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Perception of role of oral and maxillofacial surgery among healthcare professionals

Kiran Kumar Aheibam
Associate Professor, Department of Conservative Dentistry & Endodontic, Dental College, Regional Institute of Medical Sciences, Imphal-795004, Manipur
Email: aheibamkiran@gmail.com

Deepak Ningombam Singh
Assistant Professor, Department of Oral Medicine and Radiology, Dental College, Regional Institute of Medical Sciences, Imphal -795004, Manipur
Email: deepakningombam1@gmail.com

Wahengbam Tulsidas Singh
Assistant Professor, Department of Oral and Maxillofacial Surgery, Dental College, Regional Institute of Medical Sciences, Imphal-795004, Manipur
Email: tulsiwahengbam@gmail.com

Albert Ashem
Assistant Professor, Department of Oral Medicine and Radiology, Dental College, Regional Institute of Medical Sciences, Imphal 795004, Manipur
Email: albertashem@ymail.com

Potsangbam Aparna Devi
Assistant Professor, Department of Oral Pathology and Microbiology, Dental College, Regional Institute of Medical Sciences, Imphal 795004, Manipur
Email: draparna1983@gmail.com

Khwairakpam Chaoton Singh
Senior Lecturer, Department of Oral Maxillofacial and Surgery, Teerthanker Mahaveer Dental College and Research Centre, Bagadpur, Uttar Pradesh
Email: chaotonkh@gmail.com

***Abstract*---**Introduction: Oral and maxillofacial surgery (OMFS) is one of the oldest dental specialties. When compared to other surgical specialties, it is less popular among the healthcare professionals. Methods and materials: A questionnaire survey was conducted among 480 healthcare Professionals in Manipur, under four categories – dental students and practitioners, medical students and practitioners.

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***Corresponding author**: Singh, D. N.; Email: deepakningombam1@gmail.com*
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Each group contains 120 participants and they were asked to select appropriate answers for 16 questions. 38 participants don't respond to the questionnaire which gives a total number of 442 participants. Data analysis is done using SPSS software. Results:Analysis of the data shows that 74.4% of participants were aware of various specialties of dentistry and 72.6% of them know about OMFS. For the nine clinical scenario based questions, almost all of them had opted OMFS for third molar removal, fractures of maxillofacial region and oral cancer. But most of them were unaware of the role of OMFS in cosmetic surgeries. Conclusion: Even though OMFS is a vast specialty, most of the healthcare professionals are unaware of its scope.

***Keywords*---**oral, maxillofacial surgery, healthcare professionals.

Introduction

The origin of oral and maxillofacial surgery can be traced all the way back to the beginning of medicine and surgery (1). It is a surgical specialty that focuses on facial reconstruction, facial trauma surgery, oral surgery, head and neck surgery, and facial aesthetic surgery (2). Oral and maxillofacial surgery (OMFS) has gained in popularity over the last 60 years (3). OMFS has progressed and broadened beyond oral surgery to craniomaxillofacial surgery (4). This is still the only dental specialty that is intimately linked to other medical departments (5). Despite of all these advancements, both the dentistry and medical professionals still have an incomplete understanding of OMFS (6).

According to a study conducted in United Kingdom, OMFS is less prevalent in various countries around the world (7). Despite the fact that the specialty's scope is broad, most OMF surgeons limit their practice to minor oral surgeries due to a scarcity of opportunities, as this specialty overlaps with other medical specialties such as ENT (Ear, Nose, Throat) surgery and plastic surgery (8). Patients commonly present with abnormalities to their dentists and other medical departments, necessitating the assistance of OMFS professionals (9). It is important that they should have knowledge and understanding about the scope of the specialty for appropriate referrals and optimal patient management (10). The aim of this study is to assess the perception of role of Oral and Maxillofacial surgery among healthcare professionals.

Materials and Methods

Sample design

A questionnaire study was conducted to assess the perception of role of OMFS among healthcare professionals. The questionnaire includes a set of self-administered questions. A google form is created with 16 multiple choice questions besides the demographic variables along with a consent form. The study was conducted from January- July 2021.

Sample size and sampling methods

A randomized sample of 480 healthcare professionals were selected under four categories- dental students, medical students, dental practitioners and medical practitioners. Each categories had 120 participants. Out of which 38 (non response rate-7.92%) did not respond giving a total of 442 participants in the survey.

Data collection

The data was collected from medical and dental colleges in Manipur through Google form by sending it on online platform. The respondents were asked to select appropriate answers for seven yes/no type questions and for nine clinical scenarios based questions with options given as ENT (ear, nose, throat) surgeon, General surgeon, plastic surgeon, and OMF surgeon. Only completed questions were taken for data analysis.

Ethical consideration

The respondents were given full freedom to reject the survey process if they are not interested. The identities of participants were kept confidential and protected. Only one response was recorded.

Data analysis

The data analysis was done using software SPSS version 16.0, IBMCorporation, NY, USA.

