

Awareness, Attitude and Practices about OSMF among General Dentists in Bangalore.

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Abstract

Keywords:

Awareness, Attitude, Practice management, OSMF.

Aims And Objectives: To assess Awareness, Attitude and Practices about OSMF among General Dentists in Bangalore. Lack of general Dental practitioner's knowledge in management of oral sub mucous fibrosis has been shown to contribute to delay in referral and treatment.

Materials And Methods: A cross-sectional interview based survey regarding awareness, attitude and practices about OSMF among the willing general dental professionals within Bengaluru, comprising of private practitioners and dental surgeons working in public and private institutions. The questionnaire included age, sex, professional qualification (s), and clinical experience about OSMF among general the dentist. The questionnaire was validated from the subject experts.

The present questionnaire study was undertaken to assess awareness, attitude and practices about OSMF among General Dentists in Bengaluru city, India. 150 dental practitioners, 60 BDS and 90 MDS from 2 different zones (75 from north zone and 75 from south zone) were randomly selected for the present study. The data pertaining to their awareness, attitude and practices about OSMF was assessed using a self administered questionnaire, consisting of 30 questions, and analyzed using descriptive statistics.

Results: The results of this questionnaire study can be considered as an eye opener for the general dental practitioners. Among 150 participated general dental practitioners, 60 were BDS and 90 MDS practitioners. 120 (80%) dentists were aware of signs, symptoms and investigations required for diagnosis of oral sub mucous fibrosis and 85 (60%) dentists had inadequate knowledge about its management. The chi-square (χ^2) test was used as a test of significance and p value of < 0.05 was considered as the level of significance.

Conclusion: The observations and findings of our study clearly indicate that continuous dental education is needed for general dental practitioners, which helps in early diagnosis, treatment plan and better prognosis of OSMF.

INTRODUCTION

Oral sub mucous fibrosis is a chronic, insidious disease that affects the oral mucosa as well as the pharynx and the upper two-thirds of the esophagus^{1,2,3,4,5,6}. The disease occurs mainly in Indians, affecting 0.2-1.2% of urban population. Oral submucous fibrosis (OSMF) is common in countries of south-east Asia and shows a predisposition towards the Indian ethnic group^{4,5,7}. The male-to-female ratio of OSMF varies by region, but females tend to predominate. Worldwide, estimates of OSMF shows an overall prevalence rate in India by gender varying from 0.2-2.3% in males and 1.2-4.57% in females^{4,5}. the distribution of OSMF in India, percentage prevalence was found to

be 0.36 in Ernakulum, Kerala, and 0.04 in Srikakulam district of Andhra Pradesh (both in the south), and 0.16 in Bhavnagar, Gujarat (in the north)^{1,5,8}.

Based on the clinical & epidemiological studies it has been noted that OSMF is increasingly associated with long standing areca nut chewing habit^{1,8,9}. Characteristics of the disease will appear later in the course and include fibrotic bands located beneath an atrophic epithelium. Increased fibrosis eventually leads to loss of resilience, which interferes with speech, inability to whistle and decreased ability to open the mouth^{1,10,11,12,13,14,15}. Oral health is integral to general health: Poor oral health reflects social inequalities; hence the prevention of OSMF should be given a priority in developed and underdeveloped countries around the world. OSMF is a premalignant condition, which is easy to diagnose but difficult to manage, hence awareness is required on management. Thus management should be focused on cessation of habits and treatment should be successfully implemented for better prognosis.

MATERIALS AND METHODS

A cross-sectional study was carried out among general dental practitioners in Bengaluru city, India. The duration of the study was March to August 2014. The present study is a questionnaire study conducted among 60 dental practitioners having a qualification of B.D.S and 90 having a qualification of M.D.S. and who were resident of Bangalore were included in the study. The M.D.S. practitioners from the branch of Oral Medicine and Radiology were excluded from the study. 150 dental practitioners from 2 different zones (75 from each north and south zone) were recruited for the present study. The data pertaining to their awareness, attitude and practice about oral sub mucous fibrosis was gathered using a self administered questionnaire containing 30 questions. The questionnaire consisted of worldwide, nationwide incidence and prevalence of disease, etiology, associated signs and symptoms, management and referrals of OSMF. These questionnaires were divided into those which assessed the awareness, attitude and practices about OSMF. Verbal informed consent was sought from the participating dentists, the identity of the practitioners was maintained anonymous and the practitioners were instructed to fill the questionnaire and hand over to the investigator.

