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Long-term Uncontrolled Hereditary Gingival Fibromatosis: A Case Report

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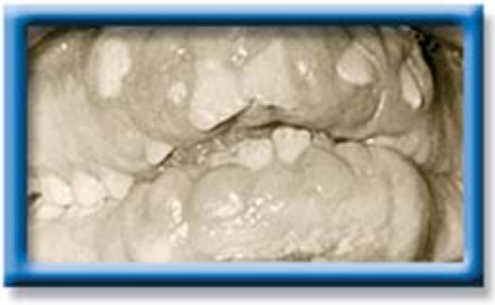

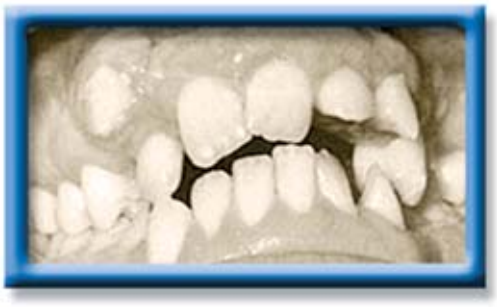

Abstract

Hereditary gingival fibromatosis (HGF) is a rare condition characterized by varying degrees of gingival hyperplasia. Gingival fibromatosis usually occurs as an isolated disorder or can be associated with a variety of other syndromes.

A 33-year-old male patient who had a generalized severe gingival overgrowth covering two thirds of almost all maxillary and mandibular teeth is reported. A mucoperiosteal flap was performed using interdental and crevicular incisions to remove excess gingival tissues and an internal bevel incision to reflect flaps. The patient was treated 15 years ago in the same clinical facility using the same treatment strategy. There was no recurrence one year following the most recent surgery.

Keywords: Gingival hyperplasia, hereditary gingival hyperplasia, HGF, hereditary disease, therapy, mucoperiostal flap

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Introduction

Hereditary gingival fibromatosis (HGF), also known as elephantiasis gingiva, hereditary gingival hyperplasia, idiopathic fibromatosis, and hypertrophied gingival, is a rare condition (1:750000)[1] which can present as an isolated disorder or more rarely as a syndrome component.[2,3] This condition is characterized by a slow and progressive enlargement of both the maxillary and mandibular gingiva.[2] Males and females are equally affected.[3] Most cases of HGF appear to be inherited in an autosomal-dominant manner,[4,5] although autosomal recessive inheritance has been reported.[6-8] The hyperplastic gingiva presents with normal color, has a firm consistency, and an abundance of stippling of the attached gingiva.[6] Buccal and lingual tissues may be involved in both the maxilla and mandible.[2,3] The degree of enlargement may vary from mild to severe and may be the same between individuals within the same family.[5,6] Most cases are seen from birth, but the condition may not be noticed until later childhood at the time of eruption of the deciduous or permanent teeth.[2]

This condition may appear as an isolated disorder, but in some cases it is associated with other conditions such as hypertricosis and epilepsy or with syndromes such as Zimmerman-Laband, Murray-Puretic-Drescher, Cowden's syndrome, and Cross syndrome.[2,3]

The histological appearance of HGF tissues are composed mainly of dense connective tissue rich in collagen fibers, and the epithelium is dense and hyperplastic with long rete pegs. Occasionally dystrophic calcification, ulceration of the overlying mucosa and inflammation can also be seen.[2]

This report presents the clinical features and dental management of a 33-year-old male patient with HGF over a period of 15 years with periodic recall exams during the first two years; this patient's HCF has been uncontrolled for the last 13 years.

Case Report

A 33-year-old man was referred to the Department of Periodontology of the Faculty of Dentistry at the University of Hacettepe in Ankara, Turkey with a complaint of recurrent generalized gingival overgrowth. The patient had presented himself for examination at the same clinic with the same complaint 15 years ago. At that time, he was treated with full-mouth periodontal surgery after the diagnosis of HGF had been made following clinical and histological examination (Figures 1 A-B).

