

# Chronic Inflammatory Gingival Enlargement – A Case Report.

Sneha Singh<sup>1</sup>, Toshi Das<sup>2</sup>, Rahul Anand<sup>2</sup>, Mayuri Prasad<sup>2</sup>, Priyata Ranjan<sup>2</sup>, Rahul Mohan<sup>3</sup>

<sup>1</sup>Sr. Lecturer, Dept. of Periodontology, Mithila Minority Dental Collage and Hospital, Darbhanga.

<sup>2</sup>PG Student (Final yr.), Dept. of Periodontology, Buddha institute of Dental Sciences and Hospital, Patna.

<sup>3</sup>Assistant professor, Narayan Medical College and Hospital, Sasaram.

Received: February 2018

Accepted: February 2018

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## ABSTRACT

Gingival enlargement, also synonymous with the terms gingival hyperplasia or hypertrophy, is defined as an abnormal overgrowth of gingival tissues. A case of 18-year-old female presenting with maxillary chronic inflammatory gingival enlargement. Surgical therapy was carried out to provide a good aesthetic outcome. The importance of patient motivation and compliance during and after therapy as a critical factor in the success of treatment.

**Keywords:** Gingival enlargement, chronic inflammation, Hypertrophy, Hyperplasia.

## INTRODUCTION

Gingival enlargement, a globally accepted terminology for an increase in the size of the gingiva, is a general feature of gingival diseases. It is a multifactorial condition that develops in response to various stimuli and interactions between the host and the environment. It may be plaque-induced or associated with systemic hormonal disturbances. It also occurs as a manifestation associated with several blood dyscrasias, such as leukemia, thrombocytopenia or thrombocytopathy. A rare variant, idiopathic gingival fibromatosis, with a familial inheritance, has also been reported. Based on the extent and severity, these enlargements may lead to functional disturbances like altered speech, difficulty in mastication and aesthetic and psychological problems.

Inflammatory gingival enlargement may be categorized as acute or chronic, wherein chronic changes are much more common.<sup>1</sup> The ability to perform oral hygiene measures is compromised in some patients with gingival enlargements, which may be further complicated by the presence of prosthesis and fixed orthodontic appliances. This may lead to more inflammation and further plaque

accumulation perpetuating this vicious cycle. Thus, there is a transformation of the gingival sulcus into a periodontal pocket creating an area where plaque removal becomes impossible.

One of the most important determinants of treatment outcomes is patient compliance. The willingness to perform adequate oral hygiene measures and receive timely periodic recalls and treatment are deemed essential for a successful outcome. The therapeutic approaches related to gingival enlargement are based on the underlying etiology and the subsequent changes it manifests on the tissues. The prime treatment modalities involve obtaining a detailed medical history and non-surgical periodontal therapy, followed by surgical excision to retain esthetical and functional demands.<sup>[2]</sup>

## CASE REPORT

A 18-year-old female patient reported to the Department of Periodontology, Mithila Minority Dental College and Hospital, Bihar. The patient complained of swelling of upper gums in front of tooth region since 6 months. She also complained of bleeding from the gums while brushing. There was no other relevant medical and family history.

On clinical examination, diffuse enlargement was present on right and left maxillary arch. Further soft tissue assessment revealed soft and mixed having both fibrotic and edematous consistency and bleeding on probing on all teeth with generalized gingival recession. [Figure 1]

### Name & Address of Corresponding Author

Dr. Priyata Ranjan  
Post Graduate Final Year  
Department of Periodontics  
Buddha Institute of Dental Sciences and Hospital  
Patna, Bihar.



**Figure 1: Fibrotic and edematous consistency and bleeding on probing on all teeth with generalized gingival recession.**

For radiological examination OPG was done, generalized horizontal bone loss seen wrt maxillary and mandibular arches. [Figure 2]



**Figure 2: Generalized horizontal bone loss seen wrt maxillary and mandibular arches.**

A treatment plan consisting of initial periodontal therapy followed by a surgical procedure was planned to improve aesthetics and function. The initial periodontal therapy comprising supragingival and subgingival scaling was performed. Oral hygiene instructions were given and the use of chlorhexidine mouthwash (0.2% Clohex TM, Dr. Reddy's Laboratories Ltd., India) twice a day for one week was advised. At the next visit, in spite of use of the prescribed medicated mouthwash, the gingival enlargement did not show considerable reduction in size. [Figure 3]



**Figure 3: The gingival enlargement did not show considerable reduction in size**

At this stage, complete blood count investigations (RBC, WBC and platelet counts, ESR, bleeding time, clotting time, prothrombin time) were carried out for surgical procedure.

