Research Article

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Awareness of Oral Medicine and Radiology Speciality among General Medical Practitioners: A Questionnaire-Based Study

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ABSTRACT

Background: Oral Medicine and Radiology is a dental specialty focused on the diagnosis and non-surgical management of orofacial conditions. General practitioners are often the first to encounter oral manifestations of systemic diseases, yet awareness and referral practices to Oral Medicine specialists remain limited. Aim: To evaluate the awareness and referral patterns of general medical practitioners regarding the Oral Medicine specialty. Material and Method: A cross-sectional study was conducted among 100 medical practitioners in North Gujarat. Participants completed a questionnaire assessing their awareness of Oral Medicine, the frequency of encountering oral conditions, and referral behavior. Data were analyzed using SPSS software with the Pearson Chi-square test ($p < 0.05$ considered significant). Results: Only a minority of practitioners referred cases to Oral Medicine specialists, with most preferring other specialties. Statistically significant associations ($p < 0.001$) were found between specialty and frequency of referral. After being informed about Oral Medicine, 99% were willing to refer patients, showing a notable shift in attitude. Conclusion: General practitioners frequently encounter oral health issues but seldom refer such cases to Oral Medicine specialists, primarily due to lack of awareness. Increasing awareness among them can significantly improve healthcare outcomes.

Keywords: General Practitioners, Interdisciplinary Collaboration, Oral Medicine, Radiology, Oral Health Awareness, Referral Patterns.

INTRODUCTION

Oral health is intrinsically connected to systemic health and overall well-being. Numerous systemic diseases manifest symptoms within the oral cavity, ranging from mucosal changes to lesions and ulcers.[1-3] Conversely, oral health issues such as periodontitis and oral cancers can significantly affect systemic conditions like cardiovascular disease, diabetes, and immunological disorders. As primary healthcare providers, general medical practitioners are often the first point of contact for patients and play a critical role in recognising oral symptoms early[4,5].

Despite this, general awareness of the Oral Medicine and Radiology speciality among medical professionals remains limited. Oral Medicine and Radiology is a field that involves diagnosis and non-surgical management of complex oral and maxillofacial disorders, including conditions related to mucosal diseases, orofacial pain, systemic disease manifestations, and radiologic assessment[6,7]. Integration of oral health into routine medical evaluations is imperative to holistic healthcare, yet the knowledge gap persists due to limited exposure during medical training [7,8,9].

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This study explores the current state of awareness, observation, and referral behavior among general medical practitioners in North Gujarat and seeks to identify the potential for improvement through awareness campaigns and interdisciplinary cooperation.

MATERIAL AND METHOD

A cross-sectional survey was conducted by distributing self- administered questionnaire among general medical practitioners and graduates over a period of six months. The study was approved by the Institutional Ethics Committee (NPDCH/ IEC/ 2024/ 175). Questionnaire was provided to 100 practicing medical professionals from various specialties that included 20 fixed and close ended questions. Participants were between the ages of 20 and 60 years and were selected based on their willingness to participate. The questionnaire included demographic details, clinical experience with oral conditions, and referral behavior before and after awareness of the Oral Medicine and Radiology specialty. Data were tabulated in Microsoft Excel and analyzed using SPSS software. Pearson Chi-square test was applied to assess associations. A p-value of <0.05 was considered statistically significant.

Inclusion criteria:

1. General Medical Practitioners

2. Practitioners having any post graduate degree (General Medicine, General Surgery, ENT Surgery, Obstetrics and Gynecology, Pediatrics and Dermatology)

3. Homeopathic practitioners

4. Ayurvedic practitioners

5. Both genders

6. Those who are willing to participate

Exclusion Criteria:

1. Non-practicing practitioners

2. Subjects not willing to participate

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The details of this study are given and explained to me. I understand my participation in this study is voluntary. I agree not to restrict any use of data or results that arise from this study provided such as the use is only for scientific purpose. I fully consent to participate in the above-mentioned study.

Name : **Sign of Participant**
Age/ sex:
Education :
Location:
Years of practice:

1. **Specialty**
   i) General practitioner
   ii) General Surgery
   iii) ENT Surgery
   iv) Obstetrics and Gynecology
   v) Pediatrics
   vi) Dermatology
   vii) Ayurvedic
   viii) Homeopathic
   ix) Others:
2. **Practice field**
   i) Private practice
   ii) Government job
   iii) Academicians involved in treatment of patients
3. **Do you believe that oral cavity is the mirror of human body?**
   i) Yes
   ii) No
4. **Do you know that oral manifestations might be the initiation of systemic ailments?**
   i) Yes
   ii) No
   iii) Not sure
5. **Before receiving this questionnaire, have you ever heard of a specialty in Dentistry called Oral Medicine and Radiology?**
   i) Yes
   ii) No
6. **If yes, how often do you refer cases to an oral medicine specialist?**
   i) Frequently
   ii) Occasionally
   iii) Rarely
   iv) Never
7. **Approximately, how many patients per day do you consult/ treat in your clinic?**
   i) 20-40
   ii) 50-100
   iii) More than 100
8. **From those patients, how often do you check for Oral Manifestations of systemic diseases if patient are having systemic diseases?**
   i) Less than 10
   ii) 10-20
   iii) More than 20
9. **If referral was required, whom do you refer such cases to?**
   i) BDS
   ii) MDS (any specialty)
   iii) MDS (Oral Medicine)
   iv) ENT Surgeon
   v) Others (please specify):
10. **How often do you come across Temporomandibular joint problems, orofacial and neuropathic pain?**
    i) Frequently
    ii) Occasionally
    iii) Rarely
11. **If referral was required, whom do you refer such cases to?**
    i) BDS
    ii) MDS (Any specialty)
    iii) MDS (Oral Medicine)
    iv) Neurophysician
    v) Neurosurgeon
    vi) ENT Surgeon
    vii) Others (please specify):
12. **How often do you come across oral ulcers?**
    i) Frequently
    ii) Occasionally
    iii) Rarely

