A Case Report on Generalized Aggressive Periodontitis

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Aggressive periodontitis, as the name implies is a type of periodontitis where there is rapid destruction of periodontal ligament and alveolar bone which occurs in otherwise systemically healthy individuals generally of a younger age group but patients may be older. Although its prevalence has been reported to be much less than that of chronic periodontitis, it can result in early tooth loss in the affected if not diagnosed in the early stages and treated appropriately. Dental plaque which harbours specific periodontal pathogens is its primary aetiological factor. The purpose of this report was to describe an approach to diagnose localized aggressive periodontitis and generalized aggressive periodontitis.

INTRODUCTION

Periodontitis is defined as "an inflammatory disease of the supporting tissues of the teeth caused by specific microorganisms or groups of specific microorganisms, resulting in progressive destruction of the periodontal ligament and alveolar bone with pocket formation, recession, or both."¹ The 1999 International Workshop for a Classification of Periodontal Diseases and Conditions classified periodontal disease in children as follows: Dental plaque-induced gingival diseases; aggressive periodontitis (previously known as “prepubertal” or “early onset periodontitis”) chronic periodontitis; periodontitis as a manifestation of a systemic disease; and necrotizing periodontal diseases. Periodontitis is a multifactorial disease that involves infection and inflammation of supporting periodontal tissues leading to their destruction. Based on the rate of progression periodontitis can be broadly classified into chronic & aggressive forms. Aggressive and chronic periodontitis is subdivided into localized or generalized, depending on the size of the area affected.² The 1999 International Workshop for a Classification of Periodontal Diseases and Conditions classified periodontal disease in children as follows: Dental plaque-induced gingival diseases; aggressive periodontitis (previously known as “prepubertal” or “early onset periodontitis”) chronic periodontitis; periodontitis as a manifestation of a systemic disease; and necrotizing periodontal diseases.
periodontitis and is characterized by severe destruction of periodontal ligament and alveolar bone occurring in otherwise systemically healthy individuals. It is characterized by a rapid loss of clinical attachment and alveolar bone and normally affects young adults. The terms “early-onset periodontitis” (EOP) and “juvenile periodontitis” (JP) were replaced by that of “aggressive periodontitis” (AP) according to the AAP classification of periodontal diseases and conditions in 1999. Aggressive periodontitis differs from the chronic form by the rapid rate of disease progression seen in, an otherwise healthy individual, an absence of large accumulation of dental plaque and calculus. This form of periodontitis usually affects young people at or after puberty, and thus can be observed during the second and third decade of life. The primary features of aggressive periodontitis include a history of rapid attachment and bone loss with familial aggregation. Aggressive periodontitis can be localized or generalized aggressive periodontitis.

Localised aggressive periodontitis occurs in children and adolescents without clinical evidence of systematic disease and is characterised by the severe loss of alveolar bone around permanent teeth. Frequently the disease is localized to the permanent first molars and incisors. Generalised aggressive periodontitis often considered being a disease of adolescents and young adults can begin at any age and often affects the entire dentition. Individuals with generalised aggressive periodontitis exhibit marked periodontal inflammation and have heavy accumulation of plaque and calculus.

Aggressive periodontitis becomes apparent about the time of puberty, usually between the ages of 10 and 15. Treatment methods for aggressive periodontitis are often similar to those used in chronic periodontitis. These include:

1. Oral hygiene instructions;
2. Reinforcement and evaluation of the patient’s plaque Control;
3. Supragingival and Subgingival scaling and root planning;
4. Control of other local factors;
5. Occlusal therapy, if necessary;
6. Periodontal surgery, if necessary;
7. Periodontal maintenance.

Clinical and Radiological manifestation

Aggressive periodontitis can be distinguished from other forms of periodontitis by its distinctive features. These include the following:

1. Apart from aggressive periodontitis, individuals are otherwise clinically healthy.
2. The severity of periodontal destruction manifested in aggressive periodontitis is intensive with respect to the low levels of plaque and calculus typically observed in chronic periodontitis.

