

## MANAGEMENT OF LOCALIZED AGGRESSIVE PERIODONTITIS BY RESECTIVE AND REGENERATIVE METHODS

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### ABSTRACT

Aggressive periodontitis is a group of infrequent types of periodontal diseases with rapid attachment loss and bone destruction, which are initiated at a young age. It has received considerable attention due to its peculiar clinical presentation, occurring around puberty, with an apparent lack of local factors such as heavy amounts of plaque and calculus, in patients with reasonably good oral hygiene. Here, we are reporting the management of a 22 years old male patient with good oral hygiene but complained of mobility and pain in selected teeth.

**KEY WORDS:** Aggressive, regeneration, resection.

### Introduction

Aggressive periodontitis is much less common than chronic periodontitis and generally affects younger patients than does the chronic form. Though a variety of factors such as microbial, environmental, and behavioral factors and systemic diseases are suggested to influence the risk of aggressive periodontitis, an individual genetic profile is a crucial factor, influencing the systemic or host response-related risk [1,2].

Aggressive periodontitis is characterized by a rapid and severe periodontal destruction in young systemically healthy subjects, and can be subdivided into localized and generalized forms according to the extension of the periodontal destruction [3].

### Case report

Here, we are presenting a case of a 22 years old male patient who reported in our OPD with complaint of mobility in anterior teeth and pain in posterior teeth during chewing food.

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On intraoral examination grade I mobility was found in 23, 24, 25 and 26 (according to Universal numbering system of teeth. Thaller, Seth R., 2004). Oral hygiene was found good. Radiological examination revealed severe vertical bone loss with respect to 19, 23, 24, 25, 26 and 30. There was faulty root canal treatment in 30 with distal root resorption. Root resorption was also found in disto-buccal root of 3. A peri-apical pathology was noticed in distobuccal root of 14. (Fig 1) On basis of case history, clinical examination and the radiological findings diagnosis was made as localized aggressive periodontitis.

### Discussion

The localized form of aggressive periodontitis predominantly affects the first molars and the incisors, with loss of attachment in at least two permanent teeth, one of which is the 1st molar. The rate of alveolar bone loss is considerably higher in aggressive periodontitis than in chronic periodontitis. A striking feature is the absence of clinical inflammation with minimal local factors, despite the presence of a deep periodontal pocket. Various periodontal pathogens have been implicated in sites of aggressive periodontitis, but the role of *Actinobacillus actinomycetem comitans* has been the predominant one. Several authors have referred to it as an arc-shaped bone loss which extends from the distal

surface of the 2<sup>nd</sup> premolar to the mesial surface of the 2<sup>nd</sup> molar [4].

Clinically, the patient had characterized “first molar” presentation with interproximal attachment loss on lower first molars. The pattern of alveolar bone loss was “arcuate”, extending from the distal surface of the second premolar to the mesial surface of the second molar. There was a lack of clinical inflammation despite the presence of deep periodontal pockets and advanced bone loss. The amount of plaque on the affected teeth was minimal, which seemed to be inconsistent with the amount of periodontal destruction which was present. The fact that the patient was a young male also supported the clinical picture of localized aggressive periodontitis[5].

Successful treatment of localized aggressive periodontitis depends on early diagnosis, directing therapy towards elimination or suppression of the infecting micro-organism, providing an environment considered to long- term maintenance, to alter or eliminate the microbial etiology and contributing risk

factors for periodontitis. Therapeutic goals of therapy are to arrest or slow down the progression of disease, preserving the dentition in comfort, function, and appropriate esthetics, regeneration of periodontal attachment apparatus and to prevent the recurrence of the disease.

In the present case after oral prophylaxis root canal treatment (RCT) done in 3, 14, 19, 23, 24, 25, 26. Re-RCT was performed in 30. Patient was kept on subantimicrobial dose of doxycycline (SDD, 20 mg BD) for 3 months and then extended for 6 months. In 2002 Novak et al reported that the use of SDD in conjunction with full mouth debridement is beneficial in patients with aggressive periodontitis[6]. Flap surgery with resection of root having minimal periodontal support (disto-buccal) was performed in case of 3 and hemisection of distal part in 19 followed by bridge formation. For regeneration, flap surgery with bone grafting was done in region of 14, 23, 24, 25, 26 and 30. Post-operative radiographs after 9 months revealed marked improvement in bone level (fig 2).



**Fig 1: Pre-operative IOPA radiographs**



**Fig 2: Post-operative 9 months IOPA radiographs**

### Conclusion

Localized aggressive periodontitis is a challenge for clinicians as it is infrequently encountered and the predictability of treatment success varies from one patient to another. These unusual entities often do not respond well to conventional therapy owing to the

complex nature of the disease. Careful history recording, diagnosis and correct management of cases with localized aggressive periodontitis can help the patients in maintaining the health and function of the permanent teeth and their surrounding structures.

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