

Dental Awareness and Attitudes among Medical Practitioners in Chennai

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ABSTRACT

There have been relatively few investigations regarding dental awareness and attitudes among medical practitioners.

Aim: To assess the dental awareness and attitudes of medical practitioners in Chennai.

Methodology: A cross sectional study was conducted using a structured questionnaire on 300 medical practitioners randomly selected.

Results : 85 % of undergraduates ,71 % of postgraduates ,80 % of diploma holders advised patients to visit dentist at least once in six months (P<0.05). 75 % of undergraduates, 85 % of postgraduates and 94 % of diploma holders knew that periodontal disease is a risk factor for infective endocarditis (P<0.05). 80 % of undergraduates ,77 % of postgraduates and 48 % of diploma holders were aware of systemic complications due to untreated dental diseases (P<0.01).

Conclusion: Dental awareness and attitudes was found to be good among medical practitioners in Chennai.

Keywords: Awareness, Attitudes, Medical practitioners.

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INTRODUCTION

Oral health habits are measures people learn and practice regularly in order to maintain good oral health or prevent oral diseases. The mouth is an integral part of the body, and there are oral manifestations of many systemic diseases that must be managed in both healthy and medically compromised people.

The most common oral diseases, dental caries and periodontal disease are considered to be behavioral diseases because adoption of healthy oral habits is crucial in controlling them (1). All members of the health profession have the potential to promote oral health by supporting accurate oral health messages, showing exemplary oral health related behaviors, encouraging appropriate dental visits and participating in explicit oral health promoting activities within their scope of duties(2). Dental knowledge of qualified medical practitioners is different when compared to the general public. Even though they are qualified in the medical faculty their knowledge about dental diseases, relationship of oral health with systemic diseases and life threatening dental diseases

are scarce (3). Failure to diagnose oral conditions often results in significant additional health care cost to the patient or funding agency.

The impact of oral and dental problems is significant for both the individual in terms of pain and discomfort as well as for whole communities. For example a national study in USA has shown that in one year 4.9 million acute dental conditions were reported and caused 17 million days of restricted activity along with 7 million days of work loss and had a comparatively greater impact at the community level compared to common medical problems such as gastrointestinal disorders, ear infections, skin and eye problems (4).

Traditionally, physician training in oral health has been limited. Due to the problems of access to dental care, patients may turn to other primary health care providers for their oral health needs sometimes resulting in medical practitioners encountering patients presenting with oral and dental problems (5). Medical practitioners should also possess basic dental knowledge to uncover signs and symptoms of dental diseases

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from patients, to provide appropriate treatment or advice to these patients and to act as public health educators (6). It is found that very few studies have collected data concerning the dental knowledge of medical practitioners. The present study seeks to assess the dental knowledge, attitudes and awareness of life threatening dental diseases of different medical practitioners in Chennai.

OBJECTIVES

- To assess the dental knowledge among the medical practitioners in Chennai.
- To know their attitudes towards dental health
- To assess their awareness on systemic conditions related to oral health.

MATERIALS AND METHODS

A cross sectional questionnaire survey was carried out to assess the knowledge, attitude and awareness of medical practitioners of Chennai. A simple random sampling was done. Convenient sample size of 300 medical practitioners was decided. Data was collected using a questionnaire by visiting various private clinics in Chennai. Ethical clearance was obtained from institutional review board of Meenakshi University. The duration of the study spanned over a period of six months from August 2009 to December 2009. A specially designed questionnaire consisting of 15 close ended questions divided into three sections was used to assess the knowledge, attitude and awareness on systemic conditions related to oral health. The questionnaire was distributed by the investigator. The medical practitioners were approached personally and the purpose of the study was explained. It was also mentioned that responses would remain confidential. The filled questionnaire were immediately collected after answering and analyzed.

Inclusion criteria for selecting the sample was that:

- The medical practitioners should have registered in the Indian Medical Association of Chennai branch
- They should be practicing in private clinics in Chennai

Table 1: Distribution of the study subjects according to sex and qualification

Qualification	Sex				Total	
	Male		Female			
UG	41	27.7%	51	33.5%	92	30.6%
PG	89	60.1%	89	58.6%	178	59.4%
PG diploma	18	12.2%	12	7.9%	30	10%
Total	148	100%	152	100%	300	100%

- Out of 3628 medical practitioners who have registered with Indian Medical Association, 300 medical practitioners were randomly selected for the study.

