

“SKILL TO KILL” – Oral cancer and potentially premalignant oral epithelial lesions (PPOELs): A survey approach. Emerging of a new system and professionals

Nawal Khan¹, Radhika M Bavle¹, Soumya Makarla¹, S R Amulya¹, Paremala Konda², M Sudhakara¹

¹Department of Oral and Maxillofacial Pathology, Krishnadevaraya College of Dental Sciences, Bengaluru, Karnataka, ²Department of Oral Pathology, Government Dental College and Hospital, Hyderabad, Telangana, India

Abstract

Background: Oral cancer is said to be the 6th most common cancer in men and 12th in women. Potentially malignant disorders/potentially premalignant oral epithelial lesion (PMDs/PPOELs) have shown an increased risk of progressing to cancer. In this regard, lack of awareness about identification of oral PMDs among healthcare providers in general and oral pathologists in particular is said to be responsible for the diagnostic delay. Oral cancer is said to be the most common cancer in men and 3rd most common in women in the Indian subcontinent. PMDs have shown an increased risk of progressing to cancer. The various rates of conversion include 14%–51% for erythroplakia, 60%–100% for proliferative verrucous leukoplakia and 7%–26% for oral submucous fibrosis (OSMF). In this regard, early detection at PPOEL level will lead to prevention of malignant transformation.

Aims and Objectives: The purpose of this survey was: 1. To determine if awareness among professionals is essential/key to challenge the progression of PMDs of the oral cavity. 2. To examine and/or discern if oral pathologists felt enough was being done to address the issue of early detection and prevention and how the scenario could be improved further.

Materials and Methods: A survey was designed to assess the interest, zeal, knowledge and skill of healthcare providers in general and oral pathologists in particular in careful examination of the oral cavity and early detection of PMDs. A questionnaire with 18 questions was designed to address these issues/points and distributed among post-graduate students and practicing oral pathologists on online platforms.

Results: The results of the survey were collected, analyzed and the results discussed question wise. The validity and reliability of the questionnaire was assessed and confirmed with Aiken's index for validity and Cronbach's alpha for reliability. Inferential statistical analysis was performed using Chi square test with $P = 0.05$ being statistically significant.

Conclusion: On evaluation of the survey, we found that 85% of the surveyees are on agreement that PPOELs should be registered in a standard format and should be included in the list of recognizable diseases. 89.2% and 87.8% of the respondents would like to be part of an active body for early detection and diagnosis and for Cancer screening in our country respectively. In conclusion, the oral pathology fraternity is eager to work for and tackle these PPOELs head on, provided the right opportunities and training are meted out to them.

Address for correspondence: Dr. Nawal Khan, Department of Oral and Maxillofacial Pathology, Krishnadevaraya College of Dental Sciences, Bengaluru, Karnataka, India. E-mail: parisai@yahoo.com

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INTRODUCTION

India is a country of large stature in many forte. One of them being a developing and emerging country with a population of 1.35 billion.^[1] For a nation to progress, one of the important issues to be addressed is health care. During the earlier decades of 1970s and 1980s, India was overwhelmed with burden of infectious and parasitic diseases, whereas since mid-1990s, burden of chronic noncommunicable diseases has been increasing and is somewhat larger than the burden of communicable diseases.^[2]

Noncommunicable conditions account for the second largest share, after communicable health conditions, of the disease burden in India and includes cancers, cardiovascular disease (CVD), diabetes, respiratory conditions such as asthma and chronic obstructive pulmonary disease and mental health disorders. Diabetes is associated with an increased risk for CVD and is emerging as a serious health challenge in India.^[3]

Cancers are a third area of concern. They refer to a group of diseases associated with uncontrolled cell growth that can affect normal body functions, often with fatal outcomes. Worldwide, cancers account for about 5.1% of the disease burden and 12.5% of all deaths. In India, cancers account for about 3.3% of the disease burden and about 9% of all deaths. These estimates will, however, change as many of the common risk factors for cancers, such as tobacco and alcohol consumption, continue to become more prevalent in India. The number of people living with cancers rose by nearly one-quarter from 2001 to 2016. Nearly 10 lakh new cases of cancer got diagnosed in 2016, compared to about 800,000 in 2001. The incidence of cancers common to both men and women has seen sharp increase during this period; nearly 670,000 people have been estimated to have died of cancer in India in 2016.^[3] 300,000 patients are annually estimated to have oral cancer worldwide with India taking a forward jump with world's highest number (nearly 20%) of oral cancers.^[4] Among that, oral cancer is the 12th most common cancer in the world^[5] and ranks among the top three types of cancer in our country.^[6]

