Research Paper

Volume : 5 | Issue : 3 | March 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 69.48

Idiopathic Gingival Enlargement- a Case Report

Medical Science

KEYWORDS : Idiopathic gingival enlargement, gingival hyperplasia, gingivectomy.

Dr. Vidhya D. Kamble	PG Student Department of Periodontology Bharati Vidyapeeth Deemed University Dental College and Hospital, Pune.
Dr. Vishakha Patil	Professor Department of Periodontology Bharati Vidyapeeth Deemed University Dental College and Hospital, Pune.
Dr. Amita Mali	HOD and Professor Department of Periodontology Bharati Vidyapeeth Deemed University Dental College and Hospital, Pune.
Dr.Samruddhi Metha	PG Student Department of OMDR Bharati Vidyapeeth Deemed University Dental College and Hospital, Pune.

ABSTRACT

Gingival enlargement (Gingival hyperplasia) is a bizarre condition causing esthetic, functional, psychological and masticatory disturbance of the oral cavity. Idiopathic gingival enlargement is a rare hereditary condition that has no definite cause. This is a case report of forty-five year old male patient who presented with fibrotic generalised gingival enlargement. Upon clinical, radiographic, laboratory and histo-pathological findings, it was diagnosed as "Idiopathic Gingival Enlargement".

INTRODUCTION-

Idiopathic gingival enlargement is a rare condition of unknown etiology characterized by slow, progressive enlargement of the gingiva.It is also known as elephantiasis, idiopathic fibromatosis, gingivomatosis, and hereditary gingival fibromatosis (HGF).[1]The etiology and pathogenesis of gingival hyperplasia are still not well established; however it could be directly linked to three factors: individual susceptibility, local factors (dental plaque, caries, and iatrogenic factors) and the action of chemical substances and their metabolites.The condition is usually manifested during eruption of permanent dentition, occasionally associated with primary dentition and very rarely occurs at birth.[2]It shows clinical presentation as localised form or generalised form.[3]Gingival enlargement may present itself either as an isolated disorder or as a part of a syndrome.[4]The condition remains asymptomatic until massive enlargement occurs and starts interfering with speech and mastication.As a result of increased mass of tissue, it serves as a nidus for plaque accumulation due to which oral hygiene measures are compromised.[3]The enlarged gingiva is pink in colour, firm in consistency, is stippled with characteristic pebbled surface that is asymptomatic.[5]Histologically, epithelium appears hyperplastic with elongated ret pegs. There is a markedincrease in the amount of connective tissue and shows bundles of collagen fibers running in all directions with numerous fibroblasts.[1] Mild chronicinflammatory infiltrates are also observed in subepithelial connective tissue. Small calcifiedparticles, ulceration of overlying mucosa, amyloid deposits, osseous metaplasia, and islands of odontogenic epithelium have also been reported.[6]Treatment of idiopathic gingival enlargement consists of surgical excision[7]of the hyperplastic tissue to restore gingival contours, but the recurrence rate is very high followingsurgical excision.

CASE REPORT-

A 45-year-old male patient reported to the Department of Periodontology with a chief complaint of swollen gums involving all his teeth since last two years. Patient noticed swollen gums 2 years back. Negligence was shown by the patient as it was asymptomatic. The lesion started as a small painless, beadlike enlargement of gingiva [Figure1]. Progression of the enlargement resulted in a massive tissue fold covering a considerable portion of the crowns, interfering with mastication and speech. Familial and postnatal history was non-contributory. Haematological investigations were done which were within normal limits.