STATISTICAL ANALYSIS

Data obtained was analyzed using the SPSS (Statistical package for social sciences) version 15. Pearson’s chi-square test was used to find the statistical significance among the medical practitioners for their responses based on dental knowledge, attitude and awareness on systemic conditions related to oral health.

RESULTS

(Table 1) represents the study population. Based on their qualification 92 (30.6%) were undergraduates (UG), 178 (59.4%) were Post graduates (PG) and 30 (10.0%) were Postgraduate diploma PG diploma holders.

Responses of the study subjects based on their dental knowledge (Table 2)

Among the study subjects about 220

(73.3%) have said that the plaque and calculus are the most important factor causing periodontal disease. Based on their qualification 71 (77.2%) of the UG doctors and 138 (78.0%) of the PG doctors and 11 (35.5%) of the PG diploma doctors have answered correctly that the plaque and calculus are primary factors responsible for causing periodontal disease. The differences noted were found to be very highly statistically significant (P<0.001) (Figure 1).

Among the study subjects 279 (93 %) have answered correctly that Prosthodontics was a specialty in dentistry. Based on their qualification 88 (95.7%) of UG, 166(93.8%) PG doctors and 25(80.6%) PG diploma holders, have answered the right option as Prosthodontics for specialty in dentistry. The differences noted were found to be statistically significant (P<0.05) (Figure 2).

Among the study subjects 195 (65.0%) of the doctors said that scaling has no adverse effect on teeth. It was found that 67 (72.8%) of UG doctors 118 (65.0%) of PG doctors, and only 13 (41.9%) of the PG