Results

A total number of 442 participants were responded to the questionnaire study. Out of which, 119(26.9%) were dental students, 105(23.8%) were dental practitioners, 115(26%) were medical students and 103(23.3%) were medical practitioners. The demographic data shows that the age of most of the dental and medical students lies within a range of 18-25 years. Predominant age range among the dental and medical practitioners was 36-45 years. Majority of participants except dental students were males.

Table 1:Distribution of participants'response according to their awareness of oral and maxillofacial surgery

Sl no.	Clinical scenarios	Occupation	ENT surgeon N (%)	Plastic surgeon N (%)	General surgeon N (%)	OMFS N (%)
1.	fractures of maxillofacial region	Dental student	0(0)	0(0)	1(0.8)	118(99.2)
		Dental practitioner	0(0)	0(0)	0(0)	105(100)
2.	oral cancer	Dental students	0(0)	0(0)	0(0)	119(100)
		Dental	0(0)	0(0)	0(0)	105(100)

		practitioner				
3.	third molar removal	Dental students	0(0)	0(0)	0(0)	119(100)
		Dental practitioner	0(0)	0(0)	0(0)	105(100)
4.	cleft lip and cleft palate	Dental students	0(0)	23(19.3)	0(0)	96(80.7)
		Dental practitioner	0(0)	17(16.2)	1(0.2)	87(83.6)
5.	Oro-facial infection	Dental students	0(0)	0(0)	18(15.1)	101(84.9)
		Dental practitioner	0(0)	4(3.8)	13(12.4)	88(83.8)
6.	TMJ (temporomandibular joint) disorders	Dental students	0(0)	0(0)	2(1.7)	117(98.3)
		Dental practitioner	0(0)	0(0)	0(0)	105(100)
7.	Rhinoplasty	Dental students	50(42)	62(52.1)	0(0)	7(5.9)
		Dental practitioner	30(28.6)	63(60)	0(0)	12(11.4)
8.	facial deformity/ asymmetry	Dental students	0(0)	83(69.7)	0(0)	36(30.3)
		Dental practitioner	2(1.9)	89(84.8)	0	14(13.3)
9.	cosmetic surgeries of face	Dental students	0(0)	85(71.4)	0(0)	34(28.6)
		Dental practitioner	2(1.9)	88(83.8)	0(0)	15(14.3)

Analysis of this data shows that 74.4% of participants are aware of specialties of dentistry and72.6% of them know about OMFS. Only 66.3% of them were aware of the procedures done by OMF surgeon. Around 72.2% of participants think that OMF surgeons are capable for doing procedures other than dentoalveolar surgeries and 68% of them responded that their institution has an OMFS unit. Among respondents, 70.8% of them said that OMF surgeons have better expertise than other dentists. Only 39.1% of them replied that OMF surgeons had received a good recognition from others (Table 1).

Table 2: Response by dental students and practitioners to which surgeon would they prefer for certain clinical scenarios

Sl no.	Clinical scenarios	Occupation	ENT surgeon N (%)	Plastic surgeon N (%)	General surgeon N (%)	OMFS N (%)
1.	fractures of maxillofacial region	Dental student	0(0)	0(0)	1(0.8)	118(99.2)
		Dental practitioner	0(0)	0(0)	0(0)	105(100)
2.	oral cancer	Dental students	0(0)	0(0)	0(0)	119(100)
		Dental practitioner	0(0)	0(0)	0(0)	105(100)
3.	third molar removal	Dental students	0(0)	0(0)	0(0)	119(100)
		Dental practitioner	0(0)	0(0)	0(0)	105(100)

4.	cleft lip and cleft palate	Dental students	0(0)	23(19.3)	0(0)	96(80.7)
		Dental practitioner	0(0)	17(16.2)	1(0.2)	87(83.6)
5.	Oro-facial infection	Dental students	0(0)	0(0)	18(15.1)	101(84.9)
		Dental practitioner	0(0)	4(3.8)	13(12.4)	88(83.8)
6.	TMJ (temporomandibular joint) disorders	Dental students	0(0)	0(0)	2(1.7)	117(98.3)
		Dental practitioner	0(0)	0(0)	0(0)	105(100)
7.	Rhinoplasty	Dental students	50(42)	62(52.1)	0(0)	7(5.9)
		Dental practitioner	30(28.6)	63(60)	0(0)	12(11.4)
8.	facial deformity/ asymmetry	Dental students	0(0)	83(69.7)	0(0)	36(30.3)
		Dental practitioner	2(1.9)	89(84.8)	0	14(13.3)
9.	cosmetic surgeries of face	Dental students	0(0)	85(71.4)	0(0)	34(28.6)
		Dental practitioner	2(1.9)	88(83.8)	0(0)	15(14.3)

Table 3: Response by medical students and practitioners to which surgeon would they prefer for certain clinical scenarios

