

# Assessing Difficulties Encountered by Dental Students Studying Oral Pathology and Addressing Their Concerns

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## ABSTRACT

**Introduction:** The present scenario of Oral Pathology and Oral Histology as a subject is alarming. In spite of so many advancements in terms of books, internet and conferences there are still lacunae between the understanding and interest for the subjects in the students. It can be partly due to the fact that the students perceive it as a non-clinical subject having a lesser scope for practice.

**Aim:** The present study was aimed at evaluating the students approach towards oral pathology department and the subject. The purpose of the study was to analyze practical hurdles encountered by students and to find out solutions to overcome them.

**Materials and Methods:** The cross-sectional questionnaire based study was done with BDS students of People's Dental Academy, Bhopal, India, to gauge the understanding of their

knowledge in the subject of Oral Pathology and Oral Histology. Questionnaire comprised of 28 multiple choice questions under five parameters. The data recorded was subjected to statistical analysis using chi-square test.

**Results:** We found that study samples were efficient enough in terms of following instructions related to their day to day training. Although they were content with light microscope, they thought that some more interactive sessions could be beneficial for them in Oral Pathology.

**Conclusion:** Through our study we found out that the students are well oriented on the whole about Oral Pathology. They certainly encounter difficulties which are easy to handle if proper measures are taken. We through our study would like the readers to be aware of the changing trends in teaching and to incorporate them routinely.

**Keywords:** Approach, Knowledge, Scenario

## INTRODUCTION

The prime consideration about higher/professional education including dentistry is to strengthen the students' abilities and skills so as to transform them to become competent graduates. There seems to be emphasis on student welfare which has shifted the paradigm from teachers to students, the latest concept being learning and learners rather than teaching and teachers [1]. Moreover, in a single class there may be difference in the intellectual level of students [2]. The foundation of a dental student is built on their ability to identify pathological diseases under a microscope. This can be achieved by reading books, exhaustive literature, and following the prescribed curriculum [3]. The Oral Pathology department plays a vital role in training them to this unique and diversified field of dentistry. This is the dental specialty that identifies and manages diseases affecting oral and maxillofacial regions and investigates the cause, processes and effect of these diseases. In this discipline, students are uniquely trained to professionally address both diagnosis and treatment of oral diseases, which will aid rapid critical connection between oral and systemic diseases and combine expertise in histopathological diagnosis with clinical diagnosis and treatment outcome [4]. Unfortunately, the students have a good access to the electronic media such as internet, Google, etc., which makes them more vulnerable to the ever changing pathological world. Undoubtedly, perfection in this field is achieved by spending more and more hours in the classroom in front of microscope. In spite of a good and standardized academic curriculum and a decent enough infrastructure, there is still a gap between the student's understanding and teacher's training. With progressing time, changes are obligatory. As far as our knowledge

goes, there are no studies carried out in this respect. Keeping this in mind we tried to assess the difficulties encountered by dental students in Oral Pathology thereby bridging the gap in order to facilitate a conducive environment for the budding dentists.

## MATERIALS AND METHODS

The cross-sectional closed ended questionnaire based survey was carried out in the year 2015 which had approval of Research Advisory Committee (2015/004/RAC/04) and Institutional Ethical Clearance (2015/400/IEC/04) of People's Dental Academy (PDA), Bhopal, Madhya Pradesh, India. The participants constituted students of second, third, final year and interns from the field of dentistry, PDA. First year and postgraduate students were excluded. A total of 292 students formed the study group. An informed consent was obtained from the participants. The students were not obliged to fill the questionnaire. The questionnaire was in the form of multiple choice questions [Table/Fig-1]. It was designed in such a way which would be simple to understand and answer. It was pre-tested for precision, validity, consistency and meaning of questions. The questions comprised of two, three or four alternatives and were divided into five parts. The first element covered demographic details. The second and third segments consisted of individual's approach towards Oral Pathology and understanding Oral Pathology as a department respectively. The fourth part was focused to understand Oral Pathology as a subject. Finally, the fifth set of questions was directed towards the efforts and measures that can be initiated for improvement. There was not any kind of identification regarding the participant on the questionnaire. The data recorded was subjected to statistical analysis (chi-square test) using SPSS version 20.0 software.

