

Original Research Paper

Clinical Teaching in Forensic Medicine: Need of the Hour

¹Prakash M Mohite, ²Anil J Anjankar, ³Tripti Srivastava

Abstract

Forensic Medicine is a medical specialty that is practiced at the interface with the law. Keeping in view the increasing incidences of allegations against health professionals it is necessary to impart practical training to medical graduates in various Medico-legal cases to make them well oriented with the procedures & proper documentation. Total 138 students of 2nd M.B.B.S of J.N.MC participated in this study. The exercise of Examination & certification of an Injury was given to the student. Students were informed about this exercise. Bedside teaching students were exposed to examination to interpret the injuries present. The impact of the clinical exposure on the students was carried out through structured questionnaire. The student's feedback was taken in the form of Pre & Post-test. This feedback evaluation was used to assess the significance of this newer teaching methodology. Statistically significant results were observed from the response given by the students to each structured question. It is need of the hour to reframe the under graduate curriculum and introduce clinical posting for them in the subject of Forensic Medicine for making a competent medical graduates to handle the cases of Medico legal importance.

Key Words: Bedside Examination, Demonstration, teaching methodology, Reframe curriculum

Introduction:

In the last two decades, medical education has drawn from a range of disciplines to introduce new teaching and assessment methods and approaches to educational intervention. Teaching and learning methods in medical education have much in common with those in other health and social care professions. It is time to ensure that teachers and curriculum developers have appropriate educational skills and knowledge. [1]

Teaching and learning approaches are designed to ensure that students acquire appropriate scientific and clinical knowledge; so that they acquire practical, procedural and communication skills or competencies needed to practice medicine, and that they develop professional attitudes and demonstrate proper behavioural approach to the practice of medicine. [2] Clinical teaching traditionally involves patients as the pillar of all learning and teaching events whether this is at the bedside, in the clinic or in the operating theatre.

Care needs to be taken to ensure that patients and their caregivers are fully informed about this activity and their active participation should be taken in such teaching modalities. [3]

Clinical teachers have a range of teaching and learning methods currently available to them; teachers need to plan academics carefully for learners so that optimum learning can take place with minimum disturbance to patient care. [2]

Keeping in mind the increasing medico-legal problems in practising medicine it is time to introduce clinical Forensic Medicine to make Medical Graduates competent in dealing with Medico-legal cases. Hence this study is carried out to evaluate the need of clinics and its importance for proper documentation & certification of Medico legal cases in the subject of Forensic Medicine.

Material & Methods:

The study was carried out by active participation of the Students of IVth semester M.B.B.S. studying in Jawaharlal Nehru Medical College Sawangi (M) Wardha. It was Experimental & open labelled study.

It was taken to improve awareness & identify the cases of Medico legal importance among Medical graduates. Total 138 students participated in this project. The students were divided into small groups of 20-25, however 10-12 per group would have been ideal.

Each group was subjected to clinical teaching on patients admitted in the ward with

Corresponding Author:

¹Professor & HOD,
Department of Forensic Medicine,
Jawaharlal Nehru Medical College, Sawangi (M)
Wardha-442 004, Maharashtra, India
E-mail: drprakashmohite@rediffmail.com

²Prof, Dept. of Forensic Medicine

³Prof, Dept. of Physiology

DOR: 22.12.2014 DOA: 07.07.2015

DOI: 10.5958/0974-0848.2015.00069.X

history of wound for examination & certification of injury. The group was accompanied by the faculty in Forensic Medicine.

The students voluntarily participated in this study prior to the clinics after explaining the importance of the study to them. A Medico-legal case for examination of wound for certifying the injury was taught to the students during routine class room teaching.

The same students were then taken to the indoor wing of the Department of Surgery & Orthopaedics, Acharya Vinobha Bhave Rural Hospital; for examination & certification of injuries received by patient through clinical teaching on the patient. The consent of the respective Head of the Department was taken prior to taking the students to the clinics.

