Case Report

Psychological/psychosocial stress and periodontal diseases: An intricate web

Ghaziya Ghansh¹, R. Shanmuga Priya¹, Sabitha Sudarsan¹, Manikandan Krishnan²

¹Department of Periodontics, Sri Venkateswara Dental College and Hospital, Chennai, Tamil Nadu, India, ²Department of Preventive Dentistry, Sri Venkateswara Dental College and Hospital, Chennai, Tamil Nadu, India

Abstract

Currently, several clinical studies have documented a positive relationship between psychological/psychosocial stress and chronic periodontal disease. Stress in the least form has known to impact periodontal health through changes in the individual behavior and loaded with the potential to affect the pathogenesis of periodontal disease. Although a direct association remains to be proven, recent studies indicate that psychological/psychosocial stress definitely possesses as a potential risk indicator for periodontal disease and, hence, should be addressed as and when the situation demands. This article seeks to highlight the subtle link between the above-stated risk factors and periodontal disease by quoting an instance of compromised oral maintenance leading to premature tooth loss.

Keywords
Fear, oral health, periodontium, psychotic disorder, stress

Introduction

“Health is a state of complete physical, mental, and social well-being not merely the absence of disease or infirmity.” This is how health has been defined by the WHO. In the large context, oral health also plays a significant role in the complete well-being of a person. Adding to the conundrum, to date, a major part of the population is still not conscious of the benefit of maintaining meticulous oral hygiene. Stress, distress and coping behaviors are considered as crucial factors for the development of periodontal disease. It is very obvious that the maintenance/inclination to maintain meticulous oral hygiene is definitely dependent on the mental health of the patient. This disturbance can lead the patient to neglect the oral hygiene and that the resultant accumulation of plaque and calculus is determinant to periodontal health.

Case Report

A 39-year-old female patient reported to the outpatient Department of Periodontology and Implant Dentistry, Sri Venkateswara Dental College and Hospital, Thalambur, with the chief complaint of bleeding gums and fetid odor for the past 10 years, she gave a history of the previous dental visit for oral prophylaxis 8 years ago.

On examination, huge deposits of thick yellowish calculus deposits were seen, especially on the labial aspect of right maxillary molars [Figure 1] and in the lingual aspect of mandibular anterior, almost encroaching onto the floor of the mouth and covering the lingual frenulum [Figure 2]. The gingiva presented with a generalized reddish hue and rolled out margins with blunt interdental papillae [Figure 3]. Generalized profuse gingival bleeding was elicited even on slight probing the patient was all along conscious of her poor oral hygiene and the emanating foul breath. After a thorough case history, charting was completed; the patient was reassured with great emphasis being laid on the importance of maintenance of good oral hygiene and its relation to systemic health. A complete and meticulous oral prophylaxis regime was planned and executed using both hand and ultrasonic scalers. At the culmination of each review, the patient was educated and motivated to improve and maintain her oral hygiene. Thus, each passing appointment saw the emergence of a highly confident patient, whose compliance in the maintenance regimen schedule brought untold dividends in the form of excellent oral health.
and new confidence levels in the patient [Figures 4-6 post-operative]. During the treatment sessions, great care was taken not to jeopardize, slightly mobile teeth. The patient was emotionally upset numerous times during our treatment session. The tissue adjoining the calculus deposits which were initially granulomatous in appearance showed a remarkable tendency to heal completely. At every appointment, oral hygiene instructions were reinforced and the patient was counseled to attend regularly the follow-up sessions. Thus, at the end of a 3-week period, the patient’s health had been completely restored, along with her confidence levels.
Discussion

The most notable feature in the aforementioned case was the highly educated levels of the patient. She possessed a post-graduate degree and was employed before her wedding with the passage of time and slow neglect of her oral health resulted in chronic gingivitis. She sorts dental care but was warded off due to the unpleasant consequence of professional dental care such as loosening of teeth and the resulting severe hypersensitivity, slowly she stopped using her toothbrush and restored to cleaning her teeth with her fingers using paste. This only served to worsen the condition. Severe bleeding followed by professional seating appointments further deterred her attempts at seeking the dentist advice. This leads to a slow withdrawal of public interactions and the consequent “Fetor Oris” only enhanced to make her a social recluse. Thus, it was after 8 years, she sought help from the periodontists, but by this time, the periodontium had been subjected to the onslaught of the huge calculus deposits, especially in the lower mandibular anterior regions. Slow but strict and stringent measures along with counseling resorted by the periodontists coupled with the patient, slow but steady compliance and growth in confidence level brought beneficial results in the patient leading to an alarming transformation in both the patient’s oral health and her personal psyche.

The aforementioned case served as a classic example of how patients react when subjected to fear psychosis education notwithstanding patient tends to take succor behind fallacious and false connotation regarding professional periodontal dental care. It is very evident that proper oral hygiene is partially dependent on the mental health status of an individual. Ringsdorf et al., Meyer et al., and Deinzer et al. were by venture of numerous study elicited that psychological disturbance can lead patients to neglect their oral hygiene and that the resultant accumulation of plaque and calculus serves to erode the health of the periodontal apparatus.

Direct association between stress and periodontal disease still remain to be proven with credible evidence. The study conducted by Hildebrand et al. in 2000 and Deinzer et al. in 2000 has also concluded that psychological stress can serve as a risk factor for gingival inflammation with increased circulation of interleukin-B levels by disrupting homeostatic complex. Thus, it would be prudent to conclude that even minor stresses or “Hassles” serve as a potent risk indicator for periodontal disease and vice versa. They may have similar implication both on the patient’s oral health and psyche, hence, should be addressed.

References

1. Peter S. Essentials of Public Health Dentistry. 5th ed. New Delhi: Arya Medi Publishing House; 2013.
2. Bathla S, Bathla M. Periodontics Revisited. New Delhi: Jaypee Brothers Medical Publisher; 2011.
3. Meyer MJ. Stress and periodontal disease: A review of the literature. J N Z Soc Periodontol 1989;68:23-6.
4. Deinzer R, Kottmann W, Förster P, Herforth A, Stiller-Winkler R, Idel H, et al. After-effects of stress on crevicular interleukin-1beta. J Clin Periodontol 2000;27:74-7.
5. Ringsdorf WM Jr., Cheraskin E. Emotional status and the periodontium. J Tenn State Dent Assoc 1969;49:5-18.
6. Deinzer R, Ruttermann S, Mobes O, Herforth A. Increase in gingival inflammation under academic stress. J Clin Periondontal 1998;25:431-3.
7. Hildebrand HC, Epstein J, Larjava H. The influence of psychological stress on periodontal disease. J West Soc Periodontol Periodontal Abstr 2000;48:69-77.

How to cite this article: Ghansh G, Priya RS, Sudarsan S, Krishnan M. Psychological/psychosocial stress and periodontal diseases: An intricate web. J Oral Dis Markers 2018;5-7.