## RESULTS

All the 292 participants responded to the questionnaire. Out of these, 64 were males and 228 were females indicating predominance of females. A total of 88 were from second year, 78 were from third year, 73 were from final year and 53 were interns.

<b>I Demographic details:</b>		
Sex:	1) M	2) F
Class:	1) I BDS	2) II BDS
	4) IV BDS	3) III BDS
		5) Interns
<b>II Questions focusing on individual's approach towards Oral Pathology:</b>		
1. How many hours do you spend in the department of oral pathology in a week?		
	1) 2 hours	3) 4 hours
	2) 6 hours	4) 8 hours
2. Do you attend lectures which discuss slides before they are shown?		
	1) Yes	2) No
3. Do you feel it is necessary to explain the slides before they are focused?		
	1) Yes	2) No
4. How many slides do you see on an average in one practical class?		
	1) 2	3) 4
	2) 6	4) More than 6
5. Do you ask your teachers to explain, in case of difficulties?		
	1) Yes	3) No
	2) Sometimes	
6. Do you make record books for your classes?		
	1) Yes	2) No
<b>III Questions focusing on understanding Oral Pathology as a department:</b>		
1. Is light microscope good for you to study the slides?		
	1) Yes	2) No
2. Do you know that there are microscopes other than light microscopes?		
	1) Yes	2) No
3. Did you ever explore oral pathology department?		
	1) Yes	2) No
4. Are you aware of histology techniques?		
	1) Yes	2) No
<b>IV Questions focusing on understanding Oral Pathology as a subject:</b>		
1. How do you actually identify the slide?		
	1) From outside	3) From inside
	2) Both ways	4) Never bothered
2. How well can you identify the features on a slide after seeing it for the first time?		
	1) Very well	2) Sometimes
	3) Almost never	
3. Are you able to differentiate between ground sections and decalcified sections (for examination of teeth and bone)?		
	1) Yes	2) No
4. Do you make an effort to read the topic before you see the slide?		
	1) Yes	3) No
	2) Sometimes	
5. Do you feel that the slides are not properly stained (faded)?		
	1) Yes	2) No
6. What is the main difficulty you face?		
	1) Identification	3) Drawing diagrams
	2) Remembering during exams	4) All of the above
7. How often do you view oral pathology atlas?		
	1) Almost daily	3) Just before practicals
	2) Just before exams	4) Almost never
8. How often do you practice to draw the diagrams?		
	1) Almost daily	3) Just before practicals
	2) Just before exams	4) Almost never
9. Have you ever prepared ground section during your posting in Oral Pathology department?		
	1) Yes	2) No
10. Did you ever try to understand the hematoxylin and eosin stained structures?		
	1) Yes	2) No
11. Have you heard about special stains?		
	1) Yes	2) No
12. How often have you attended seminars/continuing dental education programs/conferences/symposiums related to Oral Pathology?		
	1) Twice a year	3) Once a year
	2) Once in 2 years	4) Never
13. Is internet a good source for understanding oral pathology slides?		
	1) Yes	3) No
	2) Sometimes	
<b>V Efforts and measures to be taken</b>		
1. Do you feel that more revision practical/theory classes should be arranged than the usual		
	1) Yes	2) No
2. Do you feel that more hours should be put in by the student to increase understanding?		
	1) Yes	2) No
3. Do you feel that there should be more interactive sessions with the faculty?		
	1) Yes	2) No
4. Do you feel that you can improve if you are further motivated?		
	1) Yes	2) No
5. If yes, what kind of motivation?		
	1) Quiz	3) Awards in university exam
	2) Sponsorship in national platforms	

**[Table/Fig-1]:** Questionnaire for assessing difficulties encountered by dental students studying oral histology and pathology and addressing their concerns.

The results showed that the 116 students (39.72%) spent 2 hours per week in practical class and the same number saw 4 slides per practical class. These results were highly significant. Most of the respondents were of the opinion that they need to attend lectures before the slides are shown [Table/Fig-2]. The participants were well aware of the histology techniques. These results were highly significant [Table/Fig-3]. A total of 176 students accepted that only sometimes they were able to identify slides after seeing it for the first time. The subjects confirmed that they made an effort to read the topic before they saw the slides. A 35.4% final year students felt that the main difficulty that they face is identification, whereas 40.9% third year students felt that remembering during exams is their greatest difficulty. A 41.5% and 35.8% second year and third year students respectively confessed that they practiced to draw diagrams just before exams. These results were statistically significant. All throughout, 229 students tried to understand hematoxylin and eosin stained structures, but the results were not significant. A total of 153 students felt that internet can be a good source for understanding Oral Pathology [Table/Fig-4]. Total 65.75% of students felt that more hours should be put in by the student to improve their performance. The result was significant. Total 84.58% students were of the opinion that there should be more interactive sessions and 89.38% opined that they would improve if they were motivated, although the results were not significant [Table/Fig-5].

## DISCUSSION

Around 310 dental colleges are currently there in India [5,6]. This reflects that India is one of the largest producers of dental graduates. The sound base of a dental graduate is built on knowledge and understanding of pathological diseases at microscopic level. This makes it imperative that students develop interest in Oral Pathology. One of the primary roles of Oral Pathology branch is to expertise the student in direct patient care and also to prepare them for hospital and college jobs [7]. The dental institutes will have to reinforce this subject at the undergraduate level so that the students value it for the rest of their training and could be benefited to the fullest [8]. The purpose of our study was to estimate the problems/difficulties faced by undergraduates in recognizing pathological microscopic slides with a view to improve their understanding. This study had a reasonably decent sample size and the response was 100%. Our study showed that 34 third year students and almost 40 final year students had spent 2 hours per week in a practical class. In most of the international universities, the number of hours spent are more or less the same.

Most of the participants (92.80%) confirmed that it is beneficial for them to attend lectures, while 46.57% participants agreed that they faced difficulty and approached the teachers for the same. It was observed that 39.72% participants studied 4 slides per week, while only 10.27% studied 2 slides per week. Nearly all the participants answered 'yes' for making record books.

Most of the respondents were satisfied with light microscope for studying slides and they were aware of other microscopes also. There are advocates of virtual microscopy who prefer it over conventional light microscopy [9,10]. While, a little more than 50% participants said that they had some knowledge about histology technique. We believe that if the students take interest in histology technique or rather if they are given an exercise to prepare a microscopic slide of a tissue, it would further generate enthusiasm in them and they would get closer to Oral Pathology.

Total of 60.27% participants could "sometimes" identify the features on a slide after seeing it for the first time. More than half of the participants confirmed that they read the topic before seeing the slides; however, 32.87% participants felt that their main difficulty was identification of slide while 30.13% were having difficulty in remembering it for exam. The percentage of understanding of

