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# Inflammatory Gingival Enlargement and Management: A Case Report

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## ABSTRACT

Inflammatory gingival enlargement, also synonymous with the terms gingival hyperplasia or gingival hypertrophy, can be defined as an abnormal growth of gingival tissues. It can be associated with chronic periodontitis. The present case report describes a case of long standing gingival enlargement in a systemically healthy, non-syndromic young female involving the anterior region of both the arches. Surgical therapy was carried out to provide a good aesthetic outcome. No recurrence was reported at the end of one year recall.

***Keywords:*** Gingival enlargement, inflammatory enlargement.

## INTRODUCTION

Constant external and internal stimuli to the oral mucosa may develop spectrum of disease that range from reactive, developmental inflammatory to neoplastic. [1] Gingival enlargement is a multifactorial condition that develops in response various stimuli and interactions between environment and host. [2] These may also be due to reaction to low-grade injury like calculus, fractured teeth, food lodgement, overhanging restorations and overextended denture flanges. [3] It can be plaque-induced, systemic hormonal disturbances or as a manifestation associated with several blood dyscrasias (leukemia, thrombocytopenia or thrombocytopathy). Extent and severity may cause functional disturbance with speech, mastication and psychological problems. [4]
Classification of gingival enlargement: [5]

Grade 0: No signs of gingival enlargement;
Grade I: Enlargement confined to interdental papilla;
Grade II: Enlargement involving interdental papilla and the marginal gingiva;
Grade III: Enlargement covering three quarters or more of the crown.

Inflammatory hyperplasia due to plaque is the most common form of enlargement. It can be generalized or localized, can be exaggerated by hormonal effects, as seen in pregnancy or puberty or by systemic medications. [6]

## CASE REPORT

A 40 years female reported to the Department of Periodontology, Rural Dental College, Loni, with the chief complaint of gingival enlargement in relation with maxillary and mandibular anterior teeth since 1 year. She also complained of difficulty in mastication and had concern for aesthetics. There was no history of drug intake that is known to provoke gingival enlargement neither family history was present. Intra-oral examination revelled grade III enlargement with maxillary and mandibular anterior teeth and Grade II enlargement in relation with mandibular right posterior teeth, the enlargement was diffuse and fibrotic with increase in stippling, generalized gingival bleeding on probing, anterior region showed probing depth of more than 5mm. (Image.1). The radiograph (OPG) showed no evidence of bone loss. (Image.2)

**Image.1**
**(Pre-operative)**

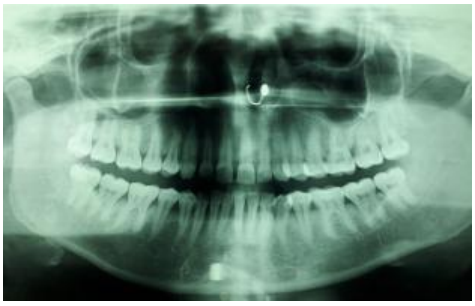

**Image.2**
**(Orthopantomogram)**

**TREATMENT:**

Phase I therapy that is scaling and root planning after which oral hygiene instructions were given. Patient was recalled after 4 weeks and re-evaluated. A written consent was obtained before the surgical phase. Decision was made for internal bevel gingivectomy for esthetic purpose on the basis of amount of tissue presents after phase I therapy. Pockets were measured using a pocket marker and bleeding points were marked on the outer surface of gingiva. Internal bevel incision was made on a point apical to the alveolar crest depending on thickness of the tissue. Flap was reflected with periosteal elevator and residual plaque and calculus was removed through root planing was done which was followed by thinning of the flap. Direct interrupted sutures were given. (Image.3) Periodontal dressing was given and the excised tissue was sent for histopathological examination in the department of oral pathology. Haematoxylin and eosin staining showed hyperplastic stratified squamous epithelium with underlying connective tissue showing numerous blood vessels with increased inflammatory cells predominantly plasma cells and lymphocytes with increase in blood vessels. Histopathologically, it showed inflammatory fibro epithelial hyperplasia (Image.4). Antibiotics and analgesics were prescribed for 5 days and chlorhexidine mouth wash was given twice daily for 3 weeks. Post-operative instructions were given and the patient was recalled after 7 days for suture removal (Image.5). Patient was recalled at frequent intervals for next 2 months and there was uneventful healing was seen (Image.6). Recall visits after 1 year showed no recurrence and healthy gingiva. (Image.7)

**Image.3**
**(Intra-operative)**

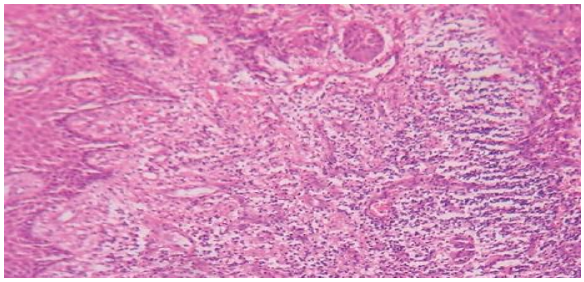

**Image.4**

**Image.5**
**(1 week post-operative)**

**Image.6**
**(1 month post-operative)**

**Image.7**
**(1 year post-operative)**

## DISCUSSION

Gingival overgrowth may vary from isolated mild enlargement of interdental papilla or a uniform enlargement which may affect either one or both jaws. [7] Inflammatory gingival enlargement is the most common form, and is caused by prolonged exposure to plaque. Chronic inflammatory gingival enlargement is most common form and clinically presents as soft and discoloured gingiva which is due to edema and infective cellular infiltration caused by prolonged exposure to bacterial plaque and can be treated by conventional periodontal treatment that is scaling and root planning. If the chronic inflammatory gingival enlargement includes fibrotic components that do not shrink after phase I therapy then surgical removal should be considered for removal of excess tissue. [8] Clinically plaque-induced gingival enlargement usually presents as enlarged gingival contours due to edema or color changes to red and/ or bluish red hue, bleeding on probing and increased exudates from gingiva. [9] Enlargements of these types are often associated with long-standing bacterial plaque accumulation which will require regular professional oral prophylaxis and good patient compliance. Patient education, motivation and compliance during and after dental treatment are most important factors. Reinforcement of oral hygiene is necessary as there is tendency to revert to their original behaviour.

## CONCLUSION

This report highlights the importance of diagnosis, management and motivation of

the patient. For the predictable outcomes oral hygiene motivation should be started at the initial stages of treatment itself. There should be at least one year follow up for the patient to evaluate the tissues and for oral hygiene maintenance.

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