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CASE STUDY

INFLAMMATORY GINGIVAL ENLARGEMENT

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ABSTRACT

Gingival diseases include a group of complex entities which are caused by various etiologic factors. Every condition displays a characteristic set of signs and symptoms. However, these may overlap in different conditions and may be further complicated by the presence of dental plaque, presence of other local etiologic factors and their severity. In the present case series, two young female patients reported with swelling and bleeding from the gums in the mandibular anterior region, which, on examination was found to be associated with ill-constructed prosthesis in Case 1 and mild crowding and plaque accumulation in Case 2. Both cases responded well to Phase I therapy which included thorough scaling and root planing and oral hygiene maintenance instructions. However, surgical treatment was indicated for the enlargement that persisted following Phase I therapy. Internal bevel incision gingivectomy procedure was performed. One month follow up revealed no recurrence. In conclusion, it can be said that, although gingival enlargement can be effectively treated by surgical and non surgical methods and their combination. However, not one method exists that prevents recurrence of the condition and long term follow is necessary.

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INTRODUCTION

Gingival diseases include a group of complex entities which are caused by various etiologic factors. (Mariotti, 1999) Every condition displays a characteristic set of signs and symptoms. However, these may overlap in different conditions and may be further complicated by the presence of dental plaque, other local etiologic factors and their severity. (Mariotti, 1999) An increase in the size of the gingiva is termed as gingival enlargement (The American Academy of Periodontology, 2001) and it is strictly a clinical term. (Newman *et al*., 2006) The terms, hyperplasia and hypertrophy are not precise as they are based on histological diagnosis and not on the clinical appearance of the tissue. Gingival enlargements are of various types and may result due to interactions between the host and environmental factors. They have been classified as plaque-induced gingival diseases modified by systemic diseases, medications and mal-nutrition and non-plaque induced gingival diseases of genetic origin. (Armitage, 1999) Clinical symptoms of gingival enlargement may include pain, tenderness, bleeding, abnormal tooth mobility and migration, occlusal problems, and aesthetic concerns, leading not only to deranged function but also adversely affecting the patient's quality of life.

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Various treatment modalities have been proposed which include non-surgical approach, such as use of antiseptic mouth rinses and maintenance of adequate oral hygiene. In some cases, surgical intervention is indicated. The different modalities, although effective, do not prevent the recurrence of the condition (Research, science and Therapy Committee of the American Academy of Periosontology, 2004).

The following case reports present the efficacy of the combination of non-surgical and surgical approach used for the treatment of discrete gingival enlargement in young female patients.

Case report

Case Report 1: A 31- year old female patient reported with the chief complaint of swelling and bleeding from the gums in the mandibular anterior region since 4-5 months. The bleeding occurred only on brushing and was not associated with pain. On intraoral examination the marginal and the papillary gingiva appeared red and inflamed (Figure 1a). The papillae were enlarged and the enlargement appeared to extend to the attached gingiva. The consistency was soft and edematous and suppuration was present. On examination of the hard tissues, mild crowding was observed in the mandibular anterior area and the teeth in the area of chief complaint were found to have

thick deposits of calculus and debris. Grade I mobility was observed with respect to the central and the lateral incisors.

Fig. 1a. Case 1: Inflammation and enlargement of the marginal and papillary gingiva seen in the anterior region

Fig. 1b. Response of the gingival tissues to Phase I non-surgical therapy

Fig. 1c and 1d. Internal gingivectomy procedure was performed to reduce the bulk of the tissue

Fig. 1e. 1 month follow up revealed no recurrence of the enlargement

Case Report 2: A 35- year old female patient reported to the department with the chief complaint of swelling and bleeding from the gums in the mandibular anterior region since 6 months. On intra-oral examination, an ill-fitting fixed partial prosthesis extending from the left canine to the right canine was present, replacing the missing central and lateral incisors (Figure 2a).

2a and 2b. Case 2: Enlargement is seen in the mandibular anterior region. Fixed partial denture replacing the missing incisors is seen with irregular margins and causing plaque accumulation and eliciting an inflammatory response from the tissues

2c. 1 month after Phase I therapy

2d. 1 months post-operative follow up revealed no recurrence of enlargement

The uneven margins of the crowns on the abutment teeth promoted accumulation of plaque and soft debris eliciting an intense inflammatory response from the surrounding gingival tissues (Figure 2b). Suppuration was also present. Hard tissue examination revealed presence of calculus along the cervical one third of the abutment teeth and Grade 1 mobility.

Laboratory investigations were performed for both the patients, which revealed no systemic condition. Radiographic investigation revealed generalized mild bone loss with adequate support remaining for all teeth.