Questions	Answers	II	III	IV	Intern	Total	Chi square	p-value
Q1) No. of hours per week?	2 hrs	25 (21.6%)	34 (29.3%)	40 (34.5%)	17 (14.7%)	116 (100.0%)	80.103	0.001 (HS)
	4 hrs	27 (29.7%)	16 (17.6%)	31 (34.1%)	17 (18.7%)	91 (100.0%)		
	6 hrs	33 (53.2%)	23 (37.1%)	2 (3.2%)	4 (6.5%)	62 (100.0%)		
	8 hrs	3 (13.0%)	5 (21.7%)	0 (0.0%)	15 (65.2%)	23 (100.0%)		
Q2) Do you attend lectures which discuss slides before they are shown?	Yes	82(30.3%)	67(24.7%)	73(26.9%)	49(18.1%)	271(100.0%)	11.266	0.01 (S)
	No	6 (28.6%)	11(52.4%)	0 (0.0%)	4(19.0%)	21(100.0%)		
Q3) Necessity of explanation of slides.	Yes	82(30.37%)	73(27.0%)	72(26.7%)	44(16.3%)	270(100.0%)	13.728	0.033 (S)
	No	6 (28.6%)	5 (23.8%)	1 (4.8%)	9(42.9%)	21(100.0%)		
Q4) No. of slides seen per practical class?	2	12(40.0%)	7 (23.3%)	7(23.3%)	4(13.3%)	30(100.0%)	42.912	0.001(HS)
	4	33(28.4%)	26(22.4%)	37(31.9%)	20(17.2%)	116(100.0%)		
	6	7(10.1%)	33 (7.8%)	19(27.5%)	10(14.5%)	69(100.0%)		
	> 6	36(46.8%)	12(15.6%)	10(13.0%)	19(24.7%)	77(100.0%)		
Q5) Do you ask your teachers to explain, in case of difficulties?	Yes	32(23.5%)	15(11.0%)	55(40.4%)	34(25.0%)	136(100.0%)	58.055	0.001(HS)
	Sometimes	51(36.2%)	57(40.4%)	16(11.3%)	17(12.1%)	141(100.0%)		
	No	5(33.3%)	6(40.0%)	2(13.3%)	2(13.3%)	15(100.0%)		
Q6) Do you make record books for your classes?	Yes	83(30.2%)	71(25.8%)	71(25.8%)	50(18.2%)	275(100.0%)	2.684	0.443 (NS)
	No	5(29.4%)	7(41.2%)	2(11.8%)	3(17.6%)	17(100.0%)		
Count (%)		88(30.1%)	78(26.7%)	73(25.0%)	53(18.2%)	292(100.0%)		

[Table/Fig-2]: Showing questions focusing on individual's approach towards oral pathology.

S- Significant, NS- Not Significant, HS- Highly Significant

Questions	Answers	II	III	IV	Intern	Total	Chi square	p-value
Q1) Is light microscope good for you to study the slides?	Yes	78(30.1%)	68(26.3%)	65(25.1%)	48(18.5%)	259(100.0%)	0.373	0.946 (NS)
	No	10(30.3%)	10(30.3%)	8(24.2%)	5(15.2%)	33(100.0%)		
Q2) Do you know that there are microscopes other than light microscopes?	Yes	72(29.6%)	60(24.7%)	63(25.9%)	48(19.8%)	243(100%)	4.883	0.181 (NS)
	No	16(32.7%)	18(36.7%)	10(20.4%)	5(10.2%)	49(100.0%)		
Q3) Did you ever explore oral pathology department?	Yes	63(31.8%)	47(23.7%)	56(28.3%)	32(16.2%)	198(100.0%)	6.607	0.086 (NS)
	No	25(26.6%)	31(33.0%)	17(18.1%)	21(22.3%)	94(100.0%)		
Q4) Are you aware of histology techniques?	Yes	61(37.2%)	47(28.7%)	24(14.6%)	32(19.5%)	164(100.0%)	23.177	0.001 (HS)
	No	27(21.1%)	31(24.2%)	49(38.3%)	21(16.4%)	128(100.0%)		
Count (%)		88(30.1%)	78(26.7%)	73(25.0%)	53(18.2%)	292(100.0%)		

[Table/Fig-3]: Showing questions focusing on understanding oral pathology as a department.

