

Current Practice Pattern of Oral Pathologists in India

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Abstract

The practice of oral and maxillofacial pathology encompasses research, diseases diagnosis through clinical, radiographic, microscopic, biochemical and patients management akin. Unlike general dentist an oral pathologist have a practices to that of general pathologist. Hence, conducting a survey will be useful to analyse the practice patterns of oral pathologists will help broaden the scope of this speciality.

Objective: To analyse the current practicing patterns and scope of oral pathologist in India

Methodolgy: An online questionnaire-based, cross-sectional study will be conducted among oral pathologist in India.

Results: A total of 112 oral pathologists were participated in study among them 68.9% were female and 31.1% were male. Regarding admission methods 53.3% were admitted by merit, 42.5% by choice and 4.2% and In-service Working status of participant was as follows teaching faculty- 61.3%, Students-17%, retired-3.3 % practioners – 9.9%, Dental surgeons- 7.1%

and others- 2.4%. Non-academic participants were distributed among corporate health sector- 5.7%, Pathology lab- 5.2% research institute -0.5% and tobacco cessation center - 0.5%.

Conclusion: Studies have found that prime motive for dental students when choosing future career options include financial security, independent & specialized professional, job satisfaction, status, and a desire to serve to the community.

Keywords: Broaden, Dental Surgeons, Otolaryngology Microscopic

Introduction

Dentistry offers a broad range of career and business opportunities for the both general practitioner and specialist. Several incentives and factors such as advice from friends family, admiration of a certain mentor or a genuine interest in the specialty influence the final decision.¹

Thorough diagnosis and understanding of the disease pathogenesis, lays down the foundation for all dentist to provide successful treatment. In 1946 the speciality of

Oral and Maxillofacial Pathology had its noble inception with the founding of the American Academy of Oral Pathology.²

The American Academy of Oral and Maxillofacial Pathology (AAOMP) defines the oral and maxillofacial pathology as “A specialty of dentistry and pathology which deals with the nature, identification, and management of diseases affecting the oral and maxillofacial regions. It is a science that investigates the causes, processes, and effects of these diseases. The practice includes research, clinical diagnosis of disease, radiographic, microscopic, biochemical and other examinations, and management of patients”.³

The scope of this specialty has significantly broadened with advancement in cancer research. Molecular biology, diagnostics, immunology, and genetics in the recent years.² Unfortunately there is a lack of awareness about Oral & Maxillofacial Pathology (OMFP) as a specialization,⁴ and Oral Pathologists after confine themselves to academics. This only gives the impression that it is a nonclinical subject with limited practical application.⁵ Therefore this study is planned to analyse the practice patterns of oral pathologists and broaden the scope of this speciality.

Aims and Objective

- To analyse current practicing pattern of oral pathologist in India.
- To analyse scope for the oral pathologist in India.

Materials and Method

Study design, study setting and study population This a descriptive cross-sectional study was conducted among oral pathologist in India. Ethical clearance was obtained from the Institutional Ethics committee. All the participants were informed about the nature of the study, assured confidentiality and provided informed consent. The study questionnaire was validated by senior

speciality faculty. The questionnaire consisted of 13 questions categorised under three sections; i) demographic details including name, age, gender, and located place ; ii) focused on practicing pattern of pathologist in India and iii) scope of oral pathology assessing the perceived scope of oral pathology according to the participant views. This study was conducted online using google forms.

The collected data was entered into Microsoft Excel 365 and subject to statistical analysis using SPSS20. Descriptive and inferential statistics were computed and Chi-square test were conducted. The level of statistical significance was set at $P \leq 0.05$.

Results

A total of 112 oral pathologist in India were selected using convenience sampling, participated in the study of the participants 68.9% were female and 31.1% were male (fig-1). Regarding admission methods 53.3% were admitted by merit, 42.5% by choice and 4.2% and In-service (fig-2) Working status of participant was as follows teaching faculty- 61.3%, Students- 17%, retired- 3.3 % practitioners – 9.9%, Dental surgeons- 7.1% and others- 2.4% .(fig-3) Non-academic participants were distributed among corporate health sector- 5.7% , Pathology lab- 5.2% research institute -0.5% and tobacco cessation center - 0.5%.(fig-4). Regarding the type of practice of participants, reported as general dental practice- 20.8 % , specialty- 10.8 % and both general and specialty practice - 31.6 % .(fig-5). Among all the participant 88.2% says they receive referred from general surgeons/general pathologist and 11.8% says no (fig-6). 56.1% stated that it is useful in dental practice while 43.9% denied this. (Fig-7). Overall 83.5% were satisfied with the profession and 16.5% were not. (Fig-8).

