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A Rare Case of Idiopathic Gingival Fibromatosis: Case Report and its Management

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Abstract

Gingival enlargement (GE) is an uncommon condition characterized by extensive fibrous expansion of keratinized gingiva on the maxillary and mandibular areas of unknown etiology. An increase in submucosal connective tissue elements causing the proliferation of the fibrous tissue in the gingiva. It is the main dominant type of autosomal condition or very rarely an autosomal recessive type. Gingival hypertrophy is a condition that affects the appearance, function, psychology, and masticatory functions of the mouth.

Keywords: idiopathic, gingival fibromatosis, gingival enlargement, ledge and wedge technique

INTRODUCTION

Gingival fibromatosis (GF) is a condition that is characterized by increasing gingival enlargement caused by an increase in submucosal connective tissue elements[1]. Plaque accumulation, poor dental hygiene[2], inadequate diet, and systemic hormone stimulation[15] can all contribute to gingival expansion. Idiopathic gingival fibromatosis is a slowly progressing and benign type of enlargement. The gingiva is a firm, dense, and resilient fibrous tissue that covers the alveolar ridges and spreads over the teeth, forming large pseudo pockets[6]. Gingival enlargements are also found in different types of diseases such as leukemia. The degree of enlargement may vary from mild to severe and may be the same between the individuals of the same family[7]. Gingival fibromatosis may be familial or idiopathic[8].

Idiopathic GF is a rare hereditary condition. It is the main dominant type of autosomal condition or very rarely an autosomal recessive type, either as an isolated disorder or as part of a syndrome. Autosomal-dominant forms of gingival fibromatosis, may be genetically linked to the chromosomes 2p21-p221,12,13,14 and 5q13-q22. Isolated (nonsyndromic) gingival fibromatosis has been linked to a mutation in the son of sevenless-1 (SOS-1) gene, but no definitive link has been demonstrated[16]. GE is classified into two types according to its form—the nodular form and the symmetric form. Diffuse gingival enlargement is also found to be associated with different syndromes.

CASE REPORT:

A 12-year-old female patient accompanied by her parents reported to the outpatient department of periodontics with a chief complaint of swollen gums in both the jaws for 5-6 years which caused difficulties in speech, mastication, and esthetic impairment.

History revealed that enlargement has been progressing slowly since then. She did not appear to have any mental impairment and her weight and height were within normal limits. Her medical and familial backgrounds were both normal.

On intra-oral examination, massive, painless, Grade III type[3] of GE involving both the arches, encroaching buccal, palatal, and lingual vestibular spaces was found. GE went all the way up to the occlusal planes of the teeth. Crowns of permanent teeth totally or partially covered by the enlarged gingiva. With melanin pigmentation, the gingiva was pink in color. It was firm, dense, and fibrous in consistency. No bleeding and suppuration were noticed.

Occlusal radiography revealed the presence of retained deciduous canine, molar in mandible. Grade II mobility of deciduous teeth and generalized probing pocket depth in the range of 7 to 10 mm.

Laboratory investigations were done. All the reports were within the normal limits and a provisional diagnosis of IGF was made.

Sextant-wise surgical excision of the enlarged gingiva under local anesthesia was planned. Written consent was obtained from her parent. First, on the buccal side of the arch, an internal bevel gingivectomy was performed. To remove gingival overgrowth over the palatal side of the maxillary posterior region Ledge and wedge procedure was done.

After the surgery, the periodontal dressing was placed in the surgical site for 7 days. The patient was assessed on a visual analog scale after 7 days[4]. The patient has been prescribed a 0.2% chlorhexidine mouth rinse for 1-week. The excised tissue was sent to the Department of Oral and Maxillofacial Pathology for histopathological examination. The patient was encouraged for maintenance care. Recurrence of gingival enlargement was not observed 6 months after the periodontal surgery.