The issue in case of oral cancer is different as it is primarily habit associated as compared to other high mortality cancers like that of breast and uterus in females and lung cancer in males whose etiology is primarily genetic.^[7]

Oral cancers are heterogeneous and arise from different parts of the oral cavity, with different predisposing factors, prevalence and treatment outcomes. The increased prevalence of the oral cancer in the Indian subcontinent seems to be due to smoking and other smokeless tobacco habits, alcohol, spicy food and neglect of overall oral health. It is said that one-third of all oral cancers are preventable and one-third of them occur due to risk factors. Human papilloma virus especially types 16 and 18 are known as risk factors (there are over 100 variables) and independent causative factor for oral cancer.^[8] In oral cancer, 69%–80% of cases are tobacco habit based.^[9,10] This makes the scenario challenging for the early detection and treatment of oral cancer.

The terminology for oral lesions that may have the potential to progress to malignancy has varied over the years. From premalignant to potentially malignant, it was recommended that the distinction between potentially malignant lesions and conditions be abandoned in favor of a common term, potentially premalignant oral epithelial lesions (PPOELs).^[11,12] A commonly accepted prevalence of 1%–5% has been reported. Average age of patients with PPOELs is 50–69 years, which is 5 years before occurrence of oral cancer.^[11]

It is noteworthy that many oral squamous cell carcinomas (SCCs) develop from PMDs (PPOELs).^[13] Numerous disorders have been associated with an increased risk of SCC, including leukoplakia, erythroplakia, oral lichen planus, OSMF, actinic cheilitis, palatal lesions of reverse cigar smoking, discoid lupus erythematosus and some inherited disorders, such as dyskeratosis congenita and Fanconi anemia.^[14] Warnakulasuriya and Ariyawardana calculated an overall transformation rate of 3% for homogeneous lesions of leukoplakia and 14.5% for nonhomogeneous lesions of leukoplakia.^[10] The various rates of conversion of various PPOELs include 14%–51% for erythroplakia, 60%–100% for proliferative verrucous leukoplakia and 7%–26% for OSMF.^[15–17] Correct diagnosis and timely treatment of PPOELs helps prevent malignant transformation in oral lesions. Lack of awareness about signs and symptoms of oral PPOELs among general population and even at physicians' or dentists' level are believed to be responsible for the diagnostic delay of these entities and therefore plays a key role in saving patients' lives.^[18] Histopathologic evaluation is paramount and is considered critical for making the final informed decision about management.^[11]

Therefore, it will be deemed as a failure on our part if at this point, the PPOELs or potentially malignant disorders (PMDs) of the oral cavity are not addressed and given their due. The tenets in addressing the issue are – if awareness among professionals is essential to challenge the progression of disease? If enough is being done on the grounds of prevention and early detection? Is a system put in place to tackle this? All of which is addressed by the survey undertaken. The link to this survey is given below.

<https://www.1ka.si/admin/survey/index.php? anketa=140361anda=analysisandm=sumarnik>

Aim

1. To assess if existing oral pathologists are well trained to take up the endeavor of early detection and treatment of PPOELs and oral cancer
2. To assess if a strong workable system can be put up for implementation of better policies and screening systems
3. To facilitate the first step of linking oral pathologists and oral cancer for addressing the issue of oral cancer in our country as the dental community is regarded as the first line of defense in early detection of the disease. Education of the public regarding risk factors and recognition of the early signs and symptoms area dentist's or an oral care specialist's area of responsibility.