Discussion

Dentistry is a branch of medicine that focuses on the investigation, diagnosis, and treatment of diseases and disorders of the oral cavity and maxillofacial region.^{vi} While oral and maxillofacial pathology (OMFP) oral pathology is a speciality which deals with identification of diseases and investigating its causes, processes and effect on oral and maxillofacial regions.⁷ With the establishment of the American Academy of Oral Pathology in 1946, the profession of OMFP officially began.⁸ In Washington, on November 8, 1948, The American Board of Oral Pathology was formed and incorporated conducting its first certifying examination to recognize those with advanced training and education in this specialty area.^{9,10} Usually Oral pathologists join academy after completion of post graduation. However, in recent years, a significant number of oral pathologists prefer the practice of surgical /clinical oral pathology rather than teaching. This shift may be due to reduction in academic opportunities.¹¹ According to department of National Taiwan University Hospital young dentists tend to avoid choosing the OMFP as a career. Reasons include limited academic job, low quality of life, high workload, and low wages.³

This survey was conducted to impart a better understanding of current trend in practice of oral pathologist in India aiming to expand the scope of the OMFP for better future.

According to survey total 212 oral pathologist participated. Most of oral pathologist were females. (68.9 %) with fewer males (31.1%). (fig-1) showing interest in oral pathology. This may be due to relatively lower income and more dependency as compared to other dental specialties.¹²

According to Saluja, et al. undergraduate students are generally inclined to pursue post-graduation (62%) with

preference for clinical branches over OMFP due to anticipated higher more consultations and more job opportunities. However, for those facing financial constraints or limited choices OMFP becomes a viable option. This decision may also stem from a belief is due to their strong belief that in a practice patients prefer a post graduate (PG) practitioner rather than BDS Dentists.

According to Eversol L R students may opt for oral pathology and microbiology either out of genuine interest or by chance due to reasons. Over time they gradually develop interest in the subject.¹³ Here also most of oral pathologist opting the oral pathology by in-service selection is significantly low compared to those chosen on their own choice(42.5%) is also not so much as compared to merit (53.3%).(fig-2)

Now a day, many newly certified young oral pathologist state the insufficient assignment opportunities as well as job engorgement as teaching staff in dental colleges, resulting in lack of conviction on the scope for oral pathologists in future.¹⁴ But we found that many oral pathologists have different working status in India as Teaching faculty (61.3%) Students (17%) Retired (3.3 %) Practitioners (9.9%) Dental surgeons (7.1%) Others (2.4%). Others include corporate health sector-(5.7%) Pathology lab (5.2%) Research institute (0.5%) and Tobacco cessation (0.5%). (fig-3) Among this pathology lab practicing and in research oral pathologist are much less. This might be because establishing diagnostic setup is really challenging. It requires adequate research, planning and investments before starting specialty practice. Also oral pathologist should have updated knowledge and experience about various diagnostic procedures and latest investigation techniques related to oral lesions. Postgraduate training program and

curriculum should be designed in such a way that it not only enhances academics, but clinical expertise too.¹⁵

It is important to build a professional network with fellow colleagues and other medical colleagues in dermatology, oncology, and otolaryngology is crucial for referring specialty cases. A good collaborative relationship with general pathologists to discuss difficult cases. Such networking will enhance proper functioning of patient's health-care system.¹⁶

In the study by Satish M J et al, 82.3 % of students felt that Oral Pathology was a research oriented subject ii however, our study finding revealed that only 0.5% .(fig-3) oral pathologist are associated with research institute. This number we need to provide extensive area for research with significant infrastructure and funding in Dental Institutions across the country. This would ensure that research in oral pathology and histology excludes beyond just dissertations.¹⁷

In the study, Cheng F. C. in 2020 it was found that in Taiwan 42.9% oral pathologist practice general dentistry, while only 11.43% do speciality practice in contrast in India the percentage of oral pathologist practicing general dentistry is lower (20.8%) than speciality practice (31.6%) and specialityas well as general and speciality was 10.8% (fig-5). This study suggest that in India the proportion of oral pathologist engaged in speciality practice are higher than the oral pathologist in Taiwan.

