Case Report

Gingival hyperplasia and quality of life

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ABSTRACT

Gingival enlargements are a common clinical entity and most of them manifest as a part of developmental, reactive and inflammation or neoplastic diseases. Among these reactive lesions, fibroepithelial hyperplasia is a histological variant of fibroma and a proliferative fibrous lesion of the gingival tissue. The enlargement affects the regular oral hygiene procedure, esthetic appearance, speech, mastication, quality of life and also increases the chances of more inflammation and infection of the gingiva. These lesions are due to chronic irritation and trauma. Many of these lesions are difficult to diagnose because of similar clinical presentation. This case report discusses the clinical presentation, histological evaluation and management of fibroepithelial hyperplasia of gingiva.

Keywords: Gingival enlargement, Reactive lesion, Fibroepithilial hyperplasia

INTRODUCTION

Gingiva is exposed to many external and internal stimuli and the result is manifestation of a spectrum of disease that ranges from developmental, reactive and inflammatory to neoplasm. Among these reactive gingival lesions are very special as they mimic various groups of pathologic processes and present diagnostic challenges to the clinicians, as they are clinically similar and possess distinct histopathological features. Kfir et al classified them based on their histology into pyogenic granuloma, peripheral giant cell granuloma, fibrous hyperplasia and peripheral fibroma[1]. Most of these lesions are reactive in nature and may not be true neoplasms, but merely fibrous overgrowth caused by chronic irritation and many authors prefer the term fibroepithelial polyp or fibrous hyperplasia for these type of lesions[2]. Fibrous hyperplasia of the gingiva are slowly progressive in nature and probably result from chronic infection rather than trauma [3].The lesion presents as painless, sessile, round or ovoid, broad-based swelling sometimes may cover the tooth surfaces involving the gingival margin with extension to the inter-dental papilla and become so extensive that the teeth are displaced and their crowns covered [4, 5]. Treatment includes surgical excision with periodic follow up to prevent reccurrence of the lesion [6]. The present article discusses a case of chronic non-specific gingival fibroepithelial hyperplasia and its management.

CASE REPORT

A 24 year old female reported to the department of Periodontics at with a chief complaint of swollen gums in the upper and lower front tooth region since 10-12 years which was affecting her esthetics, chewing and regular oral hygiene procedure. and this. Past dental history was not contributory as she did not report any remissions of the enlargement during 10-12 year period and this was her first visit to the dentist. Medical history of the patient revealed no systemic illness or pregnancy, family and drug history were not contributory; she had a personal history of betel nut chewing for the past 5 years. She brushed her teeth in a horizontal method once daily and had poor oral hygiene with gingival enlargement extending from premolar to premolar

Fig.1: Labial view of gingival enlargement w.r.t. upper and lower arches

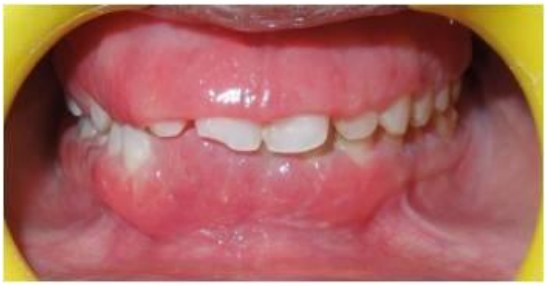


Fig. 2: Lingual and palatal view of gingival w.r.t upper and lower arches

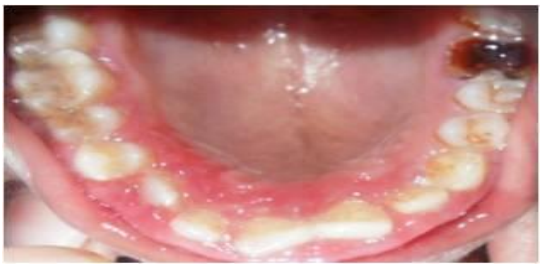


Fig.3: Orthopantomograph

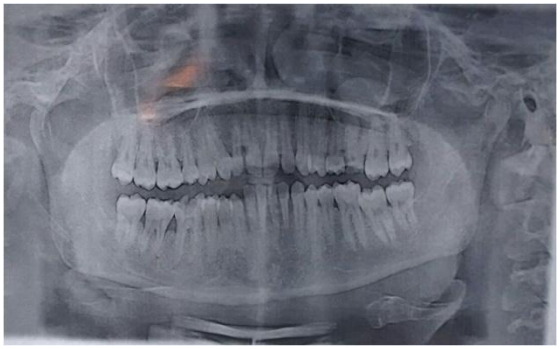
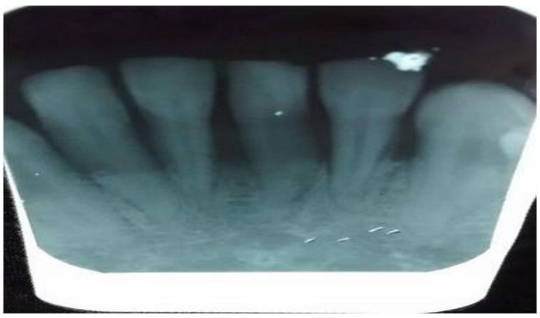
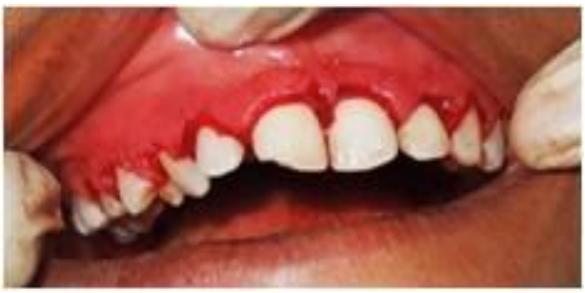


Fig.3a: IOPA mandibular wrt lower anteriors to radiograph w.r.t lower anteriors



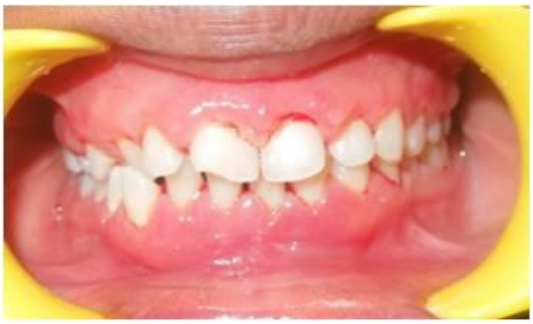
in the maxillary and mandibular arch, covering almost 2/3rd of the coronal aspect of the teeth involved which was more pronounced in mandibular anterior teeth and enlargement was categorized as grade III (Figure 1). The gingiva appeared reddish pink, firm, and non-tender and of a fibrotic consistency, with no signs of acute inflammation. Grade II mobility of 31 and 41 was seen. Lingual and the palatal gingiva did not show any signs of enlargement (Figure 2). Panoramic radiographs revealed bone loss in relation to 31 and 41(Figure 3 & 3a).

Fig. 4: Immediate Post-operative following gingivectomy



Patient was subjected to complete hemogram and all the values were within normal limits. Based upon clinical and the radiographic findings, the lesions were provisionally diagnosed as inflammatory hyperplasia. Differential diagnosis included inflammatory hyperplasia and peripheral ossifying fibroma.

Fig 5: Mild recurrence after 6 months



Patient was subjected to non surgical periodontal therapy which includes scaling and root planing and instructed to use chlorhexidine mouthwash for two weeks. After three weeks excision biopsy of the lesions was done (Figure 4) and the excised tissues were subjected histopathological investigation to confirm our diagnosis.

HISTOLOGICAL EXAMINATION

The histopathologic report showed stratified squamous para-keratinized epithilium with long and confluent rete ridges, epithelium was edematous with focal areas showing atrophy and clear cells. Connective tissue was hypercellular, mature, edematous showing interlacing bundles of collagen along with numerous endothelial lined blood vessels. Plump and spindle shaped fibroblasts were seen. Chronic inflammatory cell predominantly plasma cells, lymphocyte and eosinophils were seen along with mucin pooling and focal area shows multinucleated giant cells also seen. Plump spindle shaped fibroblasts are also seen, focal area shows presence of Russel bodies. Histological features were suggestive of the final diagnosis as Chronic Nonspecific Fibroepithelial Hyperplasia. (Figure 5)

DISCUSSION

Many pathological conditions/diseases may present as enlargements in oral cavity. The most common forms of enlargements are due to local irritants, such as plaque and calculus which are termed as inflammatory gingival hyperplasia. In addition to plaque induced gingival enlargement, other types of enlargement which are termed as reactive lesion of the gingiva develop in response to chronic recurring tissue injury that stimulate an exaggerated tissue response[7].

These reactive gingival enlargements are usually localized and sometimes may be generalized. The term epulis is commonly used clinically to describe any localized overgrowth of the gingiva [8]. Fibro

epithelial hyperplasias are reactive / inflammatory conditions and they give rise to variety of lesions named according to their clinical presentation. For example, pyogenic granuloma or fibrous epulis is named so due to the vascularity and presence of ulceration. Most of these lesions arise on gingiva, reflecting universal presence of inflammation in the interdental papillae. Lesions are associated with local predisposing factor like mal-aligned teeth, ill fitting restorations or calculus which prevent removal of bacterial plaque and indirectly induce inflammation [9]. The patients we describe in this report had gingival enlargement with underlying local irritants that is, plaque and calculus which favoured the diagnosis of inflammatory fibro epithelial hyperplasia rather than idiopathic enlargement. Also the patient had no systemic problem, nor she was taking any kind of drugs and neither were any of her family members affected by it, which further supported our diagnosis.