S- Significant, NS- Not Significant, HS- Highly Significant

Questions	Answers	II	III	IV	Intern	Total	Chi square	p-value
Q1) How do you actually identify the slide?	From outside	10(26.3%)	15(39.5%)	6(15.8%)	7(18.4%)	38(100.0%)	6.880	0.650 (NS)
	Both ways	45(33.8%)	32(24.1%)	34(25.6%)	22(16.5%)	133(100.0%)		
	From inside	32(28.3%)	29(25.7%)	30(26.5%)	22(19.5%)	113(100.0%)		
	Never bothered	1(12.5%)	2(25.0%)	3(37.5%)	2(25.0%)	8(100.0%)		
Q2) How well can you identify the features on a slide after seeing it for the first time?	Very well	15(35.7%)	14(33.3%)	8(19.0%)	5(11.9%)	42(100.0%)	24.420	0.001 (HS)
	Some times	46(26.1%)	36(20.5%)	59(33.5%)	35(19.9%)	176(100.0%)		
	Almost never	27(36.5%)	28(37.8%)	6(8.1%)	13(17.6%)	74(100.0%)		
Q3) Are you able to differentiate between ground sections and decalcified sections?	Yes	70(33.3%)	53(25.3%)	51(24.3%)	37(17.6%)	210(100.0%)	6.302	0.039 (S)
	No	18(22.2%)	25(30.9%)	22(27.2%)	16(19.8%)	81(100.0%)		
Q4) Do you make an effort to read the topic before you see the slide?	Yes	37(28.9%)	25(19.5%)	44(34.4%)	22(17.2%)	128(100.0%)	25.408	0.001 (HS)
	Some times	45(36.0%)	37(29.6%)	16(12.8%)	27(21.6%)	125(100.0%)		
	No	6(15.4%)	16(41.0%)	13(33.3%)	4(10.3%)	39(100.0%)		
Q5) Do you feel that the slides are not properly stained (faded)?	Yes	51(26.0%)	54(27.6%)	56(28.6%)	35(17.9%)	196(100.0%)	6.579	0.087 (NS)
	No	37(38.5%)	24(25.0%)	17(17.7%)	18(18.8%)	96(100.0%)		
Q6) What is the main difficulty you face?	Identification	24(25.0%)	22(22.9%)	34(35.4%)	16(16.7%)	96(100.0%)	39.867	0.001 (HS)
	Remembering during exams	24(27.3%)	36(40.9%)	11(12.5%)	17(19.3%)	88(100.0%)		
	Drawing diagrams	27(55.1%)	9(18.4%)	6(12.2%)	7(14.3%)	49(100.0%)		
	All of the above	13(22.0%)	11(18.6%)	22(37.3%)	13(22.0%)	59(100.0%)		

Q7) How often do you view oral pathology atlas?	Almost daily	18(30.0%)	16(26.7%)	19(31.7%)	7(11.7%)	60(100.0%)	25.134	0.003 (S)
	Just before exams	33(36.7%)	31(34.4%)	11(12.2%)	15(16.7%)	90(100.0%)		
	Just before practicals	24(25.5%)	14(14.9%)	32(34.0%)	24(25.5%)	94(100.0%)		
	Almost never	13(27.1%)	17(35.4%)	11(22.9%)	7(14.6%)	48(100.0%)		
Q8) How often do you practice to draw the diagrams?	Almost daily	14(20.9%)	10(14.9%)	33(49.3%)	10(14.9%)	67(100.0%)	50.155	0.001 (HS)
	Just before exams	44(41.5%)	38(35.8%)	11(10.4%)	13(12.3%)	106(100.0%)		
	Just before practicals	28(26.7%)	24(22.9%)	28(26.7%)	25(23.8%)	105(100.0%)		
	Almost never	2(14.3%)	6(42.9%)	1(7.1%)	5(35.7%)	14(100.0%)		
Q9) Have you ever prepared ground section during your posting in oral pathology department?	Yes	34(29.6%)	35(30.4%)	29(25.2%)	17(14.8%)	115(100.0%)	4.505	0.609 (NS)
	No	54(30.6%)	43(24.4%)	44(25.0%)	36(20.5%)	176(100.0%)		
Q10) Did you ever try to understand the hematoxylin and eosin stained structures?	Yes	72(31.4%)	63(27.5%)	50(21.8%)	44(19.2%)	229(100.0%)	5.769	0.123 (NS)
	No	16(25.4%)	15(23.8%)	23(36.5%)	9(14.3%)	63(100.0%)		
Q11) Have you heard about special stains?	Yes	81(32.1%)	70(27.8%)	56(22.2%)	46(18.3%)	252(100.0%)	11.296	0.080 (NS)
	No	7(17.9%)	8(20.5%)	17(43.6%)	7(17.9%)	39(100.0%)		
Q12) How often have you attended seminars/ continuing dental education programs/ conferences/ symposiums related to oral pathology?	Twice a yrs	16(29.1%)	12(21.8%)	18(32.7%)	9(16.4%)	55(100.0%)	11.472	0.245 (NS)
	Once in 2 yrs	13(28.9%)	17(37.8%)	8(17.8%)	7(15.6%)	45(100.0%)		
	Once a yr	35(36.8%)	20(21.1%)	19(20.0%)	21(22.1%)	95(100.0%)		
	Never	24(24.7%)	29(29.9%)	28(28.9%)	16(16.5%)	97(100.0%)		
Q13) Is internet a good source for understanding oral pathology slides?	Yes	20(23.3%)	24(27.9%)	23(26.7%)	19(22.1%)	86(100.0%)	29.328	0.001 (HS)
	Some times	56(36.6%)	47(30.7%)	25(16.3%)	25(16.3%)	153(100.0%)		
	No	12(23.1%)	6(11.5%)	25(48.1%)	9(17.3%)	52(100.0%)		
Count (%)		88(30.1%)	78(26.7%)	73(25.0%)	53(18.2%)	292(100.0%)		