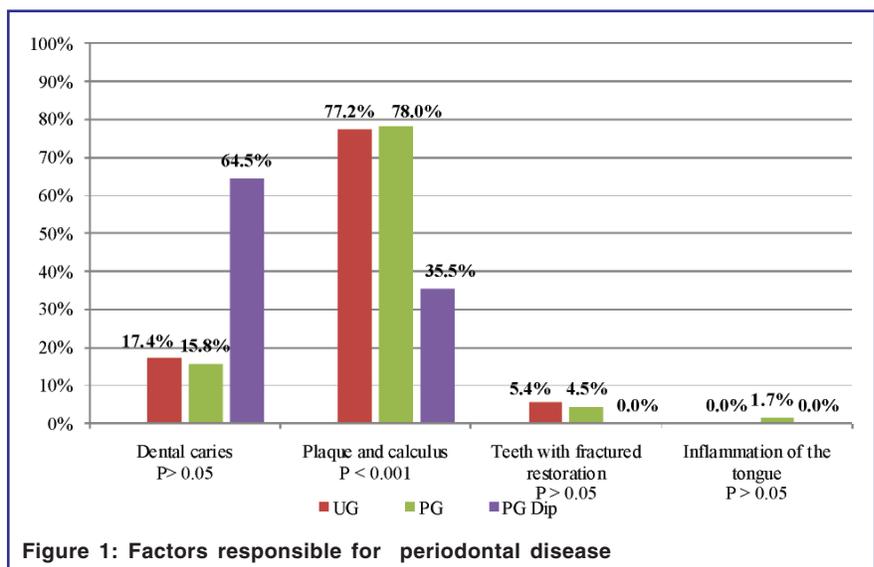


Figure 1: Factors responsible for periodontal disease

Table 2 : Responses of study subjects based on their dental knowledge

Questions on Dental knowledge		Distribution of study subjects according to their responses			
		Total 300(100%)	UG 92 (100%)	PG 177(100%)	PG dip 31 (100%)
1. Important factors causing tooth decay	a. Brushing once daily	7(2.3%)	1(1.1%)	6(3.4 %)	0
	b. Using tooth powder	10(3.3%)	1(1.1%)	9(5%)	0
	c. Sugar contained foods consumed per day	271(90.3%)	86 (93.5%)	158(88.7%)	28 (90.3%)
	d. Smoking	12(4%)	4(4.3%)	5(2.9%)	3 (9.7%)
2. Factors responsible for periodontal disease	a. Dental caries	64(21.3%)	16(17.4%)	28(15.8%)	20(64.5%)
	b. Plaque and calculus	220(73.3%)	71(77.2%) ^{###}	138(78.0%) ^{###}	11(35.5%) ^{###}
	c. Teeth with fractured restoration	13(4.4%)	5(5.4%)	8(4.5%)	0
	d. Inflammation of the tongue	3(1%)	0	3(1.7%)	0
3. Brushing teeth daily prevents	a. Oral cancer	2(0.7%)	0	1(0.6%)	1(3.2%)
	b. Oral ulcer	7(2.3%)	2(2.2%)	5(2.8%)	0
	c. Tooth decay and periodontal disease	291(97.0%)	90(97.8%)	171(96.6%)	30(96.8%)
	d. Proclination of teeth	0	0	0	0
4. Specialty in dentistry	a. Lasodontics	4(1.3%)	2(2.2%)	2(1.1%)	0
	b. Prosthodontics	279(93%)	88(95.7%) [#]	167(93.8%) [#]	25(80.6%) [#]
	c. Hypodontics	6 (2%)	0	4(2.3%)	2(6.5%)
	d. Ododontics	11(3.7%)	2(2.2%)	5(2.8%)	4(12.9%)
5. Does scaling have any adverse effects on teeth	a. No	195(65.0%)	67(72.8%) [#]	118(65.0%) [#]	13(41.9%) [#]
	b. Yes				
	a. Thinning of tooth	24(8.0%)	6(6.5%)	15(8.5%)	3(9.7%)
	b. Increase in interdental space	8(2.7%)	1(1.1%)	4(2.3%)	3(9.7%)
	c. Increase in mobility of teeth	7(2.3%)	0	7(4.0%)	0
d. Cause tooth sensitivity	66(22.0%)	18(19.6%)	36(20.3%)	12(38.7%)	

^{###} $\chi^2=$, P<0.001, Very Highly Significant
[#] $\chi^2=$, P<0.05, Significant

diploma doctors have answered the right option that scaling does not have any adverse effect on teeth. The differences noted were found to be statistically significant (P<0.05).

RESPONSES OF STUDY SUBJECTS BASED ON THEIR ATTITUDES TOWARDS DENTAL HEALTH (TABLE 3)

Among the study subjects 229 (76.3%) have answered correctly saying that they would suggest their patients to visit the dentist atleast once in six months. Based on their qualification it was seen that the

79 (85.9%) of UG, 125 (70.6 %) of PG and 25 (80.6%) of PG diploma doctors had the attitude of suggesting their patients for dental visit every once in six months. The differences noted were found to be statistically significant (P<0.05) (Figure 3).

Responses of study subjects based on their awareness on systemic conditions related to oral health due to dental diseases/ infections (Table 4)

Among the study subjects about 249 (83 %) of the doctors have said that

periodontal disease is a risk factor for infective endocarditis. Based on their qualifications it is seen that 69 (75.0 %) UG and 151 (85.3%) PG and 29 (93.5 %) PG diplomas have answered correctly as periodontal disease is a risk factor for infective endocarditis. The differences noted were found to be statistically significant (P<0.05) (Figure 4).

Among the study subjects 224 (74.7%) of the doctors have answered that necrotizing fasciitis is a systemic complication due to untreated dental infection. Based on their qualification 73(79.3%) UG, 136 (76.8 %)

PG doctors and 14 (48.4 %) PG diploma have answered that Necrotizing Fasciitis is a complication due to untreated dental infection. The differences noted were highly statistically significant (P<0.01).

DISCUSSION

As William Osler said mouth is the mirror of general health (7). Poor oral conditions may adversely affect general health and certain medical conditions may have a negative impact on oral health (8). This cross sectional study was conducted to assess the dental knowledge, attitude and awareness of different medical practitioners of Chennai.

