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"Diagnosis and management of Chronic Inflammatory Gingival Enlargement: A Case Report"

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ABSTRACT

Gingival enlargement is a common feature in gingival disease. If gingival enlargement isn't treated, it may some aesthetic problems, plaque accumulation, gingival bleeding, and periodontitis. Overgrowth of the gingival tissue makes it more difficult for patients to maintain oral hygiene. After performing scaling and root planning surgical correction of the gingival overgrowth is still the most frequent treatment. Such treatment is only advocated when the overgrowth is severe. It includes scalpel gingivectomy, overgrowth flap surgery, electro-surgery and laser excision. 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, modified Widman flap.

INTRODUCTION

The interdental papilla and/or the marginal gingiva may somewhat balloon, which is when chronic inflammatory gingival enlargement begins. Papillary or marginal, the expansion might be localized or universal. Unless there is an acute infection or trauma, it advances gradually and painlessly. Chronic exposure to tooth plaque results in chronic inflammatory gingival hypertrophy. The oral mucosa may develop a variety of diseases, from reactive to cancerous, as a result of ongoing internal and external stressors. [1] A multifactorial condition called gingival enlargement arises in response to a variety of stimuli and interactions between the environment and the host. [2] These could also be a result of the body's response to minor trauma, including as calculus, broken teeth, food lodgement, overhanging restorations, and overextended denture flanges. [3] It can be a symptom of various blood dyscrasias (leukemia, thrombocytopenia, or thrombocytopathy) or plaque-induced, systemic hormonal abnormalities. Extent and intensity may result in psychological issues, as well as functional problems with speaking and mastication.[4]It is more challenging for patients to maintain good dental hygiene when the gingival tissue has grown excessively. The most common therapy for gingival overgrowth is still surgical repair. Only when the overgrowth is significant is this type of treatment advised. Scalpel gingivectomy, overgrowth flap surgery, electro surgery, and laser excision are all included in it. The purpose of this research is to describe chronic inflammatory gingival hypertrophy and how flap surgery can be used to treat it.

CASE DESCRIPTION

A 29 years female reported to the Department of Periodontology, Post Graduate Institute of Dental Sciences, Rohtak, Haryana with the chief complaint of gingival overgrowth along with bleeding in relation with mandibular anterior teeth since 8-9 months. 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 revealed grade III enlargement mandibular anterior teeth and was diffuse and fibrotic. Generalized gingival bleeding on probing, anterior region showed probing depth of more than 5mm. (Figure1).

Figure 1: Preoperative image showing gingival enlargement and increased pocket depth.

Phase I therapy that was 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. As pocket makes it impossible for the patient to remove biofilm, which is part of the vicious cycle, therefore decision was made for Modified Widman Flap Surgery which used only horizontal incisions on the basis of amount of tissue, aesthetics, keratinized tissue widthand pockets presents after phase I therapy. This technique offers the possibility of establishing an intimate postoperative adaptation of healthy collagenous connective tissue to tooth surfaces.

The first incision was scalloped internal bevel incision directed towards the alveolar crest away from the gingival margin. The papillae were dissected and thinned to have a thickness similar to that of the remaining flaps.Full-thickness flaps are reflected away from the alveolar crest. The second, crevicular incision was made in the gingival crevice to detach the attachment apparatus from the root.The interdental tissue and the gingival collar were detached from the bone with a third incision. The gingival collar and granulation tissue were removed with curettes. The root surfaces were scaled and planed(Figure2). Direct interrupted sutures were given(Figure3). Periodontal dressing was given and the excised tissue was sent for histopathological examination in the department of oral pathology.

Figure 2: Intraoperative image showing flap reflection.

Figure 3: Image showing simple interrupted suturing after flap surgery.

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. Antibiotics and analgesics were prescribed for 5 days and chlorhexidine mouth wash was given twice daily for 2 weeks. Post-operative instructions were given and the patient was recalled after 7 days for suture removal (Figure 4).

Figure 4: Postoperative image showing successful healing at 1 week.

RESULTS

One month after surgery, a fully epithelialized gingival crevice with a well-defined epithelial attachment was present. Patient was recalled at frequent intervals for next 2 months and there was uneventful healing. Recall visits after 6 months (Figure5) showed no recurrence and healthy gingiva.

Figure 5: Postoperative image showing successful healing at 6 months.

DISCUSSION

A uniform enlargement that may impact one or both jaws or an isolated moderate enlargement of the interdental papilla are two examples of gingival overgrowth. [7] The most typical type, inflammatory gingival expansion, is brought on by prolonged contact with plaque. The most typical form of chronic inflammatory gingival enlargement is characterized by soft, discolored gingiva due to edema and infective cellular infiltration brought on by prolonged exposure to bacterial plaque. Scaling and root planning, a traditional periodontal treatment, can be used to treat this condition. In addition to nonsurgical periodontal care, periodontal access surgery should only be performed once the patient has shown effective biofilm control. The primary objective of periodontal access surgery is access for root instrumentations. The secondary objective of periodontal access surgery is pocket reduction through soft tissue resection. 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 typically manifests as expanded gingival contours brought on by edema, color changes to red and/or bluish red, bleeding upon probing, and a rise in gingival exudates. [9] These enlargements are frequently accompanied by bacterial plaque buildup over time, necessitating consistent professional oral prophylaxis and high patient compliance. The most crucial elements are patient education, inspiration, and compliance throughout and after dental treatment. There is a propensity for their behaviour to revert to their previous patterns, thus oral hygiene needs to be reinforced.

CONCLUSION

This case study emphasizes the significance of patient motivation, care, and diagnosis. Motivating patients to practice good dental hygiene should begin right away in order to achieve consistent results.

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