METHODS

The study questionnaire comprises of 18 questions [Annexure 1] which were subjected to validity and reliability assessments. The content validity of the questionnaire was confirmed using Aiken's index by expert panel for adequacy of the domains' coverage with sufficient number of items to adequately measure the domain of interest. If any items had Aiken's index <0.80 (range of 0.60–0.80), that marked them as not relevant, contradicting and confusing were deleted or changed after consultation with the experts. However, the Aiken's V-index score for all the 18 questions ranged between 0.8 and 1.0, indicating that raters have accepted the questions as essential. The reliability of the obtain questionnaire was estimated using Cronbach's alpha which yielded a value of 0.873, which ensured that the responder's answer is constant and provides consistent measure of awareness (positive/negative) of oral cancer and PPOEL.

An electronic/digital questionnaire using One Click (1KA) Survey app was designed to evaluate multiple points, namely:

- Professional strength
- System placement to tackle the disease

- A strengthening of the foundation of the professionals and system.

One Click is an open source application that is freely accessible to all public sector users (research, academic and educational) and nongovernmental non-profit. It is an online service (SaaS-Software as a Service) (Microsoft, IBM, SPSS Inc.) that combines support for development, design and technical creation of an online questionnaire, implementation of online survey: support for invitations, publication and distribution of data and compiling and analyzing data and paradata.

A survey was made using One Click Survey app and titled SKILL TO KILL. It was based on a questionnaire of 18 questions as represented in annexure-1 which were formatted to address the aims as stated above and directed at trained professionals. The e-survey was circulated online by E-mail and WhatsApp and answered by 957 trained individuals. The answers to the trichotomous questions were collected and evaluated online. In addition to it, bar diagrams for each answer were also evaluated. The survey was active from September 30, 2017 to December 30, 2017 for a period of 3 months.

OBSERVATIONS, RESULTS AND STATISTICS

India has a registered association of oral pathologists, a strong group of more than 1200 life members and an equal number of student members. The survey was launched on the electronic media in September 2017. A total of 957 professionals attempted the survey implying a 47.85% of oral pathologists concerned about oral cancer and ready to participate in a part of a system to curb, recognize and treat PMDs and oral cancer.

On the questions based on satisfaction related to current curriculum set, 23.9% of each student and life members feel that it needs to be modified as against 23.6% and

Table 1: Q1. Are you satisfied with the curriculum setup for oral pathology MDS by your respective universities?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
1. Yes	82 (23.9)	82 (23.9)	164 (47.8)	0.389	0.379
2. No	81 (23.6)	98 (28.6)	179 (52.2)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 2: Q2. After acquiring the MDS degree do you feel confident enough to start practice of diagnostic pathology?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	2 (0.6)	1 (0.3)	3 (0.9)	5.69	0.05*
1. Yes	92 (26.8)	80 (23.3)	164 (47.8)		
2. No	69 (20.1)	99 (28.9)	168 (49.0)		
Total	163 (47.5)	180 (52.5)	343 (100)		

*P 0.05 Statistical significance

28.6%, respectively, who are satisfied with the present curriculum [Table 1].

On the question based on their satisfaction of being trained well in their vocation, overall 47% and 50% of oral pathologists (Q1 and 2) feel that they are ready to take up the challenge, as on date. But 49% of them among which 28.9% are life members do not feel 100% confident of investing their time and skill as they want to acquire and readdress their learning and skill development. These results were statistically significant with $P = 0.05$ [Table 2].

In the present scenario, among the 50% of the oral pathologists who want to hone better skills in diagnostic and oncopathology, 77.6% are ready to invest their time and energy in learning through courses, continuing dental education (CDEs) and programs (Q3 and 4). In continuation to this, 48.4% prefer hands-on courses on "diagnosis and trouble shooting", 31.2% prefer slide discussions and 18.4% prefer slide share programs [Tables 3 and 4]. Around 88.9% of the oral pathologists agree and are keen to attend clinical pathology and outpatient departments (OPD). They are also ready to work (84%) as consultant in specialty clinics to aid in the screening, diagnosis and treatment planning [Q5 and 6, Tables 5 and 6].

