Abstract

Background and Aim: There is a paucity of information about awareness about oral pathology specialty among medical professionals. To the best of my knowledge, this is the first study to be reported in literature. This study aimed to assess and create awareness of oral pathology specialty among medical professionals in hospitals under Kerala Health Services Department in Malappuram district in Kerala. Materials and Methods: The study was conducted between January 2018 and April 2018. The printed and validated questionnaire regarding oral pathology specialty was supplied to medical professionals in hospitals under Kerala Health Service Department in Malappuram district. The questionnaire comprised of the demographic data of the participants, including age, gender, position, and years of experience, and basic facts about oral pathology specialty. Results: Most participants surveyed (91.7%) were aware of the oral pathology specialty. In total, 77.8% of medical professionals refer oral pathology cases to general pathologists for histopathology report. However, 41.7% of medical professionals know about the new terminology potentially malignant oral disorders and their histopathological interpretation. Approximately, 33.33% of medical doctors were aware about common oral cancer (squamous cell carcinoma) grading. Conclusion: Medical professionals are aware of oral pathology specialty. The stance of referring and consulting oral pathologists for oral pathology cases for histopathology report is poor.

Keywords: Awareness, India, Kerala health service department, medical professionals, oral pathology specialty

Introduction

Oral pathology is the branch of dental science dealing with pathology affecting the oral and maxillofacial regions. The information about the current scenario of oral pathology specialty and its future perspective is evident in the literature. Oral pathology forms a crucial link between basic dental sciences and clinical dental sciences. More recently, dental traits of congenital syphilis, bilaterally impacted maxillary and mandibular impacted canines, Stensen’s duct sialolith, and eruption cyst associated with right maxillary deciduous first molar were reported from our dental department referred by medical professionals in our institution. It was known from my medical colleagues working in hospitals under Kerala Health Services that they are dealing with oral pathology cases and are referring to general pathologists in private sector for histopathology report. There is a paucity of information about awareness about oral pathology specialty among medical professionals in India. This printed and validated questionnaire study aimed to assess and create awareness of oral pathology specialty among medical professionals in hospitals under Kerala Health Service Department in Malappuram district. To the best of my knowledge, this is the first study to be reported in literature around the globe.

Materials and Methods

The printed and validated questionnaire regarding oral pathology specialty was supplied to medical professionals in hospitals under Kerala Health Services Department in Malappuram district in Kerala, India. This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

How to cite this article: Shamim T. Awareness about oral pathology specialty among medical professionals in hospitals under Kerala Health Services Department in Malappuram district in Kerala, India. J Family Med Prim Care 2019;8:590-3.
Service Department in Malappuram district. The questionnaire comprised of the demographic data of the participants, including age, gender, position, and years of experience, and basic facts about oral pathology specialty [Figure 1]. The study was conducted between January 2018 and April 2018. All incomplete answered questionnaires were excluded from the study. The questionnaire was supplied to 100 medical professionals, but completely filled questionnaire was received from 36 medical professionals. The study was approved by the ethics committee of Government Taluk Head Quarters Hospital, Malappuram, India (THQHMPM Reference 1/Dental/2018). This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Participants in the study
Designation wise, the participants were grouped into general cadre (Assistant Surgeon/Casualty Medical Officer and Civil Surgeon) and specialty cadre (Junior Consultant and Consultant). Assistant Surgeon/Casualty Medical Officer constitutes medical undergraduates with basic Bachelor of Medicine and Bachelor of Surgery (MBBS) degree working in entry cadre. Civil Surgeon is the promotion post of Assistant Surgeon/Casualty Medical Officer. Junior Consultant constitutes medical professionals with postgraduate degree or diploma working in entry cadre. Consultant is the promotion post of Junior Consultant.

Speciality wise, the participants were grouped into medical undergraduates with basic MBBS degree working as Assistant Surgeon/Casualty Medical Officer and Civil Surgeon and medical professionals with postgraduate degree or diploma working as Junior Consultant and Consultant.

Inclusion criteria
Medical professionals working in general cadre (Assistant Surgeon/Casualty Medical Officer, Civil Surgeon) and specialty cadre (Junior Consultant, Consultant).

Exclusion criteria
Medical professionals working in administrative cadre (District Medical Officer of Health, Deputy District Medical Officer, Superintendent, Deputy Superintendent, and Resident Medical Officer).

The data were analyzed using descriptive statistics.

Results
The demographic data of the participants and participant’s response to basic questions to oral pathology are summarized in Table 1.

