. Integrated teaching is well known and accepted teaching methodology nowadays. It is been followed and practiced in many medical colleges. It can be either vertical integration i.e., Integration among the basic science departments or horizontal integration i.e between clinical and non clinical departments. As per early clinical exposure, the students can be exposed to clinical practice in the first year itself for integrated teaching and learning. It will help them to understand their moral responsibilities, social values and their duties as a medical professional \(^1\). The importance of basic sciences can be emphasized and can be given the due weight age to the subjects.

OBJECTIVES:

1. To sensitize the students for clinical exposure.
2. To create more interest towards the basic science subjects
3. To make them understand the humanitarian aspects and attitude in dealing with patients earlier in the course before actually posted for clinics.

METHODOLOGY:

The study was conducted among 100 first MBBS students after explaining about preclinical exposure and the conduct of the study. The study was discussed with our department faculties and faculties of medicine and surgery for their cooperation. Ethical committee approval was taken. Organ function tests topic Renal Function Tests [RFT] was taken as routine class room teaching method and feedback was got. Feedback form consists of questions regarding their understanding, correlation of clinical topics, listening span in classroom and their difficulties in classroom teaching. MCQ test was conducted after the class in the same topic. The second topic liver function tests were taken in the classroom small groups of each 25 during their practical session. Each batch was taken to the clinical side. A jaundice patient with clinical signs and symptoms was shown to the students and discussed for patient’s complaints, relevant clinical history. Further discussion was made with different laboratory reports of the patient and other such lab reports for their interpretation. Patient’s urine was tested for bile pigments and bile salts by the students and reported. After the whole discussion and feedback was got for the lab teaching methodology with a short MCQ testing. Summative assessment was done by written exam conducted two weeks later to assess the residual knowledge. Same methodology was followed for another clinical biochemistry topic Chronic Renal Failure. Students were taken to dialysis room and were shown a case of renal failure undergoing dialysis.
RESULTS:

Fig 1: Response of students for lab teaching compared to classroom teaching

![Graph showing response of students]

CRT - Class Room Teaching
LT - Lab Teaching

Fig 2: Mean marks obtained in MCQ test

![Bar chart showing mean marks]

Fig 3: Mean marks obtained in written test

![Bar chart showing mean marks]
Table 1: Comparison between Lab teaching and Class room teaching

<table>
<thead>
<tr>
<th></th>
<th>Class room teaching</th>
<th>After lab teaching</th>
<th>SD</th>
<th>Paired t test value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean marks obtained</td>
<td>LFT 6.86</td>
<td>8.94</td>
<td>5.951</td>
<td>3.457</td>
<td>0.000[S]</td>
</tr>
<tr>
<td></td>
<td>RFT 6.19</td>
<td>7.02</td>
<td>5.064</td>
<td>2.856</td>
<td>0.002[S]</td>
</tr>
</tbody>
</table>

LFT: Liver function test

RFT: Renal function test

DISCUSSION:

The response of the students to the lab teaching method as per early clinical exposure was very encouraging. The students were excited about their clinical visit and attended the session in full attendance. There was a curiosity among them to go the hospital side. Most of them opined that they felt their social responsibility as doctors when they interacted with the patient. Their responses were that the session was very interactive, clinically oriented, better and easy to understand and remember when compared to classroom teaching and helpful for their learning. 60 percent of the students wanted only lab teaching for clinical topics, 38 percent wanted both classroom and lab teaching and only 2 percent of students opted for class teaching alone as it is more easier for them to understand. The test results were also promising that lab teaching is more effective when compared to classroom teaching alone.

The mean marks obtained for MCQ testing after CT is 6.19 and that off LT is 7.02 which was statistically very significant with p value of 0.000 [S]. To test their retained knowledge on both the topics, we conducted written test as summative assessment for documentation. The mean mark obtained after classroom teaching alone is 6.86 when compared to 8.94 after CT and LT which was also statistically significant with p value of 0.002 [S]. From this it is very clear that early clinical exposure in the form of lab teaching methodology is very effective and helpful from student point of view in understanding subjects like biochemistry. It helps students in better understanding of especially clinical oriented topics. It also provokes student’s interest in learning and attending classes. It is also helpful in freshers like first year MBBS students to overcome their fear and tension by clinical scenario. It can also be used to relieve their stress and to make it different from their routine curriculum. It will also develop their better attitude and insight towards their Nobel profession. This when attained at an earlier stage will definitely help them in their success as future health care personals with emotional, social and professional satisfaction. We do met with some challenges in making this study. First to bring cooperation between clinical departments like medicine, surgery and basic sciences for conducting lab teaching. It definitely needs manpower, planning and proper execution to attain the aim. Involvement of others staffs both teaching and non teaching is very essential for carrying out such experiments which is different from the routine curriculum.
CONCLUSION:

Early clinical exposure for first MBBS students is definitely a promising methodology to bring about the professional and social responsibility as well as interest towards the subjects as recommended by Medical Council of India. It needs to get implemented in all medical colleges and the faculties should be trained accordingly.

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