Intraoral examination of periodontium showed a massive, generalised diffuse type of gingival enlargement involving both maxillary and mandibular arches. Gingiva was pale pink, firm and fibrotic in consistency. There was presence of dental plaque and subgingival calculus with generalised bleeding on probing. Generalised probing depth measured was in the range of 7 to 10 mm [Figure2]. Full mouth radiographs revealed generalised alveolar bone loss, indicating severe form of periodontal disease [Figure3]

Full mouth scaling and root planning was done followed by oral hygiene instructions .One month after completion of Phase I therapy, a quadrant-wise gingivectomy was planned. Surgical therapy included internal bevel gingivectomy with open flap debridement under local anaesthesia [Figure4] Extraction of 11, 12, 31 teeth were carried out due to hopeless prognosis. Function and esthetics were restored early with removable partial dentures.

Histological examination of excised tissue revealed connective tissue with densely arranged collagen-fibre bundles, numerous fibroblasts and mild chronic inflammatory cells chiefly lymphocytes and plasma cells. The overlying epithelium exhibited hyperplasia with elongated rete ridges suggesting histo-pathological diagnosis of fibro-epithelial hyperplasia [Figure5].

Considering the medical, family history, any drug intake history, clinical findings and histological findings, a final diagnosed of 'Idiopathic gingival enlargement'was made.

DISCUSSION-

Gingival enlargement is thought to be caused by one or more sources. It is mainly associated with various medications such as phenytoin, cyclosporine and calcium channel blockers, with different syndromes and hereditary disorders. There are few reports which states that idiopathic gingival enlargementis mainly associated with aggressive periodontitis[4,8] and chronic periodontitis[1,9]

In this case report, gingival enlargement was not related to drug or associated with any syndromes and endocrine problems. There was presence of subgingival calculus, deep periodontal pockets and loss of alveolar bone. As it was not associated with any findings, it was thought to be idiopathic.

Various types of treatment modalities for the excision of the enlarged tissues include internal or external bevel gingivectomy, electrocau-

tery, and carbon dioxide lasers[2,5,7,10]. The treatment varies according to the degree of severity. When the enlargement is minimal, thorough scaling and oral hygiene maintenance may be sufficient to maintain good oral health. As the tissue increases, surgical excision is required to restore function and esthetics.

According to Lata Goyal et al[11]internal bevel gingivectomy should be considered for all quadrants in both arches as plaque removal is restricted due to the enlargement of tissues. A study conducted by Girish P. Nagarale et al (2013)[1] mentioned that if there are large areas of gingival overgrowth or attachment loss with osseous defects, periodontal flap procedure may be preferred for the treatment of gingival enlargement. Internal bevel gingivectomy was performed in this case and excise tissue sent for histological examination.

The histologic features were hyperplastic epithelium with long and slender rete ridges. The underlying connective tissue showed thick bundles of collagen fibres interspersed with fibroblast and infiltrates of inflammatory cells. Similar histological features are reported in the literature.[12,13]

There was no recurrence, even after one year of follow up in our case [Figure6].Reports about recurrence rates are contradictory so the post-operative long-term benefit of periodontal surgery cannot be predicted. Few studies have stated that recurrence is faster in areas of poor plaque control.[7]One study hasstated that degree of enlargement is not related to oral hygiene or the amount of calculus present, a correct physiologic contour of the marginal gingiva is more important to prevent recurrence[14]. In literature, no recurrence has been mentioned for a period of 2years[15], 3years[6] or even 14 years[16] of follow up.

CONCLUSION-

Idiopathic gingival enlargement is characterized by fibrous overgrowth of gingival tissue resulting in esthetics deformities and difficulty in masticatory function.To improve oral hygiene status, elimination of local factors and surgical intervention of the over growth is required. However, recurrence may occur. Maintenance of proper oral hygiene plays an important role in the prevention of recurrence.

