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PERIPHERAL OSSIFYING FIBROMA : A CASE REPORT

Dental Science

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ABSTRACT

The peripheral ossifying fibroma (POF) is a reactive gingival overgrowth occurring frequently in the anterior maxilla in teenagers and young adults. The pediatric patient with a POF has special management considerations compared to the adult, as it requires early recognition and treatment by the dentist. It requires proper treatment protocol with close postoperative follow-up. The present report describes a case of POF in a 67 yr female, which was surgically excised from the palatal and labial mucosa in the maxillary incisor area. Some features of the differential diagnosis and therapy when it occurs are discussed.

KEYWORDS

Gingiva, ossifying fibroma, peripheral ossifying fibroma peripheral ossifying fibroma

INTRODUCTION

Peripheral ossifying fibroma (POF) is a non-neoplastic enlargement of the gingiva with randomly distributed calcifications, immature bone and osteoid. Solitary gingival enlargements in children are relatively common finding and are usually the result of a reactive response to local irritation. [1] One such reactive lesion is the peripheral ossifying fibroma (POF), a gingival nodule composed of a cellular fibroblastic connective tissue stroma associated with the formation of randomly dispersed foci of mineralized product consisting of bone, cementum-like tissue, or dystrophic calcification. [2]

A combination of the aforementioned products is often found. POF was first reported by the Shepherd in 1844 as alveolar exostosis.[3] Eversol and Robin in 1972, later coined the term peripheral ossifying fibroma.[3] It occurs in the younger age group with a female preponderance. It has a predilection for maxillary arch and most of them occur in the incisor-cuspid region. It can be pedunculated or sessile. Earlier lesions appear irregular and red and older lesions have a smooth pink surface. Surface ulceration may be present.[4]

In the vast majority of cases, there is no apparent underlying bone involvement visible on the roentgenogram. However, on rare occasions, there does appear to be superficial erosion of bone.

The lesions should be surgically excised and submitted for microscopic examination for confirmation of diagnosis. The extraction of adjacent teeth is seldom necessary or justified. However, the lesions do occur with some frequency and, in fact, repeated recurrences are not uncommon. In the series of Cundiff, 16% of the cases recurred, while in a series of 50 cases reported by Eversole and Rovin, the recurrence rate was 20%.

CASE REPORT

A 67-year-old female visited the Department of Oral and Maxillofacial Surgery, CSMSS Dental College and Hospital , with the chief complaint of swelling in the anterior with grade II mobility with 11. The lesion had been growing from 6 months. Intraoral examination revealed a well-circumscribed, sessile, erythematous, firm swelling measuring 3x3x4 cm in size approximately, extending on the palatal and labial wrt 11, 21, 22[Figure 1,2].

The lesion was symptomatic, ulcerated, and overlying mucosa appeared inflamed. No radiological signs of involvement of alveolar ridge were observed. Clinically, the differential diagnosis included pyogenic granuloma, fibrous hyperplasia, POF, and peripheral giant cell granuloma. Under local anesthesia, the lesion was completely excised [Figure4,5]. Wound closed using 7 BBSS sutures. The excisional biopsy was submitted for histological analysis.

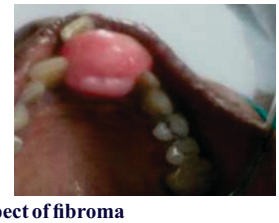

Fig1 : Palatal aspect of fibroma

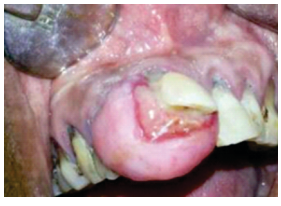

Fig2: Labial aspect of fibroma

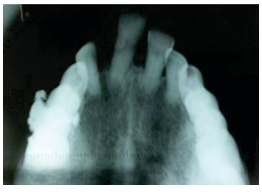

Fig3: Occlusal view

Fig4: Excised specimen

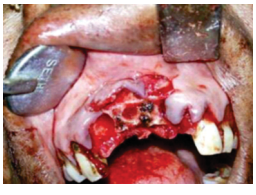

Fig5: Intra Op

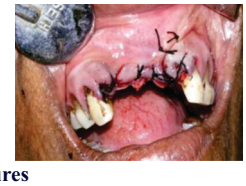

Fig6: Post Op Sutures

The histopathological examination of the lesion revealed the prominent area of highly cellular fibrous connective tissue showing collagen fibers and proliferating plump fibroblasts, and focal areas of trabecular bone lined by osteoblasts. The covering stratified squamous epithelium was parakeratinized with focal areas of acanthosis. The diagnosis was POF according to both clinical and histopathological patterns. A five-month postsurgical follow-up showed no evidence of recurrence.

DISCUSSION

Reactive lesions, e.g., the POF, reported in this case, are relatively common clinical finding in children. The main etiological factors of POF,[5],[7],[9] , [10]are trauma and chronic irritation, particularly from subgingival plaque and calculus. Moreover, the occurrence of this lesion associated with an orthodontic appliance was detected in 3.8% of cases described by Buchner and Hansen [9] and 7% of pediatric cases described by Cuisia and Brannon. [10] Inflammatory hyperplasia originating in the superficial periodontal ligament is considered to be a factor in the histogenesis of the POF. [5], These findings include the exclusive occurrence on the gingiva, the proximity of gingiva to PDL, and the inverse correlation of age distribution of lesions with the number of the lost teeth and their corresponding PDL. Furthermore, high female predilection, rare occurrence in the first decade, and decline in incidence after age 30 suggest that hormonal influence may be a lesional growth factor. [6],

POF has to be differentiated from other reactive lesions of a gingiva such as pyogenic granuloma, peripheral giant cell granuloma (PGCG) and peripheral odontogenic fibroma. Pyogenic granuloma shows red mass with surface ulceration clinically and microscopically exhibit vascular proliferation resembling granulation tissue. PGCG shows scattered giant cells in a fibrous stroma. Peripheral odontogenic fibroma contains prominent islands of odontogenic epithelium.[11] Bone involvement, though not significant in most of the cases, some alterations are noted like:

- Superficial erosion of bone
- Foci of calcifications
- Widening of the periodontal ligament space and thickened lamina dura[11]
- Migration of teeth with Interdental bone loss.[4]

The basic microscopic pattern of the POF is fibrous proliferation associated with the formation of mineralized components. Mineralized component varies from 23 to 75%.[12] Butcher and Hansen reported three types of components in POF:[13]

1. Dystrophic calcifications
2. Bone (woven/lamellar)
3. Cementum.

Moreover, the recurrence rate of the POF has been considered high for reactive lesions and it probably occurs due to incomplete initial removal, repeated injury, or persistence of the local irritants. [6],[9],[10]

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