Dermatology

USEFULNESS OF CONVENTIONAL KNOWLEDGE BASED CLINICAL EXAMINATION (SHORT CASE) VERSUS OBJECTIVE STRUCTURED CLINICAL EXAMINATION (OSCE) IN ACQUIRING CLINICAL COMPETENCE IN FINAL YEAR MBBS STUDENTS.

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ABSTRACT **Introduction:** The way medical students learn is largely determined by the way they are assessed. There is a need to rationalize the examination system by giving due emphasis on internal assessment, and supplementing the traditional short case examination with more valid and reliable instruments for the assessment of clinical skills. **Aims And Objectives:** To compare the marks/score pattern between short case and OSCE and to study the students and faculty feedback about short case method of assessment versus OSCE. **Methodology:** This study was conducted on 60 final year MBBS students at the end of their clinical posting in skin department of IRT Perundurai Medical College Hospital, Erode. Clinical assessment was first done on short case and then by administering OSCE. The results were analyzed using ANOVA. Two scenarios were chosen namely Hansen's disease and psoriasis. **Results:** Marks obtained by the students were only marginally higher in OSCE than short case assessment. Students performed better in OSCE leprosy. 26 out of 60 students scored 70% or above by short case method whereas 32 out of 60 scored 70% or above by OSCE method. The student's feedback regarding both in general was positive. Students preferred short case assessment in terms of method and time. Logistical difficulties were noted in OSCE. **Conclusion:** The practical clinical examinations are of key importance in the assessment of clinical competence of medical students. Students perform better in OSCE because it is objective, fair, unbiased, without examiners marking variability, without fear of examiner and anxiety. Students and faculty sensitization regarding nuances of OSCE is the need of the hour.

KEYWORDS : MBBS students, OSCE, short case, feedback

INTRODUCTION:

Main purpose of medical education is to produce competent medical graduates. It is a well-known observation that the way medical students learn is determined by the way they are assessed. The clinical component is traditionally assessed by long case or short case presentation. Conventional methods of teaching and learning clinical examination invite bias as students imbibe bad clinical skills from a teacher later on to develop their own faulty styles. Lack of objectivity and unstandardised marking scheme is observed with case presentation. With OSCE on the other hand using structured methodology, basic history taking & step by step patient examination with no omission in hurry is taught later to be observed. Real clinical patients for testing clinical skills and simulated patients for testing communication skills, demonstration of signs are used. OSCE brings uniform standards in teaching, learning and assessment methods as it eliminates bias from all sides. Hence this study was done after IEC approval to facilitate clinical competence by these two methods.

AIMS & OBJECTIVES

1. To compare marks/score pattern between clinical short case examination and OSCE as methods of learning.
2. To study the student's feedback about usefulness of short case method of assessment Vs OSCE
3. To study the faculty's feedback about usefulness of short case method of assessment Vs OSCE.

MATERIALS & METHODS

This study was conducted on 60 final year MBBS students at the end of last quarter of their final year postings to Dermatology wards / OPD. Knowledge based clinical assessment of the students was first done on short cases and later on the prefixed day by administering OSCE. The results of the marks scored in both were compared.

Short Case Examination:

Each student was allotted separate real patient in dermatology ward. Time allotted was 15 minutes. Students were requested to take relevant history, perform physical examination with more relevance to skin, hair, nails and available mucosa, formulate a provisional diagnosis and plan the line of management. Students were assessed by 5 faculty members (12 students each).

Total marks was 20, which was further divided as below
1. History taking: 5 marks
2. Physical examination: 5 marks
3. Diagnosis & Investigations: 5 marks
4. Treatment: 5 marks

Objective Structured Clinical Examination:

Students were assessed by administering OSCE (20 marks) after detailed explanation. There were 15 stations including a rest & counselling station. Manned or unmanned stations were designed to assess all domains of clinical competence. Supervising faculty acted as simulated patient in the counselling station. We had invited assessors from other departments (Total number = 10).

Case scenarios chosen for the study were 1.**Hansen's disease** 2.**Psoriasis**. These diseases are chronic common skin diseases which belong to must know category of dermatology undergraduate curriculum. These were chosen to assess the level of interest in the subject among students and to avoid bias in scoring system among the faculty. Numbers of stations based on domain testing in OSCE psoriasis were as follows: Cognitive - 8, Psychomotor - 5, Affective - 1 and finally rest station - 1. Numbers of stations based on domain testing in OSCE leprosy were as follows: Cognitive - 5, Psychomotor - 8, Affective - 1 and finally rest station - 1.