The questionnaire was administered by the investigator and each practitioner was given 15 min to fill in the questionnaire.

RESULTS

A total of 30 questions were framed for gathering the information about the awareness, attitude and practice management skills of dental practitioners of Bangalore city about OSMF.

Awareness

Among thirty questions, question numbers 1 to 9 were structured to gain information about the general awareness of the dentists about OSMF. About prevalence of the OSMF in worldwide, 94(65%) of the general dentists felt it is 1 to 2%, and 56(36%) responded as 0.2 to 1.2%. For the question asked on which state has highest prevalence of OSMF, 53 (36%) replied Karnataka, whereas 32 (21%) said Kerala, and 65 (43%) answered it as Haryana. Majority 148 (99%) of general practitioners, replied high incidence of OSMF seen in India and South Asian population and 2 (1%) said seen in western countries. 103 (70%) practitioners replied that OSMF is a precancerous condition and 47 replied (30%) OSMF is a precancerous lesion. 80 (56%) practitioners replied the habit of chewing areca nut products is associated with OSMF, whereas 59 (37%) of them said tobacco chewing and 11(7%) of them answered smoking is associated with OSMF (Table-1).

Table: 1 Assessment of awareness about OSMF among general dental practitioners

Q. NO:	QUESTIONS ANSWERED	TOTAL DENTIST n (%)

1.	0.2 to 1.2% 1 to 2%	56 (36%) 94 (65%)
2.	0.2% to 0.5% 10 to 15%	43 (28%) 107 (72%)
3.	Karnataka Kerala Haryana	53 (36%) 32 (21%) 65 (43%)
4.	India and south Asian countries Western countries	148 (99%) 02 (1%)
5.	Low-socioeconomic status High –socio economic status	150 (100%) 0 (0%)
6.	Precancerous lesion Precancerous condition	47 (30%) 103 (70%)
7.	Disease of oral cavity Not Disease of oral cavity	122 (83%) 28 (17%)
8.	Smoking Tobacco chewing Areca nut products	11 (7%) 59 (37%) 80 (56%)

Attitude

Question 10 to 17 contained the information about the attitude of dentists. To the question asked about product associated with OSMF, 79(56%) of them replied betel gutkha chewing, and 57 (37%) said betel quid whereas 11(6%) answered panparag and 3(1%) said supari. For the question with what age group is OSMF strongly associated, 104 (69%) answered it is between 20 to 39 years and 35(24%) replied it is above 40 years and 11 (7%) said it is 19 years. To the question asked about progression of OSMF, 134(80%) revealed depends on dose of the habit, frequency of the habit and nature of the habit. Whereas 12(17%) replied it is frequency of the habit. About a genetic predisposition in the cause of OSMF, 99(61%) of them replied yes and 51(39%) replied no. To the question, is nutritional deficiency a precipitating factor for OSMF, 116(77%) replied yes and 34(23%) said no. What percentage of malignant transformation is seen in OSMF patients, about 85 (58%) practitioners replied that 4.5 to 7.6 %, whereas 5(36%) said 15 to 19 % of chances and 11 (6%) answered 20 to 30 %. Apart from burning sensation, are you aware about the other symptoms like dysphagia, altered taste sensation, xerostomia and hearing deficits among OSMF patients, 130(88%) said yes and 20(12%) replied no. 100(66%) practitioners replied that OSMF regresses completely after habit cessation and 50(34%) of them replied no (Table-2).

Table 2: Assessment of attitude about OSMF among general dental practitioners

Q.NO:	QUESTIONS ANSWERED	TOTAL NO OF DENTIST n (%)
9.	Betel quid Gutka Panparag Supari	57 (37%) 79 (56%) 11 (6%) 3 (1%)
10.	19 years 20-39 years Above 40 years	11 (7%) 104 (69%) 35 (24%)
11.	Dose of habit Frequency of habit Nature of habit All of the above	2 (1%) 12 (17%) 2 (2%) 134 (80%)
12.	Genetic prediction No genetic prediction	51 (39%) 99 (61%)
13.	Nutritional deficiency No Nutritional deficiency	116 (77%) 34 (23%)
14.	4.5 to7.6% Malignant transformation 15 to 19% Malignant transformation 20 to 30% Malignant transformation	85 (58%) 54 (36%) 11 (6%)
15.	Aware of symptoms Not aware of symptoms	130 (88%) 20 (12%)
16.	OSMF regress completely Does not regress	50 (35%) 100 (65%)
17.	Difficulty of diagnosing No difficulty in diagnosing	26 (17%) 124 (83%)

