An unusual case of idiopathic gingival fibromatosis

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Abstract

Idiopathic gingival fibromatosis is a condition of undetermined cause that can develop as an isolated disorder, but mostly it is associated with some syndrome. It usually begins at the time of eruption of permanent teeth but can develop with the eruption of deciduous dentition and rarely present at birth. Case report describes an unusual case of non-syndromic generalized idiopathic gingival fibromatosis in a 15-year-old male present since birth. Surgical treatment in the form of ledge and wedge procedure with internal bevel gingivectomy was performed. No recurrence of enlargement was seen after 2 years of follow-up.

Keywords: Gingival enlargement, gingival fibromatosis, gingival hyperplasia, ledge and wedge

Introduction

Idiopathic gingival fibromatosis is a rare, benign, asymptomatic, non-hemorrhagic, and non-exudative proliferative lesion of gingival tissue. It is a condition of undetermined cause and hence is designated as “idiopathic.” It usually begins at the time of eruption of permanent teeth but can develop with the eruption of deciduous dentition and rarely present at birth.

Gingival fibromatosis may manifest either as the nodular form or the symmetric form resulting in the uniform enlargement of the gingiva and represents the most common type. The hyperplastic gingiva in idiopathic gingival fibromatosis usually presents a normal color and has a firm consistency with abundant stippling. Gingival enlargement can be generalized or localized. The idiopathic gingival enlargement may occur alone or as part of a syndrome which include autosomal-dominant (Laband, Rutherford) or autosomal-recessive syndromes (Cross, Murray-Puretic-Drescher, Ramon).

Treatment depends on the severity of enlargement. Minimal enlargement is treated through scaling of teeth and home care whereas overgrowth of tissues needs to be surgically removed. Various treatment modalities include external or internal bevel gingivectomy with gingivoplasty, electrocautery and carbon dioxide laser.

This case report highlights a non-syndromic case of severe generalized idiopathic gingival fibromatosis present since birth in which surgical intervention in the form of ledge and wedge procedure was done resulting in remarkable improvements in aesthetic and function.

Case Report

A 15-year-old male patient accompanied by his father reported to the Department of Periodontics with a chief complaint of enlarged gums in upper and lower arches which caused difficulties in speech, mastication, and complete closure of lips, thereby leading to esthetic impairment.

History revealed that enlargement was present since birth and has progressed slowly since then. He did not appear to have any mental impairment and his weight and height were within normal limits. His medical and family history was also non-contributory.

Intraoral examination revealed generalized severe gingival overgrowth involving both the maxillary and mandibular arches [Figure 1]. The enlarged gingiva totally or partially covered the crowns of permanent teeth with only the incisal and occlusal surfaces visible. The gingiva was firm, dense, and fibrous in consistency. No bleeding and suppuration were noticed. Pseudopockets ranging from 7 mm to 10 mm were observed. Malpositioning of teeth was also noted. Orthopantomograph revealed presence of retained deciduous canine in maxillary left region [Figure 2a].

Treatment consisted of sextant-by-sextant surgical excision of the enlarged gingiva under local anesthesia. Transgingival probing revealed the bony overgrowths on the buccal aspects of mandibular posterior region, which was subsequently confirmed with the surgical exposure. Internal bevel gingivectomy was performed on the buccal/labial aspects...
of both arches. Ledge and wedge procedure was done to remove gingival overgrowth over the palatal aspect of maxillary posterior region. On the mandibular posterior region, ledge and wedge procedure combined with internal bevel gingivectomy followed by ostectomy and osteoplasty was done in order to remove the overgrowth of bone wherever present. The excised tissue [Figure 2b] was sent for histopathological examination. Patient was recalled after 1 month for check-up. Gingivoplasty was performed quadrant wise under local anesthesia during four sittings over 4 consecutive weeks. Patient was asked to maintain good oral hygiene.

Histopathology of the excised gingival tissues showed a bulbous increase in the amount of connective tissue that was relatively avascular and consisted of densely arranged collagen bundles and numerous fibroblasts. The surface epithelium was thickened and acanthotic with elongated rete pegs [Figure 2c]. All these features are consistent with idiopathic gingival fibromatosis. Recall appointments were
scheduled after every 6 months and after 2 years of follow-up no recurrence of enlargement was seen [Figure 3].