Hyperplasia may occur as a result of poor oral hygiene and many a times irritation also results in proliferation of the fibrous elements of the gingival tissues [10]. In the present case presence of enlarged gingiva and pseudopockets, have further aggravated the enlargement [11].

Identification of any reactive/inflammatory hyperplastic gingival lesion requires the formulation of a differential diagnosis to enable accurate patient evaluation and management. These lesions must be separated clinically and histologically from precancerous, developmental and neoplastic lesions. Differential diagnosis may include metastatic tumours in the oral cavity, angiosarcomas, gingival non- Hodgkin's lymphoma, Kaposi's sarcoma and haemangioma [11]. The clinical appearance of these lesions in most cases has a striking resemblance to reactive gingival lesions; especially pyogenic granuloma. In addition, the clinical appearance of non-Hodgkin's lymphoma and small haemangiomas may also be clinically indistinguishable. Hodgkin's lymphoma in the gingival may present as an asymptomatic reactive gingival lesion [3,4,12]. Characteristically, this massive gingival enlargement appears to cover the tooth surfaces involving the gingival margin with extension to the inter-dental papilla. In some conditions, gingival enlargement can progress rapidly into destructive periodontal diseases, as a result of altered immune response of the gingiva to the bacterial plaque which was observed in the lower anterior region. The treatment therefore is to remove local irritants. If the hyperplasia is too extensive, surgical excision is desirable. In the present case, similar treatment approach was implemented and followed by maintenance therapy, but signs of recurrence were noticed six months post operatively which may be due to poor patient compliance (Figure 6). Therefore, thorough patient motivation, education and reinforcement of the oral hygiene play an important role in the success of the treatment.

CONCLUSION

Many cases of gingival enlargement will persist for long periods before patients seek treatment because of the lack of symptoms associated with the lesion. The hyperplastic response of gingiva varies depending on the pathology associated; a thorough knowledge about their clinical presentation and histological variations helps the dentist to carefully arrive at a proper diagnosis and recurrences of lesions can be minimized by proper education, motivation and positive compliance of the patient. The psychological and functional benefits of the periodontal therapy have definitely improved the patient's quality of life. Because the condition described here is of both epithelial and connective tissue origin, chances that it may transform into neoplasia are quite high. Further studies are required to confirm this hypothesis with longer follow up of the patient [9].

REFERENCES

1. Kfir Y, Buchner A, Hansen LS. Reactive lesions of the gingiva, A clinico-pathological study of 741 cases. J Periodontol 1980; 51: 655-61.
2. Tyldesley WR. Oral medicine for the dental practitioner. 7. Inflammatory overgrowths and neoplasms. Br Dent J 1974; 136:111-6.
3. R Rajendra. Benign and malignant tumors of oral cavity. In: Shafer's Textbook of Oral Pathology. 5th ed. Elsevier India; 2007.p.178-80.
4. Ramzi Cotran, Vinay Kumar, TuckerCollins. Robbins Pathologic Basis of Disease.6th ed. W.B. Saunders; 1999.
5. Shambulingappa Pallagatti, Soheyl Sheikh, AmitAggarwal ,SimranpreetKaur, JyotiMago Gingival Fibrous Hyperplasia- A Case Report. National Journal of Medical and Dental Research 2013; 1(2): 26-30
6. Mathur L K, Bhalodi A P, Manohar B, Bhatia A, Rai N, Mathur A. Focal fibrous hyperplasia: A Case Report. Int J Dent Clin 2010; 2(4): 56-7.
7. Mohammed Nazish Alam, S.C Chandrasekaran,Mohan Valiathan. Fibroma of the Gingiva: A Case Report of a 20 Year old Lesion. Int J Contemp Dent 2010; 1: 107-9.
8. Cooke B.E.D. The fibrous epulis & the fibroepithelial polyp: Their histogenesis & natural history. Br Dent J 1952; 93:305-9.
9. Prasanna JS, Sehrawat S. Fibroepithelial hyperplasia: Rare, selflimiting condition- Two case reports Journal of Advanced Oral Research 2011; 2(3): 63-70.

10. Reddy R, Jain U, Sudheendra, Agarwal N, Sowmya.K, Reddy R. Idiopathic Gingival Enlargement- An Inter-Disciplinary Approach. Int J Den Clin 2011; 3(1): 92-3.
11. Hirschfield I. Hypertrophic gingivitis; its clinical aspect. JADA 1932; (19): 799.
12. Dieter Krahl, Andreas Altenburg, Christos C. Reactive hyperplasias, precancerous and malignant lesions of the oral mucosa. JDDG 2008; 6:217-32.
13. Odell EW, Morgan PR. Mucosal Fibroepithelial Hyperplasias, Gingival inflammation and enlargements. In. Biopsy Pathology of the Oral Tissues.2ed. London, Chapman & Hall Medical, 1997;p.93-114.

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