IDIOPATHIC GINGIVAL FIBROMATOSIS: A CASE REPORT

ABSTRACT

Idiopathic gingival fibromatosis is a proliferative fibrous lesion of the gingival tissue that causes esthetic and functional problems. It is a gradually progressive benign enlargement that affects the marginal gingiva, attached gingiva and interdental papilla. It may be associated with other diseases/conditions characterizing a syndrome but this case report describes a case of nonsyndromic generalized idiopathic gingival fibromatosis in a 30 year-old female patient who presented with generalized gingival enlargement. Non-surgical periodontal therapy was performed which yielded functionally as well as esthetically satisfying results. The patient was regularly monitored clinically for improvement in his periodontal condition as well as for any recurrence of gingival overgrowth.

Key words: Gingival enlargement, Idiopathic gingival fibromatosis, non-surgical periodontal therapy.

INTRODUCTION

Gingival fibromatosis (GF) is a heterogeneous group of disorders characterized by progressive enlargement of gingiva caused by an increase in submucosal connective tissue elements. Massive gingival enlargement as well as interference in maintenance of oral hygiene and mastication favors accumulation of materia alba and plaque, which further complicates the existing hyperplastic tissue. Many cases are iatrogenic, some are inherited while others are idiopathic.

Among these, idiopathic gingival enlargement is a rare condition of undetermined cause and is designated as gingivomatosis, diffuse fibroma, idiopathic fibromatosis, hereditary gingival fibromatosis, familial elephantiasis.

Idiopathic gingival fibromatosis (IGF) is an uncommon, benign, hereditary, slowly progressive, nonhemorrhagic fibrous enlargement of keratinized gingiva. The hyperplastic gingival tissue is pale-pink, firm, has leathery consistency and presents a characteristic pebbled surface. Usually, these types of enlargements are associated with minimal local factors and minimal alveolar bone loss, however, there have been few reports on this rare lesion where it was associated with aggressive periodontitis and chronic periodontitis.

The condition has been classified into two types. Nodular form characterized by presence of multiple tumors in the
dental papillae and other form which is symmetrical resulting in uniform enlargement of gingiva and represents the most common type. There may be a combination of both types. The enlarged tissues may partially or totally cover the dental crowns, may cause diastema, delay or impede tooth eruption and periodontitis. In severe cases, it may lead to mastication and speech impediments or lip closure difficulties.

Treatment of idiopathic gingival enlargement depends on the severity of the enlargement. It may be treated conservatively with routine prophylaxis, irrigation, and mouthwashes or by surgical excision of the hyperplastic tissue to restore gingival contours. Idiopathic gingival enlargement recurs after surgical removal even after all local irritants have been removed. The enlargement can be at minimal size by preventing secondary inflammatory involvement.

Present case report highlights the unusual coexistence of nonsyndromic idiopathic gingival fibromatosis.

**CASE REPORT**

A 30 year old female patient reported to the department of Periodontology and Oral Implantology, Sri Guru Ram Das Institute Of Dental Sciences And Research, Sri Amritsar with the complaint of swollen gums. Patient noticed swollen gums 2 years back. Since it was asymptomatic, patient neglected it. The lesion started as a small painless, beadlike enlargement. As the enlargement progressed it resulted into a massive tissue fold covering considerable portion of the crowns, interfering with mastication. Besides these, no other complaint was present, such as pain. Patient’s past dental, medical and drug history were non-contributory. Further questioning revealed that none of her family members were affected with any form of gingival enlargement, nor was there any familial history of aggressive periodontitis, hypertrichosis, mental retardation, or epilepsy. All the parameters in the hematological investigations were within normal limits.

Intraoral examination revealed firm, dense and fibrotic gingival overgrowth involving the marginal, attached gingiva and interdental papillae of all teeth especially of maxillary arch. Moderate stains and calculus along with pathologic migration mainly in the maxillary anterior teeth was seen (Figure 1a,1b,1c).

