

## Inflammatory Gingival Hyperplasia in a Young Female Patient - A Case Report

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**Received:** June 14, 2019; **Published:** July 04, 2019

### Abstract

Increase in the size of the gingiva is a common feature of gingival diseases. The gingival hyperplasia maybe isolated or uniformly segmental affecting both or one of the jaws and has a diverse etiopathogenesis. It is a chronic disease with painless progression which may be exacerbated by drugs, hormones or any systemic disease. Gingival enlargement may be plaque induced or non-plaque induced. In this case report, A 22 year old young female patient was afflicted with gingival hyperplasia with staining on her teeth due to the accumulation of plaque because of improper oral hygiene maintenance and habit of betel quid chewing were the main etiological factors responsible for inflammatory gingival hyperplasia. After non-surgical therapy, surgical therapy was done to remove hyperplasia and attain proper gingival contours.

**Keywords:** Oral Hygiene; Gingival Hyperplasia; Inflammatory; Chronic; Young Patient

### Introduction

Gingival hyperplasia is a multifactorial condition that develops as a response to noxious stimuli because of unfavourable interactions between host and environment. It may be associated with plaque or systemic hormonal disturbances. Oral manifestations associated with blood disorders like leukemia and thrombocytopenia. Based on the extent and severity, these enlargements may lead to functional disturbances such as altered speech, difficulty in mastication, and esthetic and psychological problems. These enlargements usually cause functional disturbances like difficulty in speech and psychological problems [1].

Inflammatory gingival enlargement may be categorized as acute or chronic; wherein chronic changes are much more common. Accumulation of plaque causes chronic inflammatory gingival enlargement (CIGE). With the debridement of plaque and calculus, the gingival inflammatory enlargement resolves but the fibrotic nature of gingival remains unresolved, hence impeding the maintenance of oral hygiene and persistent pockets. Gingival hyperplasia may also be caused by certain drugs such as amlodipine, cyclosporine and phenytoin. Various treatment modalities for treating gingival hyperplasia are gingivectomy, lasers and electrocautery. Diode laser excision of overgrowth can be done for treating any gingival overgrowth [2].

### Case Report

A 19-year-old female reported to the Department of Periodontics, Subharti Dental College, Meerut with a chief complaint of swollen gums, bleeding from gums, and bad breath. The patient was apparently well until she started noticing bleeding from her gums 2 months back. She complained of swelling of the upper and lower gums with brown staining (Figure 1).



Figure 1

On taking proper dental and medical history it was discovered that patient had a habit of betel quid chewing which were the primary reason for chromogenic staining along with plaque and calculus accumulation (Figure 2 and 3). Treatment plan included non-surgical therapy followed by surgical therapy. The initial therapy included oral prophylaxis which aimed at rigorous removal of all the calculus supra and subgingivally to minimize the inflammation.



Figure 2



Figure 3

Patient was given oral hygiene instruction post scaling. He was advised to use chlorhexidine digluconate mouthwash twice a day for 21 days. On the subsequent visit, gingival inflammation showed a slight reduction. Patient was advised for a full mouth radiograph (OPG) and blood investigations (Complete Blood Count) for surgical intervention.

After three weeks, surgical therapy was initiated and internal bevel gingivectomy was performed in the sextants that were severely affected, which was then followed by gingivoplasty. After the initial incision, flap was reflected by periosteal elevator, to access root calculus. After thorough debridement, flap was sutured back. Periodontal dressing was given post-treatment. Antibiotics and analgesics were prescribed to the patient.

Chronic inflammatory changes are common cause of gingival enlargement. CIGE is caused by prolonged exposure to dental plaque. Factors that favor plaque accumulation and retention include poor oral hygiene, abnormal relationships of adjacent/opposing teeth, lack of tooth function, improper restorations, orthodontic therapy, and habits. Treatment of gingival enlargement is based on an understanding of the cause of the enlargement and the underlying pathologic changes. Here, we report a case of CIGE. These enlargements are often associated with a long-standing bacterial plaque accumulation.

Chronic inflammatory gingival enlargement often results due to long standing plaque accumulation and lack of oral hygiene maintenance. This case report highlights a case of a young girl with poor hygiene and betel quid chewing habit exhibiting gingival hyperplasia.

For the management of such cases, regular professional oral prophylaxis and patients compliance is necessary. The gingival hyperplasia with a long standing chronic feature usually consists of fibrotic component which needs to be treated surgically. The patient was successfully treated and was called for recall every month for 3 months and then at 3 months interval (Figure 4 and 5).



Figure 4



Figure 5

### Discussion

Gingival hyperplasia may be caused due to several multi factorial etiologies such as drug induced enlargement due to (Cyclosporin, phenytoin, nifedipine), hereditary, puberty induced, pregnancy induced, inflammatory component and systemic involvement such as (leukemia, neurofibromatosis) [3].

Plaque induced gingival hyperplasia usually begins at gingival margin and shows change in color and contour. Consequently, the sulcular temperature changes too and the quantity of gingival exudate is increased. The gingival bleeds on slight provocation [4].

Evident histological changes are seen in such cases such as histopathologic changes include proliferation of basal junctional epithelium leading to apical and lateral cell migration, vasculitis of blood vessels adjacent to the junctional epithelium, progressive destruction of the collagen fiber network with changes in collagen types, cytopathologic alteration of resident fibroblasts and a progressive inflammatory/immune cellular infiltrate. Removal of plaque reverses the disease [5].

Symptoms and severity vary from individual to individual. The common clinical findings of plaque induced gingivitis include erythema, edema, bleeding, sensitivity, tenderness, and enlargement [5].

### Conclusion

Inflammatory Gingival Hyperplasia occurs in individuals of all age groups. This case report shows how betel quid chewing along with poor oral hygiene can lead to massive gingival hyperplasia in a young individual. The patient after the treatment is instructed to be on supportive periodontal therapy which requires her to visit the dentist every 3 months for evaluation of her oral hygiene status along with non-surgical therapy.

### Bibliography

1. Carranza FA and Hogan EL. "Gingival enlargement". In: Newman MG, Takei HH, Klokkevold PR, Carranza FA. Carranza's Clinical Periodontology. 11<sup>th</sup> edition. Philadelphia, Penn: W.B. Saunders Company (2006): 373-390.
2. Saleem M and Deepa D. "Management of amlodipine induced gingival enlargement by diode laser". *Journal of Current Research in Scientific Medicine* 2.1 (2016): 49-52.
3. Saraswathi T. "Shafer's textbook of oral pathology". *Journal of Oral and Maxillofacial Pathology* 13.1 (2009): 46.
4. Jhadhav T, *et al.* "Chronic Inflammatory Gingival Enlargement Associated with Orthodontic Therapy - A Case Report". *Journal of Dental Hygiene* 87.1 (2013): 19-23.
5. Seymour RA. "Effects of medications on the periodontal tissues in health and disease". *Periodontology 2000* 40 (2006): 120-129.

**Volume 18 Issue 7 July 2019**

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