



## GINGIVAL ENLARGEMENT - A CASE REPORT

**Dr. Princy Thomas<sup>\*1</sup>, Dr. Pramod Waghmare<sup>2</sup>, Dr. Amit Chaudhari<sup>3</sup>, Dr. Nishita Bhosale<sup>4</sup> and Dr. Neelam Gavali<sup>5</sup>**

<sup>1,4,5</sup>Post Graduate Student, Department of Periodontology, Bharati Vidyapeeth (Deemed to be University) Dental College and Hospital- Pune.

<sup>2</sup>Professor, Department of Periodontology, Bharati Vidyapeeth (Deemed to be University) Dental College and Hospital- Pune.

<sup>3</sup>Associate Professor, Department of Periodontology, Bharati Vidyapeeth (Deemed to be University) Dental College and Hospital- Pune.

**\*Corresponding Author: Dr. Princy Thomas**

Post Graduate Student, Department of Periodontology, Bharati Vidyapeeth (Deemed to be University) Dental College and Hospital- Pune.

Article Received on 03/09/2018

Article Revised on 04/10/2018

Article Accepted on 25/10/2018

### ABSTRACT

Gingival enlargement also known as gingival hyperplasia or hypertrophy, is defined as an abnormal overgrowth of gingival tissues. A case of a 23-year-old female presenting with maxillary and mandibular chronic inflammatory gingival enlargement is reported here. Surgical therapy was done with scalpel to provide a good aesthetic outcome. Even with advanced treatment options, conventional scalpel treatment is a better option in terms of precise incision, lower cost and faster reepithelization. This case report also highlights the importance of patient motivation and compliance during and after therapy which act as a crucial factor in the success of treatment.

**KEYWORDS:** Inflammatory Gingival enlargement, conventional scalpel, patient motivation.

### INTRODUCTION

Gingival enlargement is a common feature of gingival disease which can be caused due to gingival inflammation, fibrous growth, or the combination of both.<sup>[1]</sup> It is a multifactorial condition that develops as an interaction between the host and the environment or in response to various stimuli.<sup>[2]</sup> On the basis of the extent and severity of enlargement, it may cause functional disturbances like difficulty in mastication, altered speech, aesthetic and psychological problems.<sup>[3]</sup> Inglés et al. summarized different methods and presented their clinical index to measure the degree of gingival enlargements.<sup>[4]</sup>

Gingival enlargement can be caused by wide variety of etiologies. It may result from acute or chronic inflammatory changes but chronic changes are more common. Chronic inflammatory gingival enlargement (CIGE) is caused by prolonged exposure to dental plaque. Plaque-induced inflammatory gingival enlargements resolve with debridement of plaque and calculus and improved oral hygiene. Where the gingiva is fibrotic, resolution may not occur resulting in periodontal pocket such that oral hygiene is impeded.<sup>[5]</sup> This may lead to more inflammation and further plaque accumulation perpetuating this vicious cycle.

The therapeutic approaches related to gingival enlargement depends on the underlying etiology and the subsequent changes it manifests on the tissues. The prime treatment modalities involve obtaining a detailed medical history and nonsurgical periodontal therapy, followed by surgical excision to retain esthetical and functional demands.

Scalpel is being used routinely for oral surgical procedures. Excision of growth, excisional or incisional biopsy, ablation of white lesions, removal of mucocele and gingivectomy are commonly performed intraoral procedures. The most widely used cutting instrument in surgery is the scalpel, also known as cold knife and has been considered gold standard cutting tool till now. Scalpel has been used for many years because of its ease of use, accuracy, low cost and minimal damage to adjacent tissue.<sup>[6]</sup> This case report presents a clinical presentation and treatment of CIGE.

### CASE REPORT

A 23-year-old female reported to the department of Periodontology and implantology at Bharati Vidyapeeth Dental College and Hospital in Pune, India. The patient presented with a chief complaint of pain in the gums with swelling and bleeding for 3-4 months. She also

complained of mobile teeth in the lower front tooth region.

Patient visited dentist for the same and got medications one month back. She brushed her teeth twice daily in horizontal scrub motion but was unable to do it properly since past two months due to pain and bleeding while brushing.

A detailed family history was obtained and was not contributory. The patient had no systemic problems that

could have contributed to gingival enlargement. She had no history of hospitalization and medication in the past.

On clinical examination, a diffuse gingival enlargement from canine to canine in both maxillary and mandibular arch involving the interdental, marginal and attached gingiva was observed. The marginal gingiva appeared pinkish red with melanin pigmentation, soft and friable with a smooth shiny surface. Gingival bleeding occurred on slightest provocation. Suppuration was present in the anterior maxillary region.



**Figure-1.**



**Figure-2.**

The lower anterior teeth were having grade 1 mobility. Probing depth was  $\geq 6$ mm in relation to the upper and lower anterior teeth. Attachment loss of  $\geq 3$  mm was seen in relation to upper and lower anterior teeth.

