

IDIOPATHIC GINGIVAL FIBROMATOSIS: A CASE REPORT AND ITS MANAGEMENT

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ABSTRACT

Idiopathic gingival fibromatosis, also known as, gingival hyperplasia, is a rare condition affecting the oral cavity. It is nothing but the overgrowth of gingiva at some point of time leading to esthetic and phonetic problems. Herewith, we report a case of idiopathic gingival fibromatosis in a 43 year old male patient, highlighting differential diagnoses and its approach of management.

Keywords: Gingiva, fibromatosis, hyperplasia

J Odontol Res 2017;5(1)27-32.

Introduction:

Gingival overgrowth is a condition that results in esthetic, functional and masticatory disturbances in the oral cavity. Idiopathic gingival fibromatosis is the fibrous enlargement of the gingiva that has no definite cause¹. Various etiologies have been described for gingival enlargement such as poor oral hygiene, inadequate nutrition or systemic hormonal stimulation². The condition is also seen in several blood dyscrasias such as leukemia, thrombocytopenia or thrombocytopathy. The progressive fibrous enlargement of the gingiva is a facet for the condition³. Literature reports of various genetic linkage and heterogeneity associated with the condition⁴. The condition may manifest as an autosomal dominant or less commonly as an autosomal recessive mode of inheritance^{5,6}. It can occur either as an isolated disease or can be part of a syndrome⁷. Genetic linkage to the chromosome 2p21-p222 and 5q13-q22 is seen in autosomal dominant forms of gingival fibromatosis which are non syndromic^{8,9}.

Idiopathic form of gingival overgrowth is considered as gradually progressive benign enlargement that affects the marginal gingiva, attached gingiva and the interdental papillae. The condition usually overlies the tooth surfaces, thereby causing functional disturbances to the patient. Here we report a non syndromic case of Idiopathic gingival fibromatosis along with its management.

Case Report:

A 43 year old male patient named Mr. Sulaiman reported to our department with chief complaint of enlargement of gums noticed since 11/2 years. According to the patient, initially enlargement was small in size and gradually increased to the present size within a period of 1 year. He reported no reduction in size of the growth. It was not associated with any pain, bleeding or discharge. Patient reports of difficulty in mastication and speech due to the contact with tongue. Recently underwent extraction in the upper jaw tooth following which growth of gingiva was seen. Patients medical, family and personal histories were noncontributory. Extraoral examination revealed a dolicocephalic head with convex profile and incompetent lips.

Intraoral soft tissue examination revealed bulbous enlargement of the gingiva with respect to the maxillary arch (figure 1). Local examination of gingiva revealed generalized diffuse, bulbous enlargement seen on the posterior aspect of the jaw, compared to anterior half, that extends medially 0.5 cm away from the midline. Laterally it involves the free gingiva, attached gingiva and the interdental papillae. Color of the gingiva was slightly pale. Overgrowth covers almost 2/3rd of the crowns of posterior teeth. Surface of the mucosa appeared to be smooth and glossy. There were no signs of bleeding, erythema or any discharge. On palpation



Figure 1: Gingival Overgrowth of maxilla



Figure 2: Anterior half of maxilla



Figure 3: Posterior half of maxilla

inspectory findings were confirmed. Lesion was firm in consistency, non-tender & did not bleed on probing. Surface was smooth to palpate. There were no signs of bleeding or discharge upon palpation.

Differential diagnoses considered were

- (a) Inflammatory gingival enlargement- Here the lesion may be deep red in color. Enlargement will be soft and friable with a smooth shiny surface and tendency to bleed. There will be a life preserver-like bulge around the involved teeth. These all findings are negative for this case.
- (b) Hereditary gingival enlargement- There will be a positive family history for the patient. HGF starts at the time of active eruption of permanent dentition. Enlargement is maximum during adolescence but minimum during adult life.
- (c) Enlargements due to systemic diseases
 - Leukemia: Here the gingiva becomes soft, edematous and swollen. Appearance of gingiva is purplish & glossy. There will be symptoms of ulceration, pain & severe hemorrhage. There will be pallor in the surrounding mucosa.
 - Vit-C deficiency : Here the gingiva becomes tender, edematous and swollen. There is ulceration & necrosis of gingiva. Gingiva has a spongy consistency and bleeds frequently. The crest of interdental papillae appears red/purple.

The following investigations were carried out:-

1. Hematological investigations were done which showed that all values were within normal limits except for the RBC count which was slightly low.

Haemoglobin	13.4 gm%
Total count	5800 cells/cu.mm
ESR	10mm/1hr
RBC count	4.30 millions/cu.mm
Platelet count	2.33 akhs/cu.mm

2. Conventional radiographs were taken to check for any bony pathologies. Radiographs taken were panoramic radiograph and occlusal radiograph.

Panoramic radiograph showing normal anatomic hard tissue structures with multiple missing teeth and grossly decayed with respect to maxillary and mandibular arches. There are generalized interdental bone loss evident in maxillary & mandibular arches. It showed no bony involvement (figure 4) Maxillary true occlusal radiograph showing multiple missing teeth. There is no evidence of bony involvement (figure 5).

