

Peripheral Ossifying Fibroma of Anterior Maxilla: A Case Report

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Abstract

Localized gingival growths are one of the most frequently encountered lesions in the oral cavity and Peripheral ossifying fibroma (POF) is one of them. This case report describes the growth that occurred in the maxillary anterior region with displacement of anterior teeth along with its satisfactory management and literature review. Peripheral ossifying fibroma represents a reactive benign lesion of connective tissue and is not the soft tissue counterpart of ossifying fibroma. Peripheral ossifying fibroma in the age of 21 years, and in male patient arising in the maxillary anterior region, is an occasional entity. Careful clinical examination and histopathology findings should be correlated to conclude the final diagnosis.

Keywords: Peripheral ossifying fibroma, Gingival growth, benign lesion.

Introduction

Localized gingival growths are one of the most frequently encountered lesions in the oral cavity and Peripheral ossifying fibroma (POF) is one of them. It accounts for 3.1% of all oral tumors and for 9.6% of gingival lesions.[1] These lesions may arise as a result of such irritants as trauma, microorganisms, plaque, calculus, restorations and dental appliances.[2] The purpose of this article is to present a case of POF, briefly review the current literature.

Case Report

A 21-year-old male patient reported with the complain of discomfort during chewing and speaking due to a growth in the left upper anterior region of the jaw behind the front teeth, which started as a small growth approximately 9 months ago and gradually increased in size with time to attain present size. There was no associated history of bleeding or pain. Her medical history was non-significant and no history of any medication. He had a habit of smoking, since 5 years.

Intraoral examination revealed an approximately 1 cm × 1 cm sessile, non-tender, firm, reddish growth present on the palatal gingiva in relation to the maxillary incisors region [Figure 1]. The lesion was extending from mesial of left central incisor to right lateral incisor and up to the level of the occlusal surface, causing occlusal interference. Pathologic migration of maxillary central incisor was present as distal and labial migration. The differential diagnosis included irritation fibroma, pyogenic granuloma,

hemangioma and POF. Based on the clinical and radiographic findings, the provisional diagnosis of hemangioma was made.

The treatment plan included patient education and motivation for oral hygiene instructions and quitting the habit, scaling and root planing, reevaluation and surgical excision of the lesion under local anesthesia. Patient was given post-operative instructions and was prescribed with analgesic and antimicrobial rinse (0.2% chlorhexidine gluconate twice-a-day for 1 week). He was recalled, after 1 week for follow-up. The excised tissue [Figure 2] was placed in 10% formalin and sent for the histopathologic examination.



Figure 1: showing clinical appearance of peripheral ossifying fibroma.

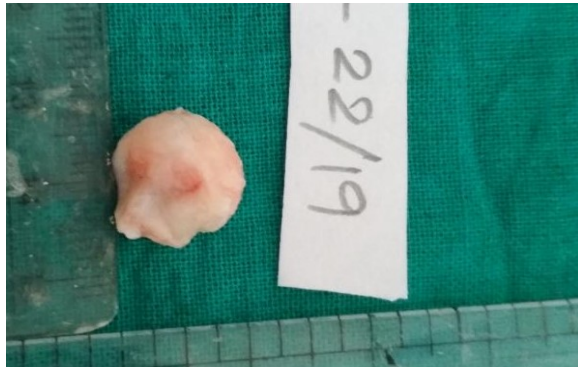


Figure 2: Lesion after surgical removal.

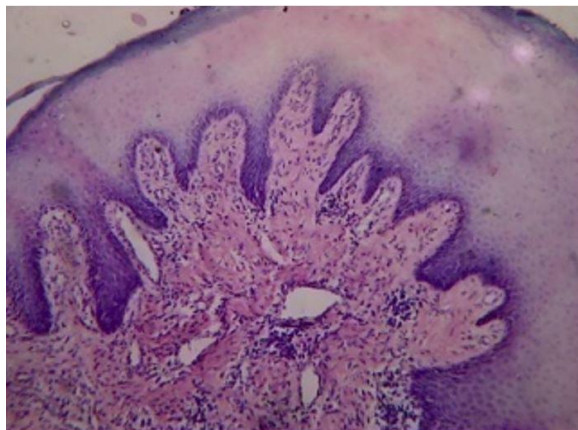


Figure 3: Histopathological slide (10×) showing basophilic cementum-like material and numerous plump fibroblasts

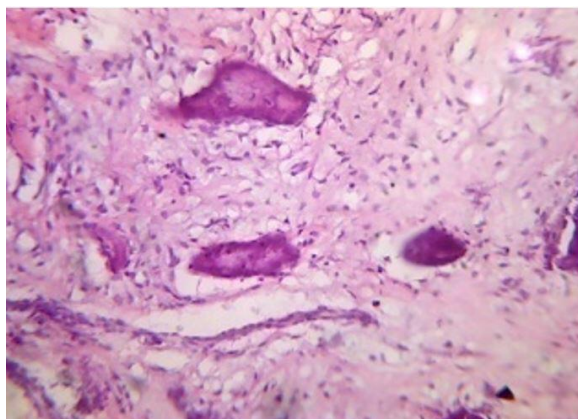


Figure 4: Histopathological slide (40×) showing basophilic cementum-like material and numerous plump fibroblasts

On histopathological evaluation of H&E sections shows par keratinized stratified squamous epithelium with underlying highly cellular connective tissue stroma. The connective tissue stroma shows both fibrous and mineralized

component with abundant endothelial lined edematous proliferating blood vessels of varying shapes and sizes with per vascular inflammation, few areas of dystrophic calcifications and abundance of Lymphoplasmacytic inflammatory infiltrate. All the microscopic finding confirms the diagnosis of Peripheral Ossifying Fibroma.[Figure 3], [Figure 4].

Discussion

Intraoral ossifying fibromas have been described in the literature since the late 1940s. Many names have been given to similar lesions, such as epulis, peripheral fibroma with calcification, peripheral ossifying fibroma, calcifying fibroblastic granuloma, peripheral cementifying fibroma, peripheral fibroma with cement genesis and peripheral Cemento-ossifying fibroma. The sheer number of names used for fibroblastic gingival lesions indicates that there is much controversy surrounding the classification of these lesions. [3] Almost two-third of all cases occur in females, with a predilection for the anterior maxilla. Hormonal influences may play a role, given the higher incidence of POF among females, increasing occurrence in the 2nd decade and declining incidence after the 3rd decade. The size of the POF ranges from 0.4 to 4.0 cm and whites (71%) are more frequently affected than blacks (36%).[4] Histological, when bone and cementum-like tissues are observed, the lesions have been referred to as cemento ossifying fibroma.[5] The term “cemento ossifying” has been referred to as outdated and scientifically inaccurate.[6] It is very difficult to distinguish bone and cementum like material in H&E staining. Mineralized products in the form of trabeculae and calcification are noticed.

Radiographic features of POF may vary. Radiopaque foci of calcifications have been reported to be scattered in the central area of the lesion, but not all lesions demonstrate radiographic calcifications. Underlying bone involvement is usually not visible on a radiograph. In rare instances, superficial erosion of bone is noted.[7] Different treatment modalities include surgical excision by scalpel; laser or radial/electro surgery.[8] The carbon dioxide laser can effectively excise the lesion and has been shown to allow diagnostic microscopic evaluation with a minimal distortion of the biopsy sample. [9] The advantages of laser excision are minimal post-surgical pain and no need for suturing the biopsy site. This precise tissue destruction can also result in partial or incomplete removal of the base of the pathologic lesion, which can lead to recurrence.[10] Thus, surgical excision including the involved periodontal ligament and periosteum is the preferred treatment, [11] which was performed in this case.

Conclusion

Peripheral ossifying fibroma is a benign neoplasm that means the growth of the lesion is slow as well as it is asymptomatic. It is very difficult to diagnose peripheral ossifying fibroma clinically hence histopathological investigation is mandatory. Also to prevent recurrence complete removal is advised along with regular follow up.

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