

Generalised Aggressive Periodontitis

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ABSTRACT

Background

Patients suffering from aggressive periodontitis show typical features which make them distinguishable from chronic periodontitis. The rapid attachment and bone loss creates an alarming situation to both the dentist and the patient. However, correct diagnosis and proper treatment plan favours better outcome and prognosis. The key to success in cases of aggressive periodontitis is unequivocally early detection and early intervention. This paper reports a case of generalised aggressive periodontitis. A follow up of one year presents significant pocket depth reduction, clinical attachment gains and bone fill after non-surgical, endodontic, occlusal and surgical therapies.

Keywords: bone graft; generalised aggressive periodontitis; GTR; root resection.

INTRODUCTION

Aggressive periodontitis is “A disease of the periodontium occurring in an otherwise healthy adolescent, which is characterized by a rapid loss of alveolar bone around more than one tooth of the permanent dentition.”¹ The primary features include non-contributory medical history, rapid attachment loss and bone destruction and familial aggregation.² Generalised Aggressive Periodontitis affects persons less than 30 years, shows generalized interproximal attachment loss affecting at least three permanent teeth other than first molars and incisors, destruction of attachment and alveolar bone and poor serum antibody response to infecting agents.

CASE REPORT

A 24 year old male patient reported to the Department of Dental surgery, Periodontology and Oral Implantology Unit with the chief complain of pain in upper right back region of jaw since one month. He had visited a dental clinic one month ago and his sibling also complains of gum problems. He had non-contributory medical history. He was a smoker who smoked three cigarettes per week since one year. On intraoral examination, the amounts of microbial deposits was inconsistent with the severity of

destruction. There was presence of generalized deep pockets. Grade 3 Furcation involvement was seen in 16 and grade 2 in 36. Grade 2 mobility was observed in 16, 17, 26, 27, 47, 46. Fremitus test was positive in relation to 11 and 21.

The case was diagnosed as Generalised Aggressive Periodontitis. Scaling and root planing was done. Systemic antibiotics was administered. Root canal treatment was done in relation to 16, 36 and 46. Occlusal reduction was done in relation to 11 and 21. Extraction of 48 was done. The deep pockets in relation to 21, 22, 23 reduced significantly after six months of non-surgical periodontal therapy. Deep pocket in relation to 36 reduced significantly after six months of endodontic therapy. Other areas showed persistent deep pockets and were considered for surgery after the completion of Phase 1 therapy. In each of the surgeries, patient preparation was done with proper extraoral asepsis with 2% povidone-iodine, followed by intraoral pre-procedural 0.2% chlorhexidine rinses. Local anesthesia was administered. Crevicular incision was given with Bard Parker blade no.12. Labial and lingual mucoperiosteal flaps were raised for the advancement and mobility of the flap. Open flap debridement was done in 26. Root resection was planned in relation to 16. On surgical exposure, there

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was grade 3 furcation involvement with inadequate bone support in the distobuccal root. Proper outlines were planned for resection. The distobuccal root tip was resected (Figure 1) and removed.



Figure 1. Resection of distobuccal root.

Final root contours were established and osseous surgery was completed with hand and rotary instruments. Flaps were sutured with interrupted loop suture. Prosthesis was given to complete the treatment. The area was rendered accessible to oral hygiene aids and was well maintained after one year of the surgery. Deep periodontal pocket of 10 mm was found in mesio-buccal and mesiolingual aspect of 46. On surgical exposure, combined vertical defect (3 wall apically and 2 wall above) was observed. The defect was filled with demineralized xenogenic bone graft (Bio-Oss: Geistlich, Wolhusen, Switzerland). It was then covered with porcine derived collagen membrane (Bio-Gide, Geistlich, Wolhusen, Switzerland). The membrane was placed 3 to 4 mm apical to the margin of the defect, 2 to 3 mm laterally beyond the defect and 2 mm apical to the cemento-enamel junction. Flaps were sutured with interrupted loop suture (3-0 silk suture: Ethicon, Somerville, NJ) to achieve primary closure. Periodontal dressing was given. (Coe-pak: GC America, Chicago, IL, USA). The patient was prescribed analgesics (Ibuprofen 400 mg every 8 hours) or when needed and instructed to rinse with 0.2% every 12 hours for 14 days. Postoperative written instructions were given. Sutures were removed after seven days. In case of GTR with bone graft, suture was removed after 10 days. There was uneventful healing. There was significant pocket reduction in the

surgeries. Radiograph revealed significant bone fill.

Initial and final orthopantomograph shows significant positive outcome of the case (Figure 2) and (Figure 3).

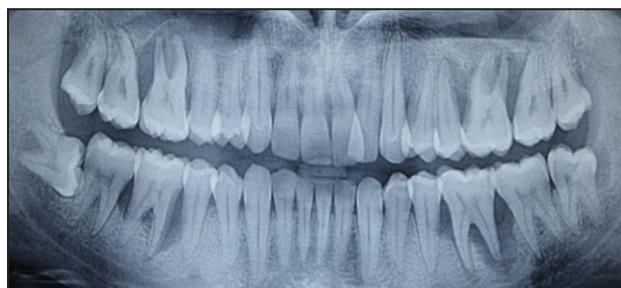


Figure 2. Pre treatment orthopantomograph.



Figure 3. Post treatment orthopantomograph.

DISCUSSION

Various treatment modalities are available for the treatment of aggressive periodontitis patients. This includes non-surgical therapy, surgical therapy, interdisciplinary therapy and maintenance and psychotherapy.³ Combination of various therapies is detrimental to accommodate a holistic approach for the welfare of the patient. Scaling and root planing is the initial step in every treatment. Generalised aggressive periodontitis cases respond well upto a period of 6 months. After this duration, relapse and disease progression is evident.⁴ Antibiotic regimen such as combination of amoxicillin and metronidazole offers better disease control and improvement in clinical parameters.⁵ Root resection is a reliable option for treatment of furcation involvement in maxillary molars. Survival of more than 90% has been recorded in a follow up period of 5-23 years.⁶ Flap surgeries is another simple, yet, predictable alternative. Clinical attachment level gain of 2.23 mm has been observed with percentage of stable sites being upto 95%.⁷ Combined use of collagen membrane and bone graft in cases of intraosseous defects show mean reduction in pocket depth of 3.3mm and CAL gain of 3.40

mm.⁸ GAP patients who smoke exhibit more affected teeth and more loss of clinical attachment than their non-smoking counterparts.⁹ Thus, smoking cessation should be advised and monitored at frequent intervals. GAP also shows genetic predisposition. Major genes are transmitted through an autosomal dominant pattern.¹⁰ In regard of this context, oral health of the family members and siblings should be questioned and if present, it must be treated immediately.

CONCLUSIONS

Multifactorial causation of aggressive periodontitis makes it rather challenging to understand and treat the disease process. Nevertheless, it is the relentless effort of the dentist and the patient that eases the aggressive behaviour of the disease.

Conflict of interest: None

Consent: Informed consent was taken for case report.

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