Dental knowledge of medical practitioners

Results of the study showed that the medical practitioners had good knowledge about dentistry. In the present study with regards to dental knowledge in this study 220 (73.3%) of the doctors said that plaque and calculus is responsible for periodontal disease, and 291(97%) have said that brushing teeth daily prevents tooth decay and periodontal disease. In a study

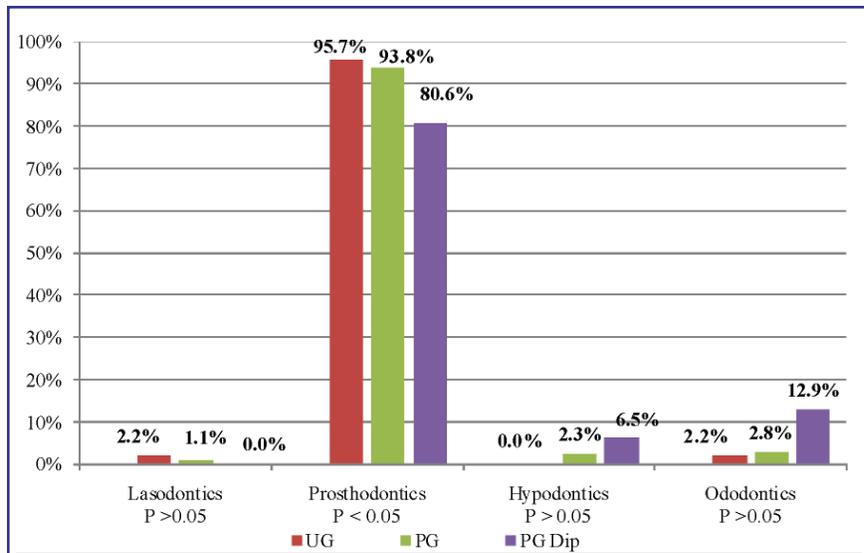


Figure 2: Speciality in dentistry

conducted by Eve line KL Wong and Elischwartz (9) 98(81%) house officers believed that poor oral hygiene caused periodontal disease and thirty three (27%) of medical students believed that bacteria was the cause and 17 (14%) believed that calculus were the causes of periodontal disease.

Attitudes of medical practitioners

In the present study with regards to attitude 229 (76.3%) of the medical practitioners have answered that they would suggest their patients to visit the dentist once in six months. In a study conducted by Jagadish Chandra et al (3) in Mangalore it is seen that regular visit of once in six

Table 3 : Responses of study subjects based on their attitudes towards dental health

Questions on attitudes to dental health		Distribution of study subjects according to their responses			
		Total	UG	PG	PG dip
		300(100%)	92 (100%)	177(100%)	31 (100%)
1. Advise to visit the dentist	a. Atleast once in six month	229(76.3%)	79(85.9%)#	125(70.6%)#	25(80.6%) #
	b. Once in two months	15(5%)	4(4.3%)	11(6.2%)	0
	c. Only if in pain	37(12.3%)	5(5.4%)	30(16.9%)	2(6.5%)
	d. Once in every 2-5 years	19(6.3%)	4(4.3%)	11(6.2%)	4(12.9%)
2. Patient with an dental abscess	a. Refer the patient	239(79.7%)	81(88.0%)	133(75.1%)	25(80.6%)
	b. Prescribe antibiotics and analgesics	60(20%)	11(12%)	43(24.3%)	6(19.4%)
	c. Ignore	1(0.6%)	0	1(.6%)	0
3. Does dental attendance improve quality of life?	a. Yes	292(97.3%)	92(100%)	170(96.0%)	30(96.8%)
	b. No	8 (2.7%)	0	7(4%)	1(3.2%)
4. Do pregnant women need dental check –up?	a. Yes	273(91%)	85(92.4%)	162(90.4%)	28(90.3%)
	b. No	27(9%)	7(7.6%)	17(9.6%)	3(9.7%)
5. Advise periodic dental care for paediatric patients	c. Yes	276 (92.0%)	87(94.6%)	162(91.5%)	27(87.1%)
	d. No	28 (8.0%)	5(5.4%)	15(8.5%)	4(12.9%)

χ^2 =, P<0.05, Significant

months was suggested by 259 (86.3%) which is slightly high when compared with the attitudes of medical practitioners in Chennai.