Sl no.	Clinical scenarios	Occupation	ENT N (%)	Plastic surgeon N (%)	General surgeon N (%)	OMFS N (%)
1.	fractures of maxillofacial region	Medical students	20(17.4)	7(6)	8(7)	80(69.6)
		Medical practitioner	2(1.9)	19(18.5)	2(1.9)	80(77.7)
2.	oral cancer	Medical students	30(26.1)	1(0.9)	9(7.8)	75(65.2)
		Medical practitioner	52(50.5)	3(2.9)	1(1)	47(45.6)
3.	third molar removal	Medical students	0(0)	0(0)	0(0)	115(100)
		Medical practitioner	0(0)	0(0)	0(0)	103(100)
4.	cleft lip and cleft palate	Medical students	12(10.4)	65(56.6)	2(1.7)	36(31.3)
		Medical practitioner	24(23.3)	48(46.6)	0(0)	31(30.1)
5.	Oro-facial infection	Medical students	34(29.6)	4(3.5)	29(25.2)	48(41.7)
		Medical practitioner	31(30.1)	2(1.9)	28(27.2)	42(40.8)
6.	TMJ disorders	Medical students	4(3.5)	15(13)	0(0)	96(83.5)
		Medical practitioner	3(2.9)	4(3.9)	2(1.9)	94(91.3)
7.	Rhinoplasty	Medical students	14(12.2)	97(84.3)	0(0)	4(3.5)
		Medical practitioner	50(48.5)	50(48.5)	0(0)	3(2.9)
8.	facial deformity/ asymmetry	Medical students	14(12.2)	98(85)	1(0.9)	3(2.9)
		Medical practitioner	2(1.9)	82(79.6)	2(1.9)	17(16.5)
9.	cosmetic surgeries of face	Medical students	13(11.3)	99(86.1)	2(1.7)	1(0.9)
		Medical practitioner	1(1)	83(80.6)	0(0)	19(18.4)

Table 2 and 3 shows the responses of participants to the question which surgeon they would expect to treat the nine clinical scenarios. Almost all of the participants selected OMFS for third molar removal. Majority of dental students (99.2%), dental practitioners (100%), medical students (69.6%) and medical practitioners (77.7%) have selected OMFS for treating fractures of maxillofacial region. For the treatment of oral cancer, 65.2 % of medical students and almost all of the dental students and practitioners opted for OMFS. Most of the dental students (80.7%) and dental practitioners (83.6%) have selected OMFS for treating cleft lip and palate.

OMFS were preferred by most of the healthcare professionals for the treatment of TMJ disorders and orofacial infection. Majority of dental students and practitioners and medical students have preferred plastic surgeon for rhinoplasty while medical practitioners equally opted for ENT and plastic surgeon (48.5%). For the treatment of facial deformities and cosmetic surgery of face, almost all of them preferred plastic surgeon.

Discussion

Oral and maxillofacial surgery is a branch of dentistry which act as a link between dentistry and medicine. Results of this study reveals that almost all of the dental students and practitioners had heard of different specialties of dentistry and OMFS whereas some of the medical students and practitioners were unaware of it. This same result can be seen in a study conducted by Ashwant KV and Ramen Sinha in Hyderabad(11). In our study, majority of dental students and practitioners have an awareness about the procedures done by OMFS and they believe that OMFS surgeon has a better surgical expertise than them. This finding is supported by the study performed by Dyna Albert and MR Muthuin South India(12).

The role of OMFS in treating the fractures of maxillofacial region and removal of third molar was recognized by almost all of the healthcare professionals in our study. A similar result can be seen in the study conducted in Nigeria by Chima oji(13) . All of the dental students and practitioners, medical students and majority of medical practitioners were aware of the role of OMFS in treating oral cancer. But in a study undertaken by Krishnaraj S, shows that most of the medical students and practitioners had opted ENT surgeon for the treatment of oral cancer(14).

In our study most of the dental students and practitioners had selected OMFS for cleft lip and cleft palate surgeries whereas majority of medical students and practitioners opted plastic surgeon. A study conducted in North-West Nigeria had also showed that there is a lack of awareness about the role of OMFS in cleft lip and cleft palate surgeries among medical professionals (15) .Our present study shows that majority of healthcare professionals would consult OMFS for the treatment of orofacial infection. A contrast to this is seen in a study conducted in Kohat, Pakistan where most of the medical professionals had selected ENT surgeon(16).

This study reveals that OMFS had selected by the dental professionals to treat TMJ disorders. It is similar to the study of Arun P performed in Central West India(17).Our study indicates that majority of healthcare professionals were unaware of the role of OMFS in rhinoplasty and facial aesthetic surgeries. This result is supported by the studies conducted in Kuwait by Mohammed Kamaland Australia by Lababidi(18,19).It is a matter of concern that even dental professionals were unaware about the scope of OMFS in this surgeries(20). Limitations:This study is conducted in few medical and dental colleges in Manipur, so the results may not be generalized to other places. Questionnaire for this study was designed as a google form which includes self-supported questions, it may affect the generosity of the results.

Conclusion

Awareness of the scope of OMFS should be improved among healthcare professionals, particularly with relation to cosmetic surgery. Understanding the spectrum of OMFS can improve the success and delivery of high quality care. OMF surgeons should take on the task of raising awareness of OMFS among health care providers.

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