



## Clinical Diagnosis by the Doctors of the Morrow

Arka Mukhopadhyay

*Asst. Professor, Oral Pathology,  
Hi-Tech Dental College and Hospital*

Submitted: 15-08-2021

Revised: 29-08-2021

Accepted: 31-08-2021

**ABSTRACT:** Although advanced medical equipment and diagnostic tools are no longer fictitious, but realistically feasible for those with means, clinical diagnosis of potentially malignant and malignant oral disorders are instrumental in early diagnosis and prompt treatment, equally in rural setups with limited facilities, to multispeciality setups with limitless resources and finance. The identification of these aforementioned lesions by way of developing a proper 'clinical-eye' should be the primary focus of any institution training graduates in the art and science of oral health-care. The principal objective of this study is to thus determine the proficiency of interns in light of clinical diagnostic capability of premalignant and malignant oral disorders as well as to assess their knowledge of probable risk factors. Interns posted in various dental colleges, were supplied with a questionnaire comprising of 10 questions, both with binary choices and open-ended questions. The filled-in questionnaire was then collected and the data was analysed statistically. The study reveals 48% interns have adequate knowledge whereas 11.3% have proper knowledge of clinical appearance. 92.5% believed dental surgeons more prudent in diagnosis of PMODs over general physicians. 43.8% suggest oncology consultation, 27.5% and 20% to oral surgery and oral medicine respectively; 8.8% still refer to ENT. 58.8% believe to have sufficient knowledge whereas 41.3% still doubt their aptitude in diagnosing PMODs. Interns of the day although admit to being adequately to well informed in regard to diagnosis of PMODs, alarmingly, a good number doubt their proficiency in matters of confident diagnosis.

**KEYWORDS:** Diagnosis, Questionnaire study, Clinical eye, PMODs, Oral Cancer.

### I. INTRODUCTION

The advent of medical technology in the last three decades in light of limiting human involvement as well as that of machine learning and artificial intelligence has been groundbreaking since

its inception and its growth has neither faltered nor progress stagnated. The process of automation in medical technology has thus predominantly reduced the so called 'clinical-eye' of the professionals being inducted into this profession or under process of training and education currently thus leaves a lot to be desired in the deductive and inferring techniques of fresh graduates and trainees. Thus a need to assess the developing 'clinical-eye' has been felt greatly and any institution striving to train professionals in the art and science of maxillofacial healthcare must adhere to this classical approach of training alongside honing the automation and technology at their disposal, limited only by their resources and finance.

The current study has been designed in a questionnaire format to assess the interns of the day, their insights into the field of study and the development of the 'clinical-eye' that warrants any professional skill to advance this field of study and practice. The assessment is primarily based upon the diagnosis of potentially malignant oral disorders (PMODs) which comprise nearly half of the OPD cases seen in tropical India and the proficiency of the interns of the day to assess, diagnose and treat the cases under facultative supervision.

### II. AIMS AND OBJECTIVES

The principal objective of this study is to thus determine the proficiency of interns in light of clinical diagnostic capability of premalignant and malignant oral disorders as well as to assess their knowledge of probable risk factors.

### III. METHODOLOGY

A questionnaire study was designed comprising of 10 questions, both open ended and binary choices were supplied to interns across various dental colleges of eastern India, and the results were then analysed statistically. A sample questionnaire is attached below in Fig.1



## QUESTIONNAIRE FOR INTERNS ON CANCER AWARENESS

AGE(YRS):

SEX: M/F(Tick)

Department:

1. DO YOU EXAMINE PATIENTS' ORAL MUCOSA REGULARLY? YES/NO

2. IF NO, DO YOU EXAMINE PATIENTS' ORAL MUCOSA IN HIGH RISK CASES? YES/NO

3. ENLIST ANY 3 RISK FACTORS FOR POTENTIALLY MALIGNANT DISORDERS/ORAL CANCER:

---

4. WILL YOU ADVISE PATIENTS REGARDING SAID RISK FACTORS DURING CLINICAL PRACTICE? YES/NO

5. HAVE YOU EXAMINED PATIENTS WITH POTENTIALLY MALIGNANT/MALIGNANT LESIONS? YES/NO

6. IN REGARD TO ORAL CANCER CLINICAL APPEARANCE, YOU ARE:  
VERY WELL INFORMED/WELL INFORMED/ADEQUATELY INFORMED/POORLY INFORMED

7. LIST ANY 3 CHANGES YOU WOULD EXPECT IN PMODs/ORAL CANCER LESIONS:

---

8. WHERE IN YOUR OPINION SHOULD A PATIENT CONSULT FOR PREMALIGNANT/MALIGNANT ORAL LESIONS? PHYSICIANS/DENTAL SURGEONS

9. WHERE WOULD YOU REFER A PATIENT AFTER SUSPECTING A MALIGNANCY?  
ONCOSURGERY/ENT/ORAL SURGERY/ORAL MEDICINE/GENERAL PHYSICIAN/GENERAL DENTAL PRACTITIONER

