

Calcifying fibroblastic granuloma-A rare case report

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Abstract- Calcifying fibroblastic granuloma is a relatively rare gingival overgrowth that is considered to be reactive rather than neoplastic in nature. It is a benign fibro-osseous lesion of the jaws consisting of cellular fibroblastic tissue containing rounded or lobulated masses of calcified cementum like tissue. In this article, we present a case of 32 year female with an intra oral swelling on the labial aspect of 32 & 33, appearing to originate from the marginal gingiva & interdental papilla. The swelling was sessile, mobile, non-tender, firm in consistency with an irregular surface. The colour of the gingiva was normal with slight ulceration. The swelling was excised & sent for histopathological examination. Based on clinical, radiologic and histopathologic findings a final diagnosis of calcifying fibroblastic granuloma was made.

Index Terms- excision, calcification, flap, granuloma

I. INTRODUCTION

Calcifying fibroblastic granuloma has been described by various synonyms such as peripheral ossifying fibroma, peripheral odontogenic fibroma with cementogenesis, peripheral fibroma with osteogenesis, peripheral fibroma with calcification, fibrous epulis, etc.¹ Dental calculus, plaque, microorganisms, dental appliances, and restorations are considered to be the irritants triggering the lesion.² It occurs exclusively on the gingiva as a nodular mass, either pedunculated or sessile, that usually emanates from the interdental papilla. It has also been reported that it represents a maturation of a pre-existing pyogenic granuloma or a peripheral giant cell granuloma.³ The color ranges from red to pink, and the surface is frequently, but not always ulcerated. It is a localized reactive enlargement of the gingiva that typically measures less than 1.5cm in size.⁴ It is one of the several common reactive hyperplastic inflammatory lesions of the gingiva. It occurs approximately 2 to 4 times more frequently in females than in males⁵, most often between the ages of 25 to 35 years.⁶ A case of calcifying fibroblastic granuloma in the mandibular gingiva of a 32 year old female patient is described here.

II. CASE REPORT

A 32 year old female patient reported to the OPD of Department of Periodontics, Rungta Dental College with a chief complaint of swelling in lower front tooth region since last nine months. The swelling was associated with mild pain on digital pressure. History revealed that the lesion started growing on its own since she first noticed it about nine months back when it was a small

nodule. The patient also complained of bleeding on brushing in that area. Intra-oral examination revealed a solitary sessile oval lesion on the labial interdental papilla and adjacent marginal gingiva of 32 and 33 (Fig 1).



Fig 1: Pre-operative

The lesion was reddish pink in colour and measured about 5 by 9mm. It was seen to be extending till the middle third of coronal portion of 32 and 33. There was no significant medical and familial history.

Radiographic examination revealed widening of periodontal ligament space with thickening of lamina. Complete hemogram was performed which showed all blood counts to be within normal limits. After obtaining informed consent, the patient was scheduled for full mouth scaling. After one week excisional biopsy of the growth was done (Fig 2) and the excised mass was sent for histopathological examination (Fig 3).



Fig 2: Excisional biopsy done



Fig 3: Excised mass measured

This was followed by flap reflection and thorough debridement (Fig 4) to prevent recurrence. Sutures were placed and periodontal dressing was given. Patient was called after 15 days; healing was uneventful (Fig.5). Oral hygiene instructions were reinforced; patient is still under follow-up.



Fig 4: Flap reflection and debridement done



Fig 5: Post-operative

III. HISTOPATHOLOGY

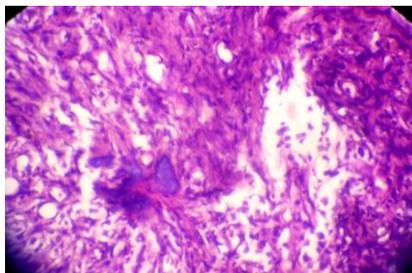


Fig 6: Histopathological picture

Histopathological examination of the specimen revealed parakeratinized stratified squamous epithelium. Underlying connective tissue stroma is fibrocellular and bony trabeculae formed in the central portion. Fibro-cellular connective tissue

revealed spicules of bone formation and high degree of cellularity where the cells were found to be plump and active. Also, there is presence of curvilinear trabeculae and spheroidal calcifications. Trabeculae is lined by osteoblast and few trabeculae with reversal line and calcification. All these findings were suggestive of calcifying fibroblastic granuloma (Fig 6).

IV. DISCUSSION

The present case is a rare case of calcifying fibroblastic granuloma which mainly occurs as a reactive lesion. It has been suggested that calcifying fibroblastic granuloma represents a separate clinical entity rather than a transitional form of pyogenic granuloma, peripheral giant cell granuloma or irritation fibroma.³ Many authors suggest similar sex and site predilection for calcifying fibroblastic granuloma, pyogenic granuloma, peripheral giant cell granuloma and a similar clinical and histological features. They opined that these lesions could simply be varied histological responses to irritation.⁵ However, Gardner⁷ stated that cellular connective tissue of calcifying fibroblastic granuloma is so characteristic that a histological diagnosis can be made with confidence, regardless of the presence or absence of calcification.

Though the etiopathogenesis of calcifying fibroblastic granuloma is uncertain, an origin from cells of periodontal ligament has been suggested.⁸ The reasons for considering periodontal ligament origin for calcifying fibroblastic granuloma include excessive occurrence of calcifying fibroblastic granuloma in the gingiva (interdental papilla), the proximity of gingiva to the periodontal ligament, and the presence of oxytalan fibres within the mineralized matrix of some lesions. Excessive proliferation of mature fibrous connective tissue is a response to gingival injury, gingival irritation, subgingival calculus or a foreign body in the gingival sulcus. Chronic irritation of the periosteal and periodontal membrane causes metaplasia of the connective tissue and resultant initiation of formation of bone or dystrophic calcification. It has been suggested that the lesion may be caused by fibrosis of the granulation tissue.⁹

Treatment requires proper surgical intervention that ensures deep excision of the lesion including periosteum and affected periodontal ligament. Thorough root scaling of adjacent teeth and/or removal of other sources of irritants should be accomplished. Early recognition and definitive surgical intervention result in less risk of tooth and bone loss.¹⁰ Although calcifying fibroblastic granuloma is a benign, reactive lesion, the recurrence rate is fairly high. Therefore, the patient is still on regular follow-up.

V. REFERENCES

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