Interactive teaching of students with the patient at the centre was carried out. Assessment of the understanding of Student's for examination & certification of Medico legal case was carried out by the pre- & post-test evaluation (Semi quantitative) methods.

The overall feedback of the teaching method was taken. The significance of the study was carried out by applying the χ^2 test & finding the p-value for each response of the students for the structured questionnaire given to the students prior to & after the exposure to clinics & Bedside teaching. The analysis of the overall feedback of this teaching activity was carried out by putting questions as annexed-2 and their response noted in 5 point scale.

This study will help to impart knowledge of legal procedures and to properly interpret findings for handling cases of Medico legal importance in the Medical graduates to make them competent for proper documentation & certifying Medico legal cases.

Observations and Results:

All the students' responses to the question were submitted to χ^2 -test and the significance of the response was determined by p-value. The p-value for the questions was found to be significant if it was < 0.05 which was found to be significant in all the responses given by the students proving the significance of this study. (Table 1 & Graph 1) The overall response with Z-value is 13.56. (Table 2 & Graph 2) The analysis of the overall feedback of the activity was graded as satisfactory & Excellent by the students. as shown in Table 3.

Discussion:

Osler (1905) quotes "The student begins with the patient, continues with the patient and ends his studies with the patient, using books and lectures as tools as means to an end". [4]

Students subjected to the regular curriculum have restricted information about the vast variety of cases faced by the practising doctors. [5] Hippocrates (460-370 BC) was not only a teacher but also an itinerant practitioner. The first two principles of his Hippocratic method are-Observe all and Study the patient rather than the disease, giving the importance of clinical teaching. [1]

Through clinical exposure, students had the opportunity to examine the patient, interpret the findings & document cases of medico legal importance in a proper way. Students are able to identify specific cases and provide adequate certification of the Medico-legal case.

Bed side teaching or Clinics has the advantage of group discussions, close intellectual understanding between the student and teacher, sharing of observation and coming to a common conclusion. [6, 7] Clinical teaching in the wards forms the backbone of Medical education of the Medical graduates. For better understanding of the Medico legal problems arising in practising medicine in the society, it is necessary that the undergraduates should be exposed to clinics or bedside teaching. [8,9]

The implementation of Clinical Forensic Medicine teaching will give an opportunity to teach students medico-legal aspect in an efficient way which will definitely improve the medico legal examination and medico-legal report writing as suggested by Khandekar et al. [10,11] As students become more dispersed and mobile and medical schools increasingly need to ensure they produce doctors who are safe, competent practitioners who can practice professionally in a range of contexts, teaching, learning and assessment methods need to adapt to reflect the demands of patients and healthcare systems. [2, 12] Clinical postings for Medical graduates in Forensic Medicine will help them to be competent in identifying and handling the cases of Medico-legal importance.

Conclusion:

Clinical teaching will definitely improve the quality of medico-legal work in medical graduates as it is seen from the response & feedback given by the students.

Exercise like examination & certification of wound, certification of age, certification of impotence can be taught in clinics. The curriculum of MBBS may be reframed and few clinics can be added in current teaching Time Table. Clinical posting for Undergraduate students in Forensic Medicine be introduced in Medical colleges, especially during fourth or Fifth Semester of second M.B.B.S. Casualty posting

for Interns, which is at present optional, should be made compulsory.

This programme if implemented will provide the core for the development of a high quality of Medico-legal services.

References:

1. Dr. Chris Christodoulou, Undergraduate Medical Education Learning ObjectivesUGME, Faculty of Medicine, University of Manitoba, Version 7.0; FINAL; November 9, 2010; Page 1 -12
2. **McKimm J.** Current trends in undergraduate medical education: Teaching, Learning & assessment. Samoa Medical Journal. 2010; 1 (1) 38-44.
3. **McKimm J.** Current trends in undergraduate medical education: program and curriculum design. Samoa Medical Journal. 2010; 1 (2): 40-48.
4. **Prideaux D.** Curriculum development in medical education: from acronyms to dynamism. Teaching and Higher Education. 2007; 23:294-302.
5. **LaCombe M. A.** On bedside teaching. Annals of Internal Medicine. 1997; 126:217-220.
6. **Nair B., Coughlan J., & Hensley M.** Impediments to bed-side teaching. Medical Education. 1998; 32:159-162.
7. **Lisa Vaughn, Raymond Baker.** Teaching in the medical setting: balancing teaching styles, learning styles and teaching methods. Medical Teacher.2001; 23, 6: pp 610-612.
8. **Nair, B., Coughlan, J., & Hensley, M.** Student and patient perspectives on bedside teaching. Medical Education. 1997; 31:341-346.
9. **Eckert W. G.** Forensic Sciences and Medicine, the Clinical or Living Aspects. American Journal of Forensic Medicine and Pathology. 1990; Vol. 11, No. 4:pp. 336-341.
10. **IndrajitKhandekar, BipinchandraTirpude, PankajMurkey, VishwajeetPawar.** Development of Clinical Forensic Medicine in India- A need of time. JIAFM. 2011; 32(1) page-85-90.
11. **Smock W. S., Nichols G. R., Fuller P. M.** Development and Implementation of the First Clinical Forensic Medicine Training Program. Journal of Forensic Sciences. 1993; July; Vol. 38, No. 4:pp.835-839.
12. **Cordner S.** The Victorian Institute of Forensic Pathology and its Role in Clinical Forensic Medicine. J. A. A. P. M. O. 1988; 18: 4-12.

Table 1: Pre- test & Post- test % to correct response, χ^2 value & p-value

| Response | Pre Test | Post Test | χ^2 -value | p-value |
|----------|----------|-----------|-----------------|----------|
| | % | % | | |
| Q.1 | 58.7 | 73.2 | 16.04 | 0.003 |
| Q.2 | 60.9 | 83.3 | 24.51 | p<0.0001 |
| Q.3 | 26.81 | 42.8 | 10.10 | 0.03 |
| Q.4 | 63.0 | 87.0 | 21.94 | 0.0002 |
| Q.5 | 63.0 | 78.3 | 13.73 | 0.0082 |
| Q.6 | 38.4 | 62.3 | 19.96 | 0.0005 |
| Q.7 | 42.0 | 52.2 | 11.79 | 0.019 |
| Q.8 | 23.2 | 34.8 | 22.33 | 0.0002 |
| Q.9 | 42.0 | 80.4 | 49.72 | p<0.0001 |
| Q.10 | 5.8 | 68.1 | 121.4 | p<0.0001 |

Table 3: Satisfactory Response for the Overall Feedback of the Study

| Question | Students % | |
|--|------------|--------------|
| | F | % |
| 1. Were you sufficiently briefed by the teachers about the role of learner & modality of learning in Clinics | 110 | 79.71 |
| 2. Was the teacher available & of help to your batch during Clinics when required? | 114 | 82.60 |
| 3a. Do you think the teaching in clinics was successful in generating interest | 110 | 79.71 |
| Q 3.b: Do you think the teaching in clinics was successful in better understanding | 116 | 84.05 |
| Q 3.c: Do you think the teaching in clinics was successful in improving interpretation skill | 112 | 81.15 |
| Q 3.d: Do you think the teaching in clinics was successful in fulfilling teaching Objectives. | 121 | 87.68 |
| Q 4: Do you think learning through clinics is better as compared to traditional classroom teaching | 115 | 83.33 |
| Q 5: Do you think clinics improves your communication skill | 114 | 82.60 |
| Mean | 114 | 82.60 |

Table 2 Comparison of Overall Score at Pre and Post Test

| | Mean | N | SD | Mean Difference | Z-value | p-value |
|-----------|------|-----|------|-----------------|---------|---------------|
| Pre Test | 4.25 | 138 | 1.74 | 2.55±2.20 | 13.56 | 0.000S,p<0.05 |
| Post Test | 6.80 | 138 | 1.32 | | | |

Graph 1 Percentage of Students showing correct response to the questions in Pre-test & Post- test