All participants completed questionnaires exploring perceptions and acceptability. Feedback was taken using a standardized rating Likert's scale (1= Agree, 5= Disagree). Faculty's feedback was also obtained immediately at the end of each method of examination. Their suggestions and remarks were also collected. Marks on the OSCE were statistically correlated with the marks obtained in the clinical case presentation. Scores were revealed to students in person and feedback

after each assessment method was given individually.

RESULTS
Table No.1 Numbers Of Students Scoring Pass Marks Or Below Pass Marks

ASSESSMENT	NUMBER OF STUDENTS SCORING PASS MARKS 50% OR ABOVE	NUMBER OF STUDENTS SCORING BELOW 50 %	TOTAL
Short Case assessment	60	0	60
OSCE assessment	59	1	60

Table No.2 Pattern Of Marks In Short Case Versus OSCE

MARKS IN PERCENTAGE	NO. OF STUDENTS SHORT CASE	NO. OF STUDENTS OSCE
90% and above	0	2
80% and above	8	17
70% and above	18	13
60% and above	24	18
50% and above	10	9
Less than 50%	0	1
TOTAL	60	60

Comparison and analysis of the marks by the one-way ANOVA

In analysis, between OSCE psoriasis & OSCE leprosy marks significant difference is observed. f and p values are presented below. The f-ratio value is 24.58875 and the p value is < 0.00001. P value is less than 0.05. The result is significant at $p < 0.05$. However it is reversed in the short cases psoriasis and short cases leprosy. The f-ratio value is 1.73466 and the p value is < 0.190368. P value is higher than 0.05.

Analyzing the psoriasis OSCE & Short Cases, there is no significant difference. f-ratio value is 1.41098 and the p value is < 0.237279. P value is higher than 0.05. However it is reversed in the OSCE Leprosy & Short case Leprosy. The f-ratio value is 9.43825 and the p value is < 0.002639. P value is less than 0.05.

Table No. 3. Feedback Summary (students)
A. OSCE Assessment B. Short Case Assessment

A. POINTS OF EVALUATION OSCE (N=60)	AGREE (%)	NEITHER AGREE OR DISGREE (%)	DISAGREE(%)
Exam conduction was fair	60(100)	0	0
Wide knowledge covered	56(93.33)	4(6.66)	0
More time Needed	32(53.33)	10(16.66)	18(30)
Stressful	9(15)	13(21.66)	38(63.33)
Highlighted areas of weakness	54(90)	4(6.66)	2(3.33)
Logical sequence of stations	48(80)	9(15)	3(5)
Questions & skills asked to perform in the stations were fair	56(93.33)	2(3.33)	2(3.33)
Whether the exam provided opportunity to learn	58(96)	2(3.33)	0
Clarity of instructions given before OSCE	59(98.33)	1(1.66)	0
Fully aware of OSCE before	46(76.66)	4(6.66)	10(16.66)
B. POINTS OF EVALUATION SHORT CASE(N=60)			
Questions were easy to follow	54(90)	2(3.33)	4(6.66)
Questions asked were clear	56(93.33)	1(1.66)	3(5)
Found short case easier than OSCE	42(70)	2(3.33)	16(26.66)
Adequate time allocated	52(86.66)	3(5)	5(8.33)
Preferred more short case and less OSCE in future exams	42(70)	2	16(26.66)

Table No. 4 Feedback Summary (Faculties)
A. OSCE Assessment B. Short Case Assessment

A. POINTS OF EVALUATION OSCE (N=10)	AGREE	NEITHER AGREE OR DISAGREE	DISAGREE	TOTAL
Wide range of knowledge covered	8	2	0	10
Compulsion to learn different procedures in detail	7	3	0	10
Highlighted weak and strong points of subject	6	3	1	10
Assessed all domains of knowledge	9	1	0	10
Atmosphere was apt	6	2	2	10
Checklist provided a fair system of marking scores	9	1	0	10
Lengthy & exhaustive	4	1	5	10
Stressful	3	1	6	10
OSCE as future tool of assessment	8	1	1	10
B. POINTS OF EVALUATION SHORT CASE (N=5)				
Wide range of knowledge covered	2	1	2	5
Compulsion to learn different procedures in detail	2	1	2	5
Assessed all domains of knowledge	0	0	5	5
Atmosphere was apt	2	1	2	5
Checklist provided a fair system of marking scores	4	1	0	5
Length & exhaustive	1	0	4	5
Stressful	1	1	3	5
Short case preferred over OSCE	1	1	3	5