It is commendable that in spite of minimal opportunities provided, 86% of professionals are ready to work on spreading awareness among common man in their respective areas [Q7, Table 7] and 87.5% are agreeable on mode of "simple screening and early detection" as the most acceptable, easy and practical approach for a startup to tackle PPOELs and oral cancer [Q8, Table 8]. With a high percentage of professionals prepared to take over the task, a good 86.9% which include equal number of student and life members (43% each) agree that oral PPOELs need to be strongly associated with oral cancer programs and

should be given a recognizable disease's status like oral cancer because of its prominent, strong and recurrent association with oral cancers in India [Q9, Table 9].^[18,19]

More than 86% which include almost equal number of student and life members of the oral pathologists are ready to be part of a screening program and are also ready to extend the help on a regular basis in different areas [Q10, 11, 12, Tables 10-12].

To make the PPOEL (PMD) and oral cancer detection, screening practical, consistent and valid – 78% are ready to work on a "Common Goal-Common Method" protocol encouraging all to unite for a common cause on a common frequency [Q13, Table 13]. Around 83% agree on following, educating and addressing the rural and urban population on "self-examination" protocol to start with for detecting PPOELs [Q14, Table 14].

A strong agreement is also expressed for registering PPOELs and oral cancer as a recognizable disease in our country [Q15, Table 15] according to 85.1% including both student and life members of the participating oral pathologists.

Around 87% are willing to use and adapt to different requirements to achieve the goal [Q16, Table 16]. Around 73% of professionals are ready to register the cases with an Aadhar link to facilitate future scheme oriented proposals by the Government [Q17, Table 17]. Around 75.2% strongly feel that more can be done in the field of diagnosis and treatment of PPOELs and oral cancer such as awareness campaign, screening for oral cancer and self-examination protocol which might help bringing down the morbidity and mortality rates in India [Q18, Table 18]. On the whole, both students and life members were equally in agreement and well aware of the current scenario on PPOELs and oral cancer.

Table 3: Q3. Are you ready to invest your knowledge and skill for practice of oral pathology (diagnostic and oncopathology)?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	1 (0.3)	0 (0.0)	1 (0.3)	4.31	0.22
1. Yes	131 (38.2)	135 (39.4)	266 (77.6)		
2. No	10 (2.9)	21 (6.1)	31 (9.0)		
3. Later	21 (6.1)	24 (7.0)	45 (13.1)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 4: Q4. What kind of programme/course/CDE can improve your skill and confidence?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
1. Talks	4 (1.2)	3 (0.9)	7 (2.0)	2.196	0.53
2. Hands on "On Diagnosis and trouble shooting"	73 (21.3)	93 (27.1)	166 (48.4)		
3. Slide discussions	52 (15.2)	55 (16.0)	107 (31.2)		
4. Slide share programs	34 (9.9)	29 (8.5)	63 (18.4)		
Total	163 (47.5)	180 (52.5)	343 (100)		

DISCUSSION

The survey target population was the oral pathologists community in India. A close to 50% of the oral pathology professionals and students pursuing Masters in this specialization had responded to the survey. This shows their willingness to participate and be part of a system in

Table 5: Q5. Do you agree we need outpatient department and department with oral pathologist for early and proper diagnosis of oral lesions in government and private hospitals?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	11 (1.2)	17 (0.9)	28 (2.0)	0.842	0.839
1. Yes	147 (42.9)	158 (46.1)	305 (88.9)		
2. No	3 (0.9)	3 (0.9)	6 (1.7)		
3. Maybe	2 (0.6)	2 (0.6)	4 (1.2)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 6: Q6. Are you ready to work as a consultant in the speciality of oral pathology - clinically and in laboratory, take up diagnosis and be a part of treatment plan?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	11 (3.2)	19 (5.5)	30 (8.7)	6.20	0.10
1. Yes	142 (41.4)	146 (42.6)	288 (84.0)		
2. No	5 (1.5)	2 (0.9)	7 (2.0)		
3. Maybe	5 (1.5)	13 (3.8)	18 (5.2)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 7: Q7. Potentially malignant disorder is still not known to the common man at large. Will you be willing to spread awareness around about these lesions?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	11 (3.2)	19 (5.5)	30 (8.7)	1.60	0.65
1. Yes	145 (42.3)	153 (44.6)	288 (86.9)		
2. No	2 (0.6)	2 (0.6)	4 (1.2)		
3. Maybe	5 (1.5)	6 (1.7)	11 (3.2)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 8: Q8. Do you agree "simple screening and early detection" is still an important key for early diagnosis of oral cancer and potentially malignant disorders in our country (India)?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	11 (3.2)	19 (5.5)	30 (8.7)	2.51	0.47
1. Yes	144 (42.0)	156 (45.5)	300 (87.5)		
2. No	6 (1.7)	4 (1.2)	10 (2.9)		
3. Maybe	2 (1.5)	1 (1.7)	3 (0.9)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 9: Q9. Are you agreeable that "Potentially Malignant Disorders" also should be brought under recognizable disease like oral cancer?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	10 (2.9)	17 (5.0)	27 (7.9)	4.55	0.20
1. Yes	148 (43.1)	150 (43.7)	298 (86.9)		
2. No	2 (0.6)	5 (1.5)	7 (2.0)		
3. Maybe	3 (0.9)	1 (2.3)	11 (3.2)		
Total	163 (47.5)	180 (52.5)	343 (100)		

