Case Report

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IPSILATERAL IDIOPATHIC GINGIVAL ENLARGEMENT AND ITS MANAGEMENT USING CONVENTIONAL GINGIVECTOMY: A RECURRENT CASE AFTER 4 YEARS

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ABSTRACT:

The various clinical manifestations of inflammatory gingival enlargement reported are more or less similar regardless of the underlying etiological factors. Unusual presentation and unknown etiology pose a diagnostic challenge for a periodontist. Gingival enlargements are a common clinical finding and mostly represent a reactive hyperplasia as a direct result of plaque related inflammatory gingival disease. These generally respond to conservative tissue management and attention to plaque control. Idiopathic gingival fibromatosis is a relatively rare condition characterized by the proliferation of the gingival tissues resulting in masticatory, esthetics, phonetics and psychological disturbances. The severity of the overgrowth can range from a solitary isolated mass to a more generalized and diffused enlargement. The present article deals with recurrent case of ipsilateral idiopathic gingival growth and its management using the conventional periodontal surgery.

Key words: enlargement, idiopathic, ipsilateral, gingivectomy

INTRODUCTION:

Gingival enlargement is an overgrowth characterized by an expansion and accumulation of the connective tissue with seldom increase in a number of cells.[1] Gingival enlargement is a common finding in clinical practice and the appropriate treatment depends on correctly diagnosing the cause of the enlargement.[2]

Various etiological factors have been listed in the literature, causing gingival enlargement and the treatment is based on an understanding of the cause and the underlying pathological changes.[3] In most cases, prolonged exposure to bacterial plaque was shown to initiate the condition, and gingival enlargement may result from chronic inflammatory changes.[4] The other etiological factors causing gingival enlargement are selective drug therapy, familial or genetic conditions,[3] and pregnancy-induced enlargement.[4] Sometimes, it may be the sequelae of other pathological conditions of the oral cavity, such as soft tissue tumours [5], squamous cell carcinomas [6] and malignant lesions.[5]

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This unknown etiology has now been linked to specific genes and idiopathic gingival enlargement (IGF) is at times referred to as hereditary gingival enlargement. This condition is a benign, slow growing proliferation of gingival tissues.[7] Idiopathic gingival enlargement is a rare occurrence and presents itself either as an isolated disorder or as a part of a syndrome. Several ongoing investigations to establish the exact genetic linkage and heterogeneity associated with the disease exist, however the exact etiology still eludes us.[8]

IGF is now an established hereditary gingival enlargement (HGF) and the terms IGF and HGF are used interchangeably. The enlarged gingiva is pink in color, firm in consistency, with abundant stippling, and has a characteristic pebbled surface that is asymptomatic. Males and females are equally affected at a phenotype frequency of 1:175,000.[9] This anomaly is classified as two types according to its form. The localized nodular form is characterized by the presence of multiple enlargements in the gingiva. The most common symmetric form results in uniform enlargement of the gingiva.[10]

Histologically, epithelium appears hyperplastic with elongated ret pegs. There is a marked increase in the amount of connective tissue which is relatively avascular and presents bundles of collagen fibers running in all directions and numerous fibroblasts.[11]

Treatment of idiopathic gingival enlargement consists of surgical excision [11] of the hyperplastic tissue to restore gingival contours, but the recurrence rate is very high following surgical excision.[12] Usually, these types of enlargements are associated with minimal local factors and minimal alveolar bone loss; however, there have been few reports on this rare lesion where it was associated with aggressive periodontitis.[13]

In this report, we present an unusual case of a nonsyndromic; recurrent case of localized idiopathic gingival enlargement associated with chronic periodontitis and discuss the clinical and histopathological features. No other case with such an association has been reported to date. It presents a case of recurrent ipsilateral idiopathic gingival enlargement on the lingual aspect of mandibular right side and its conventional treatment using internal bevel gingivectomy.

CASE DETAIL:

A 35 year old male patient reported to the department of periodontology, Subharti Dental College and Hospital, Meerut with the chief complaint of gum swelling in the right lower back tooth region since 7 months. The patient also complained of difficulty and pain during mastication besides the phonetic problem. Patient gave the history of similar lesion some 4 year back for which he was treated in a private clinic. However, according to the patient this growth reappeared 7 months back. It was progressively increasing in size and was associated with moderate pain during chewing. Also there was associated bleeding during tooth brushing from the same region. There was no relevant medical, family or drug history.

