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IDIOPATHIC GINGIVAL FIBROMATOSIS AND ITS MANAGEMENT: A CASE REPORT

Dental Sciences

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ABSTRACT

Idiopathic gingival fibromatosis is a rare but proliferative fibrous lesion of the gingival tissue that results in esthetic, mastication, and other functional problems. It is usually associated with plaque, but other contributing factors are undetermined. Patient's oral hygiene habits and regular follow-up are closely related to the prognosis of idiopathic gingival enlargement. Here, we address the rare case of idiopathic gingival fibromatosis associated with clinical and radiographic presentation in a young female. Histopathological test confirmed the diagnosis of gingival hyperplasia.

KEYWORDS

Idiopathic gingival fibromatosis, Gingival enlargement, Plaque

INTRODUCTION

Idiopathic forms of gingival fibromatosis a rare condition, also known as gingivomatosis, idiopathic fibromatosis, elephantiasis with undetermined specific cause. It can be directly associated with individual susceptibility, local factors (plaque, poor oral hygiene) or reaction of chemical substances. IGF is characterized with slow progression, non-hemorrhagic, fibrotic overgrowth of keratinized gingival tissue.[1] Fibrosis is an integrant of the defense mechanism against progressive inflammation of periodontium. It occurs due to disproportionate balance between building up of matrix or collagen formation and its enzymatic lysis. The frequency of occurrence is 1:175,000 with equal preponderance of males and females.[2]

The diffuse enlargement of gingiva involves the facial and lingual/palatal surfaces of lower and upper arch. In severe cases, the teeth are almost entirely covered, with tooth mobility and the overgrowth extend into the oral vestibule.[3] An affected person develops poor swallowing pattern, difficulty in speech and mastication as well as poor oral hygiene due to enormous gingival enlargement.[1] The jaws also appear distorted and lead to aesthetic disfigurement. Ultimately, accumulation of materia alba and plaque will be favoured, which further complicates secondary inflammatory changes.[3] Such case of generalized IGO in adult female is represented here.

CASE REPORT

A 35yrs old female patient referred to the Department of Periodontology with the chief complaint of swollen gums in the front region of upper jaw and back region of lower and left upper jaw last 4 years. She had complaint of occasional bleeding from the gums as well as loosing of teeth. She was highly unsatisfied with her facial appearance due to incomplete lip closure and poor esthetics along with difficulty in mastication and speech. She had undergone dental surgical procedure for enlargement on the right upper and lower region of the jaw 8 years back. Systemically healthy and no other medical or drug intake history was obtained from her. There was no contributory family history of gingival overgrowth.

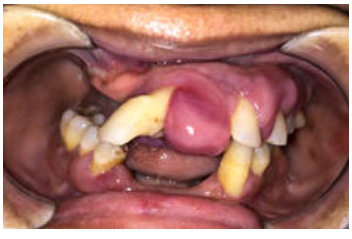

Figure 1: Pre-treatment view of patient

EXAMINATION

Extra-oral examination reported the profile of the patient was convex with incompetent and everted lips. An intraoral examination showed generalized, diffused gingival overgrowth involving the maxillary and mandibular arches with pink, firm and fibrous consistency. (figure 1) The teeth were malpositioned and pathologically migrated which were hardly seen as covered by enlarged gingiva till the incisal/occlusal third of the teeth. Grade I mobility with 33,34,35 and grade III in 21,22,23,24,25,26,27,28 were observed. A thick band of plaque with deep pockets and moderate gingival inflammation was reported by periodontal examination.

INVESTIGATIONS

Orthopantomogram showed the presence of generalized bone loss. (figure 2) The routine investigations included complete blood picture and viral markers done which were within normal range. Hematological investigations comprise punch biopsy was performed which exhibited relatively avascular and distended connective tissue, densely arranged collagen bundles, numerous fibroblasts, and mild inflammatory cell infilterates. Hyperplasia with elongated rete pegs exhibited by overlying hyperparakeratinized stratified squamous epithelium suggesting histopathological diagnosis of fibroepithelial hyperplasia.