10. DO YOU FEEL YOU HAVE SUFFICIENT KNOWLEDGE FOR DETECTION AND PREVENTION OF ORAL CANCER? YES/NO

**Fig.1: Sample questionnaire supplied to interns**

### DATA TABULATION

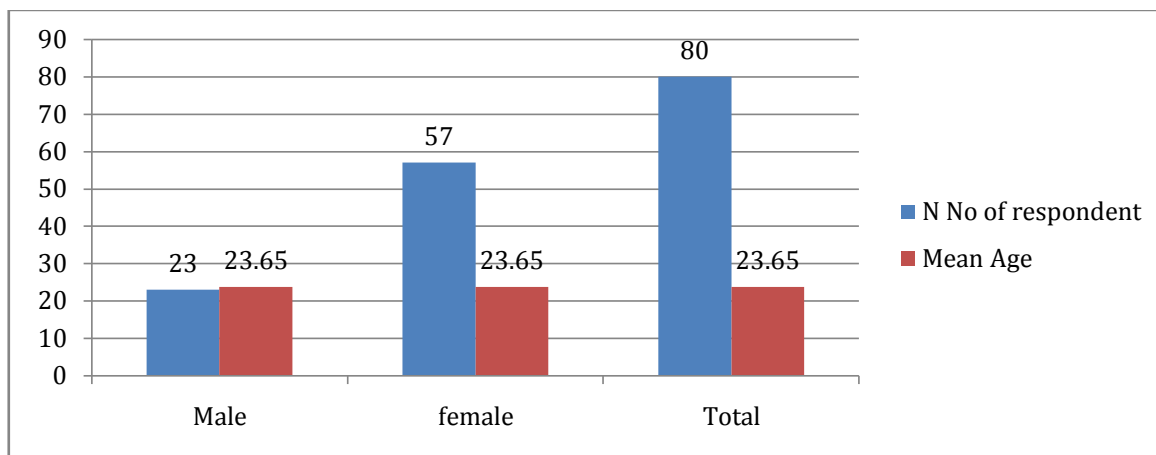
A total of 100 questionnaires were supplied to interns across various dental colleges in eastern India of which 80 completed responses were received. Raw data obtained was then tabulated according to both socio-demographic

details supplied by the respondents, as well as that based upon their responses to the questions asked. Only completed responses were included and incomplete or blank responses were discarded. The tables and graphs depicting the distributions have been compiled forthwith.



Age and Demographics of the study population							
Sex	N	Mean	Median	Std. Deviation	Minimum	Maximum	p value
Male	23	23.65	24.00	1.027	22	25	0.992
female	57	23.65	24.00	1.356	22	32	
Total	80	23.65	24.00	1.264	22	32	

**Table1: Demographic distribution**



**Fig2: Graphical Demographic Distribution**

ORAL MUCOSA ASSESSMENT					
		Yes	No	Total	P value
Male	Count	22	1	23	0.67
	% of Total	95.7%	4.3%	100.0%	
female	Count	54	3	57	
	% of Total	94.7%	5.3%	100.0%	
Total	Count	76	4	80	
	% of Total	95.0%	5.0%	100.0%	

**Table2: Assessment of oral mucosa on a regular basis**

ENLISTING 3 RISK FACTORS FOR PMODs					
		Yes	No	Total	P value
Male	Count	20	3	23	0.417
	% Total	87.0%	13.0%	100.0%	
female	Count	52	5	57	
	% Total	91.2%	8.8%	100.0%	
Total	Count	72	8	80	



	% Total	90.0%	10.0%	100.0%	
--	---------	-------	-------	--------	--

**Table3: High risk case assessment**

ADVISING RISK FACTORS TO PATIENTS					
		Yes	No	Total	P value
Male	Count	22	1	23	0.419
	% of Total	95.7%	4.3%	100.0%	
female	Count	56	1	57	
	% of Total	98.2%	1.8%	10000.0%	
Total	Count	78	2	80	
	% of Total	97.5%	2.5%	100.0%	

**Table4: Advise towards risk factors for PMODs**

PMOD EXAMINATION BY INTERNS					
		Yes	No	Total	P value
Male	Count	21	2	23	0.623
	% of Total	91.3%	8.7%	100.0%	
female	Count	52	5	57	
	% of Total	91.2%	8.8%	100.0%	
Total	Count	73	7	80	
	% of Total	91.3%	8.8%	100.0%	

**Table5: Examination of PMODs by interns**

KNOWLEDGE ABOUT CLINICAL APPEARANCE							
		Very well	well	Adequate	Poor	Total	P value
Male	Count	3	9	11	0	23	0.679
	% of Total	13.0%	39.1%	47.8%	0.0%	100.0%	
female	Count	6	22	25	4	57	
	% of Total	10.5%	38.6%	43.9%	7.0%	100.0%	
Total	Count	9	31	36	4	80	
	% of Total	11.3%	38.8%	45.0%	5.0%	100.0%	

**Table6: Knowledge of interns about clinical appearance of PMODs**



WHOM TO CONSULT					
		physician	dental surgeon		P value
Male	Count	3	20	23	0.226
	% of Total	13.0%	87.0%	100.0%	
female	Count	3	54	57	
	% of Total	5.3%	94.7%	100.0%	
Total	Count	6	74	80	
	% of Total	7.5%	92.5%	100.0%	

