

Knowledge, Attitude and Practices Regarding the Systemic Effects of Oral Diseases among the Medical Practitioners

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Abstract

Hundred medical practitioners working at primary, secondary and tertiary level of health care delivery system work accessed for their knowledge, attitude and practices regarding the systemic effects of oral diseases. Majority of the respondents had poor (48%) to fair (42%) level of KAP regarding the systemic effects of oral diseases. Only 14%, 16%, 6%, 24% and 4% were aware that the periodontal disease may be the possible risk factor for CHD, cerebral infarction, diabetes mellitus, hospital acquired pneumonia and preterm labor (LBW babies) respectively. Only 12% of the respondents were referring all the patients with systemic disorders related to dental diseases to a dentist. Since many of the unknown etiologies of the systemic diseases may be found in the oral cavity it is required to create felt needs amongst the dental and medical practitioners to understand the importance of the inter-relationship between systemic and oral diseases and using the current knowledge for the welfare of their patients.

Work done at: Sikkim Manipal Institute of Medical Sciences, Gangtok, Sikkim, India.

INTRODUCTION

The oral cavity is the site of many infectious and inflammatory diseases. According to National Oral Health Survey dental caries is prevalent among 63.1% of 15 years old and as much as 80% among adults in age group of 35-44 years. Periodontal diseases are prevalent in 67.7% of 15 years old and as much as 89.6% of adults in the age group of 35-44 years¹. The potential impact of many systemic disorders on the periodontium is well documented, recent evidence suggests that periodontal infection may significantly enhance the risk for certain systemic diseases or alter the natural course of systemic conditions^{2,3}.

Conditions in which the influences of periodontal infections are documented include coronary heart disease, CHD-related events such as angina, infarction and atherosclerosis, stroke, diabetes mellitus, preterm labor (low birth-weight babies) and respiratory conditions such as chronic obstructive pulmonary disease (COPD)^{2,3,4}. Since many medical professionals are unfamiliar with the oral cavity and oral health research, they do not recognize the potential infection that may exist within the oral cavity⁵. Therefore the present KAP (knowledge, attitude and practices) study was carried to understand the ground realities.

MATERIAL & METHODS

The present study to know the knowledge, attitude and practices (KAP) among the medical practitioners regarding the systemic effects of oral diseases was carried out in one of the North Eastern States India on two different occasions. Two separate groups of medical practitioners, one attending a clinical meeting at a tertiary level of health care institution and other group of general duty doctors attending an on job training were studied. Consent to conduct the study was obtained from the concerned authorities as well as the participants. Both the groups were given a pre-designed, pre-tested MCQ type questionnaire to solve on the spot. To summarize the KAP level, response was graded from 0-20. The respondents securing 0-4, 5-8, 9-12, 13-16 & 17-20 marks were graded as having KAP level as poor, fair, good, very good and excellent respectively. The data thus collected were compiled, analyzed, and interpreted. Results were expressed in terms of percentage and proportions.

OBSERVATIONS

Response rate was hundred percent. There were a total of 102 respondents, 52 in first group and 50 in the second group. Two of the respondents in first group were non-medicos (i.e. M.Sc in medical sciences), so they were not included in the final analysis. The general duty doctors were working at primary and secondary level of health care

delivery. No difference was observed in the KAP regarding the systemic effects of oral diseases among the medical practitioners working at tertiary level of health care institution and the general duty doctors working at primary and secondary level of health care delivery.

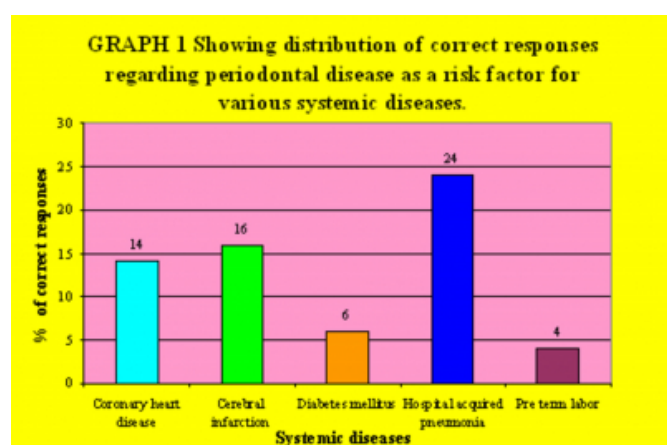
Figure 1

Table 1: Distribution of the response regarding the relationship between systemic and oaral diseases.

S. No.	Relationship between systemic and oral diseases	No. of correct responses
1.	Systemic diseases leads to oral diseases	44(44%)
2.	Oral diseases leads to systemic diseases	36(36%)
3.	It is a two way process	16(16%)
4.	Oral cavity is a remote cavity so no relationship between the two	4(4%)
TOTAL		100(100%)

Majority of the respondents 56(56%) considered the periodontal disease as an inflammatory disease with superimposed infection whereas only 36(36%) know that it is an infectious disease resulting in inflammation. Thirty eight (38%) of the respondents were aware that it is predominantly a gram –ve infection. Majority 56(56%) considered cigarette smoking or any mechanical force to be its cause. Majority of the respondents 78(78%) and 74(74%) considered it as a risk factor for bad breath and dental caries respectively, where as only 14 (14%), 16(16%), 6 (6%), 24 (24%) and 4 (4%) of the respondents were aware that the periodontal disease may be the possible risk factor for CHD, cerebral infarction, diabetes mellitus, hospital acquired pneumonia and preterm labor (LBW babies) respectively.

Figure 2



Only 14(14%) of the respondents were aware that the

periodontal disease can increase the risk of dying and only 10(10%) were aware that periodontal disease can be used as predictor of mortality. Thirty four (34%) of the respondents were of the opinion that periodontal disease is a non-modifiable condition.

Figure 3

Table 2: Pattern of referral by the medical professionals to the dentists.

All patients with systemic diseases related to dental disease	Patients with dental disease only	Not responded	Total
12(12%)	76(76%)	12(12%)	100(100%)

Table 2 shows that more than three fourth of the medical practitioners were referring only those patients to the dentists who having some dental disease. Only 12(12%) of the respondents were referring all patients with systemic diseases related to the dental disease. Four percent of the respondents did not even respond to this question.

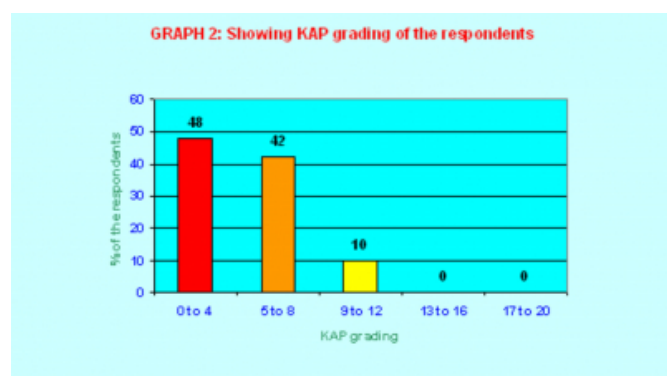
Figure 4

Table 3: Showing KAP grading of the respondents.

KAP Score	0-4	5-8	9-12	13-16	17-20	Total
No. of respondents	48(48%)	42(42%)	10(10%)	0(0%)	0(0%)	100(100%)

Table 3 shows the KAP grading of the respondents. Ninety percent of the respondents were having poor to fair KAP grade, only 10% having good KAP grade and none of the respondents were having very good or excellent grade in KAP regarding the inter-relationship between the systemic and dental-diseases.

Figure 5



DISCUSSION

The oral cavity is the site of many infectious and inflammatory diseases. The relationship between oral infection and systemic diseases has been related to periodontal disease, by far the most common oral infection. Periodontitis is predominantly a gram -ve infection resulting in severe inflammation, with potential in vascular dissemination (via the sulcular epithelium) of micro-organisms and their products such as lipopolysaccharides (LPS) through out the body ⁵. Systemic challenges with these agents induce a major vascular response ⁴. This host response may offer explanatory mechanism for the interaction between periodontal infection and a variety of systemic disorders like coronary heart disease ^{6,7,8,9}, CHD related events such as angina infarction and atherosclerosis ^{9,10}, stroke ^{2,11}, diabetes mellitus ^{12,13}, preterm labor (low birth weight babies) ^{14,15,16}, chronic obstructive pulmonary disease ^{17,18} and hospital acquired pneumonia ^{2,19,20}. Total surface area of pocket epithelium in contact with sub-gingival bacteria and their products in a patient with generalized moderate periodontitis has been estimated to be approximately the size of an adult hand and with even larger areas of exposure in case of more advanced periodontal destruction ²¹. An infection of the size of one's palm on the leg of a pregnant women or a person with diabetes mellitus would be a major concern to a patient and his doctor. Periodontal infection must be viewed in a similar manner. In the susceptible individuals it may act as an independent risk factor for systemic diseases ⁵. Fortunately it is a readily modifiable risk factor. Since many medical practitioners are unfamiliar with the oral cavity and oral health research they do not recognize that many of the unknown etiologies of the systemic diseases may be found in the oral cavity. Therefore it is required to create felt needs amongst the dental and medical practitioners to understand the importance of the

inter-relationship between systemic and oral diseases and using the current knowledge for the welfare of their patients.

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