In 2019, Mudliyar et al found that 25% of general medical practitioners felt the need to hire an OMFP specialist in their department with 25% of the consultants referring to OMFPs and very few (3%) general medical practitioners felt that they can't render full justice to oral lesions.⁴ However, in 2023 our findings show that 88.2% OMFPs receives call from general pathologist and surgeons for expert opinion

while only 11.8% reported they not receiving such calls. (fig-6).

Nada O. Binmadi stated that consultation calls for OMFP's by general pathologists at hospitals or private laboratories are less. However according to Binmadi NO, Almazrooa SA. Consultation of oral pathology services are essential as 7% of outside cases involving head and neck lesions were later changed or modified.¹⁸ For the betterment of the oral pathology visibility among dentists and within general pathologists. It should be a mandatory to review all oral lesions through histopathological analysis additionally Studies on this issue should be encouraged.¹⁹

Sir William Osler, said "As is our pathology, so is our practice." emphasizing the importance of understanding oral pathology. However it is practically impossible to know all the oral lesions and conditions, a fundamental knowledge of oral pathology essential for becoming a successful dentist.²⁰ In 2020 survey by Saluja et al (63.5%) of student believed that oral pathology is the foundation of all clinical subject v in contrast our study found that a considerable number 43.9% of the pathologist says this branch is not useful in dental practice. (fig-7)

This attitude can be changed by providing various opportunities in the early years to diagnose simple oral lesions helping students become familiar with the histopathological diagnosis and develop an interest in specialization. Additionally there is a need to enhance practical education by adding incorporating biopsy/treatment courses as a super speciality.^{15,21}

The majority of students in this study were unsure about choosing OMFP for their postgraduation while 40 % expressed an interest in pursuing post-graduation degree in Oral Pathology and histology.² Our finding revealed that after completing them in specialization (83.5%) oral

pathologist are generally satisfied with their selected field with very few (16.5%) (Fig-8) expressing dissatisfaction. According to Chaturvedi et al incorporating Forensic Odontology in to the curriculum will create more of job opportunities in dental college and make speciality interesting.²² Some of participant also recommended expanding role of oral pathologist to include recent biotechnologies, genetics, forensic dentistry, special staining technique, immunohistochemistry, haematology molecular biology and aesthetic dentistry.

Conclusion

In today's competitive World, obtaining a specialty qualification is for professional and economic strength.^{23,24} The majority of participants in the study were females and their choice of oral pathology was based on merit and voluntary decision. Most of them are involved in academics, fewer in pathology lab and some in research. Others are in fields like corporate and tobacco cessation. It's favorable that most of are practicing specialty practice and receive consultancy calls and are satisfied with their job. However it is concerning that more than 50% participant felt that the specialty is not useful for dental practice. For redefining a frame of mindset, we should consider redesigning educational programme to faster innovation and growth, developing skills in our graduates that are valued by the research communities and the healthcare delivery system. Advanced education program would not only be attractive to dental schools but also to hospital-based pathology departments.^{8,25} According to Wright et al treatment of oral and maxillofacial diseases and conditions by the OMFP should be given greater importance, in both dentistry and the healthcare delivery system.⁴

To conclude whether pursued by merit or choice specialization in OMFP provides valuable opportunities in academics, lab work and research and it offers the benefits of specialty consultation. The value of this specialty for clinical practice and personal satisfaction varies. Expanding the scope of OMFP by incorporating recent advancements in areas such as biopsy techniques, genetics, specialized staining technique, IHC, haematology, and aesthetic dentistry could enhance its relevance. Ultimately there is possibility for government creations of positions at health care centres for OMFP which would generate more job opportunities for emerging specialists.²⁶

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Legend Figures

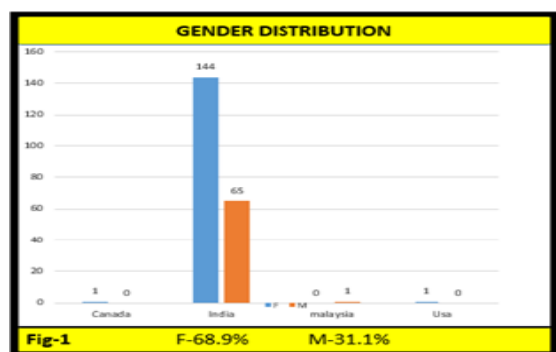


Figure 1:

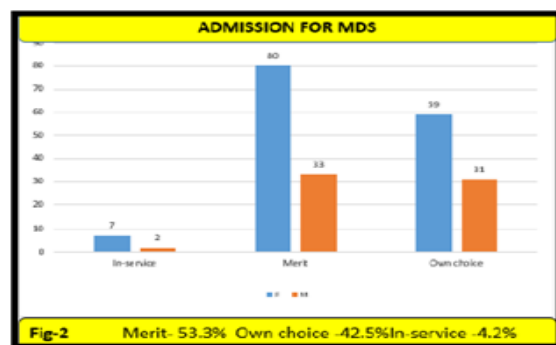


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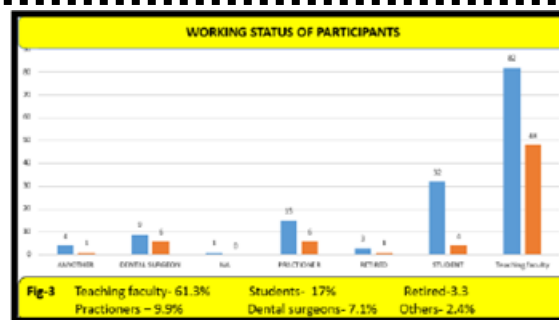


Figure 3:

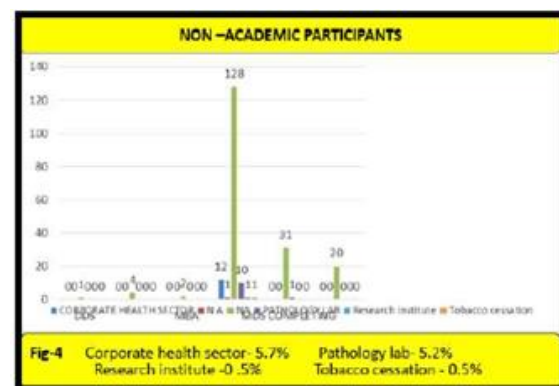


Figure 4:



Figure 5:

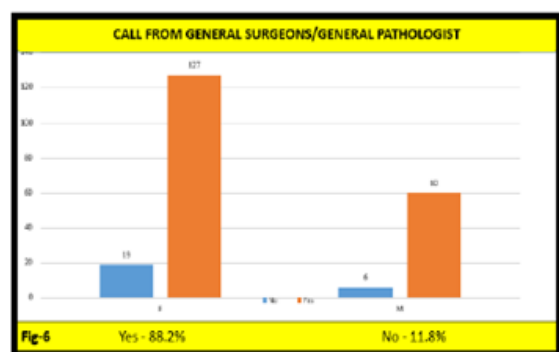


Figure 6:

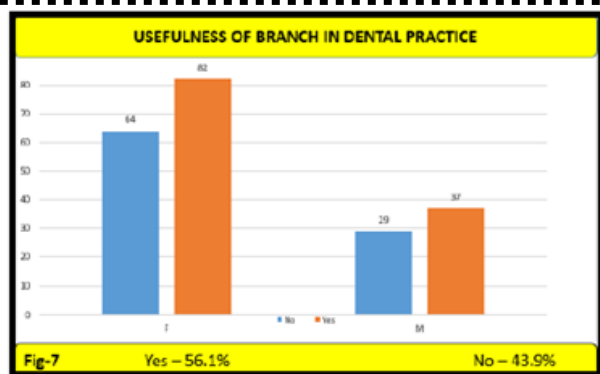


Figure 7:

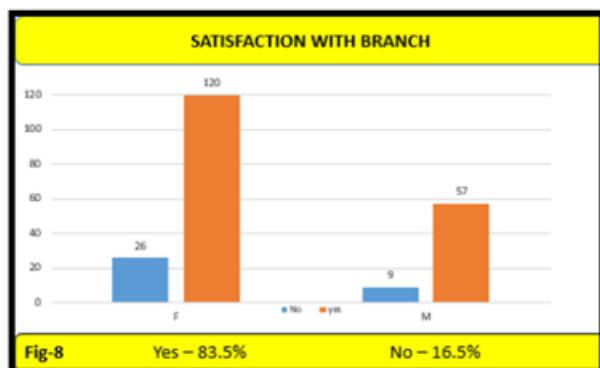


Figure 8: