Gingival Fibromatosis with Chronic Periodontitis – A Rare Case Report

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Abstract: Gingival fibromatosis is frequently an isolated condition of little consequence apart from a cosmetic problem and occasional associations with uncommon syndromes. This case report of a 38 year old female patient describes the gingival enlargement associated with chronic periodontitis. The enlargement extended beyond the middle thirds of the clinical crowns of the teeth. It was associated with generalized mobility, pocket formation and bone loss. The patient also complained of bleeding gums and difficulty in speech and mastication. This is the first case report of gingival fibromatosis associated with chronic periodontitis.

Key words: Bleeding gums, chronic periodontitis, gingival enlargement, gingival fibromatosis, mobility, pocket formation.

Introduction

Gingival enlargement is the overgrowth of the gingiva characterized by an expansion and accumulation of the connective tissue with occasional presence of increased number of cells. It is caused by several factors, such as inflammation, leukemia, drugs and inheritance.[1]

The most common forms of gingival enlargement are induced by systemic drugs, including the antiseizure drug phenytoin, the immunosuppressor cyclosporine, and nifedipine, the calcium channel-blocker with antihypertensive activity.[2]

The inheritance condition in which the gingival tissue spontaneously and progressively enlarges is identified as hereditary gingival fibromatosis (HGF).[1] Idiopathic gingival fibromatosis, a benign, slow-growing proliferation of the gingival tissues, is genetically heterogeneous. This condition is usually part of a syndrome or, rarely, an isolated disorder.[3]

We recently experienced an unusual case of gingival fibromatosis. Clinically this patient showed extensive gingival enlargement associated with generalized chronic periodontitis.

Case Report

A 38 year old female patient reported to the Department of Periodontics with the complaint of swollen bleeding gums.

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 her teeth, speaking and eating from past two years. She had stopped brushing her teeth since 3 months. She also complained of loose teeth from past one year.

General physical examination revealed no systemic abnormalities. Patient appeared to be physically, medically and mentally healthy. 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.

On extra-oral examination, incompetency of lips was observed. Lymph nodes were palpable and tender. On intra-oral examination, no abnormality was detected. Halitosis was present due the poor oral hygiene. Gingival bleeding index[4] showed 100% sites with positive scores. Gingival index score[4] was 3.0 (severe gingivitis). Russell's periodontal index score[4] was 5.65 (terminal disease). The degree of gingival enlargement was scored as Grade III.[4]

Examination of gingival status revealed generalized diffuse gingival enlargement extending till the middle thirds of the clinical crowns and obliterating the vestibular depth (Figure 1-5). Gingiva was reddish-pink in color, firm in consistency with the presence of stippling (except in upper and lower right canine-premolar region). Bleeding on probing and exudation was seen.

Examination of periodontal status revealed generalized pockets and mobility.

After thorough oral prophylaxis (Figure 6), a conservative excisional biopsy was carried out under

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local anesthesia and the excised tissue was sent for histopathological examination.

Histopathologic examination revealed a parakeratinized highly proliferative stratified squamous epithelium (a in Figure 7, 8) with long slender reteridges (b in Figure 7, 8). Underlying connective tissue was fibrous (c in Figure 7, 8) with relatively few fibroblasts and dense bundles of collagen fibers arranged in different directions. A moderate degree of chronic inflammatory cell infiltration (d in Figure 7, 8) chiefly lymphocytes and plasma cells was seen diffusely spread (Figure 7 [magnification 40X], Figure 8 [magnification 10X]). Radiographic examination revealed generalized alveolar bone loss (Figure 9).

The case was diagnosed as gingival fibromatosis with chronic periodontitis based on the findings of clinical, histopathological and radiographic examination. A treatment plan was devised for the patient, which included extraction of grade III mobile teeth followed by full-mouth internal beveled gingivectomy. The extracted teeth were to be replaced later. 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.[1] The gingival enlargement results in both aesthetic and functional problems. The most common effects are diastemas, malpositioning of teeth, cross and open bites, prominent lips and open lip posture.[5] The generalized gingival enlargement affecting aesthetics, causing diastemas, open lip posture and malpositioning of teeth was present in this case.

Histologic features of gingival fibromatosis has been focused on the connective tissue alterations which showed an increased amount of collagen fiber bundles running in all directions associated with few fibroblasts and the epithelium showing elongated retepegs.[6] This histologic feature was noted in the present case.

Co-existence of gingival fibromatosis with aggressive periodontitis has been reported.[1,7] This patient exhibited chronic periodontitis characterized by abundant calculus deposits, pocket formation, mobility and bone loss. This is the first case report of gingival fibromatosis with chronic periodontitis.

