

Idiopathic Gingival Fibromatosis with Aggressive Periodontitis : “ A Rare Case Report”

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Abstract: Idiopathic gingival fibromatosis is an uncommon, benign, hereditary condition with no specific cause. It is characterized by a slowly progressive, nonhemorrhagic, fibrous enlargement. It occurs either as an isolated disease or combined with some rare syndromes or chromosome disorders. Aggressive periodontitis comprises a group of rare, often severe, rapidly progressive forms of periodontitis often characterized by an early age of clinical manifestation and a distinctive tendency for cases to aggregate in families. The article highlights a rare case report exhibiting idiopathic gingival fibromatosis along with aggressive periodontitis. The diagnosis was based on a detailed clinical examination and case history recording, extensive haematological, microbiological and radiological investigation.

I. Introduction

Idiopathic gingival fibromatosis, is a benign, slow-growing proliferation of the gingival tissues with no definite cause; caused by several factors, such as inflammation, leukemia, drugs and inheritance.[1] Investigations are ongoing to establish the genetic linkage and heterogeneity associated with it. [2],[3] This condition may manifest as an autosomal dominant or, less commonly, an autosomal recessive mode of inheritance, either as an isolated disorder or as part of a syndrome[4],[5],[6],[7]. The condition is not painful until the tissue enlarges to partially cover the occlusal surface causing interference with maintenance of oral hygiene and mastication, esthetic, functional problem and some cases even distort the jaw. All these factors will further complicate the existing hyperplastic tissue. [8] Aggressive forms of periodontitis are currently considered to be multifactorial diseases that develop as a result of complex interactions between specific host genes and the environment. Various risk factors includes - familial aggregation, neutrophil functional defects, antibodies to specific bacteria, herpes virus infection, smoking and stress.[9] We report here an unusual case of gingival fibromatosis with aggressive periodontitis.

II. Case Report

A 21 Year old female patient reported to the Department of Periodontics with chief complaint of swollen gums & mobile teeth from the past 7-8 years. The clinical history revealed progressive enlargement over a period of 7-8 years with subsequent exfoliation of most teeth. General examination showed normal built and gait with no systemic abnormalities. There was no history of drug intake which could contribute to enlargement. Intraoral examination revealed generalized, gross, nodular enlargement of the gingiva involving upper and lower arches, which were pink in color, and had firm and fibrous consistency. The teeth were barely visible. {Figure 1}. Full mouth periodontal charting, including assessment of probing depths, clinical attachment level, revealed deep pockets (8-10 mm) throughout the mouth with multiple teeth with grade III mobility. An OPG revealed multiple impacted and missing teeth and generalized alveolar bone loss. Excisional biopsy using scalpel was done and subjected to histopathological examination (H&E staining). Parakeratinized highly proliferative stratified squamous epithelium with long slender rete ridges was found. Underlying connective tissue showed collagen fibers arranged in different directions and moderate degree of chronic inflammatory cell infiltration. {Figure 3}

A microbial culture was performed for the presence of periodontal pathogens like Porphyromonas gingivalis, Aggregatibacter actinomycetemcomitans and fusobacterium. Samples were taken from maxillary anterior site using paper points. Anaerobic microbial culture showed increased prevalence of P.gingivalis followed by Aggregatibacter actinomycete- mcomitans. {Figure 4 and 5} SEM study performed under 100X magnification showed altered or defective cementum which is indicative of aggressive periodontitis. {Figure 6} Neutrophil function test:- Nitro blue tetrazolium reduction test was done to assess the phagocytic ability of polymorpho nuclear leucocytic cells. The result was positive for 70% of patient's cells. Based on the above findings, diagnosis of Idiopathic gingival enlargement with generalized Aggressive periodontitis was made.

Treatment plan Full mouth gingivectomy using conventional surgical procedure. Amoxicillin 500 mg TID was prescribed for 8 days, extraction of teeth with hopeless prognosis was done with prosthetic rehabilitation with overdenture at a later stage. {Figure 7,8}

III. Discussion

The clinical expression of gingival fibromatosis is highly heterogenous . Gingival fibromatosis is frequently part of various syndromes, including Rutherford syndrome, Cross syndrome, Zimmerman-Laband syndrome.[10] The gingival enlargement results in both esthetics & functional problems. The most common effects are diastemas, malpositioning of teeth , prominent lips & open lip posture .[11] The results of the histopathologic evaluation of the biopsied tissues of the patient were consistent with those for fibrous gingival hyperplasia showing the presence of a thickened acanthotic epithelium with elongated rete ridges and densely arranged collagen bundles with numerous fibroblasts & chronic inflammatory cells.[12]

