Chronic Inflammatory Gingival Enlargement: A Case Report

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ABSTRACT

Chronic inflammatory gingival enlargement also called as chronic hyperplastic gingivitis is an enlargement of the gingiva as a result of chronic inflammation due to local or systemic factors. Most important local factor appears to be the dental plaque and calculus, which in the presence of trauma, ill-fitting prosthetic appliances or presence of other irritating factors are the predisposing factors in the etiology of the lesion. It has potential to cause esthetic, functional and masticatory disturbances. Here we report a case of 35-year-old female patient with gingival enlargement in the mandibular right posterior area associated with the flat panel displays. The lesions were surgically excised in Toto, and no recurrence was noted in recall visits.

Key Words: Chronic inflammation, gingival enlargement, inflammatory hyperplasia.

Introduction

Oral mucosa is common place, which is predisposed to external as well as internal stimuli; therefore, it is not uncommon to find spectrum of diseases from developmental, inflammatory, and reactive to neoplastic lesions presenting themselves in the oral cavity.1 Most frequently encountered oral mucosal lesions in human beings are reactive in nature.2 These lesions are called reactive since they are due to some kind of reaction to low grade injury, irritation, calculus, improperly contoured and designed prosthetic appliances or restorations.3 In early stage chronic irritant stimulates, the formation of granulation tissue later the tissue begins to undergo a process of fibrosis. The presence of irritating factors in the mucosa triggers a chronic inflammatory process leading to the formation of hyperplastic asymptomatic fibrous tissue.4 Lesion is usually slow growing and asymptomatic, considered a non-neoplastic cell proliferative increase in response to the action of constant physical agents.5 More common in adolescents and adults and relatively uncommon in children (<5%).6 Most cases have been reported in the fourth to sixth decade of life, determining a direct relationship between the frequencies of the injury with the increased time of use of the prosthesis; a minority (<5%) of the cases occurs in children, especially in those who are in mixed dentition. In adults, it is mainly associated with patients using oral prosthesis maladaptive; in children and adolescents, associated with the presence of biofilm, dental malposition and fixed or removable appliances.7

Case Report

A 35-year-old female patient presented to our Hospital with a chief complaint of a painless swelling in the right mandibular back region of the gums since 1-year. Her past medical and family history was insignificant. She did not have a history of receiving any medications, including antiepileptic, antihypertensive or
immunosuppressive medications, which could be contributory to gingival enlargement. On clinical examination, the lesion was well-circumscribed, polypoid, and nodular size was about 2.5 cm × 1.5 cm pink in color, it was present underneath a flat panel displays placed on 45, 46, 47; there was partially erupted impacted 48 as shown in Figure 1. The same was also confirmed through Intra Oral Perapical Radiograph (Figure 2).

Periodontal examination revealed presence of plaque and calculus and deep pocket of 12 mm (Figure 3) was associated with second molar. Complete blood investigation was advised to rule out the possibility of any other predisposing medical condition. Treatment plan first explained to the patient, and a written consent was obtained. First treatment was to remove the local factors; therefore, complete scaling and polishing were done, patient was recalled after 3 days and oral hygiene instructions were given. Scaling and polishing were again carried out and the residual calculus, which was not removed due to tissue over growth, is completely removed, and root planning was done in relation to 45 and 47. A second visit was scheduled after 3 days on which day complete surgical excision of the lesion (Figure 4) was done under local anesthesia containing 2% lignocaine with 1:80,000 epinephrine. The excised lesion (Figure 5) was sent to department of oral pathology for detailed histopathological report. The patient was advised to maintain strict oral hygiene. In addition, chlorhexidinegluconate 0.2% mouth wash was prescribed 2 times a day for 7 days. Regular recall visits were scheduled, and complete check-up was done on each visit.
Histopathological examination revealed stratified squamous epithelium with acanthosis of spinous layer. There was dense infiltration of fibrous connective tissue with chronic inflammatory cells such as lymphocytes and plasma cells. There was a proliferation of endothelial capillaries suggestive of chronic inflammation. Post-operative photograph of the same patient was taken after 1-month. Regular recall visits were scheduled, and the patient was followed-up for 1-year without any recurrence.

Discussion

Chronic irritation of the oral mucosa sometimes results in a group of lesions called as reactive hyperplasia these are the disorders of the fibrous connective layer of the oral mucosa, which proliferates due to continuous stimulation and chronic irritation. These lesions are hyperplastic in nature they are not neoplastic pathophysiology involves exaggerated repair due to irritation, which leads to the formation of granulation tissue and sometimes scar. Some reports of increase in number of gingival fibroblasts other have also reported of slower than normal growth there appears to be increased collagen synthesis rather than decreased levels of collagenase activity may be involved. Clinically such lesions express as well-demarcated exophytic mass with a range of colors from normal to white to reddish depending on the type of lesion, sometime may be confused with hemangiomas, which should be included in the differential diagnosis of reddish brown hyperplastic lesions. The lesions may vary in consistence from soft to firm. Surgical excision is the treatment of choice of such lesions with appropriate removal of causative local factors to prevent recurrences however such lesions do have a tendency to recur. Therefore, patients should be followed-up for long periods.

References