ORIGINAL RESEARCH PAPER

Volume-7 | Issue-10 | October-2018 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

GENERALISED GINGIVAL ENLARGEMENT- A CASE REPORT

Periodontology

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ABSTRACT

Gingival enlargement is one of the frequent features of gingival diseases. This condition finds a unique place in literature, because it has been associated with a variety of local and systemic factors. In some cases where gingival enlargement could be the primary sign of potentially lethal systemic diseases, a correct diagnosis of these enlargements could prove life saving for the patient or at least initiate early treatment and improve the quality of life. A 28 year female patient reported with a chief complaint of swelling in the gums. Gingival enlargement removal was done employing surgical technique after phase I therapy.Gingivectomy was carried out in all four quadrants. Periodic recalls showed maintenance of good oral hygiene and one year follow-up revealed no recurrence. The importance of patient motivation and compliance during and after therapy is the success of treatment.

KEYWORDS

Gingival hyperplasia, Gingival overgrowth, Internal Bevel Gingivectomy.

INTRODUCTION

Gingival enlargement, a globally accepted terminology for an increase in the size of the gingiva, It is a multifactorial condition that develops due to various stimuli and interactions between the host and the environment[1]. History of gingivectomy[2] can be dated back to 1742, when Fauchard describe the procedure to remove excessive tissue. Robicsek later on described a similar procedure. The tissues were excised, the granulation tissue eliminated. In 1921, William Ziesel published in his article, Pyorrhea Extermination: Gingivo-ectomy, the rationale and treatment. "Of 2500 teeth operated upon by this method, approximately over 90% has been cured. {Dinh X. Bui } Inflammatory gingival enlargement may be categorized as acute or chronic, wherein chronic changes are much more common. It may be plaque–induced or associated with systemic hormonal disturbances. These enlargements lead to functional disturbances like difficulty in mastication, aesthetic and altered speech[3].

In 1994, Bokenkamp et al. graded gingival overgrowth:[4] 0: No sign of enlargement Grade 1: Enlargement confined to dental papilla Grade 2: Enlargement involving dental papilla and marginal gingiva Grade 3: Enlargement covering three-quarters of crown of tooth or more

The ability to perform oral hygiene measures is compromised in some patients with gingival enlargements. This lead to more inflammation and plaque accumulation. Thus, there is a transformation of the gingival sulcus into a periodontal pocket creating an area where plaque removal becomes impossible. Important determinants of treatment outcomes is patient compliance. Adequate oral hygiene measures is essential for successful outcome. Treatment modalities involve obtaining a detailed medical history and non–surgical periodontal therapy, followed by surgical excision to retain functional and esthetical demands[5].

CASE REPORT

28 year female patient reported to the out-patient department of periodontics with a chief complaint of swelling in the gums in both the jaws for past 2 years. She had severe bleeding from gums, halitosis and difficulty in mastication. On intra-oral examination massive, painless, Grade III type of Gingival enlargement involving both the arches, encroaching buccal, palatal, and lingual surfaces was found. The gingiva was generally pale pink and firm, some areas showed signs of ongoing acute inflammation. Periodontal examination revealed the presence of sub-gingival calculus and bleeding on probing. The enlargement was diffuse, soggy in appearance and fibrotic with probing depth of around 6 mm and generalized gingival bleeding on probing. There was no systemic, family and drug history reported.

After the informed consent of the patient, On the first visit, oral hygiene instructions were given after scaling and polishing. After phase I therapy, the patient was recalled and results were evaluated. The healing of inflammatory enlargement had taken place and fibrotic enlargement remained. The patient was motivated to maintain oral hygiene and was asked to rinse her mouth with 0.12% chlorhexidine mouthwash twice daily for 1 week. After Phase I therapy, Surgical treatment planning was divided as each quadrant a week. Internal bevel gingivectomy for esthetic benefit was performed. Gingivectomy was performed under local anaesthesia. Pockets were measured with pocket marker and bleeding points were produced on the outer surface of the gingiva. After that an internal bevel incision was made to a point apical to the alveolar crest depending on the thickness of the tissue. The thicker the flap the more apical is the ending point of the incision. Then the thinning of the flap was done with the initial incision. Flap was reflected with a periosteal elevator. Instrumentation was done with complete debridement. and then the flap was sutured back to secure the facial and the palatal flap. The area was covered with a periodontal pack. Same procedure was performed for all the quadrants.

