

Aggressive Periodontitis with Idiopathic Gingival Enlargement: An Unusual Case Report

Abstract

Gingival overgrowth occurs due to many reasons but sometimes its etiology can not be ruled out and hence the diagnosis of idiopathic gingival overgrowth is made. It is a rare condition characterized by the proliferative fibrous overgrowth of the gingival tissue. It does not causes bone loss, however, impedes proper plaque control. Rarely, it is associated with aggressive periodontitis. In this case report, a case of aggressive periodontitis with idiopathic gingival enlargement is discussed and followed for 1 year to evaluate the recurrence of the lesion. Flap surgery with internal bevel gingivectomy was done for the correction of the lesion. No recurrence was seen 1 year post operative.

Key Words

Idiopathic gingival enlargement, aggressive periodontitis, gingival overgrowth

Dr Chitra Agarwal¹, Dr Ashish Sharma², Dr Pragya Harsh³

¹Senior Lecturer, Department of Periodontics, Jodhpur Dental College General Hospital, Jodhpur, Rajasthan, India

²Senior Lecturer, Department of Public Health Dentistry, Jodhpur Dental College and General Hospital, Jodhpur, Rajasthan, India

³Senior Resident, Department of Oral and Maxillofacial Surgery, S.N. Medical College and Mathura Das Mathur Hospital, Jodhpur, Rajasthan, India

INTRODUCTION

An esthetic and functional problem in patients with gingival enlargement forces them to seek periodontal treatment. Besides various reasons for the enlargement, sometimes it is idiopathic in nature. Idiopathic gingival enlargement is a rare condition characterized by slow progressive fibrous enlargement of the maxillary and mandibular gingiva. It can occur in isolated or syndromic form but rarely associated with periodontitis.^[1] It is mostly sporadic when occur in isolated form. However, an autosomal dominant and autosomal recessive inheritance pattern is also possible.^[2] The tissue exhibits an increased amount of mature collagenous connective tissue and a mild hyperplasia of the overlying epithelium on histopathological examinations.^[3] The gingival enlargement may delay the eruption of teeth and make cleaning of the teeth virtually impossible. Sometimes disease manifests itself partially by involving molars only. The condition is mostly seen associated with the permanent teeth and manifests itself after eruption of permanent teeth. The degree of enlargement may vary from mild to severe and may be the same between the individuals of the same family.^[4] The most common effect related to gingival enlargement is malpositioning of teeth,

diastemas, and prolonged retention of primary teeth.^[5] In some conditions, gingival enlargement can progress rapidly into destructive periodontal diseases, as a result of the altered immune response of the gingiva to the bacterial plaque and leading to combined lesion of gingival enlargement and periodontitis.^[6] The aim of the present case report is to manage the case of idiopathic gingival enlargement with aggressive periodontitis.

CASE REPORT

A 28 year-old female patient reported to the Department of Periodontics with a chief complaint of swollen gums involving all her teeth since last three years and bad breath from mouth. The patient's medical history did not reveal any drug induced gingival enlargement or hormonal changes and exhibited no signs of hypertrichosis or mental retardation that could be associated with gingival hyperplasia. Also familial and postnatal history was non-contributory. An intraoral examination revealed generalized, diffused, nodular enlargement of the gingiva involving the upper and lower arches, which were pink in color, and had a firm and fibrous consistency (Fig. 1). Periodontal examination revealed the presence of a thin band of microbial dental plaque and calculus subgingivally, generalized bleeding on probing, Grade III mobility



Fig. 1: Pre-operative photograph showing generalized gingival enlargement



Fig. 2: Radiograph showing generalized bone loss

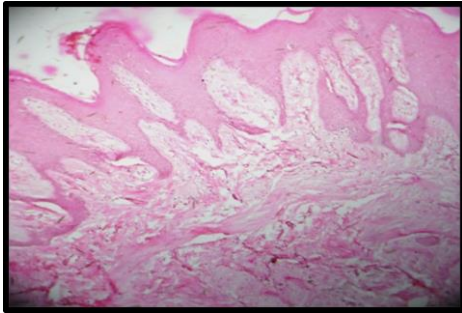


Fig. 3: Histological photograph showing gingival hyperplasia



Fig. 4: Post-operative photograph showing healthy gingiva after 1 year.

in lower incisors, malpositioning of upper anteriors, and generalized probing pocket depth in the range of 7 and 10 mm. Panoramic radiograph revealed severe generalized alveolar bone loss indicating severe form of periodontal disease (Fig. 2). In addition, halitosis was accentuated. Hematological investigations were within normal limits. Punch biopsy was carried out which revealed bulbous increase in the connective tissue, which was relatively avascular and had densely arranged collagen-fiber bundles, numerous fibroblasts, and mild chronic inflammatory cells. The overlying epithelium exhibited hyperplasia and had elongated rete ridges suggesting histological diagnosis of fibroepithelial hyperplasia. On the basis of medical, family, drug history, clinical and histological findings, it was diagnosed as idiopathic gingival enlargement alongwith aggressive periodontitis. Patient was advised extraction of hopeless teeth i.e. lower incisors. Clinical inflammation was minimal after scaling and root planing. Surgical therapy included internal bevel gingivectomy combined with the open flap debridement under local anesthesia, which was performed at an interval of 1 month. The recovery period was uneventful. The patient showed no evidence of recurrence during 1 year follow-up period. Antibiotic (Amoxicillin 500 mg, three times a day) and analgesic (Aceclofenac

500 mg, twice a day) was prescribed for 5 days to the patient.