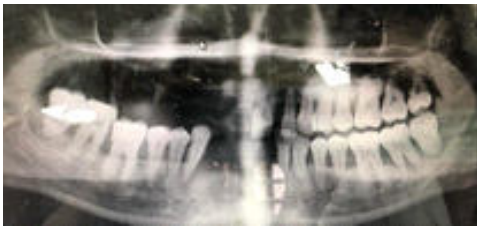

Figure 2: Radiographic (orthopantomogram) view of Pre-treatment

DIAGNOSIS

Based on case history, clinical and histopathological findings, she was diagnosed to have idiopathic gingival enlargement.

TREATMENT

Under all aseptic conditions, 30 seconds preprocedural mouth rinse with 0.2% chlorhexidine was advised before the scaling and root planing. After phase I therapy, grade III mobility to 21,22,23,24,25,26,27,28 teeth were extracted. Conventional gingivectomy procedure include external bevel gingivectomy was done to excise this enlarged tissue. (Figure 3)

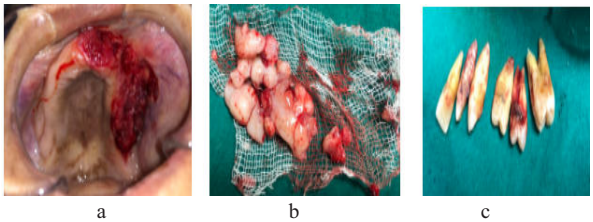

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Figure 3: Surgical phase of treatment

Coe pack was also given. The patient was then kept on maintenance phase, with thorough oral hygiene instructions and recalled post operatively. (Figure 4)

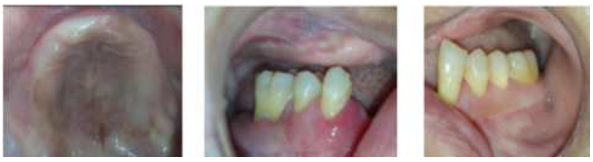

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Figure 4: Post treatment follow up after 3 months

DISCUSSION

Gingival fibromatosis (GF) represents progressive overgrowth of the gingiva due to accumulation of submucosal connective tissue elements. GF can be iatrogenic, genetic, or idiopathic. Hereditary gingival fibromatosis is the most common form, Autosomal dominant, and has been linked to several genetic loci. Chromosome 2p21 is the first polymorphic marker for HGF phenotype.[4] Sporadic cases with no familial history are also found. Fibrosis refers to a pathologic process from disrupted wound healing with defective cell proliferation, cell-to cell interactions, cell-to matrix interactions, and matrix deposition and with its impaired enzymatic degradation.[5] Use of long term drugs therapy like phenytoin, cyclosporine, nifedipine should be ruled out as commonly after effects results in fibrotic gingival enlargement.[6] Delayed physical development, mental retardation, and hypertrichosis may be related with Gingival fibromatosis. Gingival overgrowth oftenly initiates with the eruption of the permanent dentition but can occurs while the primary dentition erupts; rarely seen natal or neo natal.[7] Due to nutritional and hormonal factors gingival enlargement usually has been suggested but not completely understood. The continual rise in the tissue mass can aggregate in teeth displacement along with delayed eruption, arch deformity, spacing, and migration of teeth.[2] All these factors may result in difficulty in mastication and maintaining good oral hygiene. Ultimately, risk of gingival enlargement recurrence due to presence of inflammation and infection is high. However, genetic predisposition is also associated with gingival fibromatosis recurrence not only due to the presence of local factors.[8] Therefore, it is uncertain to predict the long-term outcomes of gingival fibromatosis treatment even after maintaining good oral hygiene.

Histologically, hyperplasia of the gingival is mainly caused by increase and thickening of mature collagen bundles in the stroma of connective tissue.[9] Gingivectomy was the only possible course of action in this situation to assure the patient's concern but extraction of the involved teeth was also done.[10] Despite of pale and firm tissue, excessive hemorrhage was one of the complications seen during surgery. Since within a few months' recurrence could be expected even after surgery in dentulous region and may revert to the previous condition within few years. This often causes rise in concern of the patients′ psychological and emotional stress, hence needs psychological counseling.[8]

CONCLUSION

It can be concluded that poor oral hygiene with superimposed plaque accumulation have a detrimental effect on the prognosis of GF. Long term follow ups are needed to predict the risk of the recurrence of GF.

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