Treatment

Both patients underwent thorough scaling and root planing in the initial phase and oral hygiene instructions were given which included use of a soft bristled toothbrush and a dentifrice in a circular motion and rinsing with 0.12% Chlorhexidine mouthwash twice daily. One month follow up revealed significant improvement in the gingival health (Figures 1b and 2c). The inflammation had subsided and the enlargement had regressed, although not completely. Surgical intervention was thus indicated in these cases. Internal bevel gingivectomy procedure was performed to reduce the bulk of the enlarged gingiva and also for pocket elimination (Figures 1c and 1d). Thorough debridement of the affected area was carried out. Post operative antibiotics and analgesics were prescribed to the patient along with continued use of Chlorhexidine mouthwash. The sutures were removed after 7 days and the gingival condition was evaluated. One month follow up revealed no post operative discomfort and the healing was uneventful (Figures 1e and 2d).

DISCUSSION

As mentioned previously, different types of gingival enlargement can be attributed to various etiological factors and may present with similar clinical signs and symptoms.

In the above discussed case, the patients presented with typical clinical features of inflammatory gingival enlargement resulting from inability to maintain adequate oral hygiene, such as colour changes from normal coral pink to red, blunting of the interdental papillae, edema of the tissues, loss of stippling, suppuration from the gingival crevice and spontaneous bleeding. The gingival tissues responded well to non surgical therapy, which further favoured the diagnosis of inflammatory gingival enlargement.

The bacteria contained in dental plaque have been proved to cause inflammatory changes and therefore, it was of utmost importance to reduce the bacterial load in the area of chief complaint by non surgical therapy. For a similar condition not responding to therapy, bacterial culturing and antibiotic therapy may be recommended. (Rose *et al*., 2000) Radiographic evaluation revealed mild bone loss and warranted surgical intervention for elimination of persistent pockets following initial full mouth oral prophylaxis. Two methods have been described for the treatment of gingival enlargement: Gingivectomy and Flap procedure. The selection of the technique depends on the size and extent of the lesion.

(Newman *et al*., 2006) Modified Widman flap procedure can be used effectively to reduce the bulk of enlarged gingival tissues. It does not intend apical positioning of the flaps or allow bony recontouring (Lindhe *et al*., 2008; Sigurd P. Ramfjord and Robert R. Nissle, 1974) In the present case, however, an internal bevel gingivectomy was performed in the areas of enlargement to reduce the bulk of the tissue (Joyce *et al*., 1984).

Differential diagnosis of this type of enlargement includes fibroma, pyogenic granuloma or peripheral giant cell granuloma. A definitive diagnosis can only be arrived at by thorough histopathologic evaluation of the disease affected tissue. While traumatic fibroma reveals the presence of thick bands of collagen, pyogenic granuloma is characterised by the presence of highly vascular proliferation that resembles granulation tissue and giant cell granuloma shows presence of multinucleated giant cells amongst ovoid and spindle shaped cells in the connective tissue. (Brad W. Neville *et al*., 2005)

Conclusion

Gingival enlargements are of many types and there are different modalities of treatment for the same. The appropriate line of treatment is decided on the basis of the response of the tissues to initial phase of treatment i.e., thorough scaling and root planing which reduce the bacterial load by removal of dental plaque and also on histopathologic evaluation and presence of other local etiologic factors. Surgical intervention is indicated in case the enlargement or some periodontal pockets persist. Although the above mentioned cases showed no recurrence of enlargement, not one treatment modality guarantees prevention of recurrence and long term follow up and maintenance of adequate oral hygiene by the patient is necessary.

REFERENCES

Armitage GC. Development of a classification system for periodontal diseases and conditions. *Ann Periodontol*., 1999;4:1.

Brad W. Neville, Douglas D. Damm, Carl M. Allen, Jerry E. Bouquot. Oral and Maxillofacial Pathology, 2nd Edition. Saunders. *An Imprint of Elsevier*, 2005.

Joyce M.Liten, Timothy J. O'Learey and Adbel H. Kafrawy. Pocket epithelium removal via crestal and subcrestal scalloped internal bevel incisions. *J Periodontol*., March 1984;55:3. 142-148.

Lindhe J, Lang NP, Karring T. clinical Periodontology and Implant Dentistry, 5th Edition. *Blackwell Munksgard*, 2008.

Mariotti A. dental plaque-induced Gingival Diseases. *Ann Periodontol.,* 1999; 4: 7-17.

Newman MG, Takei HH, Klokkevold PR, Carranza FA. Carranza's Clinical Peirodontology, 10th Edition. W.B. Saunders Company 2006.

Research, science and Therapy Committee of the American Academy of Periosontology. Information Paper. Drug Associated gingival enlargement. *J.Periodontol*., 2004; 75: 1424-1431.

Rose lF, Genco RJ, Maeley BL, Cohen DW. Periodontal Medicine. BC Decker Inc 2000.

Sigurd P. Ramfjord and Robert R. Nissle. The Modified Widman Flap. *Journal of Periodontology*, Aug 1974;45:8.2 601-607.

The American Academy of Periodontology – Glossary of Periodontal Terms. 4th Edition, 2001.

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