the early detection of PPOELs and oral cancer. The failure of the rest of 50% to respond may be associated with, no time on hand, unsure about the demand of the project or loss of information. It is clear that, as on date, a close to 47%–48% of oral pathologists are ready to participate and

Table 10: Q10. Would you like to be a part of a active body working on early detection and diagnosis of potentially malignant disorders and oral cancer?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	10 (2.9)	17 (5.0)	27 (7.9)	3.18	0.36
1. Yes	149 (43.4)	147 (45.8)	306 (89.2)		
2. No	1 (0.3)	0 (0.0)	1 (0.3)		
3. Maybe	3 (0.9)	6 (1.7)	9 (2.6)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 11: Q11. Are you willing to be a part of cancer screening in our country, if you are given an opportunity?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	11 (3.2)	18 (5.2)	29 (8.5)	2.12	0.54
1. Yes	147 (42.9)	154 (44.9)	301 (87.8)		
2. No	1 (0.3)	3 (0.9)	4 (1.2)		
3. Maybe	4 (1.2)	5 (1.5)	9 (2.6)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 12: Q12. If assistance is provided to you, are you in a position to do screening on a regular basis in your areas?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	11 (3.2)	17 (5.0)	28 (8.2)	1.49	0.68
1. Yes	141 (43.1)	147 (43.7)	288 (86.9)		
2. No	2 (0.6)	3 (0.9)	5 (1.5)		
3. Maybe	9 (2.6)	13 (3.8)	22 (6.4)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 13: Q13. "Common goal - Common method" does it make sense to have same protocol for screening potentially malignant disorders and oral cancer?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	10 (2.9)	17 (5.0)	27 (7.9)	2.93	0.40
1. Yes	117 (34.1)	130 (37.9)	247 (72.0)		
2. No	15 (4.4)	18 (5.2)	33 (9.6)		
3. Maybe	21 (6.1)	15 (4.4)	36 (10.5)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 14: Q14. If a "Self-examination protocol" is given to you, will you educate your patients to use it and do it?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	12 (3.5)	19 (5.5)	31 (9.0)	2.69	0.44
1. Yes	140 (40.8)	145 (42.3)	285 (83.1)		
2. No	3 (0.9)	2 (0.6)	5 (1.5)		
3. Maybe	8 (2.3)	14 (4.1)	22 (6.4)		
Total	163 (47.5)	180 (52.5)	343 (100)		

contribute with immediate effect. A whopping 78% would like to reinvest in learning, acquiring new skills and honing their capacity (Q1, 2 and 3).

Expertise can be developed in various forums which include talks, hands-on programs and slide discussions (Q4). A good contribution to enable such learning comes from the Indian Association of Oral and Maxillofacial Pathologists,

Government and private colleges/teaching institutions by hosting a variety of conferences, CDEs and workshops. These facilitate gaining of knowledge and acquisition of new skills to become a better clinicopathologist. Such programs should be held at regular intervals and should catch a consistent momentum over the coming years.

With the matter of learning and improvisation being addressed, this can be evaluated only on being given an opportunity and a readiness to be involved and participate. A phenomenal 93%–98% of surveys were ready to participate in screening, early detection camps for PMDs and oral cancers (Question 6, 7 and 8).