Awareness on systemic conditions related to oral health

In the present study with regard to awareness about life threatening dental diseases, about 257 (85.7%) of the doctors had answered correctly that cavernous thrombosis is a life threatening situation due to untreated dental infection. This was similar to the study conducted by Jagadish Chandra et al (3) in which 255(85 %) of subjects were aware that some dental diseases are life threatening.

The dental knowledge, attitude and awareness regarding life threatening situation were satisfactory among the medical practitioners of Chennai. This could be because the MBBS curriculum in

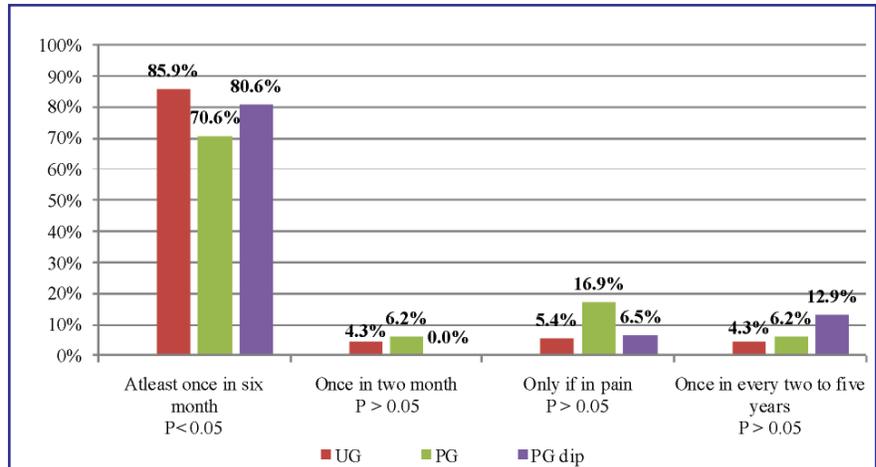


Figure 3: Advise to visit the dentist

India includes a dental posting in which they have an exposure to dental health aspects which improves their awareness, knowledge and attitude towards dentistry. Campaigns conducted by many dental

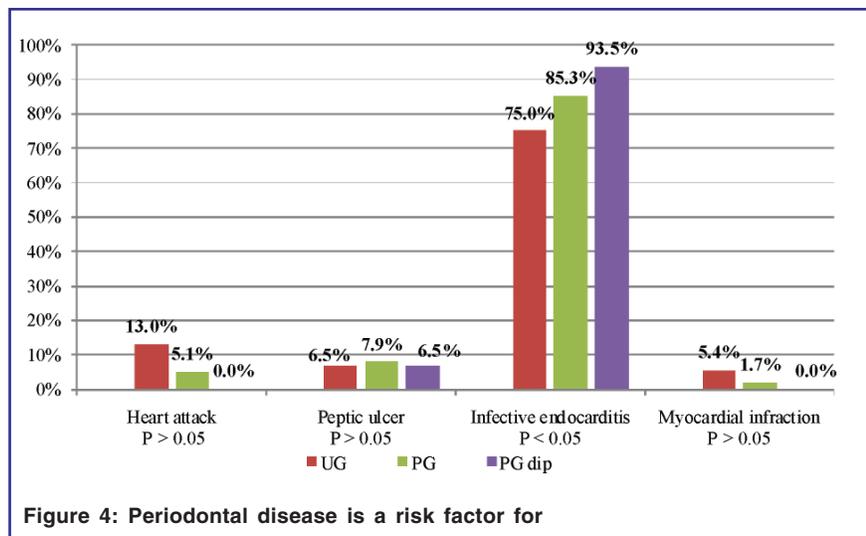
product manufacturers being focused in the metros like Chennai which further tends to enhance their knowledge. A number of continuing medical education programmes which are being conducted in Chennai for the general medical

Table 4: Responses of study subjects based on awareness on systemic conditions related to oral health

