

AGGRESSIVE PERIODONTITIS: A CASE REPORT

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Abstract

Background: Aggressive periodontitis refers to the multifactorial, severe, and rapidly progressive form of periodontitis, which primarily but not exclusively affects younger patients. Aggressive periodontitis generally affects systemically healthy individuals less than 30 years of age, though patients may be older. At the “International Workshop for a Classification of Periodontal Diseases and Conditions” in 1999, the classification of periodontal diseases was revised (Armitage 1999). The various types of periodontitis were divided into three main categories (chronic, aggressive and necrotizing periodontitis) as well as into a periodontal, a manifestation of systemic diseases. Aggressive periodontitis is distinguished from chronic periodontitis by the age of onset, the rapid rate of destruction, composition of the subgingival microflora, alteration in the host immune response, familial aggregation of diseased individuals, and a strong racial influence. This article is about treating a case of aggressive periodontitis in a conservative manner by combining periodontal therapy and antimicrobial treatment.

Conclusions: 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 maintenance and frequent recall appointments. Finally, it is extremely important that male patient with generalized AgP 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.

Key words: Periodontitis.

Introduction

Aggressive periodontitis was formerly known as juvenile periodontitis. Aggressive periodontitis (AgP) is a particularly severe form of rapidly destructive inflammatory periodontal disease characterized by loss of periodontal attachment and bone, leading to early tooth loss.¹ AgP 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.² 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.³ The sites most commonly affected show insertion loss mostly in the area of first molars and incisors.⁴ Aggressive periodontitis displays a strong genetic influence and shows familial and racial aggregation.³ Periodontal inflammation increases the hydrostatic and hydrodynamic forces surrounding veins and tissues, resulting in dental displacement and malposition of teeth which can be seen as excursion or labial displacement of incisors leading to compromised esthetics of patient.⁵ Symptoms like tooth mobility, pathologic migration of central incisors, increased tooth sensitivity, pain during mastication, periodontal abscesses are commonly seen. These symptoms have physical, psychological and esthetical impact on the patients.³ In past, the prognosis of periodontally compromised teeth was considered very poor, so usually

the treatment was more concentrated on tooth extraction. Currently mechanical therapies with or without surgery, controlling plaque and local or systemic antimicrobial agents implementation have improved the prognosis of periodontally compromised teeth.⁶ This case report describes a case of aggressive periodontitis treated in a conservative manner by combining periodontal therapy and antimicrobial treatment in a 17 year old female patient to maintain dental integrity and to restore aesthetic and functional condition.

Case Report

A 17 year old female patient reported to the Department of Periodontology of Kothiwal Dental College & Research Centre, Moradabad with a chief complaint of loosening of teeth in her upper right back teeth region since six months. Her medical history appeared non-contributory, and she had no history of taking any medication, referred no allergies and had no history of episodic illness or orofacial trauma. There is no history of tobacco chewing or cigarette smoking or any other deleterious habit associated. The clinical oral examination revealed a full permanent dentition, heavy plaques and calculus accumulation, severe gingival inflammation gingival recession in maxillary and mandibular anterior region. Bleeding on probing was present mostly in the maxillary and mandibular anteriors. The panoramic X-ray revealed severe generalized horizontal bone resorption. The patient was referred for a complete medical evaluation to rule out any underlying

systemic disease. Her complete blood count was within normal limits, including blood sugar (random) and creatinine levels, coagulation factors, alkaline phosphatase levels. Neutrophils and lymphocytes were slightly elevated while there was marked rise in basophil was seen. Based on clinical examination history taken and radiological examination final diagnosis was made as Aggressive Periodontitis. The treatment started with ultrasonic scaling of both maxillary and mandibular arch and proper oral hygiene instruction was given in each appointment followed by conventional flap surgery and curettage for all the four quadrant under local anesthesia with 1:100,000 adrenaline. The patient was advised 500 mg Amoxicillin + 125 mg of Clavulanic acid and 400 mg Metronidazole three times a day (every 8 hours) for 7 days. Chlorhexidene therapy (0.2% 10 ml rinse twice a day) was also advised to the patient. Patient was recalled after 4 weeks, 3 months and 4 months for review and follow-up. In every visit pocket depth was measured using periodontal probe and oral hygiene instruction was given. Biofilm, plaque was removed and oral hygiene instructions were reinforced each time patients were seen. Her last follow-up OPG revealed good periodontal health with no bone loss. Last follow-up clinical examination also showed reduction in pocket depth from 5-7 mm to 2-3 mm. Patient overall periodontal health was satisfactory with no halitosis. For her regular follow-up was planned in every three month.



Discussion

This case report describes the treatment approach to Aggressive Periodontitis to help the patient in betterment of her oral condition. The most debilitating feature of the patient was mobility of her teeth due to bone loss. In this patient mild bone loss was seen in follow up visits after completion of treatment. The primary feature of

aggressive periodontitis include history of rapid attachment and bone loss with familial aggregation.⁷ Aggressive periodontitis can exist in two forms - Either localized or generalized. It is very important to diagnosis and differentiates between localized and generalized form of aggressive periodontitis. Localized periodontitis patients usually have interproximal attachment loss on either on atleast two permanent first molars and incisors, with attachment loss on no more than two teeth other than first molars and incisors. Generalized aggressive periodontitis patients exhibit generalized interproximal attachment loss including at least three that are not first molars and incisors.⁸ Aggressive periodontitis is seen mostly in circumpubertal age.⁸ Successful treatment of aggressive periodontitis depends on early diagnosis, directing therapy against the infecting microorganisms and providing an environment for healing that is free of infection.⁹ Chronic periodontitis is mostly seen in children and young adults.

Extent of destruction is related to the presence of local factors such as plaque, biofilm and microorganisms. Its progression is usually slow or moderate but its rate of progression can be modified by systemic conditions such as diabetes, smoking and stress.¹⁰ Treatment of Aggressive periodontitis include combination of surgical or non-surgical root debridement in conjunction with antimicrobial (antibiotic) therapy. Generalized aggressive periodontitis does not always respond well to conventional mechanical therapy or to antibiotics commonly used to treat periodontitis. In generalized aggressive periodontitis patients who have failed to respond to standard periodontal therapy, laboratory test of plaque samples may identify periodontal pathogens that are resistant to antibiotics typically used to treat periodontitis. The result achieved confirms that damage to bone can be controlled if active treatment begins once inflammation has been controlled. However it is also clear that failing to give special oral hygiene instructions or performing inadequate periodontal treatment will lead to further bone loss. This case report shows that surgical management along with antibiotic coverage helps in maintaining teeth with compromised periodontal health. Continuous controls and periodontal management is essential to achieve good result.

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 maintenance and frequent recall appointments. Finally, it is extremely important that male patient with generalized AgP 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.

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