**[Table/Fig-4]:** Questions focusing on understanding oral pathology as a subject.

S- Significant, NS- Not Significant, HS- Highly Significant

Questions	Answers	II	III	IV	Intern	Total	Chi square	p- value
Q1) Do you feel that more revision practical/ theory classes should be arranged than the usual?	Yes	64(27.4%)	61(26.1%)	63(26.9%)	46(19.7%)	234(100%)	6.43	0.09 (NS)
	No	24(41.4%)	17(29.3%)	10(17.2%)	7(12.1%)	58(100%)		
Q2) Do you feel that more hours should be put in by the student to increase understanding?	Yes	53(27.3%)	50(25.8%)	58(29.9%)	33(17.0%)	194(100%)	7.67	0.05 (S)
	No	35(35.7%)	28(28.6%)	15(15.3%)	20(20.4%)	98(100%)		
Q3) Do you feel that there should be more interactive sessions with the faculty?	Yes	74(30.0%)	66(26.7%)	61(24.7%)	46(18.6%)	247(100%)	0.273	0.965 (NS)
	No	14(31.1%)	12(26.7%)	12(26.7%)	7(15.6%)	45(100%)		
Q4) Do you feel that you can improve if you are further motivated?	Yes	79(30.3%)	66(25.3%)	69(26.4%)	47(18.0%)	261(100%)	3.941	0.268 (NS)
	No	9(29.0%)	12(38.7%)	4(12.9%)	6(19.4%)	31(100%)		
Q5) If yes, what kind of motivation?	Quiz	42(29.6%)	50(32.5%)	17(12.0%)	33(23.2%)	142(100%)	52.118	0.001 (HS)
	Sponsorship	17(31.5%)	16(29.6%)	9(16.7%)	12(22.2%)	54(100%)		
	Awards	29(30.2%)	12(12.5%)	47(49.0%)	8(8.3%)	96(100%)		

**[Table/Fig-5]:** Questions focusing on efforts and measures taken for improvement.

S- Significant, NS- Not Significant, HS- Highly Significant

hematoxylin and eosin stained structures was 78.42%. A total of 52.39% said that the internet could be of help sometimes and was a good source for understanding Oral Pathology slides.

In response to the question, "What efforts and measures should be taken for improvement?" A total of 80.13% participants felt that more revision practical/theory classes should be arranged than the usual, 66.43% felt that it can be achieved by spending more hours to increase their understanding. Most of the students also felt the need for more interactive sessions with the faculty. A 48.63% said that they can improve if they are further motivated by the means of quiz competition, while 32.87% reported that the improvement can be done through awards. Sciubba JJ et al., also reported that students do get motivated if there is some kind of incentive. Students who combine their academic knowledge and clinical