Questions on awareness on systemic conditions related to oral health		Distribution of study subjects according to their responses			
		Total	UG	PG	PG dip
		300(100%)	92 (100%)	177(100%)	31 (100%)
1. Ludwigs angina is a	a. Cardiac disease	24(8%)	9(9.8%)	15(8.5 %)	0
	b. Venous disease	11(3.7%)	2(2.2%)	6(3.4%)	3(9.7%)
	c. Renal disease	2(0.7%)	0	2(1.1%)	0
	d. Dental space infection	263(87.7%)	81(88.0%)	154(87.0%)	28(90.3%)
2. Life threatening situation due to untreated dental infection	a. Cavernous thrombosis	257(85.7%)	82(89%)	146(82.5%)	29(93.5%)
	b. Hodgkin's lymphoma	19(6.3%)	2(2.2%)	17(9.6%)	0
	c. Myelofibrosis	19(6.3%)	7(7.6%)	11(6.2%)	1(3.2%)
	d. Brain tumor	5(1.7%)	1(1.1%)	3(1.7%)	1(3.2%)
3. Periodontal disease is a risk factor for	a. Heart attack	21(7%)	12(13%)	9(5.1%)	0
	b. Peptic ulcer	22(7.3%)	6(6.5%)	14(7.9%)	2(6.5%)
	c. Infective endocarditis	249(83%)	69(75.0%)#	151(85.3%) #	29(93.5%) #
	e. Myocardial infraction	8(2.7%)	5(5.4%)	3(1.7%)	0
4. Systemic complications due to untreated dental disease	a. Diabetes	13(4.3%)	2(2.2%)	9(5.1%)	2(6.5%)
	b. Necrotizing fasciitis	224(74.7%)	73(79.3%)##	136(76.8%)##	14(48.4%)##
	c. Leukoderma	7(2.3%)	3(3.3%)	4(2.3%)	0
	d. Gingivitis	56(18.7%)	14(15.2%)	28(15.8%)	14(45.2%)
5. A life threatening dental infection	a. Dental caries	19(6.3%)	7(7.6%)	11(6.2%)	1(3.2%)
	b. Ludwig's angina	237 (79%)	73(79.3%)	140(79.1%)	24(77.4%)
	c. Periapical abscess	27(9%)	6(6.5%)	17(9.6%)	4(12.9%)
	d. Periodontal disease	17(5.7%)	6(6.5%)	9(5.1%)	2(6.5%)

$\chi^2=$, P<0.01, Highly Significant

$\chi^2=$, P<0.05, Significant



practitioners is a great source to update their knowledge on various aspects of health.

Although physicians can provide emergency care, generally they do not provide definitive treatment. Physicians' offices may not be the most appropriate site for the treatment of dental emergencies. Physicians generally have received minimal training in the management of dental problem. The General Medical Services Committee of the British Medical Association published guidelines on the management of dental problems. Further research is required to evaluate the adequacy of general physicians, management of dental emergencies. Such studies will help to determine the need for changes in undergraduate and graduate medical education, as well as identify the necessity for continuing education courses to address this topic.

CONCLUSION

The results of the study clearly demonstrate that medical practitioners had a good knowledge, attitude and awareness about dentistry. Oral diseases have been called an "overlooked epidemic" by the U.S. surgeon general in his May2000 report The dental

awareness, attitude and knowledge of the PG doctors were better when compared to that of the UG doctors and PG diploma qualified doctors. However having knowledge does not guarantee that it will be effectively used, this requires effective campaigning within community through various medical associations and organizations. Most of the general physicians are one group of providers who have an opportunity to encourage oral health and to make a significant difference because of their access to families as a family physician. It is also incumbent upon medical practitioners to keep their knowledge updated with time and get actively involved in oral health, as mouth is a mirror of systemic conditions.

RECOMMENDATIONS

- To conduct seminars for newly graduated medical practitioners to update their dental knowledge especially on common misconceptions.
- To encourage newly graduated medical practitioners to examine the oral cavity (including teeth and gums) during their general examination for patients.
- To encourage the setting up of associate clinics, this will include both medical

practitioners and dental practitioners for the benefit of providing medical and dental services under one roof.

- To conduct continuing education programmes to improve their knowledge, attitude and awareness about various dental diseases.

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