RESULT

Excised tissue was sent for histopathological examination which revealed hyperkeratosis, elongated rete pegs, numerous bundles of collagen fibers, and mild inflammatory infiltrate (Fig. 3). Post-surgical healing was uneventful. The surgical area was profusely irrigated with Betadine and normal saline. The complete regression of the lesion was noticed and gingiva was healthy (Fig. 4). Post-operative instructions were reinforced and the patient was recalled after two weeks, one month, three month and one year for post-surgical evaluation. The patient was satisfied with postoperative result.

DISCUSSION

In the present case, idiopathic gingival enlargement with aggressive periodontitis was treated. Gingival enlargement can occur due to intake of certain drugs like phenytoin, cyclosporine etc. but in our case, patient did not give any history related to this. The laboratory investigation revealed no evidence related to any systemic disorder like leukemia, diabetes.^[7] Enlargements can be associated with some syndromes like Jones hartsfield, Murray-Puretic-Drescher syndrome, Zimmermann- Laband, Rutherford, Cross, Ramon, Prune-belly syndrome associated with hearing deficiencies, hypertelorism,

and supernumerary teeth^[8] but in our patient, no skeletal deformity, epilepsy, or hypertrichosis was detected. The histologic features observed in the present case had the typical appearance of gingival fibromatosis. Conventional external bevel gingivectomy with gingivoplasty is preferred treatment modality for patients with pseudo pockets and no attachment loss. However, when attachment loss and osseous defects is present, internal bevel gingivectomy with flap surgery is the needed approach. In our case, enlargement was associated with aggressive periodontitis so open flap debridement was done.^[9] Phase 1 therapy of the case resulted in a mild reduction in the extensive gingival enlargement. This suggested that local irritation might have induced the condition and the patient masticated unilaterally which in turn caused accumulation of plaque and secondary inflammatory changes on the unused side (right side). Probably local plaque irritational and hormonal changes at the young age super-added to initial gingival enlargement and then deepened the gingival pockets. The alveolar bone loss might have then advanced very extensively. Recurrence of this type of enlargement is a common feature and varies from case to case. 20% recurrence has been reported. In some cases, it recur within 3 months^[10] or 3 years. However, in several reported cases there was no recurrence in a period of 2 years, 3 years or even a 14-year follow-up. In a study, periodontal treatment is accompanied by orthodontic treatment of teeth in a patient with idiopathic gingival enlargement. A good occlusal and aesthetic result was achieved, and took 2 years and 6 months. Recurrence of the gingival overgrowth was minimal due to the good oral hygiene achieved by monthly examinations, cleaning, and oral hygiene instructions. Thus it can be stated that although the risk of recurrence is high with this condition, surgical treatment with correction of malocclusion and regular follow-up can provide excellent outcome. Few case reports have been reported the cases of idiopathic gingival enlargement with aggressive periodontitis. The present case report of Idiopathic gingival fibromatosis with aggressive periodontitis had shown extensive periodontal destruction in a young female. The clinical case of rare combined lesion of idiopathic gingival enlargement and aggressive periodontitis was managed successfully with no recurrence of the lesion till 1 year after surgery.

CONCLUSION

Currently, it is not known which common mechanisms, if any, would be involved in the pathogenesis of these two entities. However, due the rare observation of these lesions concurrently, it is of interest both to clinician and basic scientists to study such cases in further detail. It can be concluded that gingival enlargement should be managed early to avoid pathological migration, malocclusion, esthetic, and functional complications.

REFERENCES

1. Dhadse PV, Yeltiwar RK, Prashant K Pandilwar, Suchitra R Gosavi. Hereditary gingival fibromatosis. *J Indian Soc Periodontol.* 2012;16(4):606-9.
2. Emerson TG. Hereditary gingival fibromatosis: A family pedigree of four generations. *Oral Surg Oral Med Oral Pathol.* 1965;19:1-9.
3. Doufexi A, Mina M, Ioannidou E. Gingival overgrowth in children: Epidemiology, pathogenesis and complications. A literature review. *J Periodontol.* 2005;76:3-10.
4. Bansal A, Narang S, Sowmya K, Sehgal N. Treatment and two year follow up of a patient with hereditary gingival fibromatosis. *J Indian Soc Periodontol.* 2011;15:406-9.
5. Baptista IP. Hereditary gingival fibromatosis: A case report. *J Clin Periodontol.* 2002;29:871-4.
6. Vishnoi SL, Phadnaik MB. Unusual gingival enlargement with aggressive periodontitis: a case report. *J Contemp Dent Pract.* 2010;11(3):49-55.
7. Gorlin RJ, Pinborg JJ, Cohen Jr MM. *Syndromes of the head and neck.* 2nd edition. New York: McGraw Hill; 1976. p. 329-36.
8. Nagarale GP, Ravindra S, Thakur S, and Swati Setty. Long term follow up of idiopathic gingival enlargement associated with chronic periodontitis: A case report and review. *J Indian Soc Periodontol.* 2013;17(2):242-7.
9. Ramakrishnan T, Kaur M. Multispeciality Approach in the management of Patient with Hereditary Gingival Fibromatosis: 1-Year follow-up: A Case Report. *International Journal of Dentistry.* 2010;1-5.
10. Cholakis AK, Wiltshire WA, Birek C. Treatment and Long-term Follow-up of a Patient with Hereditary Gingival Fibromatosis: A Case Report. *J Can Dent Assoc.* 2002;68(5):290-4.