Practice management

75(59%) general practitioners replied that they refer the cases of OSMF to oral physicians for diagnosis and management, whereas 27(24%) said that they refer only for the management of OSMF and 23(18%) replied that they refer for diagnosis. To the question do you perform biopsy to diagnose OSMF in your clinic, 96(66%) of them

responded yes and 54(34%) of them said they no. for the question do you perform CBC (complete blood count) to rule out anemia in OSMF patients, 96 (63%) of the practitioners answered yes whereas 54 (37%) told no. 83 (54%) of the practitioners responded there is a definite cure of OSMF and 67 (46%) answered there is no definite cure for OSMF. To the question, is the treatment plan based on clinical and functional staging, 135(92%) said yes and 15(8%) said no. 76(52%) said they are confident in management of OSMF and 74(48%) said not confident. For the question, how do you treat OSMF in your clinic, 66(50%) of them said using corticosteroids and 36(22%) replied using antioxidants, whereas, 48(28%) told any others can be used. 128(80%) replied there is alternative therapy for OSMF and 22(20%) said no to the same. Among all the general dental practitioners, 114(76%) had knowledge of oral physiotherapy exercises used in the treatment of OSMF and 36(24%) had no knowledge about it (Table no.3).

Table 3: Assessment of practice about OSMF among general dental practitioners

Q.NO:	QUESTIONS ANSWERED	TOTAL NO OF DENTIST
18.	For diagnosis For management For both	n (%) 25 (19%) 50 (32%) 75 (59%)
19.	Perform biopsy Does not perform biopsy	95 (63%) 55 (37%)
20.	Do you perform CBC Do not perform CBC	95 (63%) 55 (37%)
21.	Refer to oral physician Do not refer to oral physician	120 (77%) 30 (23%)
22.	Definitive cure Does not have definitive cure	84 (54%) 66 (46%)
23.	Treatment based on staging Not based on staging	135 (92%) 15 (8%)

24.	Confident in managing	74 (48%)
	Not confident	76 (52%)
25.	Antioxidants	36 (22%)
	Corticosteroids	66 (50%)
	Any others	48 (28%)
26.	Alternate therapy for OSMF	22 (20%)
	No alternative therapy	128 (80%)
27.	Do you know physiotherapy for OSMF	114 (76%)
	Does not know about physiotherapy	36 (24%)

Question number 29 was framed to know the dental surgeon's attitude about educating the patient regarding OSMF. Most of the practitioners felt they will educate the patient and it would take a span of 5 to 10 minutes. In the last question, author wanted the participating dentist to give suggestion or opinion about management of OSMF, for which none of the participants were ready to give the suggestion or opinion.

Comparison of awareness about OSMF between BDS and MDS dental practitioners

All the 150 dentists responded to all the questions. About prevalence of the OSMF in worldwide, which is 0.2 to 1.2% , 41(45%) of MDS and 15(25%) of BDS doctors replied correctly and 45(75%) BDS and 49(55%) MDS answered it as 1 to 2%. This result showed statistically significant value ($p=0.013$). To the question which state in India has highest incidence of OSMF? for which, 24(40) BDS dentists and 29(33%) MDS said it is Karnataka, whereas 22(37%) BDS dentists and 43(48%) MDS answered as Haryana and only 14(23%) BDS dentists and 43(48%) MDS could say it as Kerala. Regarding socioeconomic status 100% practitioners told it is related to the low –socioeconomic status (Table-4).

Table-4 Comparison of awareness about OSMF between BDS and MDS dental practitioners

QUESTION NO:1-9 DETAILS	QUALIFICATION		X ²	P- value
	BDS n (%)	MDS n (%)		
Q:1 0.2% to 1.2%	15 (25%)	41 (45%)	6.121	0.013*
1 to 2%	45 (75%)	49 (55%)		