3. The rate of progression of aggressive periodontitis is rapid in comparison with chronic periodontitis.

4. Familial aggregation within families is another distinctive feature of the disease.

Fig 1: Clinical appearance of medically healthy 15 years old male patient with Generalized Aggressive Periodontitis. Note the minimal amount of supragingival plaque.

**Preoperative**

**Postoperative SRP**

**Fig 2:** Intra oral periapical Radiographs of Generalized Aggressive Periodontitis

**CASE REPORT**

A 15 year old male patient was come to the Department of Periodontology, Mahaveer Teerthanker Dental College Moradabad. The patient's medical history was not insignificant. The clinical features are typical of aggressive periodontitis in its most active stage of progression. Both the attached and marginal gingival were fiery red, acutely inflamed. Pus was oozing from around many teeth. In spite of this, the patient had no carious lesions and no restorations. The radiographs revealed almost total loss of the alveolar bone of the teeth. Radiographic measurements indicated that all of the teeth were affected. The mean pocket depth was about 6-7 mm. Complete course of laboratory tests, including glucose tolerance, urinalysis and routine blood tests were normal. Culture for Actinobacillus actinomycetemcomitans was negative. Neutrophil chemotaxis was normal but monocyte chemotaxis was
significantly suppressed. Treatment consisted of through training in techniques of plaque control scaling and root planning and administration of tetracycline 250 mg every six hours for 3 weeks. The response to treatment was not good, and mobility could not be controlled. So were extracted. Following the completion of this phase of treatment, the patient was placed on recall, but he failed to reappear. He was not seen again until approximately 4 months later, at which time it was noted that he had ceased tooth brushing and disease was again active. Oral hygiene was poor and mobility was present. Hemorrhage had occurred from the granulation like tissue. Soft tissue specimen adjacent to the teeth sent for histopathological examination with the provisional diagnosis of Aggressive periodontitis. Microscopic description was Chronic, extensive inflammatory condition with numerous plasma cells, covered by nonkeratinizing squamos, hyperplastic, and pseudoepithelial hyperplasia. Flap curettage was done around all remaining teeth. 250 mg tetracycline 4 times daily for 2 weeks administered again.

DISCUSSION

During puberty the most common form of periodontal disease is an inflammatory hyperplastic gingivitis associated with poor oral hygiene, plaque and supragingival calculus. In the vast majority of these latter cases, both supra and subgingival calculus is present. In pockets which are greater than 6 mm. In depth, subgingival calculus is invariably present. In aggressive periodontitis however, the gingiva in the early stages, is most frequently normal in appearance. Patients, whose oral hygiene is poor, have obvious plaque and supragingival calculus common to seen some signs of gingival inflammation clinically in the very advanced cases. In the vast majority of cases of aggressive periodontitis, however, one is left with the clinical impression that the amount of periodontal destruction observed is not commensurate with the amount of local irritants which can be found. Vertical loss of alveolar bone about the first molars and one or more incisor teeth in an otherwise healthy adolescent is a diagnostic sign of periodontosis. The pattern of bone loss is usually described as an arch-shaped loss of alveolar bone extending from the distal surface of the second bicuspid to the mesial surface of the second molar. The bone loss in the posterior regions occurs bilaterally and the right and left sides are generally mirror images of each other. The degree and the shape of the bone loss are generally dependent upon whether the lesion is diagnosed in an early or advanced stage, as well as surgery and antibiotic therapy.
was performed. But both failed to cure or control to disease, mostly because of the non-cooperation with the oral hygiene instructions\textsuperscript{16, 17}

**CONCLUSION**

We believe that a successful outcome can be achieved with an early diagnosis and periodontics treatment. The therapeutic approach includes the prescription of systemic antibiotics in combination with mechanical treatment, as well as strict oral hygiene maintainence and frequent recall appointments. Finally, it is extremely important that male patient with GAgP be carefully monitored to provide early treatment when necessary due to an increased susceptibility for periodontal diseases at older ages. Although various advanced diagnostic and treatment modalities have emerged in the management of aggressive periodontitis. A case of aggressive periodontitis was reported which was diagnosed clinically and radiographically and treated accordingly.

**REFERENCES**

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