Although the etiologic factors responsible for the unusual enlargement may have differed from those responsible for the alveolar bone loss, it is likely that such a condition could have been caused by a number of interrelated factors; i.e., some unknown conditioned factors, as well as periodontopathic infection.

Summary

Isolated forms of gingival fibromatosis are compatible with a normal life span, but the esthetic and dental-associated alterations can considerably reduce the quality of life and may result in serious emotional and social problems and functional impairment. A multidisciplinary approach is hence needed in the management of these cases so as to minimize the recurrence and improve the quality of life, providing better esthetics and minimizing functional impairment.

REFERENCES

1. Coletta RD, Graner E. Hereditary gingival fibromatosis: A systematic review. J Periodontol 2006; 77: 753-764.
2. Dongari-Bagtzoglou A. Drug-associated gingival enlargement. J Periodontol 2004; 75: 1424-1431.
3. Chaturvedi R. Idiopathic gingival fibromatosis associated with generalized aggressive periodontitis: A case report. J Can Dent Assoc 2009; 75: 291-295.
4. Newman MG, Takei HH, Carranza FA. Carranza's clinical periodontology. 9th edition. Saunders, Philadelphia 2003; 279-296.
5. Baptista IP. Hereditary gingival fibromatosis: A case report. J Clin Periodontol 2002; 29: 871-874.
6. Araujo CS, Graner E, Almeida Op, Sauk JJ, Colette RD. Histomorphometric characteristics an expression of epidermal growth factors and its receptors by epithelial cells of normal gingiva and hereditary gingival fibromatosis. J Periodontol Res 2003; 38: 237-241.
7. Casavecchia P, Uzel MI, Kantari A, Hasturk H, Dibart S, Hart TC, et al. Hereditary gingival fibromatosis associated with generalized aggressive periodontitis: A case report. J Periodontol 2004; 75: 770-778.

Figure 1: Intra-oral photograph: Frontal view showing diffuse gingival enlargement extending till the middle thirds of the clinical crowns and obliterating the vestibular depth.

Figure 2: Intra-oral photograph: Left Lateral view showing diffuse gingival enlargement.

Figure 3: Intra-oral photograph: Right Lateral view showing diffuse gingival enlargement.

Figure 4: Intra-oral photograph: Palatal view showing increase in bucco-lingual width of gingiva.

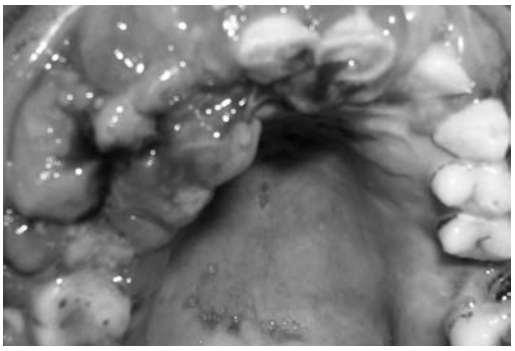

Figure 5: Intra-oral photograph: Lingual view showing increase in bucco-lingual width of gingiva.

Figure 6: Intra-oral photograph: After scaling- Frontal view showing considerable decrease in the size of the diffuse gingival enlargement.

Figure 7: Microscopic View of the biopsied tissue showing parakeratinized highly proliferative stratified squamous epithelium (a) with long slender reteridges (b), fibrous connective tissue (c) and chronic inflammatory cell infiltration (d). Level of magnification is 40X.

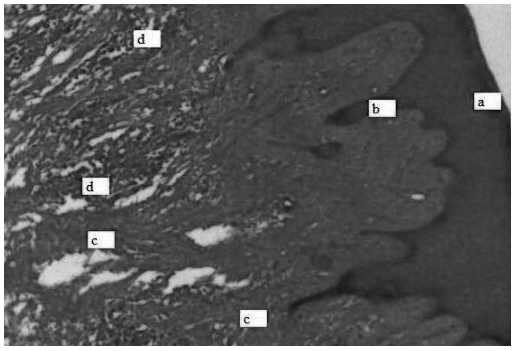

Figure 8: Microscopic View of the biopsied tissue under magnification of 10X.

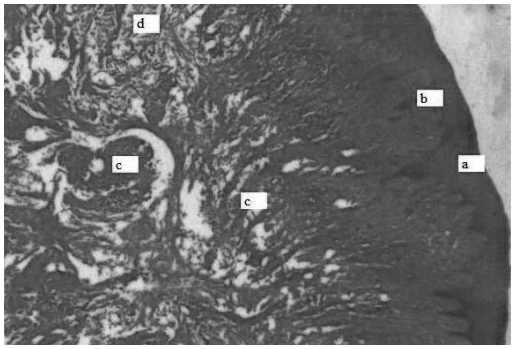

Figure 9: Radiographic view showing generalized alveolar bone loss