The treatment plan was explained to the patient and written consent was obtained. After obtaining written consent supragingival scaling and root planing was performed which was followed by subgingival scaling and root planing. It was performed thoroughly sextant wise under local anesthesia (2% lignocaine with 1:2,00,000 adrenaline). Oral hygiene instructions were given and chlorhexidine gluconate 0.12% mouthwash was prescribed. Teeth with hopeless prognosis were extracted.

The patient was recalled every week for 6 weeks. The patient showed no evidence of recurrence during 6 months follow-up period (Figure 2a,2b,2c).

**DISCUSSION**

In referral to the period of onset, the overgrowth can be classified as pre-eruptive ( <6 month of age), during the deciduous dentition (from 6 months to 6 years), during the mixed dentition period (6–12 years), and during the
permanent dentition periods before (12–20 years) and after adolescence (age 20 or later)\(^9\).

Idiopathic gingival fibromatosis is an overgrowth of the gingiva characterized by an expansion and accumulation of the connective tissue with an occasional presence of an increased number of cells\(^5\).

It may result from a variety of genetic mutations, and therefore the clinical presentation of the condition differs. It can occur by either autosomal dominant or autosomal recessive inheritance or a new type of genetic mutations. To date, four loci for isolated HGF have been identified on chromosome 2 that is GINGF on 2p21-22 and GINGF3 on 2p22.3-p23.3; one on chromosome 5 that is GINGF2 on 5q13-5q22; and on chromosome 11, 11p15 specifically that is GINGF4. Of these, only one gene mutation has been identified in the son-of-sevenless-1 (SOS-1) gene while sequencing of the 16 known genes, which mapped chromosome 2p21-22 GINGF. This heterozygous mutation in SOS-1 gene was co-segregated with the disease in a Brazilian family\(^1\).

According to Gorlin et al. idiopathic gingival fibromatosis is most commonly associated with hypertrichosis, also occasionally associated with mental retardation and epilepsy. It occurs either as an isolated disease or combined with some rare syndromes like Zimmermann-Laband syndrome (defects of bone, nail, ear, nose and splenomegaly), Murray-Puretic-Drescher syndrome (multiple dental hyaline tumors), Rutherford syndrome (corneal dystrophy), Cowden syndrome (multiple hamartomas), and Cross syndrome (hypopigmentation with athetosis)\(^11\).

In the present case, the enlargement was not related to heredity, syndromes, mental retardation and epilepsy or intake of medication, conditions, or endocrine problems. Severity of gingival enlargement was not consistent with the amount of local factors present. The presence of local factors might be secondary to gingival enlargement, as massive gingival enlargement interferes with proper oral hygiene. Based on the history, clinical and radiographical examination, a diagnosis of idiopathic gingival enlargement was made.

In this case of idiopathic gingival fibromatosis, non-surgical periodontal had shown marked reduction in gingival enlargement within 2 months hence, no surgical periodontal treatment was conducted. Patient is being regularly monitored clinically and radiographically for improvement in her periodontal condition, as well as for any recurrence of gingival overgrowth. Long term follow up is required.

**CONCLUSION**

This report helps to highlight the importance of patient motivation and patient compliance in treatment planning. Oral hygiene education supplemented with positive motivation should be started at the initial stages of the treatment strategy in order to obtain predictable outcomes. Non-surgical approach can be considered as the primary management to reduce the gingival enlargement. If non-surgical treatment encounters a limitation, surgical treatment should be considered. Even though recurrence cannot be predicted, the psychological and functional benefits far outweigh the risk of recurrence. Oral hygiene and the superimposition of plaque accumulation have a crucial effect on the prognosis of gingival fibromatosis. As a consequence, successful treatment outcome is believed to relate to 2 sides of the same coin, necessitating the combined efforts of both the patient and the clinician.

**REFERENCES**