Hereditary gingival fibromatosis among three family members

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CASE REPORT

ABSTRACT
Hereditary gingival fibromatosis is a condition that can occur as an isolated disease or as part of a syndrome or chromosomal abnormality. This paper reports three cases of hereditary gingival fibromatosis in a family, which was managed by excision.

Keywords: Elephantiasis Gingiva; Gingival Enlargement; Hereditary gingival fibromatosis

Introduction
Hereditary gingival fibromatosis, also known as elephantiasis gingiva, hereditary gingival hyperplasia, idiopathic fibromatosis and hypertrophiad gingiva, is a rare (1 in 750,000) hereditary condition characterized by slow, progressive enlargement of the gingiva. The mode of inheritance is believed to be autosomal dominant. There are few reports of recessive mode of inheritance. Recent research has shown that two genetically separate loci are responsible for the autosomal-dominant type of fibromatosis. In general the enlarged gingiva appears normal in color and feels firm and nodular on palpation. Both the mandible and the maxilla may be affected. The condition is not painful until the tissue enlarges to partially cover the occlusal surface and becomes traumatized during mastication. Due to massive gingival enlargement, an affected child usually develops an abnormal swallowing pattern and experiences difficulty with speech and mastication. Along with these features, there may be some interference with maintenance of oral hygiene and mastication. All these factors will favor accumulation of material-alba and plaque, which further complicates the existing hyperplastic tissue. This paper reports three cases of hereditary gingival fibromatosis in the same family, which was treated by excision of excess of mucosal and submucosal tissues.

Case Report
A male patient aged five years reported to the department of periodontics with the chief complaint of inability to close the mouth and drooling of saliva for last two years. Extra orally mild protuberance of maxilla was seen along with incompetent lips. Intraorally (Figure 1) only incisal one third of few teeth were visible and rest was covered by hyperplastic gingiva. The gingiva was very firm and resilient, and yellowish pink in color.

Family history reveals that his sister also had the same problem. She too had similar facial appearance as her brother. Her gingiva was hyperplastic and covered almost all the teeth except the incisal third of few teeth (Figure 2). A four-year-old cousin showed similar features of incompetent and averted lips. Both maxillary and mandibular generalized gingival enlargement was seen which was firm, fibrous and was covering almost all of teeth. OPG showed delayed eruption, displaced and erupted teeth. A Pedigree analysis was done for the family and the pedigree chart showed hereditary pattern appears to be autosomal recessive. The histopathological examination confirmed the gingival fibromatosis by the presence of thickened acanthotic epithelium with elongated rete ridges was seen with densely arranged collagen fibers, numerous fibroblasts and few chronic inflammatory cells. The treatment plan consisted of external bevel gingivectomy performed under local anesthesia quadrant wise. Postoperative periodontal dressing was applied. A 0.2% chlorhexidine gluconate rinse was prescribed twice a day for two weeks. The postoperative healing was uneventful.

Discussion
The treatment of Gingival Fibromatosis (GF) consists of surgical excision of the hyperplastic tissue to restore the gingival contours, external or internal bevel gingivectomy in association with gingivoplasty, an apically positioned flap, electro surgery, and carbon dioxide laser. Although there is general consensus on the modality of treatment for GF patients, there are controversies regarding the exact period in which it should be accomplished. The best time of treatment is when all of the permanent dentition has erupted, because it reduces the risk of recurrence. However in some cases, a delay in the surgical treatment might cause significant consequences for the patient, such as primary dentition retention with delay in the eruption of the permanent teeth, difficulties in mastication and phonation, malpositioning of teeth, aesthetic effects, and psychological problems for the patients and relatives.

Treatment depends on the severity of enlargement and shows varying degrees of success. When the enlargement is minimal, thorough scaling of teeth and home care might be all that is required to maintain good appearance. The treatment of HGF patients is conservative, although extraction of the dentition and reduction of the alveolar bone have been recommended. The recurrence is unpredictable; it is most often seen in children and teenagers, rather than adults. It has been demonstrated that recurrence is faster in areas with dental plaque accumulation. Normally recurrence is minimal or delayed if good oral hygiene is achieved by a combination of monthly examinations with professional cleaning and oral hygiene instructions.

Conclusion
In conclusion, gingival fibromatosis causes aesthetic, functional, and psychological problems and needs frequent postoperative follow up to evaluate oral hygiene maintenance, and the stability of the periodontal treatment to avoid recurrence.
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