diagnosis can be rewarded. This is only possible if the students get posted to Oral Medicine and Oral Radiology department more often where they can sharpen their skills [11]. This study gave us an insight to the student's difficulties and apprehensions. One novel idea to enhance performance is by having digitalization of slides. Few studies have shown that students find it easier and can relate well as compared to conventional slides [12,13]. Also, students can be asked to focus slides in revision classes. This will give them a chance to have an independent thinking and will be knowledge driven. The present study delineates that although, the curriculum is well planned and student learning oriented, it still has a scope for positive improvement. This study was performed in only one college, since it was a pilot study. But we assume the scenario of Oral Pathology subject to be more or less the same in other



institutes. With this belief we wish to urge that the standards can be raised if the experts of other institutes all over the country can come together so as to share their valuable experiences and pool in their intellectual resources. Student exchange programs within India and with foreign countries can be fruitful [14]. Tamgadge S had made a novel suggestion to take a bold initiative so as to improve student learning by adding 3D animation technology in Oral Pathology. This student friendly approach may help in reviving Oral Pathology subject, thereby trying to make it one of the most sought after branch in dentistry [15].

## LIMITATION

The limitations of the present study were that the Postgraduate students of Oral Pathology department were not included mainly because of only one student in the department. This would have caused a bias. Further studies including students of other various colleges are already underway, so as to get the first hand information about their response.

## CONCLUSION

Through the present study it was found out that the students were well oriented on the whole about Oral Pathology. They certainly encounter difficulties which are easy to handle if proper measures are taken. Through the present study we would like the readers to be aware of the changing trends in teaching and to incorporate them routinely.

**Conflict of Interest:** No potential conflict of interest relevant to this article was reported.

## REFERENCES

- [1] Easaw S, Yeow TP, Lee LC, Choo WS, Tan TS, Khir ASM, et al. Evaluating a weekly face-to-face informal discussion forum for final year medical students. *leJSME*. 2012;6:36-37.
- [2] Priya M, Muthu MS, Amaral D, Thomas E. Continuous assessment of undergraduate students at a dental college in India. *J Dent Educ*. 2012;76:501-08.
- [3] Yip HK, Smales RJ. Review of competency-based education in dentistry. *Br Dent J*. 2000;189:324-26.
- [4] American Academy of Oral & Maxillofacial Pathology. [Last cited on 2016 Mar]. Available from: <http://www.aaomp.org/>.
- [5] Database of Dental Council of India. [Last cited on 2015 Oct]. Available from: <http://www.dciindia.org/search.aspx>.
- [6] Dagli N, Dagli R. Increasing unemployment among Indian dental graduates – High time to control dental manpower. *J Int Oral Health*. 2015;7(3):i-ii.
- [7] Wright JM, Vincent SD, Muller S, McClatchey KD, Budnick SD, Murrah VA. The future of oral and maxillofacial pathology. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*. 2003;96(2):176-86.
- [8] RS Arvind Babu. A vision for oral and maxillofacial pathology in Jamaica. *West Indian Med. J.* 2013;62(8):764-66.
- [9] Hortsch M. From microscopes to virtual reality – How our teaching of histology is changing. *J Cytol Histol*. 2013;4:e108.
- [10] Coleman R. Can histology and pathology be taught without microscopes? The advantages and disadvantages of virtual histology. *Acta Histochem*. 2009;111:1-4.
- [11] Sciubba JJ. Oral and maxillofacial pathology-Its future in doubt? *J Dent Educ*. 2001;65(11):1194-95.
- [12] Fonseca FP, Santos-Silva AR, Lopes MA, Almeida OP, Vargas PA. Transition from glass to digital slide microscopy in the teaching of oral pathology in a Brazilian dental school. *Med Oral Patol Oral Cir Bucal*. 2015;20: e17-22.
- [13] Krippendorff BB, Lough J. Complete and rapid switch from light microscopy to virtual microscopy for teaching medical histology. *Anat Rec B New Anat*. 2005;285(1):19-25.
- [14] Sharma S, Vijayaraghavan V, Tandon P, Kumar DRV, Sharma H, Rao Y. Dental education: Current scenario and future trends. *J Contemp Dent Pract*. 2012;13(1):107-10.
- [15] Tamgadge S, Malathi N. From the author's desk. *J Oral Maxillofac Pathol*. 2015;19:273-74.

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