

Original Research Article

Knowledge and Awareness of General Medical Practitioners Regarding Periodontal Diseases

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Abstract: Periodontal disease is potential source of chronic inflammation and it is common among adults. Recent data have suggested an important role for chronic inflammation in the development of various systemic diseases. The purpose of this study was to address medical students and medical practitioners knowledge and awareness regarding different aspects of periodontal diseases. This particular cross-sectional study was done including 58 medical students of SMBT medical college, Dhamangaon, Ghoti, Nashik and the 40 general medical practitioners of the nearby place. The study was done with the help of questionnaires including of 15 questions for knowledge and awareness regarding the periodontal diseases, its etiology, pathogenesis, clinical features, consequences, treatment modalities available and their relation with the various systemic diseases. All the data was collected, tabulated and analysis was done with the help of IBM SPSS statistics version 17 using student's t test. The overall scores of all the participants were found to be low, indicating their low knowledge of the periodontal diseases and their relation with the various systemic conditions. Medical practitioners had less knowledge and awareness regarding various periodontal diseases. Thus there is need to improve this situation through all the possible actions.

Keywords: Medical practitioners, Periodontal diseases, Periodontal medicine.

INTRODUCTION

Periodontitis is a chronic inflammatory disease of the teeth supporting tissues caused by various groups of particular microorganisms. It can result in progressive loss of the periodontal ligament and supporting alveolar bone with formation of pocket, recession or both [1].

Periodontal diseases can constitute a major public health concern as it is highly prevalent and contributing to the chronic diseases global burden [2]. It involves an chronic inflammatory process in gingiva as a response to bacterial antigens in the tooth plaque [3].

Poor oral health suggest social inequalities and thus the prevention of oral diseases should be a priority in developed and underdeveloped countries around the world. Bilateral associations between periodontitis and a wide range of systemic conditions, such as cardiovascular disease, COPD, diabetes mellitus, osteoporosis and poor pregnancy outcomes have been reported. The successful prevention and management of periodontal disease depend to a large extent on

awareness and sufficient knowledge of its etiology, early identification of symptoms, and also effective treatment [2, 4-6].

As given by the World Health Organization (WHO), many of the oral diseases, like periodontal diseases, are a serious and essential part of the general health of the individual. For this reason, medical doctors should become familiar with and use this information, because they can alter the course of systemic diseases, as well as appropriately determine their treatment and prognosis [7, 8].

MATERIALS AND METHODS

The present cross-sectional study was done including 58 medical students and the 40 general medical practitioners of the nearby places of Ghoti, Nashik district. Some of the medical practitioners were contacted by telephonic conversation and their responses were collected through emails. The study was done with the help of questionnaires including of 15 questions for knowledge and awareness regarding the periodontal diseases, its etiology, pathogenesis, clinical

features, consequences, treatment modalities available and their relation with the various systemic diseases. Questions were of yes/ no type or single answer questions and each of the correct response was given score 1, while double answer or wrong answers were given score zero.

Before start of the study approval of the local ethical committee was obtained and also informed consent was recorded from each of the participants.

All the data were collected, tabulated and analysis was done with the help of IBM SPSS statistics version 17 using student's t test.

RESULTS

On comparison of the scores of the periodontal medicine knowledge and awareness among the medical students and general medical practitioners, it was found that both the groups having almost same level of knowledge and awareness and the difference in the scores were found to be statistically not significant. (Student's t test, $p > 0.05$) (Table 1, Figure 1).

Table 1: Comparison of the scores of the medical students and general medical practitioners regarding knowledge and awareness of the periodontal medicine

Group	Number of participants (n)	Scores Mean \pm SD	T value	P value
Medical students	58	10.14 \pm 1.95	1.0459	$p > 0.05^*$
General medical practitioners	40	10.55 \pm 1.87		

* $p < 0.05$ = Statistically significant difference.

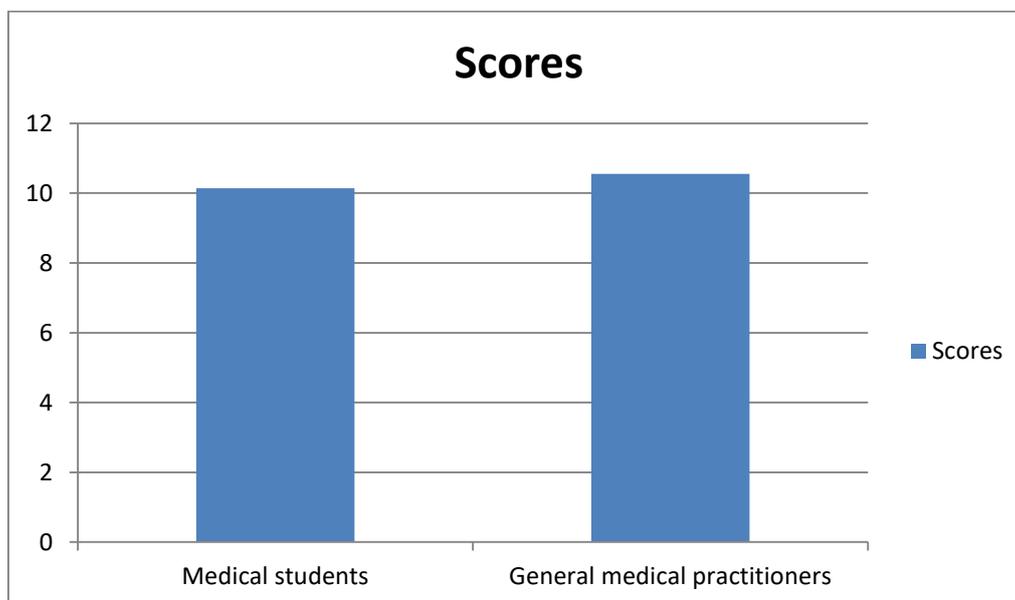


Fig-1: Graph showing comparison of the scores of the medical students and general medical practitioners regarding knowledge and awareness of the periodontal medicine

But the overall scores of all the participants (10.34 \pm 1.76) were found to be low, indicating their low knowledge of the periodontal diseases and their relation with the various systemic conditions.

DISCUSSION

Periodontitis is chronic inflammatory, bacteria induced disease which destroys the supporting tissues including bone support of the teeth. A dentist or a periodontist diagnoses periodontal disease clinically by measuring variables like recession, tooth loss, clinical attachment loss, tooth mobility, periodontal pocket probing depth and radiographic bone loss. Periodontal

disease is often accompanied with increased levels of chronic inflammation markers. Since previous studies has implicated chronic inflammation in one of the etiology of chronic heart disease (CHD). Therefore interest has been arised in evaluating whether periodontal disease is independently associated with CHD [9].

People with periodontal disease have elevated levels of systemic inflammatory markers, such as C-reactive protein, and treatment for periodontal disease has been reported to decrease systemic inflammation levels. There are variety of potential triggers for the

enhanced systemic inflammatory response, including transient bacteremia and the local release of bacterial byproducts such as lipopolysaccharide [9-11].

Maintaining the health of the tissues around the tooth is essential for most of the dental treatments. Mattila reported a significant correlation between oral health and heart attack. Panuio also analyzed the history of the lost teeth and indicated a significant relationship between the number of lost teeth and ischemic heart diseases. In a 14-year analysis, Destefano reported a statistically significant relation between cardiovascular and periodontal diseases. The initial oral health advices provided by the general physicians can be more effective than those provided by dental practitioners as commonly patients refer more to the general physicians than nearby dentists [12].

In the previous studies, the systemic diseases having effects on the periodontium have been recorded and a new area of called as “medical periodontology” was introduced by Williams and Offenbacher, who also pointed to the bidirectional inter-relationship between periodontal diseases and other systemic conditions like cardiovascular diseases, diabetes mellitus, cerebrovascular diseases and respiratory diseases. Additionally, previous researches have shown that periodontal diseases may impact the general health of an individual or change the course of systemic conditions. In the case of diabetes mellitus, changes can occur in the collagen metabolism, gingival crevicular fluid, microflora and host response [8].

In the present study, both the medical students and general medical practitioners were having low knowledge and awareness regarding the various periodontal diseases and their relation with the systemic diseases.

CONCLUSION

To improve the knowledge and awareness, various programs like seminars, symposiums or any other awareness programs must be arranged to be beneficial to their patients.

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