Multidetector computed tomographic scan was done to evaluate any bony involvement or erosions. It revealed evidence of soft tissue (gingival) thickening around the alveolar region of maxillary bone (figure 6) with few air pockets in the right infra temporal fossa, with no underlying bony erosions (figure 7).



Figure 4:
Panoramic radiograph showing no bony pathology



Figure 5:
Occlusal radiograph showing no bony pathology

3. MDCT scan (Advanced Imaging)

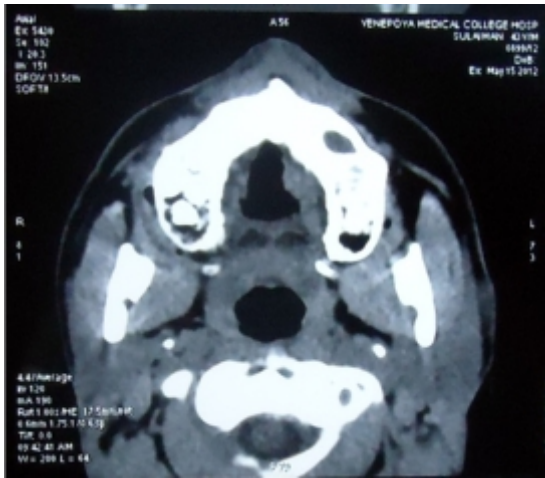


Figure 6: CT soft tissue profile (axial view) showing mucosal thickening



Figure 7: CT bony profile (coronal view) showing no bony involvement

Treatment:

A quadrant wise gingivectomy was performed under local anesthesia considering the size and extent of gingival overgrowth and periopack was placed followed by extraction of root stumps (figure 8,9). The



Figure 8: Gingivectomy done and periopack places (1st quadrant)



Figure 9: Gingivectomy done and periopack placed (2nd quadrant)

total masses of excised gingival tissue were sent for histopathological examination.

Histopathological report:

Incisional biopsy was carried out with respect to the posterior gingiva which revealed the presence of numerous collagen (mature and immature). Also revealed increased number of fibroblasts. Overlying epithelium exhibited tissue hyperplasia with various

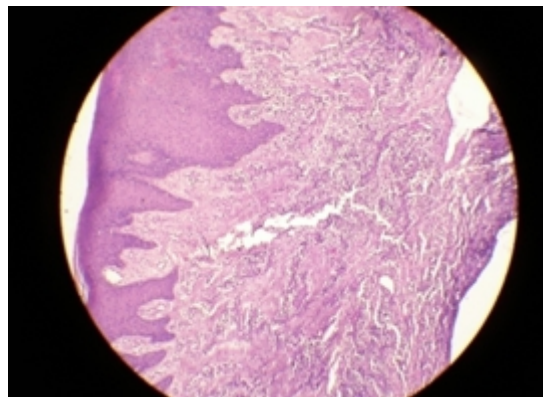


Figure 10: Histopathological picture



Figure 11: Healing after 2 months

degrees of chronic inflammation appreciated (figure 10). The patient was reviewed after 2 months (figure 11) and healing was satisfactory.

Discussion:

Gingival enlargement occurring within the oral cavity may affect single or both jaws¹⁰. The condition may vary from mild enlargement of the interdental papillae to segmental or uniform and marked enlargement¹². This case presents a non syndromic idiopathic gingival fibromatosis in a middle aged male patient. Patients family, medical and drug histories were non contributory, therefore, diagnosis of Idiopathic gingival fibromatosis was made. Various etiologies have been reported in literature (Table 1) for the development of gingival enlargement. Although the etiology of idiopathic gingival fibromatosis is unknown, it usually involves the proliferation of fibroblasts within the gingiva. The overgrowth response of gingiva does not involve the periodontal ligament but occurs peripheral to alveolar bone within the attached gingiva¹³.

Table 1: Causes of generalized gingival fibromatosis

Hyperplastic gingivitis
Mouth breathing gingivitis
Drug induced gingival overgrowth
Scurvy
Gingival overgrowth in pregnancy, leukemia
Hereditary gingival fibromatosis
Idiopathic gingival overgrowth

Literature suggest that fibromatosis gingiva affects the tooth eruption in early age, mastication and oral hygiene¹⁴. However, the present case was a middle aged old man who reported disturbed mastication and phonetics. Certain other cases reported atypical swallowing pattern in these patients¹⁵. Abnormal growth of gingiva may result in facial disfigurement which may be the complaint of most patients. Suggested treatment modality for idiopathic

gingival fibromatosis is gingivectomy¹⁶ which was done for the present case. High recurrence rate has been reported after surgery in case of gingival fibromatosis needs a close follow up. The present case is under follow-up every two months and the healing is satisfactory. In early age, surgical treatment should be carried out only after the eruption of complete set of permanent teeth¹⁷. Our patient was a middle age male, so the surgical treatment was carried out which was considered as the best approach. Histopathologically, fibromatosis shows a bulbous increase in the connective tissue which is avascular and has densely scattered collagen fibres, fibroblast cells and inflammatory infiltrate¹³ which was seen in the present case. After the treatment, patient was advised to maintain good oral hygiene and is under review.

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