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Research Article

KNOWLEDGE AND ORIENTATION OF MEDICAL INTERNS TOWARD PERIODONTAL DISEASE

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ABSTRACT

Aim: To assess knowledge and orientations of medical interns, we will be surveying incoming internal medical interns about their general knowledge, attitudes, about periodontal health and disease.

Methods and Material: 152 medical interns from all medical colleges in Vadodara city were included in this cross sectional study. All of them were provided with a printed questionnaire and were asked to fill those forms. These forms were collected as soon as they completed answering all questions.

Statistical analysis used: Descriptive statistical analysis and Pearson chi square test were used

Results: Results of this study shows that there is good knowledge ($p=0.018$) regarding periodontal disease amongst medical interns of all medical colleges in the city but they were uncomfortable performing routine periodontal examination, diagnosing periodontal disease and hence recognizing need for periodontal treatment proving lack of orientation ($p=0.005$) amongst medical interns of the city.

Conclusions: Thus we can conclude from this study that there is good knowledge but poor orientation about periodontal disease and its correlation to systemic disease in medical interns of the city. A better prospective study needs to be designed in order to prove results.

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INTRODUCTION

Periodontal disease is associated with an increased risk of systemic illnesses such as cardiovascular disease, stroke, peripheral vascular disease, and adverse diabetes mellitus and pregnancy outcomes.¹ There may be impact of certain systemic diseases on periodontium as well periodontal infection may significantly enhance the risk for certain systemic disease or may alter the natural course of systemic conditions. Periodontal disease is regarded as 6th complication of diabetes mellitus. The specific effects of diabetes on periodontium includes tendency toward enlarged, sessile or pedunculated gingival polyps, polypoid gingival proliferations, abscess formation, periodontitis and loosened teeth. Uncontrolled diabetes may lead to reduction in defense mechanisms and increased susceptibility to infections leading to destructive periodontal disease. Female sex hormones may be either initiating or the complicating factor associated with several periodontal diseases such as pubertal gingivitis, pregnancy gingivitis and menopausal gingivostomatitis. Moreover, Smith A. *et al* in 1994 showed decreased fetal birth weight and increased fetal death may be due to bacteria and products reaching amnion from periodontal infection (*P. gingivalis* LPS). Nosocomial

pneumonia is caused by aspiration of oropharyngeal contents. Oropharyngeal colonization with potential respiratory pathogens (PRPs) increases during hospitalization. PRPs are found in GIT Passed through esophageal reflux in to oropharynx subsequent aspiration cause pneumonia. Scannapieco in 2003 stated that supragingival and subgingival plaque harbours PRPs. Furthermore, anaerobic organisms from periodontal pockets may serve as the primary inoculum for pulmonary abscesses that have significant morbidity and mortality. Scannapieco in 1998 suggested individuals with poor oral hygiene have increased risk of COPD. Johnson *et al* in 2004 suggested there is increased pocket depth, attachment loss and alveolar bone loss in smokers compared to non-smokers. Following periodontal infection there is increased fibrinogen and WBCs which increase blood viscosity increasing risk of ischemic heart disease and is also regarded as risk factor for coronary heart disease. Periodontal infection causes elevation of fibrinogen and CRP which increases risk of stroke. This relationship of periodontal diseases with other systemic diseases has triggered the need of a close correlation between medical doctors and dentists for treating the patients.² The objective of present study is to evaluate knowledge about periodontal diseases among medical interns and also to understand the level of awareness regarding the systemic

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effects of periodontal disease among medical interns—the future medical practitioners—so that their training needs with respect to the subject under study may be realized. This will increase the awareness and bring about the change in aptitude of the medical interns towards oral as well as periodontal health.

SUBJECTS AND METHODS

The interns were selected as per the inclusion and exclusion criteria and their informed consent was taken. The questionnaire forms were provided by principal investigator to all the Interns posted in each department of all medical colleges in the city. Verbal permission was obtained from the respective Head of the Departments. The interns were asked to fill the questionnaire and were collected on the same day. As this study was conducted with the help of questionnaire, the validation procedure was done before the start of the study and questionnaire is valid.

RESULTS

A total of 152 medical interns with mean age of 23.61 ± 0.832 years and equal male female ratio working at medical colleges in city were included in this observational questionnaire study. Questions in the Questionnaire given to medical interns were divided on basis of 1) questions determining knowledge amongst medical interns and 2) questions determining orientation amongst participants.

In the present study, 97.4% of participants agreed to the fact that they received knowledge/orientation regarding periodontal disease in medical school. 96.7% think periodontal disease is a risk factor for systemic disease. 95.4% participants agree to the fact that there is association between systemic diseases and periodontal disease. Most of them also agree to the fact that there is strong association of cardiovascular disease, diabetes mellitus, pre-term low birth weight, smoking, cerebral infection and pneumonia to the periodontal disease. 49.3% participants agree to the fact that there exists two way relationship between diabetes mellitus and periodontal disease. 62.5% participants agree to the fact that presence of Diabetes Mellitus can aggravate periodontal disease and 56.6% agree that periodontitis have an adverse effect on glycemic control.

While looking for orientation amongst medical interns, 92.1% of them looked for signs and symptoms of periodontitis in their patients which includes bleeding gums, tooth mobility, tooth loss and receding gums, 59.9% of interns have noticed that prevalence of periodontal disease increases during pregnancy. But only 13.8% interns were comfortable asking all their patients about the history of periodontal disease, only 5.3% interns were very confident about periodontal examination, only 11.2% interns referred all their patients with periodontal problems to dentist and only 6.6% agrees to the fact that they have complete orientation about periodontal disease.

Thus, the results of the present study show that there is good knowledge but poor orientation regarding periodontal disease and its association to systemic diseases amongst medical interns of the city.

DISCUSSION

It is clear from the results of this study that there is good knowledge but poor orientation regarding periodontal disease

and its association to systemic diseases in medical interns. Most of medical interns are aware about signs and symptoms of periodontal disease its association to diabetes mellitus, cardiovascular disease, cerebral infection, pre term low birth weight and respiratory diseases but very few of them routinely perform periodontal examination in patients and refer them to periodontist.

The results of this study are similar to a study conducted by [Srinidhi et al.](#) on medical practitioners and interns in Chennai, by which they concluded that medical interns and practioners in chennai had good knowledge about dentistry, because in Chennai, dental health is included as part of the medical education to improve the knowledge and attitude of medical students towards dental health.³ But Medical students should at least know how to manage the dental emergency of their patients. A similar cross-sectional study conducted by [Asaad F. et al](#) in 2015 in medical interns of Saudi Arabia and they concluded that medical interns were not prepared nor trained to screen their patients for periodontal disease, and they had limited knowledge about the association between periodontal health and general health.⁴ But medical interns have good knowledge regarding periodontal disease but they are not comfortable performing routine periodontal examination and motivating patient for periodontal treatment. Hence, there is need to conduct orientation program on routine basis for medical interns so that they could easily perform periodontal examination and diagnose periodontal disease at early stage and their proper reference will help the periodontist to treat patient with his best abilities.

Moreover there is strong correlation between periodontal disease and systemic diseases like diabetes mellitus, cardiovascular disease, cerebral infection, preterm-low birth weight and respiratory disease. This must be explained to medical interns through regular orientation programs. This will result in a better and more efficient collaboration between oral health and medical professionals, which will improve the well-being and overall health of patients after all.

Limitations of this study are that it includes limited sample size of medical interns in vadodara city. Moreover, this study is based to self-reported knowledge and orientation of medical interns thus it may be biased. Caution must be taken in interpreting the applicability of the current data until these findings can be confirmed by larger, prospective study.

CONCLUSION

It can be concluded from this study that there is good knowledge but poor orientation about periodontal disease amongst medical interns of vadodara city. So, there arises a need to arrange various orientation programmes for medical students during their medical curriculum to orient them properly and help them to diagnose periodontal disease.

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