Discussion
This study was conducted among medical professionals working in Government hospitals in Malappuram district, Kerala to assess and create awareness about oral pathology specialty. Age wise, majority of responses received from 31–40 age group (55.5%) and 41–50 age group (25%). Sex wise, majority of responses received from males (58.3%) compared to females (41.7%).

Designation wise, majority of responses were received from Junior Consultant (58.3%) and Assistant Surgeon/Casualty Medical Officer (25%). Speciality wise, majority of responses were received from medical undergraduate (19.4%), general medicine (13.9%), pediatrics (11.1%), and general surgery (11.1%).

Most medical professionals surveyed (91.7%) were aware of the oral pathology specialty. Approximately, 77.8% of medical professionals refer oral pathology cases for histopathology report. However, 41.7% of medical doctors know about the new terminology potentially malignant oral disorders and their histopathological interpretation as detailed in literature. Moreover, 33.33% of medical doctors were aware about common oral cancer (squamous cell carcinoma) grading as given in literature. Regarding the awareness of various histopathological diagnostic measures in oral lesions, the medical professionals showed maximum responses to cytology (77.8%) and immunohistochemistry (72.2%). Cytology is usually employed in oral potentially malignant lesions, oral cancer, and lymphoproliferative lesions of oral cavity. Immunohistochemistry is routinely used for oral cancers, odontogenic tumors, and spindle cell neoplasms. The role...
of immunofluorescence and special stains in the diagnosis of oral lesions is highly appreciated in the literature.\textsuperscript{22,23}

More recently, National Accreditation Board for Testing and Calibration Laboratories (NABL) has come up with amendment for oral pathologists to practice histopathology and cytopathology of oral and maxillofacial region and hematology in India.\textsuperscript{24} With the above amendment of NABL, the oral pathology services may be instituted in dental department under hospitals in public and private sector that will promote more job opportunities for the graduating oral pathologists in India.

The following strategies should be implemented in Government or private sector to promote oral pathology specialty:

a. Clinicopathologic club or workshops regarding oral cancer grading, immunofluorescence, and special staining techniques in oral lesions should be instituted

b. The stance of referring and consulting oral pathologists for oral pathology cases for histopathology report should be improvised

c. The use of dental informatics as a major tool in teaching about the specialty oral pathology may be introduced\textsuperscript{25}

d. The oral pathology services for histopathology reporting should be instituted in dental department under hospitals under Kerala Health Services Department, so that referral from medical professionals regarding oral and maxillofacial pathologies will be improvised and it will be beneficial for the patients attending tertiary care. It will enhance the strengthening of dental units in public health sector and also improvising the revenue of public health sector. There is also a provision for posting of postgraduate students of oral pathology specialty from public and private sector as peripheral center posting in dental department with oral pathology services for histopathology reporting in Kerala Health Services Department

e. It is important that after implementing oral pathology services for histopathology services under dental department under District Head Quarters Hospital, the primary health care providers, family physicians, and medical professionals under various postgraduate disciplines of medicine working in Primary Health Center and Community Health Center can refer oral pathology cases pertaining to oral cavity for biopsy and histopathology report. It may be anticipated that oral pathology services for histopathology services under dental department may be initiated in 14 district head quarters hospitals in Kerala, and it will be beneficial for the patients attending tertiary care.

The limitations of the present study include smaller sample size, and the participants are selected only from government sector.
After implementing the above strategies in Government sector to promote oral pathology as detailed above, the study with larger sample size will be carried out throughout the State.

Conclusion

This paper may be considered as a baseline study regarding awareness about oral pathology specialty among Government medical professionals in Malappuram district in Kerala. Although medical professionals are aware of oral pathology specialty, their stance of referring and consulting oral pathologists for oral pathology cases for histopathology report is poor.

Research highlights

- First study on awareness about oral pathology specialty among medical professionals
- Medical professionals are aware of oral pathology specialty
- Approximately, 77.8% of medical professionals refer oral pathology cases to general pathologists for histopathology report
- However, 41.7% of medical professionals know about the new terminology potentially malignant disorders
- Moreover, 33.33% of medical doctors were aware about common oral cancer (squamous cell carcinoma) grading
- The stance of referring and consulting oral pathologists for oral pathology cases for histopathology report is poor.