Table 15: Q15. If a set protocol for case examination is given, will you be willing to use it and register the cases of potentially malignant disorders and oral cancer in your clinic/hospital/department?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	12 (3.5)	20 (5.8)	32 (9.3)	2.49	0.48
1. Yes	142 (41.4)	150 (43.7)	292 (85.1)		
2. No	1 (0.3)	3 (0.9)	4 (1.2)		
3. Maybe	8 (2.3)	7 (2.0)	15 (4.4)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 16: Q16. Do you feel more needs to be done in diagnosis and treatment of potentially malignant disorders and oral cancer?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	11 (3.2)	18 (5.2)	29 (8.5)	2.58	0.46
1. Yes	145 (42.3)	155 (45.2)	300 (87.5)		
2. No	1 (0.3)	3 (0.9)	4 (1.2)		
3. Maybe	6 (1.7)	4 (1.2)	10 (2.9)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 17: Q17. Since all health schemes are Aadhar linked, henceforth can you get the details of Aadhar number on to the card for registration, so that the patient can get benefit from government?

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	12 (3.5)	20 (5.8)	32 (9.3)	3.99	0.26
1. Yes	126 (36.7)	124 (36.2)	250 (72.9)		
2. No	4 (0.3)	3 (0.9)	7 (2.0)		
3. Maybe	21 (6.1)	33 (9.6)	54 (15.7)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Table 18: Q18. Given an option would you give more importance to

Responses	Students (%)	Life members (%)	Total (%)	χ^2	P
0. Unanswered	11 (3.2)	18 (5.2)	29 (8.5)	4.53	0.33
1. Awareness campaign	11 (3.2)	12 (3.5)	23 (6.7)		
2. Screening for oral lesions	13 (3.8)	13 (3.8)	26 (7.6)		
3. Self-examination protocols	1 (0.3)	6 (1.7)	7 (2.0)		
4. All of the above	127 (37.0)	131 (38.2)	258 (75.2)		
Total	163 (47.5)	180 (52.5)	343 (100)		

Unfortunately, in spite of agreement among 98% oral pathologists that they need to be part of OPD screening for early detection and proper diagnosis of PPOELs and oral cancer (Question 5), 95% of Government/private and alone institutions, hospitals, cancer centers and clinics related to oral cancers are functioning without a dedicated post for oral pathologist, marring the chance of a patient/common man to attain maximum benefit to which he is entitled to.

Considering the above mentioned points, it becomes imperative that the State and Central Government should empower professionals trained extensively in this specialty, an opportunity to serve, work and be a part of Government schemes to tackle the exodus of oral cancer and PPOELs. 93%–97% professionals are equipped and more than willing to be roped in by such opportunities provided (Questions 10, 11, 12) by Government and private organizations.

A long impending need to register the PPOEL/PPOELs as a set of recognizable diseases due to its high frequency of occurrence in oral cavity and association with oral cancer is the need of the hour. A database and registry should be set up by the center that scans such lesions. A major contribution to this will come from dental colleges and primary health centers throughout the country (Q9).

A common format to run the screening and documentation becomes vital, if it needs to be evaluated and eradicated systematically. It becomes imperative in these scenarios to have well-planned protocols for screening or self-examination and for documentation. Such formats can be launched by the national associations fighting for the cause of cancer (Q13, 14 and 15).

A consensus could also be reached in identifying the right terminology to arrive at correct treatment protocol through discussions, seminars and CDEs which are in progress at present, and recommendations can be made through these platforms to arrive at correct terminologies. Multicentric studies and proposals will help going a step further in documentation by linking these cases to Government schemes; so, the patients can acquire maximum benefit in diagnosis and treatment (Q16, 17, 18).

The knowledge, attitude and behavior of both student and life members of oral pathologists are in agreement and are well aware of the current scenario on PPOELs and oral cancer. Given an opportunity, close to 90% of people are ready to serve in OPDs for detection of PPOELs and oral cancer. Around 78% of oral pathologists are ready to invest in acquiring knowledge through CDEs, slide share and hands-on courses.