## RESULT

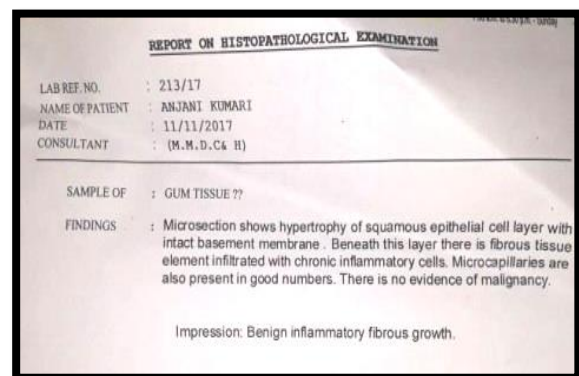
An internal bevel gingivectomy was performed for the maxillary sextant. The excised tissue was sent for histopathological examination. Patient was recalled after 7 days for suture removal and again recalled after 3 months. Intraoral examination revealed that the maxillary surgical site had healed satisfactorily. There was no recurrence of the gingival enlargement in the maxillary anterior sextant. [Figure 4]



**Figure 4: No recurrence of the gingival enlargement in the maxillary anterior sextant.**

Initial periodontal therapy was performed again and oral hygiene instructions were reinforced. The patient was also counseled regarding the importance of follow up and maintenance with special emphasis on motivation.

The histopathological examination revealed hypertrophy of squamous epithelial cell layer with intact basement membrane. Beneath this layer there is fibrous tissue element infiltrated with chronic inflammatory cells. Microcapillaries are also present in good numbers. There is no evidence of malignancy. A histopathological diagnosis suggestive of inflammatory fibrous hypertrophy was given. [Figure 5]



**Figure 5: Inflammatory fibrous hypertrophy.**

## DISCUSSION

Gingival overgrowth varies from mild enlargement of isolated interdental papillae to segmental or uniform and marked enlargement affecting 1 or both of the jaws with a diverse etiopathogenesis.<sup>[2]</sup>

Inflammatory fibrous hyperplasia or fibrous hypertrophy is a benign soft tissue response to a local irritant. It can be due to calculus, a sharp tooth, a broken filling, excessive plaque and other irritating factors. The color ranges from normal to white or reddish depending upon whether or not the surface is ulcerated, keratotic or both or neither. It can be soft or firm in palpation.<sup>[3]</sup> Inflammatory enlargement caused by local factors is self-perpetuating since it is often impossible to properly clean the “pseudopockets” which are formed by bulging tissue. The situation is exacerbated as bacterial colonization proceeds within the dental plaque and the host response to microbial products intensifies. A foul breath results as food debris degraded by the accumulating microorganisms.<sup>[4]</sup>

Here, we report a case of chronic inflammatory gingival enlargement. These enlargements are often associated with a long-standing bacterial plaque accumulation. Regular professional oral prophylaxis and good patient compliance are required in the management of such cases. In this case, patient compliance was lacking as the failure to report for regular recall appointments. This reflects the importance of patient education, motivation and compliance during and after dental treatment. Reinforcement of effective oral hygiene is essential, since patients have a tendency to revert to their original behavior. The patient must be placed into a maintenance schedule to preserve a healthy dentition. Situations in which chronic inflammatory enlargement include significant fibrotic components that do not respond to and undergo shrinkage when exposed to scaling and root planing are treated with surgical removal of the excess tissue, most often with the surgical procedure known as gingivectomy.<sup>[5]</sup>

## CONCLUSION

This report helps to highlight the importance of patient motivation and patient compliance in treatment planning. Oral hygiene education supplemented with positive motivation should be started at the initial stages of the treatment strategy in order to obtain predictable outcomes. At each recall visit, the patient should be notified about their ongoing dental condition and the effects of risk factors like poor oral hygiene, smoking and deleterious habits on the existing oral state. Successful treatment outcome is believed to relate to 2 sides of the same coin, necessitating the combined efforts of both the patient and the clinician.<sup>[7]</sup>

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**How to cite this article:** Singh S, Das T, Anand R, Prasad M, Ranjan P, Mohan R. Chronic Inflammatory Gingival Enlargement – A Case Report. Ann. Int. Med. Den. Res. 2018; 4(3): DE21-DE23.

**Source of Support:** Nil, **Conflict of Interest:** None declared