Figure1: Preoperative clinical photograph

Figure2: Clinical probing depth

Figure3: Preoperative Full Mouth Radiograph

Figure4: Internal bevel gingivectomy with mucoperiosteal flap

Figure5: Photomicrograph showing elongated rete ridges, collagen fibres arranged in bundles and chronic inflammatory infiltrate (H and E, ×10)

Figure6: Postoperative – 1 year follow up with no recurrence

REFERENCES-

1. Girish P. Nagarale, S. Ravindra1, Srinath Thakur, Swati Setty: Long term follow up of idiopathic gingival enlargement associated with chronic periodontitis: A case report and review. Journal of Indian Society of Periodontology - Vol 17, Issue 2, Mar-Apr 2013.
2. Baptista IP: Hereditary gingival fibromatosis: a case report. J ClinPeriodontol2002; 29: 871–874
3. Sivaranjani Karthik, Vineet Kashyap, S.P.K. Kennedy Babu and Ajish Paul: Idiopathic gingival fibromatosis-a rare case report with treatment and 1 year follow up. IndianJournal of Medical Case Reports2013 Vol.2 (4) October-December, pp.77-80

Volume : 5 | Issue : 3 | March 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 69.48

4. Arvind Shetty, Neha Gupta, Devanand Shetty, Rukshit Kadakia: Idiopathic gingival enlargement associated with generalized aggressive periodontitis in a 19-year-old female.Journal of Indian Society of Periodontology - Vol 18, Issue 2, Mar-Apr 2014
5. Bozzo L, Machado MA, de Almeida OP, Lopes MA, Coletta RD. Hereditary gingival fibromatosis: Report of three cases. J Clin Pediatr Dent 2000;25:41-6.
6. Gunhan O, Gardner DG, Bostanic H, Gunhan M. Familial gingival fibromatosis with unusual histologic findings. J Periodontology 1995;66:1008-11
7. Ramer M, Marrone J, Stahl B, Burakoff R. Hereditary gingival fibromatosis: Identification, treatment, control. J Am Dent Assoc1996;127:493-5.
8. Ashutosh Dixit, Seema Dixit, and Pravin Kumar:Unusual Gingival Enlargement: A Rare Case Report.Case Reports in Dentistry.
9. Tripathi Amitandra K, Khan Mohammad Arif, Jaishwal Rajeev Kaur Jaspreet, AgrawalAnkit: Idiopathic Gingival Enlargement Associated With ChronicPeriodontitis: A Case Report. International Journal of Pharma Research and Health Sciences. Volume(3)
10. Kelekis-Cholakis A, Wiltshire WA, Birek C. Treatment andlong-term follow-up of a patient with hereditary gingival fibromatosis: A case report. J Can Dent Assoc 2002;68:290-4.
11. Lata Goyal, Afshan Bey, N.D.Gupta, Amitabh Varshney: Diagnosis and management of nonsyndromic hereditary gingival fibromatosis in a 13 year old girl: Report of a rare case. Contemporary Clinical Dentistry , September 2012 vol(3)
12. Raghavendra Reddy, Upendra Jain, Sudheendra. U.S, Neeraj Agarwal, Sowmya.K, Rami Reddy.M.S**:** Idiopathic Gingival Enlargement- An Inter-Disciplinary Approach.International Journal Of Dental Clinics 2011:3(1):92-93
13. Sanyuktha Shetty, Arvind Shetty, Devanand Shetty, Suyog Dharmadikari: Idiopathic Gingival Enlargement – A Case Report Adv Hum Biol 2014; 4(1):51-55
14. Emerson TG. Hereditary gingival hyperplasia: A family pedigreeof four generations. Oral Surg Oral Med Oral Pathol 1965;19:1-9.
15. L. P. Bittencourt, V. Campos, L. F. M. Moliterno, D. P. B. Ribeiroand R. K. Sampaio, "Hereditary gingival fibromatosis: review of the literature and a case report,"Quintessence International, vol.31, no. 6, pp. 415–418, 2000
16. P. V. Dhadse, R. K. Yeltiwar, P. K. Pandilwar, and S. R. Gosavi: "Hereditary gingival fibromatosis," Journal of Indian Society ofPeriodontology, vol. 16, pp. 606–609, 2012.