Hereditary gingival fibromatosis and its management: 2-year follow-up

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Abstract

Hereditary gingival fibromatosis (HGF) is a rare hereditary condition characterised by slow, progressive, nonhemorrhagic, fibrous enlargement of gingiva caused by increase in sub-mucosal connective tissue component. This paper presents a case report of a 14-year-old male suffering from HGF with positive family history. After thorough clinical examination, routine blood investigation was advised. All the parameters were within normal physiological limits. Surgical excision of enlarged gingival mass was planned after meticulous scaling and root planning. Patient was recalled 1-week after surgery. Postoperative healing was good and desired crown lengthening was achieved with significant improvement in speech and masticatory problems. There was no recurrence of the disease even after 2 years follow-up.

Keywords: Benign lesion, crown lengthening, gingival fibromatosis

Introduction

Hereditary gingival fibromatosis (HGF) first reported by Goddard and Gross in 1856[1] is a rare, benign, nonhemorrhagic, fibrous enlargement of gingiva. It seems to be a slowly progressive keratinized gingival overgrowth with various degrees[2] and it is genetically heterogeneous and can occur in either autosomal dominant (common) or recessive forms.[3] HGF can potentially interfere with speech, lip competence and mastication resulting in both esthetic and functional problems.[4] This condition is generally diagnosed alone or occasionally in association with a number of syndromes, such as Zimmerman-Laband syndrome, Rutherford, and Ramon syndromes.[5] Since exact etiology and pathogenesis of HGF has not been yet established, therefore, there is a need for further research regarding genetic inheritance of HGF. Attempts should also be made to find out various preventive measures and implementation of different treatment modalities to limit or eradicate HGF and associated complications such as esthetics, speech and functional problems as much as possible.

Case Report

A 14-year-old male [Figure 1], accompanied by his parents, reported with the complaint of swollen gums, presented with gradual and progressive gingival enlargement of both jaws from the age of 7 years [Figure 2a-c]. The enlargement had led to incompetent lips, poor esthetics and also hindered speech and mastication. Intra-oral examination revealed fibrotic enlargement of gingiva involving both upper and lower arches. The gingiva was pink in color with superimposed melanin pigmentation. Generalized pseudo pocket were observed with no bleeding on probing. The patient did not report of any positive drug history. His current health condition and mental state were considered normal. During the evaluation of his family history, the patient’s mother demonstrated similar intra-oral features in the form of gingival enlargement, involving to various extents, the maxilla as well as the mandible with no syndromic association [Figure 3]. Biopsy sample was taken and sent for histopathological examination showing stratified squamous epithelium with long slender rete pegs, connective tissue and dense collagen stroma [Figure 4]. On the basis of the histopathological findings and positive family history the diagnosis of “HGF” was made with no syndromic association. In the treatment enlarged, gingival overgrowth was surgically removed [Figure 5a and b] (gingivectomy) and patient was referred to department of orthodontics and dento-facial orthopedics for correction of malocclusion.

Postoperative healing was good and desired crown lengthening was achieved. Patient’s speech and masticatory problems were completely resolved with gain of adequate functional ability. Esthetics was significantly improved in terms of gingival appearance after surgical excision of hypertrophied gingival tissue. Patient was put in the follow-up program at 1, 3, 6 months interval followed by after 1 and 2 years. There was no recurrence of the disease even after 2 years follow-up [Figure 6a-c].

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Syndromes that have been occasionally associated with HGF are Zimmerman-Laband syndrome (defects of bone, ear, nail and nose, accompanied by hepatosplenomegaly), Murray-Puretic-Drescher syndrome (multiple dental hyaline tumors), Rutherfurd syndrome (corneal dystrophy),
Cowden syndrome (multiple hamartomas) and Cross syndrome (hypopigmentation with athetosis). In this case, a thorough evaluation of the patient revealed no association with any of the clinical features associated with the above syndromes.

The present case reported as HGF. HGF is transmitted as either autosomal dominant or recessive. This case is diagnosed as gingival fibromatosis due to hereditary and autosomal dominant with occurrence of enlargement in successive generation from mother to son and support with other evidence by histopathological findings.

Various types of treatment modalities have been employed for the excision of the enlarged gingival tissues, including of conventional surgery, electrosurgery, an apically positioned flap and lasers.

In the present case, surgery was performed quadrant-by-quadrant internal bevel gingivectomy done.

Reports about recurrence rates are contradictory so the postoperative long-term benefit of periodontal surgery cannot be predicted. Some reports in severe cases of HGF, full-mouth-tooth clearance has been advocated, and they suggest that the condition does not recur if the teeth have been extracted. In the literature, one case has been reported that there is less chance of recurrence if the gingivectomy is delayed until the permanent dentition is in place. In our case report, there was no recurrence of the disease even after 2 years follow-up.

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