Also patient did not give any history of alcohol intake or smoking habit.

On general examination, patient was found to be healthy with good educational and financial background. Routine haematological investigations were done which were found to be normal. No underlying systemic disease was reported. Extraoral examination revealed no facial asymmetry. However, on intraoral examination, there was localized, lobulated gingival enlargement on the lingual aspect extending from distal of 1st premolar to the distal of 1st molar. The swelling was diffused measuring 4.5mm anterioposteriorly and 2.5mm buccolingually extending upto the floor of mouth. On palpation, swelling was soft and tender.

The intraoral periapical, panoramic and occlusal radiographs were done. The periapical radiographs revealed the horizontal bone loss. The panoramic radiograph revealed generalized bone loss. There was no buccal or lingual bone enlargement evident in the occlusal radiograph.

Phase one therapy was completed which included complete supra and subgingival scaling. The patient was recalled after 15 days for biopsy. The excisional biopsy was done to rule out the possibility of any malignancy or lethal lesion. The biopsy reports confirmed that it was the case of chronic generalized periodontitis with localized idiopathic gingival enlargement.

Internal bevel gingivectomy was performed in relation to the lingual aspect of premolar and molar. Local anesthesia was administered and internal bevel incision was given using a 15 no. blade. The second or crevicular incision was made from bottom of pocket to the bone. The lining was removed and the flap was reflected with periosteal elevator. The third or interdental incision is made with interdental knife. However, buccaly, simple crevicular incision flap surgery was performed. Flaps were approximated and interrupted sutures were placed. Patient was recalled after 15 days for suture removal.

Uneventful healing was observed after 15 days. Subsequently, patient was recalled for further periodontal treatment. Patient was recalled after every one month for three months and there after every six months for one and a half year. No recurrence of the lesion was noticed.

DISCUSSION:

Gingival enlargement is a common finding in clinical practice and the appropriate treatment depends on correctly diagnosing the cause of the enlargement. The most common form of enlargement is due to plaque induced inflammation of the adjacent gingival tissues (inflammatory hyperplasia) and this tends to be associated most commonly with the interdental papillae. It may be localized or generalized.[2]

Gingival fibromatosis is a rare benign slow growing fibrous overgrowth of the gingiva with great genetic and clinical heterogeneity.[14] It may exist as an isolated abnormality or as a part of a

syndrome. As an isolated finding, it is mostly sporadic, but an autosomal dominant Inheritance pattern is also possible. Rarely autosomal recessive inheritance is found.[15]

The overgrowth might be caused by several etilogical factors such as administration of specific drugs,(e.g.Phenytoin,cyclosporin,nifedipine)inflammation, systemic conditions (e.g.Leukemia). Hormonal conditions (e.g. Pregnancy , Puberty or hypothyroidism), nutritional conditions (e.g.vitaminc deficiency). A progressive fibrous enlargement of the gingival is feature of Idiopathic fibrous hyperplasia of the gingiva.[15]

Idiopathic gingival fibromatosis is a rare hereditary condition that has no definite cause. The condition may manifest as an autosomal-dominant or, less commonly, an autosomal-recessive mode of inheritance. The gingival enlargement results in both esthetic and functional problems for affected individuals.[16]

The treatment of gingival fibromatosis is of prime importance as it can cause difficulty in mastication, phonetics, esthetics, malpositioning of teeth and can lead to considerable cosmetic and phychological concerns. The severity of the enlargement precudes the treatment plan. Surgical intervention with gingivectomy and gingivoplasty is advocated for excessive enlargement.[17]

The present report describes the case of the idiopathic ipsilateral gingival enlargement in the right mandibular lingual region. Though generalized horizontal bone loss was evident in the OPG but was the gingival enlargement was localized, lobulated, sessile and painless measuring 4.5mm*2.5mm.

The etiology of Idiopathic gingival enlargement is poorly understood and has been attributed to congenital or hereditary factors. Disturbances in the homeostatic equilibrium between synthesis and degradation of collagen and/ or alterations in fibroblast function and proliferation have also been drawn in the etiopathogenesis of idiopathic gingival enlargement.[18]

The family, medical, and drug histories were noncontributory in our case; hence it was diagnosed as idiopathic gingival fibromatosis. IGF manifests due to congenital or hereditary causes which are not clearly understood.