CLINICAL PICTURES:

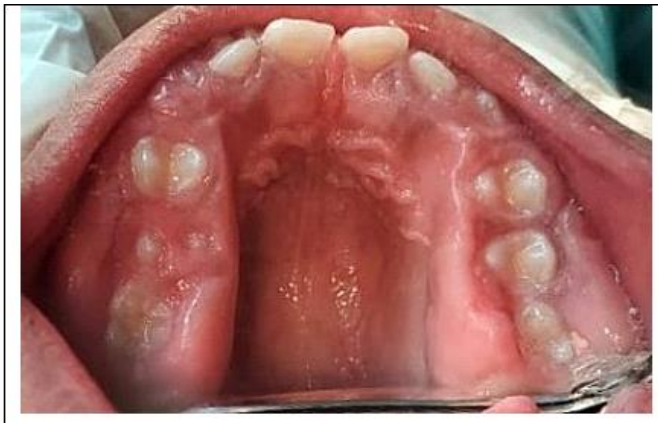


Figure 1: Maxillary Occlusal view (pre-op)

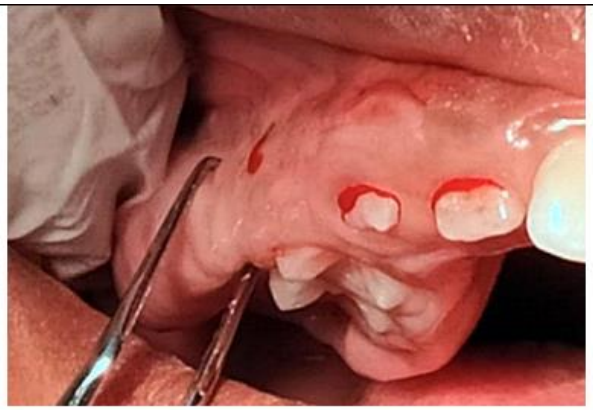
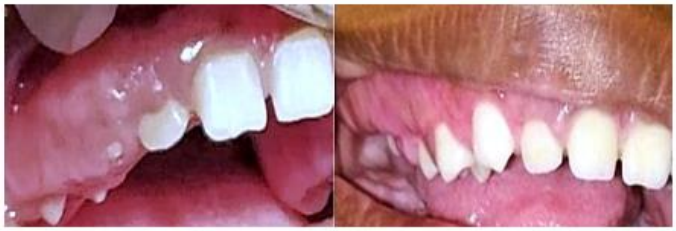


Figure 2: Pocket marking with Crane Kaplan



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DISCUSSION:

IGF is an excluding diagnosis for idiopathic gingival fibromatosis. By definition, patients with IGF lack a family history[18] of gingival hyperplasia and have no identifiable causative agents (i.e., medications, systemic conditions, etc). that only after carefully ruling out all known causes of the gingival enlargement, can a diagnosis of IGF be rendered[18].

Rutherford syndrome, Cross syndrome, Zimmerman-Laband syndrome, Prune belly syndrome, Ramon syndrome, Murray-Puretic-Drescher syndrome, and Jones syndrome are only a few of the syndromes in which gingival fibromatosis can occur. The results of the histopathologic evaluation of the gingival tissues of our patient presented Epithelial hyperkeratosis, acanthosis, elongation of rete ridges, and mononuclear infiltration in the subepithelial area.

At birth, gingival tissue may appear normal, but GE may be seen with the eruption of primary or permanent dentition, suggesting a trauma-induced tissue reaction during the eruption.

Gingival overgrowth in IGF generally starts with the emergence of permanent dentition or, less frequently, with the eruption of primary dentition and regresses following extraction, implying that teeth and the environment of the gingival crevice are the initial factors[17].

Since recurrence could be expected, the patient may have to undergo repeated surgical procedures. So psychological counseling is a must for patients and parents.

CONCLUSION

The current case study focuses on a nonsyndromic IGF and its treatment. The patient's aesthetics and masticatory functioning were greatly improved after surgery. The maintenance of oral hygiene is important to prevent a recurrence.

Acknowledgments

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