Acknowledgments

The author greatly appreciate the support and cooperation given by Dr Rajagopalan K, The Superintendent, Government Taluk Head Quarters Hospital, Malappuram, Kerala, India for carrying out this study. The author also express deep gratitude to all medical professionals for sparing valuable time inspite of busy schedule for filling the questionnaire.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Shamim T. Forensic odontology. J Coll Physicians Surg Pak. 2012;22:240-5.
2. Gowhar O. Prospective of oral pathology as profession—a cross sectional study. Internat J Contemp Med Res 2017;4:1490-93.
3. Roy S. Genesis of oral pathology as a distinct dental specialty. Oral Maxillofac Pathol J 2016;7:673-5.
4. Govindarajan S, Muruganandhan J, Raj AT. Oral pathology in India: Current scenario and future directions. World J Dent 2017;8:429.
5. Einstein A. From the author's desk: Oral pathology as a dental specialty in India. J Oral Maxillofac Pathol 2014;18:1.
6. Indirani VL. Critical evaluation of Swot analysis (South Indian scenario). J Oral Maxillofac Pathol 2003;7:5-7.
7. Shamim T, Renjini PS. Dental traits of congenital syphilis revisited in dental outpatient department (OPD). Head Neck Pathol 2017;11:517-8.
8. Shamim T, Renjini PS. Asymptomatic bilateral maxillary and mandibular impacted permanent canines: Serendipity in dental outpatient department. J Korean Assoc Oral Maxillofac Surg 2017;43:427-8.
9. Shamim T, Renjini PS, Stensen's duct sialolith in a geriatric patient. Korean J Pain 2018;31:221-2.
10. Shamim T, Shabeer KPO. Eruption cyst associated with right maxillary deciduous first molar. Pan Afr Med J 2018;30:285.
11. Sarode SC, Sarode GS, Karmarkar S, Tupkari JV. A new classification for potentially malignant disorders of the oral cavity. Oral Oncol 2011;47:920-1.
12. Warnakulasuriya S, Johnson NW, van der Waal I. Nomenclature and classification of potentially malignant disorders of the oral mucosa. J Oral Pathol Med 2007;36:575-80.
13. Frare JC, Sawazaki-Calone I, Ayoza-Rangel ALC, Bueno AG, de Morais CF, Nagai HM, et al. Histopathological grading systems analysis of oral squamous cell carcinomas of young patients. Med Oral Patol Oral Cir Bucal 2016;21:e285-98.
14. Akhter M, Hossain S, Rahman QB, Molla MR. A study on histological grading of oral squamous cell carcinoma and its co-relationship with regional metastasis. J Oral Maxillofac Pathol 2011;15:168-76.
15. Jaitley S, Agarwal P, Upadhyay R. Role of oral exfoliative cytology in predicting premalignant potential of oral submucous fibrosis: A short study. J Cancer Res Ther 2015;11:471-4.
16. Sekine J, Nakatani E, Hideshima K, Iwahashi T, Sasaki H. Diagnostic accuracy of oral cancer cytology in a pilot study. Diagn Pathol 2017;12:27.
17. Navone R, Marsico A, Reale I, Pich A, Brocoletti R, Pentenero M, et al. Usefulness of oral exfoliative cytology for the diagnosis of oral squamous dysplasia and carcinoma. Minerva Stomatol 2004;53:77-86.
18. Cozzolino I, Vigliar E, Todaro P, Peluso AL, Picardi M, Sosa Fernandez LV, et al. Fine needle aspiration cytology of lymphoproliferative lesions of the oral cavity. Cytopathology 2014;25:241-9.
19. Ye X, Wang X, Lu R, Zhang J, Chen X, Zhou G. CD47 as a potential prognostic marker for oral leukoplasia and oral squamous cell carcinoma. Oncol Lett 2018;15:9075-80.
20. Živković ND, Mihaičović DS, Kostić MS, Cvetanović AS, Mijović ZZ, Milentijević MV, et al. Markers of proliferation and cytokeratins in the differential diagnosis of jaw cysts. Ear Nose Throat J 2017;96:376-83.
21. Shamim T. The spindle cell neoplasms of the oral cavity. Iran J Pathol 2015;10:175-84.
22. Ramesh Kumar A, Varghese AK, Dinesh Kumar T, Ahmed S, Venkatramani J, Sugirtharaj G. Oral mucocutaneous lesions - A comparative clinico pathological and immunofluorescence study. J Int Oral Health 2015;7:59-63.
23. Gotmare SS, Pereira T, Shetty S, Kesarkar KS. Pindborg tumor: Pathology with special stains. Indian J Pathol Microbiol 2018;61:239-41.
24. National Accreditation Board for testing and calibration laboratories (NABL). NABL 112, Issue No. 3 vide amendment dated 07.05.2018 http://www.dciindia.org.in/Admin/ NewsArchives/Misc-II.PDF.
25. Singaraju S, Prasad H, Singaraju M. Evolution of dental informatics as a major research tool in oral pathology. J Oral Maxillofac Pathol 2012;16:83-7.