



Localized Aggressive Periodontitis in a 21 Year Old Woman - A Case Report

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Abstract

The inflammation of the supporting tissues around the teeth is commonly known as periodontitis. This report describes the case history of a 21 years old female patient diagnosed with severe localized aggressive periodontitis. It was concluded that optimal maintenance of oral hygiene at individual and community level would decrease the occurrence of such diseases.

Keywords: Chronic periodontitis; Aggressive periodontitis; Gingiva

Introduction

The definition of periodontitis is given as an inflammatory disease of the supporting tissues around the teeth caused by specific microorganisms or groups of specific microorganisms. These results in advancing destruction of the periodontal ligament and alveolar bone with formation of pocket, gingival recession, or both [1]. There are several forms of periodontal disease that distinctly differs from chronic periodontitis. According to the 1989 classification, patients who were less than 35 years of age were placed into the early-onset category if they exhibited significant attachment loss in the presence of plaque and calculus. Hence it was concluded that the term early-onset periodontitis was too constraining and suggested it be replaced with "aggressive periodontitis."

Diagnosis of aggressive periodontitis is mostly confirmed by clinical, radiographic and historical findings which show rapid attachment loss and bone destruction, and disease aggregation [1]. Patients are systemically healthy except for any presence of periodontal disease. Other features include periodontal tissue destruction, elevated levels of *A. actinomycetemcomitans* or *P. gingivalis* and enhanced levels of prostaglandin E2 and interleukin-1 β . Aggressive periodontitis can also be divided into localized and generalized forms to substitute localized and generalized juvenile periodontitis respectively [2]. The first reported case of periodontitis was in a fossil remains of a juvenile *Australopithecus africanus* specimen in which alveolar bone destruction along with movement of the affected deciduous molars was seen [3].

Case Presentation

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A 21 years old, unmarried female teacher reported to the Department of Public Health Dentistry, Kalinga Institute of Dental Sciences with chief complain of mobility in lower front tooth region since 2 months from the capital city of Odisha, India. She also complained of spacing in between the lower anterior teeth, dirty teeth and halitosis. On further investigations, patient revealed there was no pain associated with it and she observed food lodgement. No relevant family was medical history was reported. She neither had the habit of smokeless nor had smoke form of tobacco. She never visited the dentist earlier.

On enquiring about her oral hygiene practices, it was revealed that she followed horizontal method of brushing using non fluoridated toothpaste once a day for 10 min. The frequency of changing the toothbrush was 3 to 4 months. Her dietary habits included consumption of 1 cup of tea in breakfast, followed by 1 bowl of rice, dal, and curry in lunch. In evening she again had a cup of tea with a packet of cookies. During dinner she had 2 to 3 chapattis and a bowl of vegetable curry. The sugar score was 10 which were good.

On examining the subject extra-orally, no gross facial asymmetry was detected. Lymph nodes were non tender and non palpable. Lips were competent. No abnormality was detected during soft tissue examination except the gingival examination revealed pale pink color. The labial region of 31, 41 was reddish in color. The margins had knife-edged contour. The labial aspect of 31 and 41 had



Figure 1: Lingual aspect of 31, 41.



Figure 3: Extraction of 41.



Figure 2: Labial aspect of 31, 41.

a blunt rounded contour. The consistency of gingiva was firm and resilient except in the lower region on 31 and 41 where it was soft and edematous. Stippling was absent in the anterior regions. The gingival margin was apical in position to the cementoenamel junction in the labial side of 41. There was localized bleeding on probing on the labial aspect of 31 and 41.

The patient permanent type of dentition and a total number of 30 teeth were present. The upper third molars were unerupted. She had carious lesions in right lower posterior tooth region and no restorations. There was no sign of wasting diseases such as attrition, abrasion or erosion but the presence of extrinsic stains were established. Sub-gingival calculus was present and Grade II mobility was seen in 31 and 41. Labial migration and flaring of lower anterior teeth was also seen. The depth of periodontal pocket with CPITN probe was about 6 mm to 7 mm. Two relevant indexes, Oral Hygiene Index -Simplified (1964) and Russells Periodontal Index (1956) were recorded. The debris and calculus simplified scores were 0.83 and 1.3 respectively. The overall OHI-S was 2.13 and interpreted as fair. Russell's Periodontal Index score was 1.36 which indicated beginning destruction periodontal disease.

Comprehensive treatment plan consisted of five phase's namely promotive phase, preventive, curative, rehabilitative and recall and maintenance phase. Patient was advised to follow modified Bass technique for tooth brushing and to brush 2 min to 3 min daily. Chlorhexidine mouthwash was advised to be used. Ultrasonic scaling and root planning was advised and done. The mobility could not be controlled. So 41 were extracted. Following the completion of this phase of treatment, the patient was recalled after 6 months (Figures 1-3).

Discussion

The actual clinical difference between aggressive and chronic periodontitis is not broad. It is reported that the level and magnitude of clinical inflammation in generalized aggressive periodontitis appear to be analogous to that observed in chronic periodontitis. Chronic periodontitis is mostly an infectious disease which is multifactorial in nature. It occurs due to various changes between the host response and specific periodontal pathogens [4]. It is characterized by the manifestation of a slow and irreversible damage of periodontal tissue loss in a specific period of time whereas aggressive periodontitis is characterized by the involvement of multiple teeth with an identifiable structure loss of periodontal tissue. Increased rate of disease progression; an early age of onset; and the lack of systemic diseases is also a typical feature of aggressive periodontitis [5].

In this case, the most probable reason for periodontitis was poor oral hygiene and faulty tooth brushing. Preventive measures such as brushing twice a day with modified Bass method would be beneficiary. Periodic visit to dental clinic and utilization of professional services such as scaling and root planning every six months will prevent plaque accumulation and calculus.

Taking this patient as the representative of the community, primary secondary and tertiary prevention can be achieved by various modes of intervention. Dental health education, proper diet planning and consult from a dietitian, provision of oral hygiene aids such as dental floss and mouthwash can be administered. Periodic screening and referral to dental office for services such as oral prophylaxis, extraction, restoration, removable or fixed dentures can be availed. Therefore, community oral health care must be given priority for the success of various treatment approaches and betterment of the patients and community. Although public health dentists are acknowledged as more skilled in community diagnosis, we must retrieve that treatment protocol does not work in any case if the patient cooperation does not exist.

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