Microscopic examination revealed hyper-parakeratinized stratified squamous epithelium. Excisional biopsy of the tissue was done, H and E staining was done for the specimen and it showed dense fibrous connective tissue stroma, chronic inflammatory cell infiltrate consists of lymphocytes and predominantly plasma cells and a moderate number of blood vessels suggestive of chronic inflammatory fibrous hyperplasia. Immediately following surgery, use of icepacks was recommended intermittently for three hours.[Pini Prato, Pagliaro, Baldi et al] and patient was advised to use 0.12% chlorhexidine gluconate mouthrinse for four weeks. Systemic antibiotics were prescribed (Amoxicillin-500 mg, three times daily for five days) along with analgesics. Healing was uneventful with very minimal post operative pain. Recall checkup showed uneventful healing and patient was followed for next 6 months at a regular interval of 1 month.

Figure 1 : Gingival hyperplasia {buccal surface of 1st quadrant)

Figure 2 : Gingival hyperplasia {palatal surface of 1st quadrant)

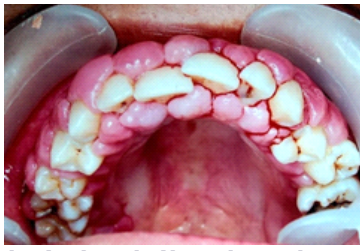

Figure 3: Pocket depth marked by pocket marker

Figure 4 : Internal bevel incision

Figure 5: Clinical appearance after gingivectomy with sutures

Figure 6: The cover of operated area with periodontal pack

Figure 7: Post operative (BUCCAL)

Figure 8: Post operative (PALATAL)

DISCUSSION

Gingival hyperplasia, with its potential cosmetic implication and tendency to provide niche for further growth of microorganism, possess a serious concern to patients and clinicians[6]. The gingival enlargement can be solely present or can be associated with some clinical manifestation[7]. Gingivectomy and gingivoplasty helps in removal of excessive gingival overgrowth giving harmonious gingival contour and also facilitates in maintaining good oral hygiene[8]. Avoiding which may result in accumulation of plaque deposits which may further exacerbate the gingival overgrowth and lead to periodontal destruction[9,10] . Management of gingival hyperplasia depends on the cause of the condition. In our case report chronic inflammatory gingival enlargement was present in relation to maxillary and mandibular arches causing esthetics and masticatory problem to the patient[11,12]. The resolution of the inflammatory component was noticed after nonsurgical therapy with the persistence of the fibrotic component which was then excised by surgical therapy. For the present case, internal bevel gingivectomy[13,14,15] was done in both maxillary and mandibular arches under local anaesthesia. Healing was uneventful and patient was satisfied. Patient was told about recurrence and was instructed to follow routine oral hygiene measures strictly to prevent recurrence.Conventional surgery have caused some problems like surgical trauma, bleeding during surgery, postoperative pain and swelling.[16,17].

In the present case report, size of the hyperplastic tissue was the main cause of aesthetic problems and masticatory difficulties to the patient therefore excised completely.Recurrence is a common feature over varying periods [18].

CONCLUSION

Successful treatment of gingival enlargement depends on the proper identification of etiologic factors and improving oral hygiene status, esthetics, and function through elimination of local factors and surgical excision of the over growth. This case report highlights how a proper case history and clinical examination are helpful in treating enlargements. The local factors i.e. plaque and calculus are known to be responsible for gingival enlargement. Therefore, the importance of supportive periodontal therapy in the form of regular check-up and oral prophylaxis cannot be ignored [16, 19,20].

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