To achieve the above-mentioned goals, Universal Health Coverage (UHC) is the way to go. The crucial aim of UHC is to ensure that everyone, everywhere, should have access to essential healthcare services without facing financial hardship. Although India is not part of UHC, India's commitment toward achieving it is reflected in its policies and institutional mechanism. India has launched Ayushman Bharat – one of the most ambitious health missions ever to achieve UHC.^[20] UHC although includes screening for cervical and breast cancer screening should also include oral cancer screening, especially in country like India, where 60%–80% of patients present with advanced disease as compared to 40% in developed countries.^[21] In this regard, Public Health Insurance Schemes should also cover screening of oral cancer. This would drastically improve the cost expenditure as well as survival rates in patients of oral cancer.

CONCLUSION

A detailed analysis of the survey highlights the following concluding remarks:

- Cases of PPOELs and oral cancers should both be registered in a standard format and should be included in recognizable diseases considering the rising number of both in our country
- Existing oral pathologists are well trained and are ready to undergo further training as per the need/requirement
- Readiness to make an early detection, awareness and treatment of PPOELs and oral cancer. Survival rates have been found to increase if oral cancer is detected at an early stage by a clinician, or if a PPOEL (PMD) is discovered and treated before malignant transformation
- A professional group – oral pathologists are waiting in the wings for an opportunity to contribute in this field. Considering the present scenario of PPOEL (PMD) and Oral cancer on one side and set of professionals ready to tackle this situation heads on, on the other; puts the nidus on the State and Central bodies to empower the appropriate professionals and provide them with a fighting chance to contribute to this social and health-related cause.

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Conflicts of interest

There are no conflicts of interest.

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ANNEXURE

Annexure I

1. Are you satisfied with the curriculum setup for MDS oral pathology by your respective universities?
a) Yes b) No
2. After acquiring the MDS degree do you feel confident enough to start practice of Diagnostic Pathology?
a) Yes b) No
3. Are you ready to invest your knowledge and skill for practice of oral pathology (diagnostic and oncopathology)?
a) Yes b) No
4. What kind of program/course/CDE can improve your skill and confidence?
 - a. Talks
 - b. Hands-on " On diagnosis and Trouble-shooting"
 - c. Slide Discussion
 - d. Slide share programs.
5. Do you agree we need OPD and department with oral pathologist for early and proper diagnosis of oral lesions in government and private hospitals?
a) Yes b) No c) Maybe
6. Are you ready to work as a consultant in the speciality of oral pathology – clinically and in laboratory, take up diagnosis and be a part of treatment plan?
a) Yes b) No c) Maybe
7. PPOEL (PMD) is still not known to the common man at large. Will you be willing to spread awareness around about these lesions?
a) Yes b) No c) Maybe
8. Do you agree "simple screening and early detection" is still an important key for early diagnosis of oral cancer and potentially malignant disorders in our country (India)?
a) Yes b) No c) Maybe
9. Are you agreeable that "Potentially Malignant Disorders" also should be brought under recognizable disease like oral cancer?
a) Yes b) No c) Maybe
10. Would you like to be a part of an active body working on early detection and diagnosis of potentially malignant disorders and oral cancer?
a) Yes b) No c) Maybe
11. Are you willing to be a part of cancer screening in our country, if you are given an opportunity?
a) Yes b) No c) Maybe
12. If assistance is provided to you, are you in a position to do screening on a regular basis in your areas?
a) Yes b) No c) Maybe
13. "Common goal – Common method" does it make sense to have same protocol for screening potentially malignant disorders and oral cancer?
a) Yes b) No c) Maybe
14. If a "Self examination protocol" is given to you, will you educate your patients to use it and do it?
a) Yes b) No c) Maybe

15. If a set protocol for case examination is given, will you be willing to use it and register the cases of potentially malignant disorders and oral cancer in your clinic/hospital/department?
 - a) Yes
 - b) No
 - c) Maybe

16. Do you feel more needs to be done in diagnosis and treatment of potentially malignant disorders and oral cancer?
 - a) Yes
 - b) No
 - c) Maybe

17. Since all health schemes are Aadhar linked, hence forth can you get the details of Aadhar number on to the card for registration, so that the patient can get benefit from Government schemes?
 - a) Yes
 - b) No
 - c) Maybe

18. Given an option would you give more importance to:
 - a. Awareness campaigns
 - b. Screening
 - c. Self-examination
 - d. All.