Review Article

Recurring Peripheral Cementifying Fibroma of Gingiva: A Case Report

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ABSTRACT :

Peripheral cementifying fibroma [PCF] is a gingival overgrowth which is reactive, occurring frequently in the maxillary anterior region in teenagers and young adults. Peripheral cementifying fibroma is a common gingival growth that is thought to be either reactive or neoplastic in nature. Here, we report a case of Peripheral cementifying fibroma in a 12-year-old male, which was previously surgically excised and had recurred after a period of 6 months. Peripheral cementifying fibroma should be considered in differential diagnosis of such reactive hyperplastic lesions originating from the gingiva. Hence, early diagnosis with proper surgical excision and aggressive curettage of the adjacent tissues are essential for prevention of recurrence.

Key words: Lobular Capillary Haemangioma, Pyogenic Granuloma.

INTRODUCTION:

Increase in the size of gingiva is a common feature of gingival disease. Accepted terminology for this condition is gingival enlargement or gingival overgrowth . Gingival overgrowths represent a reactive hyperplasia as a direct result of plaque related inflammatory gingival disease. These generally respond to conservative tissue management and attention to plaque control. However, a small group are distinct from these and whilst they also represent a reactive tissue response, these epulides grow from under the gingival margin and not as a result of a primary inflammatory gingival enlargement. This distinct aetiopathogenesis separates this group of lesions both in terms of their specific clinical presentation and behaviour and their propensity for recurrence if managed inadequately.

The peripheral cement-ossifying fibroma (PCOF), is a non-neoplastic enlargement of the gingiva that is classified as localized reactive enlargement of the gingiva that typically measures less than 1.5 cm at its greatest dimension1.

Various fibrous lesions of gingiva like pyogenic granuloma, peripheral giant cell granuloma and inflammatory hyperplasia resemble each other clinically and can be diagnosed accurately based on histopathology. PCF's are frequently mistaken for one of these lesions and removed by superficial excision. Unfortunately, PCFs have a relatively high rate of recurrence of approximately 20%2,3.

CASE REPORT:

A 12 year old male patient presented to us for the treatment of a localized gingival enlargement in the maxillary central incisor area. The lesion was asymptomatic & pedunculated and the, surface was smooth and firm in consistency, measuring around 1.5x1.0 cms in its greatest diameter. (Fig. 1)

FIG 1- Clinical appearance pre operatively

A provisional diagnosis of Inflammatory Gingival Enlargement was made and treatment plan was formulated for the patient. Thorough scaling and root planning was done, and under local anesthesia, excisional biopsy was carried out (Fig.2) and histopathologically diagnosed as peripheral cementifying fibroma. The postoperative healing was satisfactory. (Fig 3).

FIG 2- Lesion excised

FIG 3- 15 days post operatively. Uneventful healing with diastema closure can be seen.

Six months later, the patient reported to us with a similar kind of lesion in the same area as before with a palatal extension interconnected at the papilla creating a wide diastema which was closed earlier after the excision. The lesion was pedunculated and present between the maxillary central incisors, firm in consistency, non tender measuring about 0.5x1.5cms (Fig 4, 5).

There has been no recurrence of the lesion since last one year and the patient is under observation

FIG 4, 5 - Labial and palatal view of the lesion

The presence of the chronic marginal gingival enlargement and sub gingival calculus led us to make tentative diagnosis of inflammatory hyperplasia. However, seeing the recurrence of the lesion a more invasive treatment was formulated for the patient. Under local anesthesia, the lesion was excised both labially and palatally, followed by reflection of flap to expose the underlying bone. The bone was thoroughly curetted and area was debrided removing all the granulation tissue. (Fig 6) The thickened marginal gingiva was contoured by gingivoplasty followed by depigmentation in order to improve the esthetics and also to remove any tissue remnants present. (Fig 7) The excised lesion was once again sent for histopathologic examination. The flaps were secured with sutures (Fig 8) and periodontal pack placed. Healing was uneventful at the time of suture removal. (Fig 9)

FIG 6- Flap raised, area curetted and debrided.

Fig 7- Gingival contouring along with depigmentation done.

Fig 9- Satisfactory healing with excellent tissue response post operatively labially and palatally

The histopathological report read as “epithelial hyperplasia along with connective tissue comprising large numbers of plump proliferating fibroblasts was seen. Along with many inflammatory cells, foci of cementicles (arrow) were noted in the fibrous connective tissue which was suggestive of a Peripheral cementifying fibroma. (Figs 10, 11)”

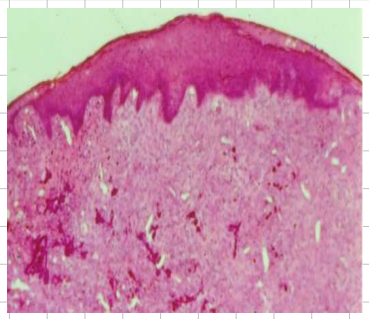

Fig 10- Epithelial hyperplasia

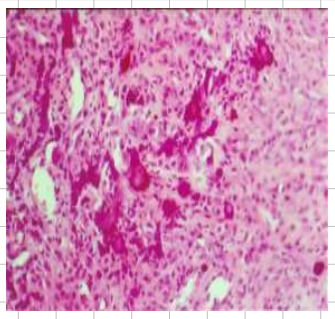

Fig 11- Cementicles in fibrous connective tissue stroma

DISCUSSION

Peripheral cementifying fibroma is thought to be either reactive or neoplastic in nature. Considerable confusion has prevailed in the nomenclature of peripheral cementifying fibroma with various synonyms being used, such as peripheral ossifying fibroma, calcifying fibrous epulis, peripheral fibroma with osteogenesis, peripheral fibroma with cementogenesis4.

Ossifying fibromas elaborate bone, cementum and spheroidal calcifications, which has given rise to various terminologies. When bone predominates, 'ossifying' is the appellation, while the term 'cementifying' has been assigned when cementicles predominate, as in our case.

The PCF may appear ulcerated and erythematous or exhibit a color similar to the surrounding gingiva. It may be pedunculated or sessile and does not blanch upon palpation.PCF occurs approximately 2 to 4 times more frequently in females than in males, most often between the ages of 10 to 19 years. It has a slight predilection for the anterior maxilla, with more than 50% of all lesions occurring in the incisor-cuspid region. PCF's are often associated with the papilla and reportedly have the potential to induce migration of teeth and bone resorption5.

While its etiology is unclear, PCFs are frequently associated with irritants like calculus, plaque, dental appliances, ill-fitting crowns, and rough restorations6. Orkin states that the peripheral cementifying fibroma originates from the periosteal/periodontal membrane and that excessive proliferation of mature fibrous connective tissue is a response to gingival injury, gingival irritation, sub gingival calculus or foreign body in the gingival sulcus6,7,8.

In our present case report the patient was treated conservatively with a diagnosis of inflammatory hyperplasia which was confirmed by the microscopic examination. When recurrence of the lesion was seen, more invasive treatment was planned keeping in mind the deep origin of the recurrent gingival lesions which is the periosteal membrane/periodontal membrane9,10.

CONCLUSION:

Adequate removal of a peripheral cementifying fibroma/ossifying fibroma is essential despite an approach to be conservative in a young patient. Due to possible exuberant growth, definitive treatment is required after early diagnosis. The lesion is known to grow rapidly in few cases causing extensive bone loss and pathologic tooth migration. Hence, a more aggressive management of such lesions is required to prevent the recurrence. If a cementifying fibroma is not completely excised to the periosteum and periodontal ligament , and a thorough root planing is not completed the result might likely be a recurring lesion.

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