Discussion

Gingival fibromatosis may occur as an inherited condition known as hereditary gingival fibromatosis or it may be associated with inflammation, leukemic infiltration and use of medications such as phenytoin, cyclosporine, and calcium channel blockers. In the present case, family history was negative and no other identifiable cause could be found out. Furthermore, the patient’s weight, height, and psychomotor development were considered to be within normal limits for his age. Hence, the case was diagnosed as a non-syndromic case of idiopathic gingival fibromatosis.

The enlargement is most intense during loss of deciduous teeth or in early stages of eruption of permanent teeth. It is rarely present at birth or arises in adulthood. The age of onset is divided into the pre-eruptive period (<6 months), deciduous dentition period (6 months to 6 years), mixed dentition period (6-12 years), permanent dentition before adolescence (12-20 years), and permanent dentition after adolescence (>20 years). In our case, history revealed that the enlargement was present since birth.

There is no consensus among authors regarding the exact time when surgery should be accomplished. According to several authors, the best time is when all of permanent dentition has erupted, because the risk of recurrence is higher before it. When patient reported to us at 15 years of age, seeing the severity of the condition we decided to go for surgical intervention since the child presented with good general health, exhibited normal bone and root formation, and was cooperative.

Among the suggested treatment protocols, ledge and wedge technique along with internal bevel gingivectomy was selected as it helps in eliminating the guesswork involved with placement of primary incisions as opposed to the conventional external bevel gingivectomy procedure. Moreover, this procedure does not leave a large external bevel and therefore result in less post-operative pain and bleeding.

Also, this technique allows the reflection of conventional flap to permit access to the underlying bone for resective osseous surgery.

Recurrence following surgical intervention is unpredictable. It is most commonly seen in children and teenagers rather than adults. Recurrence is minimal or delayed if good oral hygiene is achieved by a combination of monthly examinations with professional cleaning and oral hygiene instructions. Benefits of surgical intervention are well-known to improve patient’s quality of life since removal of hyperplastic gingival tissue eliminates difficulties in eating and speaking, improves access for plaque control, and leads to psychological benefits due to esthetic improvement. In our case, even after 2 years of follow-up, no recurrence of gingival overgrowth was observed.

References

1. Bittencourt LP, Campos V, Moliterno LF, Ribeiro DP, Sampaio RK. Hereditary gingival fibromatosis: Review of the literature and a case report. Quintessence Int 2000;31:415-8.
2. Ramer M, Marrone J, Stahl B, Burakoff R. Hereditary gingival fibromatosis: Identification, treatment, control. J Am Dent Assoc 1996;127:493-5.
3. Bozzo L, de Almedia OP, Scully C, Aldred MJ. Hereditary gingival fibromatosis. Report of an extensive four-generation pedigree. Oral Surg Oral Med Oral Pathol 1994;78:452-4.
4. Gorlin RJ, Cohen MM, Levin LS. Syndromes with gingival/periodontal components. In: Syndromes of the Head and Neck. 3rd ed. New York: Oxford University Press; 1990. p. 847-58.
5. Coletta RD, Graner E. Hereditary gingival fibromatosis: A systematic review. J Periodontol 2006;77:753-64.
6. Anderson J, Cunliffe WJ, Roberts DF, Close H. Hereditary gingival fibromatosis. Br Med J 1969;3:218-9.
7. Emerson TG. Hereditary gingival hyperplasia. A family pedigree of four generations. Oral Surg Oral Med Oral Pathol 1965;19:1-9.
8. McDonnell HT, Mills MP. Principles and practice of periodontal surgery. In: Rose LF, Mealey BL, Genco RJ, Cohen DW, editors. Periodontics Medicine, Surgery, and Implants. St. Louis: Mosby; 2004. p. 509-10.
9. Kelekis-Cholakis A, Wiltshire WA, Birek C. Treatment and long-term follow-up of a patient with hereditary gingival fibromatosis: A case report. J Can Dent Assoc 2002;68:290-4.

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