DISCUSSION
Male students were 28(46.66%) and females were 32(53.33%) formed the study group. Two persons scored 90% in OSCE (3.33%) and none in short case. One student scored equal marks in short case & OSCE (32/40, 80%). Among the score patterns noted, more than 80 % was noted in OSCE group (n=17, 28.33%) than short case group (n=8, 13.33%).70 percentile of marks & above were obtained more in short case group (n=18, 30%) than OSCE group (n=13, 21.67%). 60 percentile of marks & above were obtained more in short case group (n=24, 40%) than OSCE group (n=18, 30%).There was no major difference between groups who scored 50 percentile and above {Short case n=10 (16.67%), OSCE group n=9 (15%)}. Only one student out of the total study group failed to live up to the expectation and his score was slightly more in short case (21/40) than OSCE(19/40). Among the students who scored more than 70 percentile, significant difference was noted OSCE group (n=32, 53.33%) / short case (n=26, 43.33%). Among the students who scored more than 60 percentile, no difference was noted in both groups (n=50, 83.33%).

Students were able to obtain high scores in OSCE method as such (32) when compared to short case presentation (26). Students also expressed fear and anxiety towards examiners when subjected to short case presentation. Bias in marking among the faculties especially in short case group inspite of equal division of marks was observed. Counseling station (OSCE) was the major obstacle faced by students noted by faculty due to prior non exposure. This stresses the need for developing communication skills among future indian medical graduates from their early undergraduate study period itself in the era of increasing doctor – patient conflicts and violence against medical professionals. Detailed and documented communication with the patient and their care takers goes a long way in increasing the professional values among the health care seekers. In the match the following station also, more than number of matches, learners experienced difficulty within the stipulated time. Faculties were exhausted at the end of the OSCE although replacement and refreshment was done at requested intervals. This was not noted in short case assessment as it was done during their postings. Faculties found OSCE especially in manned station a better way to refine their

teaching & learning skills. Soft skills were found lacking much among the students which needs urgent attention. When analyzed, OSCE Psoriasis & OSCE Leprosy significant difference is observed. Student scores were better in leprosy group (OSCE scores of leprosy >Short case leprosy) than psoriasis group which may be because of prior exposure of the subject repeatedly over their pre final years through integrated teaching methods vertically and horizontally. Even subject wise, Leprosy as a tool of examination elicited good scores as it was taught from first year (nerve examination in physiology and about Leprosy in community medicine). During their second MBBS, they were taught about mycobacterium leprae (microbiology, cultural characterestics,   On the other hand, psoriasis (no significant score difference) was taught only in dermatology. Assessment in dermatology is not routinely done. The knowledge part is mostly tested now in final theory examinations as short answers rarely as essays and as a spotter case in external practical examinations. Assessors are from the department of internal medicine as of now.

The student's feedback regarding both the methods in general was positive. Of the total, 42 (70%) students agreed that they would prefer short cases method to OSCE. 56 (93.33%) of students agreed that the topics covered in OSCE were relevant. Disagreement was seen on the time allotted for each station with 32 students (53.33%). For the faculty, OSCE ensured that overall reliability was increased as vast dermatology content can be covered. The exam did face few logistical difficulties. Students found OSCE less taxing than short case presentation. Standardization of OSCE stations was found difficult and it consumed much time and needed more number of faculty and material support from other departments. Space was also found as a constraint in our institution both by the students and invited assessors.

CONCLUSION:
The practical clinical examinations are immensely important in the assessment of clinical competence of medical graduates. Students performed marginally better in OSCE because it was objective, fair, unbiased, without scoring differences, eliminating the fear and anxiety among them. Short case assessment was found preferred among students in terms of time and method. Logistical difficulties in conduction of OSCE were noted. Students and faculty sensitization regarding nuances of OSCE is the need of the hour.

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