Q:2	0.2% to 0.5%	19 (32%)	24 (27%)	0.334	0.563
	10 to 15%	41 (68%)	64 (73%)		
Q:3	Karnataka	24 (40%)	29 (33%)	1.977	0.372
	Kerala	14 (23%)	18 (19%)		
	Haryana	22 (37%)	43 (48%)		
Q:4	Indian and South-Asian	60 (100%)	90 (99%)	0.679	0.410
	Western countries	0 (0%)	2 (1%)		
Q:5	Low socio-economic status	60 (100%)	90 (100%)	-	-
	High socio-economic status	0 (0%)	0 (0%)		
Q:6	Precancerous lesion	15 (25%)	31 (35%)	1.623	0.203
	Precancerous condition	45 (75%)	58(65%)		
Q:7	Yes	52 (87%)	70(80%)	0.969	0.325
	No	8 (13%)	17(20%)		
Q:8	Smoking	5 (8%)	5(6%)	5.352	0.069
	Tobacco chewing	17 (28%)	42(47%)		
	Areca nut products	38 (63%)	42(47%)		
Q9	Betel quid	25 (42%)	31(35%)	0.748	0.862
	Gutka	30 (50%)	49(55%)		
	Pan parag	4 (7%)	7(8%)		
	Supari	1 (2%)	2(2%)		

Comparison of attitude about OSMF between BDS and MDS dental practitioners

There was a mixed response about the malignant transformation of the disease, out of 60 BDS, 34(58%) and in 90 MDS 51(57%) said it is 4.5% to 7.6%, and 21(36%) BDS, 33(37%) MDS said it is 15 to 19%. Whereas 4(7%) of BDS and 5(6%) of MDS dentists answered it as 20% to 30% which was not statistically significant. About the genetic predilection of the disease 22(37%) of BDS and 37(42%) of MDS dentists felt there is genetic role in disease occurrence, whereas 38(63%) BDS and 54(58%) said there is no genetic predilection and it is purely habit based (Table-5).

Table-5 Comparison of attitude about OSMF between BDS and MDS dental practitioners

Q: NO 10 - 17 DETAILS	QUALIFICATION		X ²	P- value
	BDS n	MDS n %		
Q: 10 19 years	5(8%)	6(7%)	7.69 3	0.053
20 - 39 years	36(60%)	68(67%)		
Above 40 years	19(32%)	14(16%)		
Q:11 Dose of habit	1(2%)	1(1%)	4.12 4	0.248
habit Frequency of the	12(20%)	1(2%)		
habit Nature of the	1 (2%)	0(0%)		
All of the above	45(76%)	78(88%)		
Q:12 Yes	22 (37%)	37(42%)	6.44 4	0.092
No	38 (63%)	54(58%)		
Q:13 Yes	44 (73%)	72(81%)	1.19	0.275
No	16 (27%)	17(19%)		
Q:14 4.5% to 7.6%	34 (58%)	51(57%)	0.10 1	0.951
15 to 19%	21 (36%)	33(37%)		
20 to 30%	4 (7%)	5(6%)		
Q:15 Yes	53(88%)	77 (87%)	6.01 4	0.050
No	7(12%)	12(13%)		
Q:16 Yes	22(37%)	27(30%)	0.65 1	0.420

	No	38(63%) 62(70%)		
Q:17	Yes	7(12%) 19(22%)	69	2.90 5
	No	53(88%) (78%)		

Comparison of practice management about OSMF between BDS and MDS practitioners

Out of 60 BDS general dental practitioners, 25(48%) respectively admitted that they refer the cases to oral physicians for both diagnosis and management of OSMF and 25(48%) for management only, whereas 9(4%) for diagnosis only. Out of 90 MDS general dental practitioners, 56(62%) respectively admitted that they refer the case to oral physicians for both diagnosis and management of OSMF, and 20(26%) for management, whereas 14(12%) for diagnosis. This result showed statistically significant value between BDS and MDS practitioners (p value=0.032) (Table-6).

33(58%) BDS practitioners and 65(72%) MDS practitioners respectively admitted that they perform CBC to rule out anemia, whereas 27(45%) of BDS and 25(28%) MDS practitioners said that they do not perform CBC. This result showed statistically significant value between BDS and MDS practitioners (p value=0.043) (Table-6).

39(55%) of BDS practitioners and 80(90%) MDS practitioners respectively admitted that they lack confidence in treating OSMF patients and refer to oral physicians for management, whereas 21(45%) BDS and 10(10%) MDS practitioners said that they do not refer to oral physicians for the management. This result showed statistically significant value between BDS and MDS practitioners (p value=<0.001) (Table-6).

27(45%) BDS and 56(63%) MDS practitioners, said that the disease has a proper cure if treated in a definite way and also about 33(55%) BDS and about 34(37%) MDS said there is no definite cure. This result showed statistically significant value between BDS and MDS practitioners (p value=0.031) (Table-6).

