Case Report

Idiopathic Gingival Fibromatosis: A Case Report

Bharat Sharma, Archana Bhatia[1], Sandeep Kumar Bains[2], Nitin Gupta[3]

Department of Oral Medicine and Radiology, Swami Devi Dyal Hospital and Dental College, Panchkula, [1]Department of Periodontology and Oral Implantology Dasmesh Institute of Research and Dental Sciences, Faridkot, [2]Department of Oral Medicine and Radiology, Dasmesh Institute of Research and Dental Sciences, [3]Private practitioner, Moga, Punjab, India.

Corresponding Author:

Dr. Sandeep Kumar Bains
Department of Oral Medicine and Radiology,
Dasmesh Institute of Research and Dental Science, Faridkot (Punjab).
E mail: drsandeepk@yahoo.com

Received: 20-07-2013
Revised: 18-08-2013
Accepted: 27-08-2013

ABSTRACT

Hereditary gingival fibromatosis (HGF) is a rare condition that can occur as an isolated disease or as part of a syndrome or chromosomal abnormality. In severe cases, the gingival enlargement may cover the crowns of teeth and cause severe functional and esthetic concerns. Histological and cell culture studies have uncovered some of the molecular and cellular changes associated with HGF. However, the pathogenesis of the disease is still largely unknown. In this article, we report an unusual case of a non-syndromic, gingival fibromatosis associated with generalized aggressive periodontitis in 25 years old male patient reported to the department of Periodontics.

Keywords: Hereditary gingival fibromatosis, gingival enlargement, Aggressive periodontitis

This article may be cited as: Sharma B, Bhatia A, Bains SK, Gupta N. Idiopathic Gingival Fibromatosis: A case report. J Adv Med Dent Scie 2013;1(2):147-150.

Introduction

Hereditary gingival fibromatosis is a slowly progressive benign enlargement that affects the marginal gingiva, attached gingiva and interdental papilla[1]. This condition is usually part of a syndrome or, rarely, an isolated disorder. The gingival tissues are usually pink and non-hemorrhagic, and have a firm, fibrotic consistency[2, 3,4]. Aggressive periodontitis comprises another group of genetically inherited diseases that represent a severe and rapidly progressive form of periodontitis. 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.[5]

Case Report

A 25-year-old man reported to the outpatient department of Periodontics, Dasmesh Institute of Research and dental sciences, Faridkot (Punjab) with complaining of pain and swelling in the gums and an inability to chew food. Patient's history revealed that the enlargement of the gums was present since 10 years, and had gradually increased to the present size. It was associated with bleeding gums and difficulty in brushing his teeth, speaking and eating from past two years. He had stopped brushing his teeth since two months.

General physical examination revealed no systemic abnormalities. Patient appeared to

be physically, medically and mentally healthy. Two of his siblings and parents were examined, but there was no similar enlargement. Family history was void of any genetic disorders. There was no history of drug intake. Personal history was non-significant. It was the patient's first dental visit. Gingival examination revealed moderate-to-severe gingival overgrowth of a firm, dense and fibrotic consistency that involved both the maxillary and mandibular arches. Halitosis was present due the poor oral hygiene.

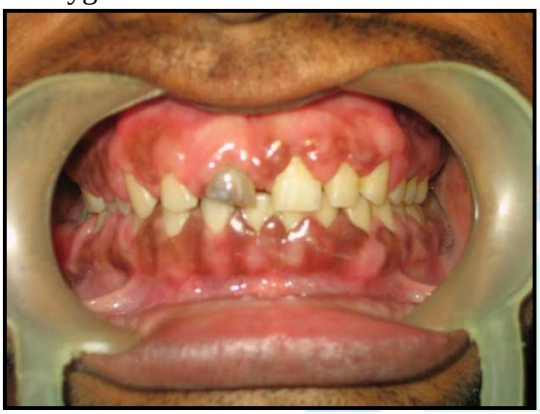

Figure 1: Intraoral photograph showing generalized gingival enlargement (Frontal view).

Full-mouth periodontal charting, including assessment of probing depth and clinical attachment level, revealed deep pockets throughout the mouth and scanty plaque and calculus deposits. Examination revealed generalized diffuse gingival enlargement extending till the middle thirds of the clinical crowns and the degree of gingival enlargement was scored as Grade III (Bokenkamp et al 1994)[4] (**Figure 1-3**).

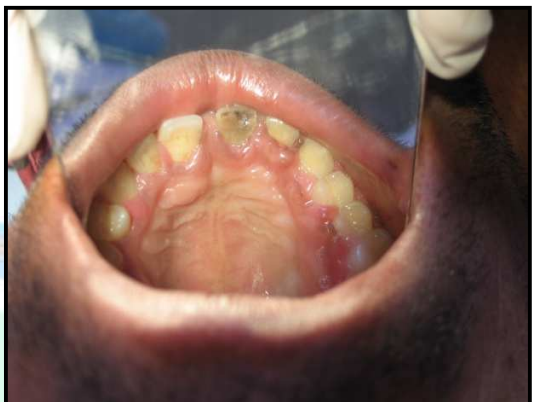

Figure 2: Gingival enlargement on palatal surface of gingiva on maxillary arch.

Figure 3: Gingival enlargement on palatal surface of gingiva on mandibular arch.