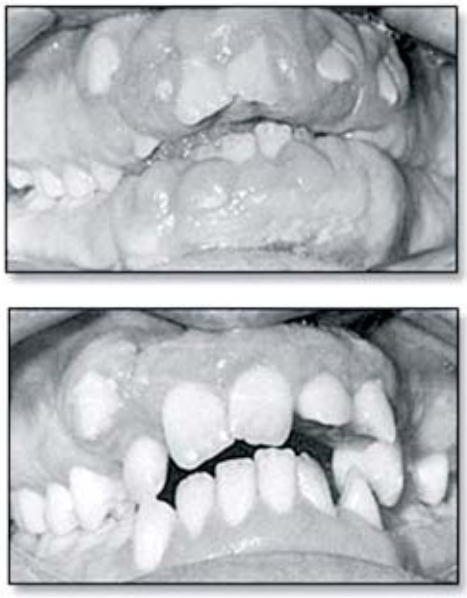

Figure 1. A. Severe gingival hyperplasia 15 years ago. **B.** Intraoral appearance postoperative 15 years ago.

The patient returned periodically for observation and two years after the periodontal surgery there was no recurrence. The patient did not return for professional care for 13 years in which his condition was uncontrolled. Teeth #13 and #44 (FDI System) were extracted by another dentist, but periodontal treatment was not performed during the uncontrolled period.

Family History

Upon questioning, the patient's close family members (father, mother, and sister) and others whom he contacted stated they had no history of gingival enlargement. However, the patient's son exhibited gingival overgrowth on the left posterior maxilla, but it was not excessive and did not hinder mastication (Figure 2). The patient said his complaint about gingival enlargement had begun in the same region of the mouth.

Medical History

The patient's medical history was normal. He exhibited no signs of hypertricosis or mental retardation and did not take any medication that could be associated with gingival hyperplasia.

Clinical Examination

The extraoral examination did not reveal any abnormality. The intraoral examination revealed generalized, severe gingival hyperplasia involving both buccal and lingual regions in the maxillary and mandibular arches (Figures 3 A-B).

The enlarged gingival tissues covered two-thirds or more of the clinical crowns of almost all teeth, and the palate was deformed by the excessive gingival tissue. The gingiva was pink and firm but the patient's oral hygiene was very poor. When intraoral photographs taken 15 years ago were compared with present day photographs, the patient's teeth in the mandibular anterior and posterior regions seemed to migrate distally and a midline diastema developed.

Radiographic Examination

Panoramic radiographic examination revealed alveolar bone loss around most teeth indicating periodontitis.

Histologic Examination

A sample of the gingival tissue removed during surgery was not sent for histologic examination because it had been done previously.

Treatment

Extraction of teeth #12 and #16 were carried out due to the presence of periapical lesions and advanced periodontal destruction.

It was also suggested teeth #35, #36, #37 be extracted and replaced with a removable prosthesis due to malocclusion caused by lingual migration of the teeth, however, the patient did not accept this recommendation.

Surgical treatment consisted of quadrant-by-quadrant mucoperiostal flap procedures for maxillary and mandibular tissues. The surgical intervention was carried out under local anesthesia using interdental and crevicular incisions to remove the large increments of

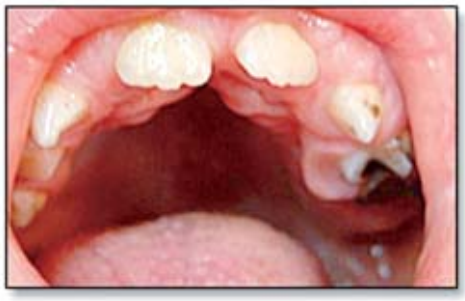

Figure 2. Intraoral appearance of the patient's son in the same region of the mouth.

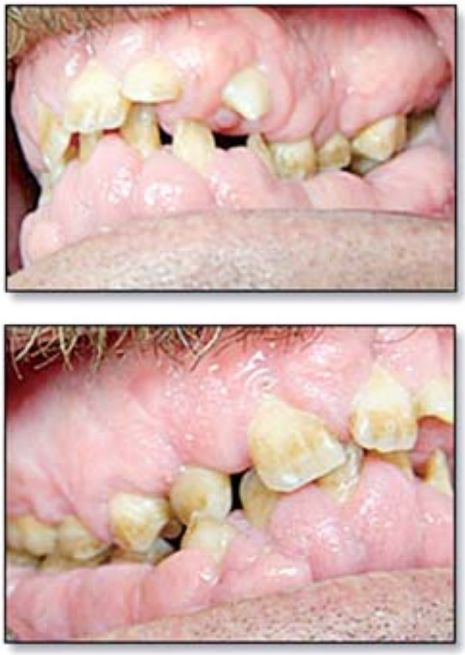

Figure 3. Preoperative view recurrence of gingival hyperplasia after 15 years. **A.** Left side. **B.** Right side.

hyperplastic tissues and an internal bevel incision was used to reflect flaps.