Table-6 Comparison of practice management about OSMF between BDS and MDS dental practitioners

Q: NO 18 - 26 DETAILS	QUALIFICATION		X ²	P- valu e
	BDS n	MDS %		
Q:18 For diagnosis	10 (4%) (26%)	20	6.86 8	0.03 2*
For management	25(48%) (12%)	14		
For both of the above	25 (48%) (62%)	56		
Q:19 Yes	17 (30%) (37%)	32	2.56 3	0.27 8
No	40 (70%) (63%)	55		
Q:20 Yes	33 (55%) (72%)	65	4.10 9	0.04 3*
No	27 (45%) (28%)	25		

Q;21	Yes	39 (55%) (90%)	80	13.0 31	<0.0 01*
	No	21 (35%) (10%)	10		
Q;22	Yes	27 (45%) (63%)	56	4.66 5	0.03 1*
	No	33 (55%) (37%)	33		
Q;23	Yes	53 (88%) (93%)	82	2.35	0.30 9
	No	7 (12%) (7%)	6		
Q;24	Yes	25(42%) (55%)	49	2.57	0.10 9
	No	35 (58%) (45%)	40		
Q;25	Anti-oxidants	10 (22%) (19%)	13	1.95 7	0.37 6
	Corticosteroids	25 (54%) (45%)	31		
	Any others	11 (24%) (36%)	25		
Q;26	Yes	7 (12%) (16%)	14	1.49 4	0.47 4
	No	52 (88%) (84%)	74		

DISCUSSION

General dental practitioners have a basic knowledge about OSMF, as they come across oral problems associated with oral sub mucous fibrosis in their practice. Generally patient visits a dental clinic with a chief complaint associated with teeth pain or bleeding gums. Most of the time practitioners give importance to the area of complaint and tends to miss out the asymptomatic mucosal lesions. If left unchecked, it can affect the quality of life and actually shorten life expectancy. This means that practitioners must play a more active role in educating their patients about the role OSMF and their overall health and why they need to eliminate disease and restore their oral health. Hence, if they examine the oral cavity completely, they can come across various white and red patches; these conditions can be identified at the initial stages and can be aborted. Another important fact to consider in OSMF is burning sensation and pallor or blanching of oral mucosa, retro molar area, followed by soft palate, palatal fauces, uvula, tongue and labial mucosa. Mouth opening may become progressively reduced. Other symptoms include increased salivation, change of gustatory sensation, and hearing loss due to stenosis of the Eustachian tubes. OSMF is an insidious disease and, if left untreated, is associated with increased risk of oral cancer^{11,14,15,16}. Oral submucous fibrosis (OSMF), now globally accepted as an Indian disease, has one of the highest rates of malignant transformation amongst potentially malignant oral lesions and conditions. Author recommends that being a general dentist we should make a complete examination of oral cavity as a whole in our protocol. Hence, if general dental practitioners identify oral disease at an initial stage it would be helpful in improving the quality of life of the patients. Majority of the general dentists lack the knowledge about management of Oral sub mucous fibrosis.

The present study was aimed at knowing the awareness, attitude and practice management of general dentists towards OSMF patients. The questions were framed accordingly. The questions about the awareness attitude and practice management had 100% response, meaning all the participant dentists responded. The results of our study

regarding prevalence, incidence of 0.2 to 0.5% in Indian population related to low socio-economic status with precancerous condition occurring as an exclusive disease of oral cavity, is in the accordance with the literature^{5,9,10}. To the questions regarding etiologic factor associated with using areca nut and associated symptoms like dysphagia, altered taste sensation, xerostomia and hearing deficits in OSMF patients were also in accordance with the literature^{4,5}. For the questions regarding performing biopsy for diagnosis, CBC to rule out anemia and management of disease with use of antioxidants, corticosteroids and alternative therapy treatment, the results were not in accordance with the literature^{4,5,11,15}. Hence, more importance should be given by the general dental practitioners in these aspects. Most of the practitioners were aware of the disease and the signs and symptoms of the disease. But more than 50% of the participants did not have the idea of geographical distribution of the disease. Kerala state even though being a highly literate state shows higher incidence of the disease prevalence, hence one can conclude that cultural and traditional values play a major role in deciding the disease prevalence. Majority of the respondents knew the signs and symptoms of OSMF and lack the information about investigations required for the diagnosis of oral sub mucous fibrosis and also they were unable to manage patients with OSMF.

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