#### **Investigations**

Intraoral periapical radiographs revealed a horizontal bone loss and 50% of bone present. Laboratory investigations did not reveal any abnormalities.



**Figure-3.**



**Figure-4.**



**Figure-5.**

**Diagnosis**

Chronic Inflammatory Gingival Enlargement.

**Treatment**

A clinical decision was made to institute a proper oral hygiene program for the patient as the first phase of treatment. Thorough scaling, root planing and polishing was done under local anaesthesia. Proper oral hygiene was instructed to patient with proper brushing technique using ultra soft toothbrush.

Patient was recalled after one week. Surgical therapy was planned to be carried out under LA using scalpel after two weeks.



**Figure 6: Two weeks after Phase 1 Therapy.**

**Armamentarium**



**Figure-7.**

**Surgical Phase**

Pockets on each surface was explored with a periodontal probe and marked in several areas to outline its course on each surface. External bevel gingivectomy was done with #15 no. blade in the maxillary and mandibular anterior region. Incision started apical to the points marking the course of the pockets and directed coronally to a point between the base of the pocket and the crest of the bone. Excised pocket wall was removed, the root surface was closely examined and cleaned. Surgical pack

was placed. Patient was given ibuprofen, amoxicillin and clavulanic acid for 7days and was recalled after one week. Post-operative and oral hygiene instructions were given. Patient was instructed to use 0.2% chlorhexidine mouth wash twice daily for two weeks. Patient motivation was done to maintain proper oral hygiene. Patient was recalled after one week and healing was found satisfactory. A good esthetic outcome was achieved after one month.(Fig.11).



**Figure-8.**



**Figure-9.**



Figure-10.



Figure-11.

## DISCUSSION

Chronic inflammatory changes are common causes of gingival enlargement. These are inflammatory response to local irritant associated with gingiva. It is caused by prolonged exposure to dental plaque. Factors that favour plaque accumulation and its 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 the 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. Regular professional oral prophylaxis and good patient compliance are required in the management of such cases. Enlargement resulting from inflammation alone can be treated successfully with local procedures and fastidious oral hygiene prevents recurrence. CIGE, which is soft and discoloured and is caused principally by edema and cellular infiltration is treated by scaling and curettage procedures provided the size does not interfere in complete removal of deposits. Chronic inflammatory enlargement which includes a significant fibrotic component surgical removal is the treatment of choice. Two techniques - gingivectomy and flap operation. Recurrence after treatment is a most common problem. Recurrence of CIGE: (a) After treatment immediately is due to incomplete removal of irritants, (b) after healing is due to inadequate plaque control by the patient which is the most common cause. One of the most important determinants of treatment outcome is patient compliance. The willingness to perform adequate oral hygiene measures, to receive timely periodic recalls and treatment is essential for a successful outcome.

## CONCLUSION

Gingival enlargement is disfiguring and can interfere in mastication and speech, hence thorough understanding of the pathogenesis is essential. The local factors, dental plaque and calculus are responsible for gingival enlargement.

CIGE in our case was due to poor oral hygiene as there was more of inflammatory component. There was drastic reduction in enlargement after SRP and the residual was

corrected by gingivectomy surgery. Thus, understanding cause and pathogenesis and planning treatment based on it is important.<sup>[7]</sup> This case 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 to obtain predictable outcomes. Future shows bright outcome for the treatment of gingival enlargement with different treatment modalities.

## REFERENCES

1. Trackman P, Kantarci A. Connective tissue metabolism and gingival overgrowth. *Crit Rev Oral Bio Med*, 2004; 15: 165-175.
2. Carranza FA, Hogan EL. Gingival enlargement. In: Newman MG, Takei HH, Klokkevold PR, Carranza FA. *Carranza's Clinical Periodontology*. 11th ed. Philadelphia, Penn: W.B. Saunders Company, 2006; 373-390.
3. Jhadhav T, Bhat KM, Bhat GS, Varghese JM. Chronic Inflammatory Gingival Enlargement Associated with Orthodontic Therapy – A Case Report. *J Dent Hyg*, 2013; 87(1): 19-23.
4. Inglés E, Rossmann JA, Caffesse RG. New clinical index for drug-induced gingival overgrowth. *Quintessence Int.*, 1999; 30: 467-73.
5. Tomar N, Vidhi M, Mayur K. Inflammatory gingival enlargement-a case report. *J Adv Med Dent Sci.*, 2014; 2: 109-13.
6. Liboon J, Funkhouser W, Terris DJ. A comparison of mucosal incisions made by scalpel, CO2 laser, electrocautery, and constant-voltage electrocautery. *Otolaryngol Head Neck Surg.*, 1997; 116: 379-85.
7. Buddiga V, Ramagoni NK, Mahantesh H. Gingival enlargement-a case series. *Ann Essence Dent*, 2012; 1: 73-76.