13. If referral was required, whom do you refer such cases to?
i) BDS
ii) MDS (Any specialty)
iii) MDS (Oral Medicine)
iv) ENT Surgeon
v) Treat them on your own

14. How often do you come across swellings in the Oro-facial region?
i) Frequently
ii) Occasionally
iii) Rarely

15. If referral was required, whom do you refer such cases to?
i) BDS
ii) MDS (Any specialty)
iii) MDS (Oral Medicine)
iv) General Surgeon
v) ENT Surgeon
vi) Others (please specify):

16. How often do you ask for harmful oral habits of patients (tobacco, areca-nut smoking and alcohol consumptions)**?**
i) Frequently
ii) Occasionally
iii) Rarely

17. How frequently do you come across oral mucosal lesions (red and white patches)
i) Frequently
ii) Occasionally
iii) Rarely

18. If referral was required, whom do you refer such cases to?
i) BDS
ii) MDS (Any specialty)
iii) MDS (Oral Medicine)
iv) General Surgeon
v) ENT Surgeon
vi) Others (please specify):

19. Do you think patients who are to undergo chemotherapy/radiotherapy to be re Medicine specialty for clearance?
i) Yes
ii) No
iii) Not sure

20. After knowing about Oral medicine and Radiology specialty, would you like to patients?
i) Yes
ii) No
iii) Not sure

Figure 1: Proforma

RESULTS

Chart 1 shows the frequency of oral manifestations observed by general practitioners. The clinical experience of participants with oral conditions varied. Oral ulcers were the most frequently observed condition, reported frequently by 59% of participants, occasionally by 38%, and rarely by only 3%. Similarly, oral manifestations of systemic diseases were observed frequently by 35% of practitioners, occasionally by 58%, and rarely by 7%. Orofacial swellings were observed occasionally by 47% and frequently by 20%, while 33% rarely encountered such cases. TMDs, orofacial, and neuropathic pain were reported occasionally by 56% of practitioners, rarely by 35%, and frequently by only 9%. Oral mucosal lesions and oral cancer were observed occasionally by 59%, frequently by 28%, and rarely by 13% of participants. Pearson Chi-square test results showed that all these observations were statistically significant, with p-values below 0.05.

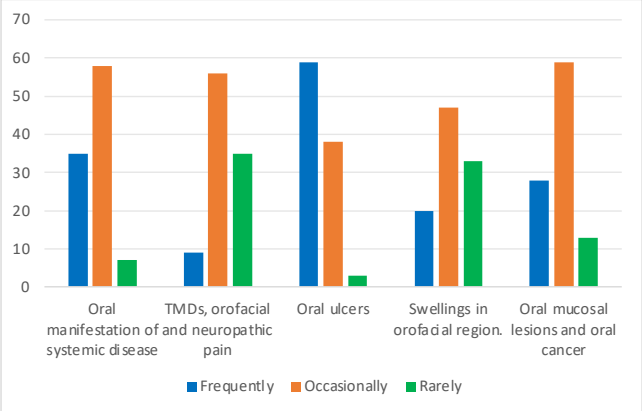

Chart 1: Frequency of oral manifestations observed among general practitioners

Chart 2 shows referral of diagnosed cases to Oral Medicine and Radiology specialists. For cases involving oral manifestations of systemic diseases, only 25 were referred to oral medicine, while 71 were referred to other specialties and 4 were managed by the practitioners themselves. TMDs and orofacial pain were referred to oral medicine specialists by 21 participants, with 73 referring elsewhere. Only 12 practitioners referred oral ulcer cases to oral medicine, while 28 referred them to other specialties and 60 managed them independently. Similar trends were seen for swellings in the orofacial region, with 13 referrals to oral medicine and 75 to other specialties. Oral mucosal lesions and oral cancer were referred to oral medicine specialists by 23 participants, while 70 directed them elsewhere. These findings were all statistically significant ($p < 0.001$), indicating a strong tendency to refer oral conditions to non- oral medicine specialists.

