

**Acute localised inflammatory gingival Enlargement – A case report**

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**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. [1]

The pathogenesis of gingival enlargement is associated with multiple factors, including inflammation, specific drug use (e.g., cyclosporine A , phenytoin , and nifedipine),[2] or it may occur as a manifestation associated with several blood dyscrasias, such as leukaemia, thrombocytopenia, or thrombocytopathy.[3] There are several adverse consequences of gingival enlargements such as functional disturbances such as difficulty in plaque control, mastication, altered speech, and aesthetic and psychological problems.[4]

The most common form of enlargement is due to plaque-induced inflammation of the adjacent gingival tissues (inflammatory hyperplasia) and this tends to be associated most commonly with the interdental papillae and may be localized or generalized.[5]

Inflammatory gingival enlargement may be categorized as acute or chronic, wherein chronic changes are much more common.[3] 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, fixed orthodontic appliances or even deleterious habits.[1]

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.



Figure 1:

### Case report

A 32-year-old male patient reported to the dept of periodontology at the DY Patil School of Dentistry, Navi Mumbai, presenting with a swelling in the upper right region associated with constant pain and spontaneous bleeding. The patient was apparently alright 2-3 weeks back when he noticed a gradual increase in the swelling ever since. He reported severe pain, mobile teeth and bleeding on touch in the area. The patient followed basic oral hygiene involving brushing using a medium bristle brush and toothpaste once every morning. He presented with a history of tobacco chewing since 10 years at a frequency of 6-7 times a day.

On clinical examination, the lesion involved the interdental papilla on the buccal and palatal aspect between the canine and first premolar along with the attached gingiva on the buccal aspect. It was measured at approximately 15 mm x 25 mm on the buccal aspect and 8 mm x 9 mm on the palatal aspect. It showed a soft consistency and was pedunculated and solitary. It showed spontaneous bleeding on probing and was associated with a mobile root piece with 14 and 15.

Supra and subgingival plaque and calculus was present along with deep black extrinsic stains consistent with the presented history of tobacco. Radiographically severe bone loss was seen between 13 and 14. Oral prophylaxis was carried out 10 days prior to planned excision surgery.

Complete excision of the lesion was achieved on both buccal and palatal aspects, which was then sent for histological examination. Extraction of 14 and 15 was done as well. A series of bloodwork including a total leukocyte count, bleeding time and clotting time was carried out. Oral hygiene instructions were given which included the use of chlorhexidine mouthwash twice a day for 14 days. 7 days post-surgery the patient was recalled for suture removal and follow up, at which the lesion had majorly settled, however, some amount of overgrowth had seemed to have recurred.

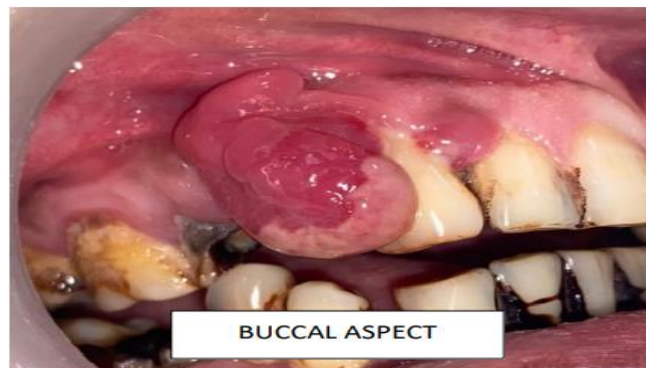


Figure 2:



Figure 3:



Figure 4:



### 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. [6] Depending on the etiology and pathogenesis, it can be classified as inflammatory, drug-induced enlargement due to systemic conditions and diseases, gingival tumors, and false enlargement.[3] Depending on these etiologies and pathogeneses, various treatment modalities have been suggested in the literature. For example, if the lesion is composed mainly of fibrotic issue as in drug-induced enlargement, little shrinkage occurs after nonsurgical therapy, hence requiring the need for surgical periodontal therapy as the definitive treatment with stoppage or replacement of the culprit drug. Inflammatory gingival enlargement may present as acute and chronic types. Chronic inflammatory gingival enlargement is usually plaque induced where local response of tissue to irritants,[7] such as calculi, overhanging margin of restorations, foreign bodies, caries, and overextended margins of appliances, may also play a significant role in diagnosis and treatment planning. When chronic inflammatory gingival enlargements include a significant fibrotic component that does not resolve completely after initial



Figure 5:

### Results

The results of the blood tests showed no deviations from normal and were inconclusive of any systemic causes.

The histopathological test reported Para keratinized stratified squamous epithelium. The epithelium showed arcading at various places. The underlying connective tissue stroma showed numerous proliferating young fibroblasts, blood vessels and aggregates of chronic inflammatory infiltrate. At places the stromal tissue exhibited myxoid degeneration. The histopathological diagnosis was suggestive of inflammatory fibrous hyperplasia.



periodontal therapy or does not meet the aesthetic and functional demands of the patient, surgical removal is the treatment of choice. The most widely employed surgical approaches for the treatment of gingival enlargements is oral prophylaxis followed by removal of local irritants and other possible predisposing factors.

Removal of deposits follows great amount of reduction in inflammation leading to shrinkage of lesion and vascularity markedly. The decrease in the size of lesion is directly proportional to the amount of inflammation present due to local deposits and irritants.[8]

In the current case report, the lesion caused severe discomfort and pain along with speech and masticatory disturbances to the patient. The lesion showed marked shrinkage post one round of oral prophylaxis, however due to the size of the lesion, a complete surgical excision was indicated and carried out.

### **Conclusion**

This care report highlights the importance of oral hygiene maintenance and patient compliance in treatment of such inflammatory regions.

It also demonstrated the rapid rate at which lesions can appear and grow in patients with inadequate oral hygiene and negligence. Thus, 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. Even though revolutionary advances have taken place in dental specialties, these 2 factors still play a critical role in the success of a therapeutic program. An effective communication is, thus, vital in motivating and educating patients about their dental problems.

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