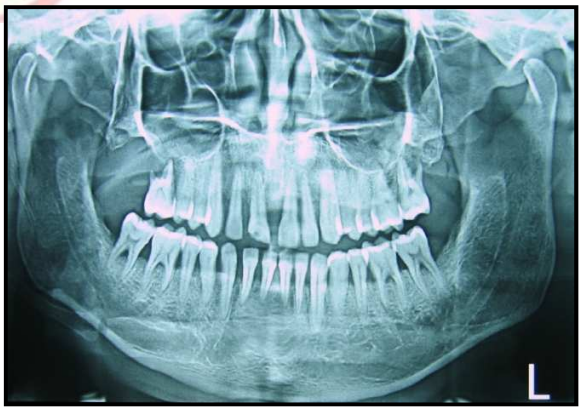

Figure 4: Panoramic radiograph of the maxillary and mandibular arches showing severe generalized alveolar bone loss.

The radiographic findings, which corroborated those of the clinical examination, revealed severe generalized alveolar bone loss (Figure 4). The peripheral blood results were normal and correlated with an absence of any history of systemic disease. The case was diagnosed as gingival fibromatosis with aggressive periodontitis based on the findings of clinical and radiographic examination. A treatment plan was devised for the patient, which included complete scaling and root planning followed by full-mouth internal beveled gingivectomy. The patient initially underwent phase I periodontal therapy that comprised scaling and root planing, oral hygiene instructions and adjunctive administration of systemic doxycycline (100 mg twice a day, on the first day, followed by 100 mg once a day for 14 days**)**. However the surgical excision could not be performed as the patient did not report for surgery, inspite of repeated motivation.

Discussion

The clinical expression of gingival fibromatosis is highly heterogeneous. Gingival enlargement may be generalized or localized to a specific area, typically the maxillary tuberosities and the labial gingiva around the lower molars. The constant increase in the tissue mass can result in delayed eruption and displacement of teeth, arch deformity, spacing, and migration of teeth.The condition is not painful until the tissue enlarges to partially cover the occlusal surface of the molars and become traumatized during mastication, which was observed in the present case. Due to massive gingival enlargement, an affected child usually develops abnormal swallowing pattern and experiences difficulty in speech and mastication. Along with these features, there may be some interference with the oral hygiene measures and normal mastication. All these will favor accumulation of materiaalba and plaque, which further complicates the existing hyperplastic tissue. Maintenance of good oral hygiene is very important[6]. Gingival fibromatosis can occur as an isolated condition or be associated with other diseases and syndromes and the involvement can be generalized or localized. The different forms can be classified as:[7]

1. Isolated HGF (generalized or localized);
2. Isolated IGF (generalized or localized);
3. GF with hypertrichosis;
4. GF with hypertrichosis and mental retardation and/or epilepsy;
5. GF with mental retardation and/or epilepsy; and
6. GF associated with other diseases as part of a syndrome

The present case has to be differentiated from the following disorders like Neoplastic gingival enlargement, drug induced gingival enlargement such as phenytoin, cyclosporine, or calcium channel blockers, gingival enlargement due to nutritional deficiency, gingival enlargement associated with certain syndromes, gingival enlargement due to systemic diseases and conditions, allergies (plasma cell gingivitis).However the clinical and systemic examination ruled out the diagnosis of Neoplastic enlargement. Gingival enlargement occurs in some patients taking certain drugs, such as phenytoin, cyclosporine and nifedipine. However this patient had not taken any of these drugs. The extensive enlargement suggested that the patient may have been suffering from syndromes associated idiopathic gingival fibromatosisie; Murray-Puretic-Drescher syndrome, Rutherford syndrome, Laband syndrome, Cross syndrome or Cowden syndrome or others. However general physical examination revealed no such syndromic associations.

Aggressive periodontitis is typically characterized by familial aggregation

because of evidence of genetic predisposition that was derived from segregation analysis of affected families. 21 Mendelianinheritance occurs, and autosomal (dominant and recessive) transmission and X-linked transmission have been proposed. Our patient had a diagnosis of generalized aggressive periodontitis with idiopathic gingival fibromatosis, based on his clinical findings and no history of familial aggregation.

A case of hereditary gingival fibromatosis associated with generalized aggressive periodontitis reported earlier indicated the possible emergence of a new syndrome, but no definite genetic linkage could be established. However, due the rare observation of these lesions concurrently, it is of interest both to clinician and basic scientists to study such cases in further detail.

Source of support: Nil
Conflict of interest: None declared

References

1.Coletta RD, Graner E. Hereditary gingival fibromatosis: A systematic review. J Periodontol 2006; 77: 753-764.
2.Wynne SE, Aldred MJ, Bartold PM. Hereditary gingival fibromatosis with hearing loss and supernumerary teeth–a new syndrome. J Periodontol 1995; 66:75-79.
3.RashiChaturvedi.Idiopathic gingival fibromatosis associated with generalized aggressive periodontitis:a case report. JADC; 2009:75:291-295.
4.Newmen Carranza. Textbook on clinical Periodontology.10th edition
5.Meng H, Xu L, Li Q, Han J, Zhao Y. Determinants of host susceptibility in aggressive periodontitis. Periodontol 2007; 43:133–59.
6.Arvind K S,H J Shah, Patil A V.Idiopathic gingival enlargement and its management-a case report. J Int Soc Periodontol 2010;14:263-265.
7.Pappachan B, Narayan JV, Nayak A. Idiopathic gingival fibromatosis—a neglected case. Indian J Radiol Imaging 2002;12:335-8.