The results of Microbiological tests showed a higher number of Porphyromonas gingivalis , followed by Aggregatibacter actinomycetemcomitans . These microorganisms are found to be associated with aggressive periodontitis.[9] Gottlieb stated that there may be altered or defective cementum formation in cases of aggressive periodontitis .The results of SEM study showed defective cementum .[13] In this study NBT was used to analyze neutrophil function , which is an indicator of degree of activity in the enzyme system which are usually triggered by phagocytosis, ultimately resulting in bacterial killing. Results of this study were positive for 70% of our patient’s cells , indicating that a large proportion of population exhibit oxidative burst.[14],[15]

This patient was diagnosed as having generalized aggressive periodontitis with idiopathic gingival fibromatosis, based on her history, clinical findings and various laboratory investigations like microbiological , histological, SEM and NBT . The suggested treatment modality for Idiopathic gingival fibromatosis is Gingivectomy .[16] Amoxicillin 500 mg TID for 8 days was given as amoxicillin is found to be useful in the management of patients with aggressive periodontitis, in both localized and generalized forms. (17). after healing post surgical procedure patient underwent prosthetic rehabilitation. {Figure 7,8}

IV. Conclusion

This case highlights the unusual coexistence of non syndromic idiopathic gingival fibromatosis with generalized aggressive periodontitis. Diagnosis was based on clinical, radiographic, histopathologic, scanning electron microscopy & other diagnostic methods. However, further research is needed to establish a syndromic association between the 2 conditions based on genetic evaluation and linkage studies.

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Figure 1

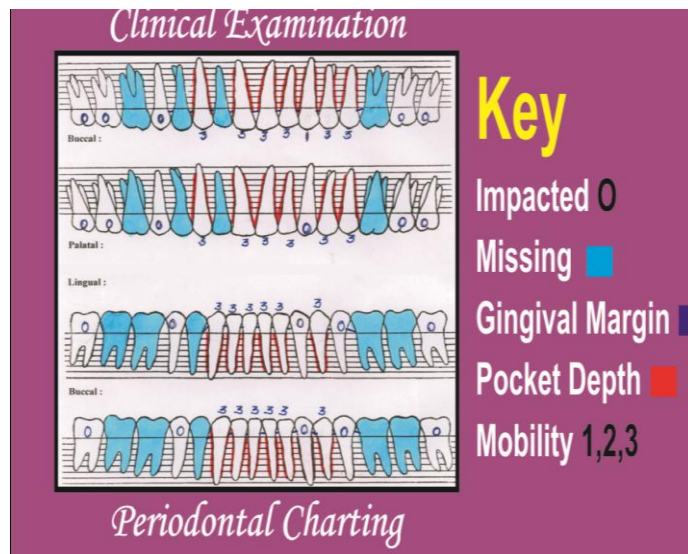


Figure 2

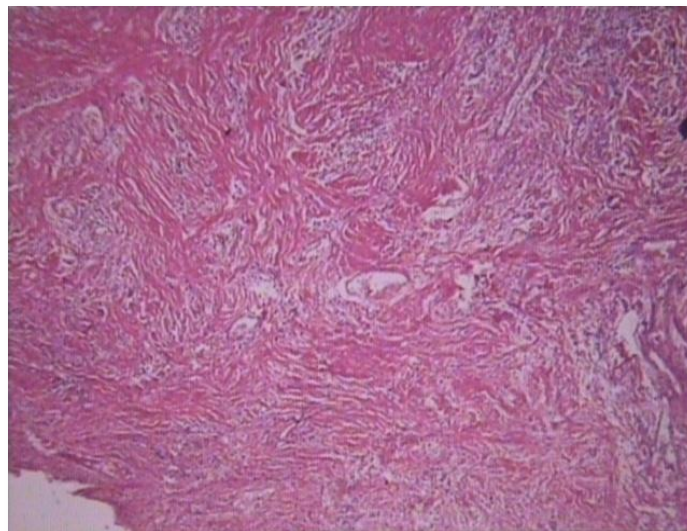


Figure 3



Figure 4



Figure 5

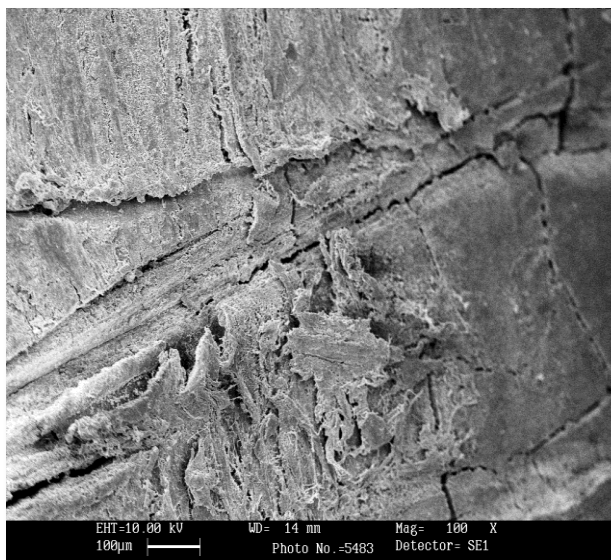


Figure 6



Figure 7



Figure 8