The patient was given a prescription for an antibiotic (Amoxicilin 500 mg, 3x1) and an analgesic (Naproxen sodium 550mg, 2x1). Sutures (3-O, silk) and a periodontal dressing (VOCO pac, VOCO Gmbh, Cuxhaven-Germany) was placed then removed after one week. The interval between each surgical procedure was two weeks. Upon completion of surgical treatment, the patient was followed for a period of one year without recurrence (Figures 4 A-B).

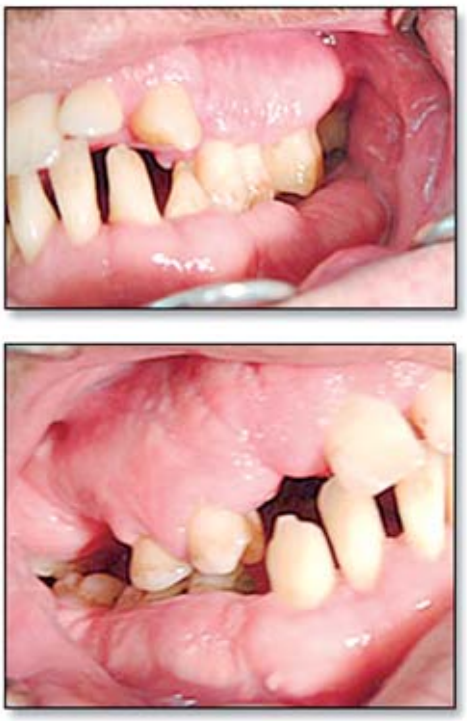

Figure 4. Postoperative view. **A.** Left side. **B.** Right side.

Discussion

Gingival enlargement can be caused by inflammation, systemic diseases such as leukemic infiltration, and medication use such as cyclosporine, phenytoin, or nifedipine.[3] HGF is a rare condition and can be seen as an isolated disorder or as part of a syndrome.

In this case a diagnosis of HGF was made because no medication taken was associated with gingival hyperplasia. The result of histopatologic examination made 15 years ago supported this diagnosis. The patient exhibited no signs of any syndrome. The family history has revealed the patient's eight-year-old son had a mild gingival overgrowth in the left maxillary posterior segment which was the same as his father who stated his gingival enlargement had started in the same area.

The suggested treatments of HGF vary according to the complete eruption of permanent teeth and the severity of the enlargement. Scaling and root planing of teeth and sufficient homecare may maintain good oral health when the enlargement is minimal. However, surgical intervention is required when enlarged tissues impair function and appearance and act as a barrier to the eruption of teeth. Fletcher[1] reported the enlargement seems to progress rapidly during active eruption and decrease with the end of this stage. Bozzo et al.[9] and Bittencourt et al.[10] suggested a conservative approach with their cases based on the patient's condition and reports in the literature. However some authors recommend excision of the excess tissue combined with removal of all teeth in severe cases and suggest the condition does not recur if the teeth are extracted.[3] The most widely used surgical approach is the gingivectomy/ gingivoplasty.[3,9-11] According to Baptista,[11] gingivectomy has been chosen in spite of advanced periodontitis around posterior teeth. A periodontal flap procedure may be preferred for the treatment of gingival enlargement if there are large areas of gingival overgrowth or attachment loss and osseous defects.[12] The periodontal flap technique was used in the present case due to the presence of an extreme bulk of gingival tissue along with alveolar bone loss.

Subgingival calculus may be present on deep root surfaces. In the present case when the flaps were reflected subgingival calculus was revealed. The reflected flaps allowed improved access for its removal. Following surgery, the patient had less postoperative discomfort as a result of the minimal cut tissue surface using flaps compared to a gingivectomy.

Although the same surgical intervention was performed for the patient fifteen years ago, he indicated his satisfaction with the appearance and function until the recurrence of the gingival overgrowth appeared again two years ago. Even though the patient had not returned for professional care and his oral hygiene had been insufficient during the uncontrolled period, the overgrowth of gingiva was within tolerable limits of the patient for most of the past 13 years.

Summary

There is no consensus among authors regarding the time that surgery should be accomplished in gingival fibromatosis cases. Emerson[13] suggested the best time is after complete eruption of the permanent teeth. We decided to treat the present case by periodontal flap procedure for reasons stated previously.

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