**Table7: Whom to consult in case of suspected PMODs (interns' opinion)**

WHERE TO REFER A PMOD CASE							
		onco	ENT	omfs	omrd	Total	P value
Male	Count	8	3	4	8	23	0.571
	% of Total	34.8%	13.0%	17.4%	34.8%	100.0%	
female	Count	27	4	12	14	57	
	% of Total	47.4%	7.0%	21.1%	24.6%	100.0%	
Total	Count	35	7	16	22	80	
	% of Total	43.8%	8.8%	20.0%	27.5%	100.0%	

**Table8: Where to refer a PMOD case**

SELF ASSESSMENT OF KNOWLEDGE					
		Yes	No	Total	P value
Male	Count	15	8	23	0.312
	% of Total	65.2%	34.8%	100.0%	
female	Count	32	25	57	
	% of Total	56.1%	43.9%	100.0%	
Total	Count	47	33	80	
	% of Total	58.8%	41.3%	100.0%	

**Table9: Interns' self assessment of their adequacy of knowledge in PMOD diagnosis**

#### IV. RESULTS

The study reveals several alarmingly key facets and may focus on the current status of training and education across oral healthcare institutions across eastern India, which are enlisted as follows; 48% interns have adequate knowledge whereas 11.3% have proper knowledge of clinical appearance. 92.5% believed dental surgeons more

prudent in diagnosis of PMODs over general physicians.

However, 43.8% suggest oncology consultation, 27.5% and 20% to oral surgery and oral medicine respectively ; and 8.8% still refer to ENT. 58.8% believe to have sufficient knowledge whereas 41.3% still doubt their aptitude in diagnosing PMODs.



### LIMITATIONS OF THE STUDY

No study design, however foolproof is absolute. The inaccuracies crop up from both the investigator as well as that of responses handed in by subjects upon whom the study is being conducted. The honesty and credibility of anonymous responses also give way to erroneous and faulty results. Larger studies with more independent examiners to reduce bias as well as a greater amount of participation are warranted so as to address the standards of oral and maxillofacial healthcare education across the country so that a 'clinical-eye' augmented with that of technological advancement and automation may pave the way for highly trained and perceptive graduates to enter the field and progress the ever changing art and science of oral healthcare.

### INFERENCE

Interns of the day although admit to being adequately to well informed in regard to diagnosis of PMODs, alarmingly, a good number doubt their proficiency in matters of confident diagnosis.

### V. CONCLUSION

Thus, more studies are warranted to build upon these facts and address the problems in the education system currently prevalent in the field of oral healthcare in the country.

### REFERENCES

- [1]. Burzynski NJ, Rankin KV, Silverman S, et al., 2002, Graduating dental students' perceptions of oral cancer education: Results of an exit survey of seven dental schools. *J Cancer Edu*, 17:83-84.
- [2]. Carter, L.M., Ogden, G.R., 2007, Oral cancer awareness of undergraduate medical and dental students, *BMC Med. Ed.*,7,44-52.
- [3]. Neville, B., 2009. *Oral and Maxillofacial Pathology*. Elsevier Health Sciences\
- [4]. Dubai SA, Ganasegeran K, Alabsi AM, et al., 2012, Awareness and knowledge of oral cancer among university students in Malaysia. *Asian Pacific J Cancer Prevention*, 13:165-168.
- [5]. Soares TR, Carvalho ME, Pinto LS, et al., 2014, Oral cancer knowledge and awareness among dental students. *Br J Oral Sci*, 13:28-33.
- [6]. Gopal KS, Duraiselvi P., 2014, Awareness and knowledge of oral cancer among dental patients: A survey based questionnaire study. *Alcohol*, 131:26.
- [7]. Ramaswamy P, Uday G, Sreenivasulu P, et al., 2014, Awareness about oral cancer among dental postgraduate students in the state of Andhra Pradesh, India. *J Cancer Educ*, 29:665-668.
- [8]. Silva SR, Juliano Y, Novo NF, et al., 2016, Comparative study of knowledge about oral cancer among undergraduate dental students. *Einstein*, 14:338-345.
- [9]. Elgazzar R., 2018, Assessment of oral cancer awareness among dental students, practitioners and patients in Manitoba, Canada. *Global J Otolaryngol*, 17:555961.
- [10]. Keser, G., Pekiner, F.M., 2019, Assessing Oral Cancer Awareness Among Dental Students, *J. Cancer. Educ.*,34(3),512-518.
- [11]. Gunjal, S., Pateel, G.D.S., Lim, R.Z.S., Yong, L.L., Wong H.Z., 2020, Assessing oral cancer awareness among dental and medical students of a Malaysian private university, *Int. Dent. J.*, 70(3), 62-69.
- [12]. Anushya, P., Gamapathy, D., Sasanka, K., 2021, A survey about awareness of oral cancer among the undergraduate dental students, *Journal of Research in Medical and Dental Science*, 9(2), 124-131.