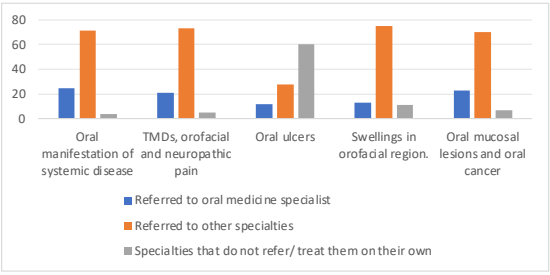

Chart 2: Referral of diagnosed cases to oral medicine specialists:

Chart 3 shows where participants were also asked about their willingness to refer oncology patients for oral health clearance. A majority (82%) agreed that patients undergoing chemotherapy or

radiotherapy should be referred to oral medicine specialists, 18% were unsure, and none disagreed. This was found to be statistically significant.

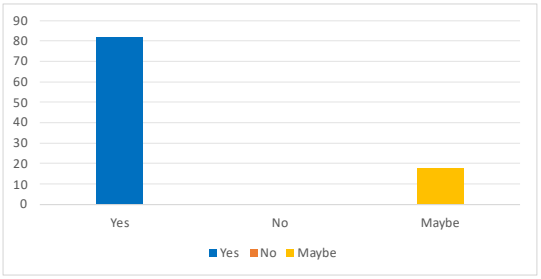

Chart 3: Awareness and attitude of general practioners regarding the referral of patients to undergo chemo/radiotherapy to oral medicine specialists:

Chart 4 shows attitude and willingness of General Practitioners for referral of cases after knowing about Oral Medicine specialty where 99% responded positively and only 1% was unsure. No participant refused to refer such cases, demonstrating a statistically significant improvement in attitude post-awareness.

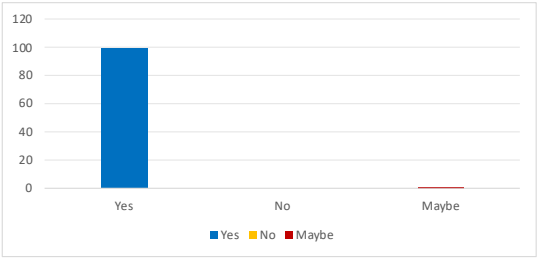

Chart 4: Frequency of Attitude and willingness of General Practitioners for referral of cases after knowing about the Oral Medicine speciality

DISCUSSION

This study revealed substantial gaps in awareness and utilization of the Oral Medicine and Radiology specialty among general medical practitioners. Although many clinicians regularly encountered oral health conditions, referrals to Oral Medicine specialists were rare. Instead, patients were often sent to general dentists, ENT specialists, or managed without referral. A significant number of participants observed oral ulcers and mucosal lesions—conditions that fall squarely under the scope of Oral Medicine— yet did not seek specialty consultation. These findings are consistent with previous studies, such as those by Almazrooa et al. and Bokkasam et al., which emphasized the underutilization of Oral Medicine services despite frequent exposure to orofacial conditions. The low referral rate for Temporomandibular Disorders and orofacial pain, which were often redirected to neurology or ENT, highlights a misdirection in patient management due to unfamiliarity with Oral Medicine's scope [10,11]. The zero-referral rates from fields like Obstetrics, Ayurveda, and Homeopathy further emphasize the need for multidisciplinary education. The low referral rates to Oral Medicine may partly stem from the lack of exposure to dental specialties during undergraduate medical training. Most medical curricula do not include structured modules on oral medicine, leading to insufficient familiarity with when and why a referral should be made[12]. This underlines a broader issue: oral health is often perceived as separate from general health, resulting in fragmented care. The WHO has long advocated for integrating oral health into primary healthcare systems, yet implementation remains limited in practice. Moreover, the consensus regarding the referral of oncology patients to Oral Medicine specialists prior to chemotherapy or radiotherapy is encouraging. Oral assessments are crucial in these contexts to prevent complications such as osteoradionecrosis, mucositis, and secondary infections[13,14,15]. The high agreement rate in this domain suggests that General practitioners do recognize the importance of oral health in specific systemic conditions, even if general awareness remains limited. Interestingly, this study demonstrated a significant shift in practitioners' attitudes once they were informed about the role and scope of Oral Medicine and Radiology. Nearly all respondents (99%) expressed willingness to refer relevant cases to Oral Medicine specialists' post-awareness, suggesting that the barrier is not resistance but rather unawareness. This aligns with findings by Alrashdan et al., who reported that a simple introduction to oral medicine was enough to change attitudes and practices among physicians.

CONCLUSION

Based on the findings of this study, it is evident that while general medical practitioners frequently encounter oral health conditions such as ulcers, systemic disease manifestations, and mucosal lesions, there remains a significant gap in awareness and appropriate referral to Oral Medicine specialists. This lack of awareness, rather

than unwillingness, appears to be the primary barrier, as nearly all practitioners expressed readiness to refer patients after gaining knowledge about the specialty. By fostering awareness and reinforcing the clinical relevance of oral medicine, the healthcare system can ensure timely diagnoses, better patient outcomes, and a more holistic approach to care.

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