



## Aggressive Periodontitis: A 2-Years Follow Up Case Report

<b>Monica Lamba</b>	Post Graduate Student, Dept of Periodontics & Oral Implantology KD Dental College & Hospital, Mathura
<b>Dr. Aditya Sinha</b>	Senior Lecturer, Dept of Periodontics & Oral Implantology KD Dental College & Hospital
<b>Dr. Jithendra K.D</b>	Professor and Head of Department, Dept of Periodontics & Oral Implantology, KD Dental College & Hospital
<b>Dr. Shailinder Singh Chauhan</b>	Reader, Dept of Periodontics & Oral Implantology, KD Dental College & Hospital, Mathura

**ABSTRACT** This case report describes the treatment of a 22-year-old female patient displaying generalized aggressive periodontitis. After initial therapy consisting of scaling, root planing and systemic administration of tetracycline, the bone defects were treated by access flap combined with application of platelet rich fibrin and alloplastic bone graft. Clinical and radiographic findings are reported for upto 8 months after initial therapy, indicating good efficacy of the therapeutic strategy and stability of the treatment outcome.

### KEYWORDS

### INTRODUCTION:

The periodontal disease can be either localized or generalized in aggressive periodontitis cases. The localized form typically has a circumpubertal onset. Actinobacillus actinomycetemcomitans and neutrophil function abnormalities are common findings, as are robust serum antibody responses to the pathogens. Aggressive periodontitis (AgP) is a group of infrequent types of periodontal diseases.<sup>1</sup> It affects systemically healthy individuals less than 35 years old, although patients may be older. Aggressive periodontitis has been defined using the following criteria: 1) age of onset, 2) distribution of lesions, 3) severity of destruction, 4) rate of progression, and 5) response to therapy. A positive family history has also been reported for aggressive periodontitis. By definition, the localized form has interproximal attachment loss on at least 2 permanent teeth (one being a permanent first molar), with or fewer permanent teeth other than the first molars or incisors involved. The generalized form usually affects people under 30 years of age, although patients can be older. The attachment loss and bone destruction are typically episodic, affecting at least 3 permanent teeth other than the first molars and incisors.<sup>2</sup>

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 planing
4. Control of other local factors
5. Occlusal therapy, if necessary
6. Periodontal surgery, if necessary
7. Periodontal maintenance.

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ing and systemic administration of tetracycline, the bone defects were treated by access flap combined with application of platelet rich fibrin and alloplastic bone graft. Clinical and radiographic findings are reported for upto 8 months after initial therapy, indicating good efficacy of the therapeutic strategy and stability of the treatment outcome.

### CASE-REPORT

An apparently healthy 22-year old healthy female patient reported to the Department of periodontics and oral implantology, K.D. Dental College & Hospital, Mathura with the chief complaint of moving teeth in upper lower front region of mouth since 1 year. Occasionally bleeding from gums occurs while brushing. Patient also gave a family history of elder sister and mother losing their teeth at an early age due to mobility of teeth.

On clinical examination, the oral hygiene status of the patient was found with moderate gingivitis. Periodontal examination revealed periodontal pockets in multiple areas with deep pockets (ranging 6-9mm).

Investigations carried out were (i) Routine haematological investigations which were found to be within the normal ranges.

(ii) OPG showed 30% bone remaining in mandible and 50% bone remaining in maxilla.

Generalized horizontal bone loss, vertical bone loss wrt 22,35,36,37,45,46,47. Periapical radiolucency seen wrt 26, pathological migration wrt 11,21. Furcation involvement wrt 26,36,37,46,47.



FIG 1: CLINICAL APPEARANCE



FIG 2: PRE-OPERATIVE OPG

After 2 months of phase I therapy which included scaling, curettage and root planning; socket preservation using PRP and alloplastic bone graft was done wrt 11, 21, 31,32,41 and immediate RPD was given to the patient replacing the same teeth.



FIG 3: PRP MIXED WITH ALLOPLASTIC BONEGRAFT



FIG 4a: SOCKET PRESERVATION wrt 11,21

FIG 4b: SOCKET PRESERVATION wrt 11,21



FIG 5a: SOCKET PRESERVATION wrt 31,32,41  
FIG 5b: SOCKET PRESERVATION wrt 31,32,41



FIG 6a: IMMEDIATE REMOVABLE PARTIAL DENTURE GIVEN wrt 11,21,

FIG 6b: IMMEDIATE REMOVABLE PARTIAL DENTURE GIVEN wrt,31,32,41

After 20 days open flap debridement was done wrt 13,14,15,16,17. One month follow up revealed reduced pocket depth.





**FIG 7a: OPEN FLAP DEBRIDEMENT wrt 13,14,15,16,17**  
**FIG 7b: OPEN FLAP DEBRIDEMENT wrt 13,14,15,16,17**

After 1 month intracoronal composite wire splinting wrt 44,45,46,47 and then after 1 week open flap debridement was done.



**FIG 8: INTRACORONAL COMPOSITE WIRE SPLINTING wrt 44,45,46,47**



**FIG 9a: OPEN FLAP DEBRIDEMENT wrt 44,45,46,47**  
**FIG 9b: OPEN FLAP DEBRIDEMENT wrt 44,45,46,47**



After 2 motion procedure bone regeneration procedure was carried out wrt 36 by using resorbable GTR membrane and allopilastic bone graft.



**FIG 10: BONE REGENERATION PROCEDURE wrt 36**

After 6 months the full mouth condition was reviewed and fixed partial denture was given to the patient wrt 11,12,21,22,31,32,41,42. Mobility and pocket depth was found to be reduced.



**FIG 11: FPD PROVIDED TO THE PATIENT**



**FIG 12a: PREOP**  
**FIG 12 b: POSTOP AFTER COMPLETION OF ALL PROCEDURES**

**DISCUSSION**

The localized form of aggressive periodontitis predominantly affects the 1st molar 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.<sup>3</sup> 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 2nd premolar to the mesial surface of the 2nd molar.<sup>4</sup>

This young female presented with the major common features including non-contributory medical history, rapid attachment loss, bone destruction and familial aggregation.

In this process, trials evaluating the efficacy of PRP in combination with different regenerative materials can still add valuable information for the clinician in decision making regarding effective and predictable treatment alternatives for periodon-

tal regeneration especially in aggressive periodontitis patients which are difficult to manage clinically because of the destructive and progressive disease character seen in young individuals.

### CONCLUSION

The early diagnosis and the management of these cases can help oral clinicians to maintain the health and function of the permanent teeth and their surrounding structures.

### REFERENCES

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