This patient exhibited rapidly progressive destruction of the periodontal tissues. Alveolar bone loss was observed in his Oral radiograph. There was a lack of clinical inflammation despite the presence of deep periodontal pockets and horizontal bone loss. The amount of plaque on the affected teeth was minimal, which seemed inconsistent with the amount of periodontal destruction present. Various treatment modalities using external bevel gingivectomy, internal bevel gingivectomy are used to excise the excess tissue on the lingual and buccal side.

CONCLUSION:

Idiopathic gingival enlargement is a relative rare condition with poorly understood etiopathogenesis and recurrence rate. The histopathological report confirmed it to be the inflammatory enlargement. The benefits of surgery outweigh the risk of recurrence and should be employed whenever deemed crucial. Patient education, periodic recall and proper oral hegiene maintenance reduce and delay the chances of recurrence.

Further studies at cellular, molecular and genetic level are required to understand the etiology and pathogenesis and pathogenesis of this bizarre condition.

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FIGURES:

Fig 1, 2 Pre operative photograph showing localized gingival enlargement

Fig 3. IOPA showing bone resorption

Fig 4. Occlusal radiogarph showing no bony enlargement.

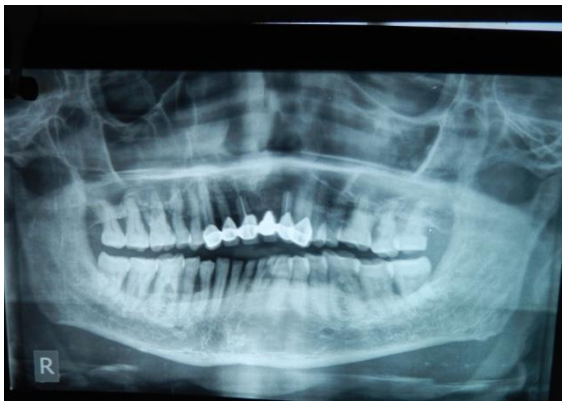

Fig 5. OPG showing the case of generalized periodontitis.

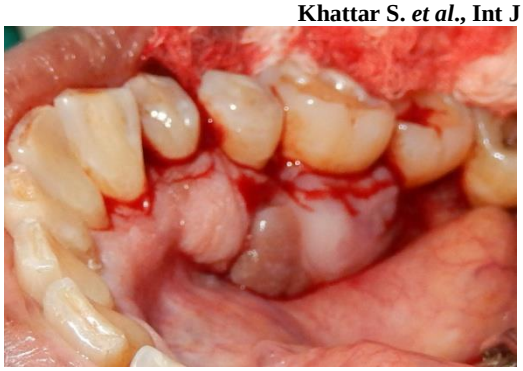

Fig 6. Internal bevel incision given.

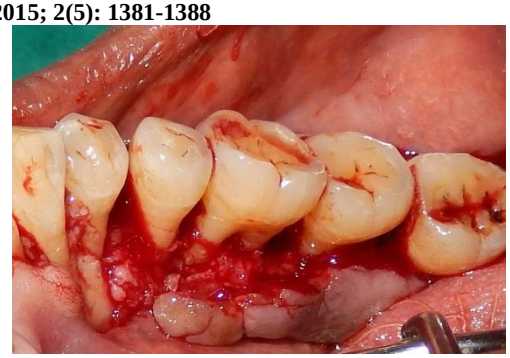

Fig 7. Flap reflection and debridement completed.

Fig 8. Sutures placed(lingual aspect)

Fig 9. Satisfactory healing after one week.

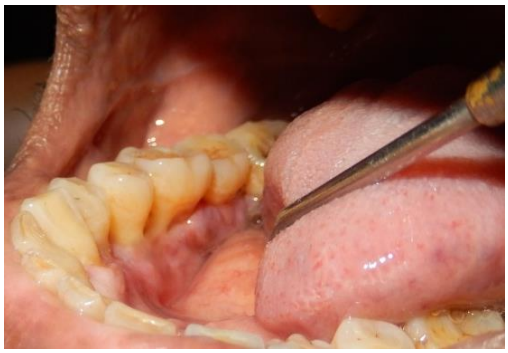

Fig 10. six month post operative

Fig 11. six month post operative (occlusion view)