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# Short Communication

## GINGIVAL ENLARGEMENT: AN ISSUE OF PINK TISSUE: CASE SERIES

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Manan M Doshi	Increase in size of gingiva is a common feature of gingival disease. Accepted current terminology for
Department of Periodontics, Yerala Medical	this condition is gingival enlargement and gingival overgrowth. Gingival enlargement may result from
Trust and Research Centre's Dental College	chronic or acute inflammatory changes. Gingival enlargements are of special concern to the patient and
and Hospital, PG Institution Institutional Area,	the dentist because they pose problems in plaque control, function (including mastication, tooth eruption
Kharghar, Navi Mumbai, Maharashtra, India	and speech), and esthetics. Treatment of gingival enlargement is based on an understanding of the cause
	and underlying pathologic changes. Because gingival enlargements differ in cause, treatment of each
DOI: 10.7897/2321-6328.02121	type is best considered individually. Selection of the appropriate technique depends on the size of the
	enlargement and character of the tissue. This article highlights the management of 3 cases of gingival
Article Received on: 16/12/13	enlargement with a varying etiology.
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### INTRODUCTION

Increase in size of gingiva is called as gingival enlargement or gingival overgrowth. Gingival enlargement may result from chronic or acute inflammatory changes; chronic changes are much more common. In addition, inflammatory enlargements usually are a secondary complication to any of the other types of enlargement, creating a combined gingival When chronic inflammatory gingival enlargement. enlargements include a significant fibrotic component that does not undergo shrinkage after scaling and root planning or are of such size that they obscure deposits on the tooth surfaces and interfere with access to them, surgical removal is the treatment of choice. Gingival enlargement is a wellknown consequence of the administration of some anticonvulsants, immunosuppressant's and calcium channel blockers and may create speech, mastication, tooth eruption and esthetic problems. Orthodontic appliances tent to retain plaque, food debris and also are capable of modifying the gingival ecosystem. An increase in Prevotella melaninogenica, Prevotella intermedia and Actinomyces odontolyticus and a decrease in the proportion of facultative microorganisms was detected in the gingival sulcus following the placement of orthodontic bands.<sup>1</sup> We report 3 cases of gingival enlargement with varying etiology.

**Case 1:** Drug induced gingival enlargement: 48 years female patient was reported to Department with chief complaint of enlargement of gums in lower front region of mouth since 2-3 months. Patient was hypertensive and was on amlodipine 5 mg (Amlos-5). The enlargement was fibrotic in consistency which was excised by gingivectomy (Figure 1).

**Case 2:** Inflammatory enlargement: 18 years male patient was reported to Department with chief complaint of enlargement of gums in upper and lower front region of mouth since 4-5 months. With scaling and root planning, resolution of inflammation and enlargement in all areas subsided, except mandibular anterior region, which was surgically excised by gingivectomy (Figure 2).

**Case 3:** Idiopathic enlargement: 24 years female patient was referred from Department of orthodontics regarding enlargement in mandibular anterior region. The patient was unhappy with the gingival enlargement and wanted correction of the same. The enlargement was fibrotic in consistency which was excised by gingivectomy (Figure 3).

### **Surgical Procedure**

After administration of local anesthesia, incision was started apical to the points marking the course of pockets. The incision was beveled approximately at 45° to the tooth surface to recreate normal festooned pattern of gingival. Excised pocket wall was removed and granulation tissue was removed. Surgical area was covered with periodontal pack.

### DISCUSSION

Drug induced gingival enlargement: Gingival enlargement is a well-known consequence of the administration of some anticonvulsants, immunosuppressant's and calcium channel blockers. Clinical and microscopic features of the enlargements caused by the different drugs are similar.<sup>2</sup> When uncomplicated by inflammation, the lesion is mulberry shaped, firm, pale pink and resilient with lobulated surface and no tendency to bleed. The enlargement is usually generalized throughout the mouth but is more severe in the maxillary and mandibular anterior regions. It occurs in areas in which teeth are present, not in edentulous areas and the enlargement disappears in areas from which teeth are extracted. Hyperplasia of the mucosa in edentulous mouths has been reported but is rare.<sup>3</sup> Some investigators believe that inflammation is a pre-requisite for development of the enlargement, which therefore could be prevented by plaque removal and fastidious oral hygiene.<sup>4</sup> However, oral hygiene by means of toothbrushing<sup>5</sup> or the use of chlorhexidine toothpaste<sup>6</sup> reduces the inflammation but does not lessen or prevent the enlargement. Hassell and co-workers<sup>7</sup> have hypothesized that in non-inflamed gingiva, fibroblasts are less active or even quiescent and do not respond to circulating phenytoin, whereas fibroblasts within inflamed tissue are in active state as a result of the inflammatory mediators and the endogenous growth factors present. Also, a genetic predisposition is a suspected factor<sup>8</sup> in determining whether a person treated with phenytoin will develop gingival enlargement or not. Gingivectomy means excision of gingiva. By removing the pocket wall, it provides visibility and accessibility for complete calculus removal and thorough smoothing of the roots. It creates a favorable environment for gingival healing and restoration of a physiologic gingival contour. Gingivectomy has the advantages of simplicity and quickness but presents the disadvantages of more postoperative discomfort and increased chance of post-operative bleeding. It also sacrifices keratinized gingiva and does not allow for osseous recontouring. In general, small areas (upto 6 teeth) of drug-induced gingival enlargement with no evidence of attachment loss (and therefore no anticipated need for osseous surgery) can be effectively treated with the gingivectomy technique. Idiopathic gingival enlargement is a rare condition of undetermined cause. A study of several families found the mode of inheritance to be autosomal recessive and autosomal dominant in others.9 Orthodontic tooth movement is possible because the periodontal tissues are responsive to externally applied forces.<sup>10</sup> Alveolar bone is remodeled by osteoclasts inducing bone resorption in areas of pressure and osteoblasts forming bone in areas of tension. Although, moderate orthodontic forces ordinarily result in bone remodeling and repair, excessive force may produce necrosis of the periodontal ligament and adjacent alveolar bone.<sup>11</sup> Thus, it is important to avoid excessive force and too rapid tooth movement in orthodontic treatment. It has been reported that the dentoalveolar gingival fibers that are located within the marginal and attached gingiva are stretched when teeth are rotated during orthodontic therapy.<sup>12</sup> Surgical severing or removal of these gingival fibers in combination with a brief period of retention may reduce the incidence of relapse after orthodontic treatment intended to realign rotated teeth.







### CONCLUSION

Isolated forms of gingival enlargement are compatible with a normal life span, but the esthetic and dental-associated alterations can considerably reduce the quality of life and may result in serious emotional and social problems and functional impairment. A multidisciplinary approach is hence needed in the management of these cases so as to minimize the recurrence and improve the quality of life, providing better esthetics and minimizing functional impairment.

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