Case Report

Peripheral ossifying fibroma

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Abstract

A case of peripheral ossifying fibroma (POF) in the mandibular gingiva of a 17-year-old male is described. The lesion was asymptomatic, firm, pink, and present on the lingual alveolar mucosa interdentally between 43 and 44. Radiographic investigations revealed no significant findings. Excisional biopsy was performed for the lesion. Microscopic findings confirmed the diagnosis of POF.

Key words: Gingiva, mandibular, peripheral ossifying fibroma

INTRODUCTION

Peripheral ossifying fibroma (POF) is a relatively uncommon gingival growth.[1] POF accounts for 3% of all oral tumors[2] and for 9.6% of all gingival lesions.[3]

The POF mainly affects women in the second decade of life. The lesions are most often found in gingiva, located anterior to molars and in the maxilla. Clinically, it manifests as a slow growing gingival mass measuring approx. 2 cm in size and is located in the interdental papilla region. The base may be sessile or pedunculated, the color is identical to that of gingiva or slightly reddish or the surface may appear ulcerated.[4]

Histologically, the POF consists of a fibrocellular component with focal deposits of bone, some cementum as well as irregular amounts of decalcification. A chronic inflammatory infiltrate is commonly seen around the periphery of the lesion.[5] In vast majority of the cases, there is no apparent underlying bone involvement visible on a roentgenogram. However on rare occasions, there does appear to be superficial erosion of bone.[6]

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Prognosis is good, but some instances of recurrence have been reported regularly in various studies. Incidences of recurrence have been put at 16–20% by various studies.[7,8] The reasons for recurrence include (a) incomplete removal of lesion, (b) failure to eliminate local irritants, and (c) difficulty in access during surgical manipulation due to intricate location of POF being present usually at interdental areas. Deep excisions have been preferred as interjection to these recurrences.[9]

CASE REPORT

A 17-year-old male patient reported to the Department of Periodontics with the chief complaint of swelling in the lower right back tooth region. The patient noticed the small swelling 1 year back which gradually increased to the present size. Past medical history and family history were not significant.

Extraoral examination revealed no significant findings. Intraoral examination revealed a single, well-defined painless, roughly oval swelling measuring 1.5 × 1 cm, firm in consistency on the lingual alveolar mucosa interdentally between 43 and 44 [Figure 1]. The surface of the swelling was smooth with no secondary changes and discharge.

Radiographic examination revealed no bone loss. However, elongation of root in relation to 43 was observed [Figure 2]. Differential diagnosis of fibroma, pyogenic granuloma,

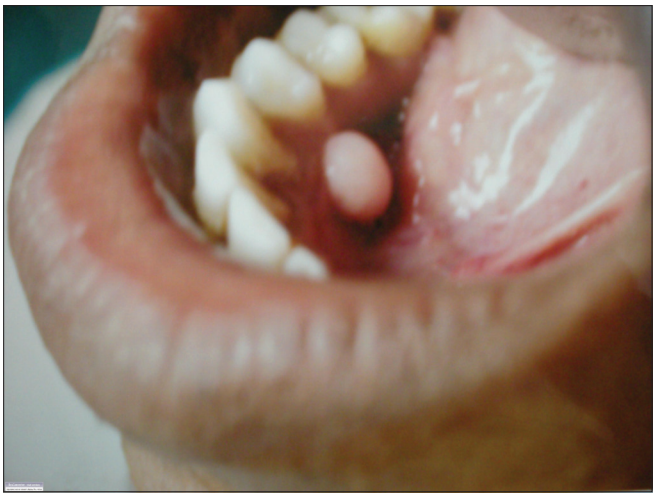

Figure 1: Intraoral clinical picture

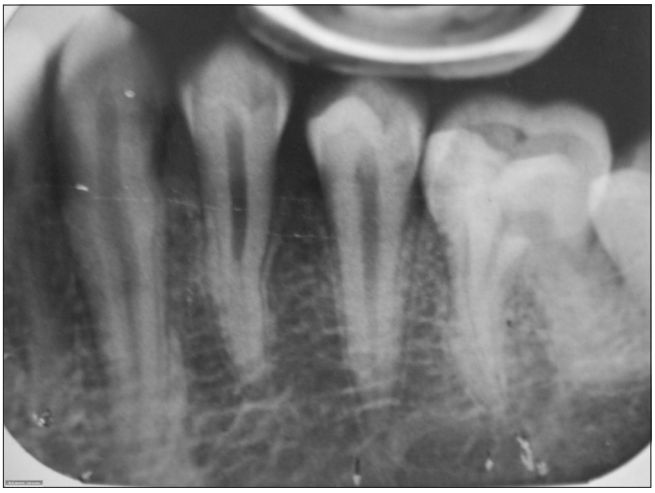

Figure 2: Intraoral periapical radiograph

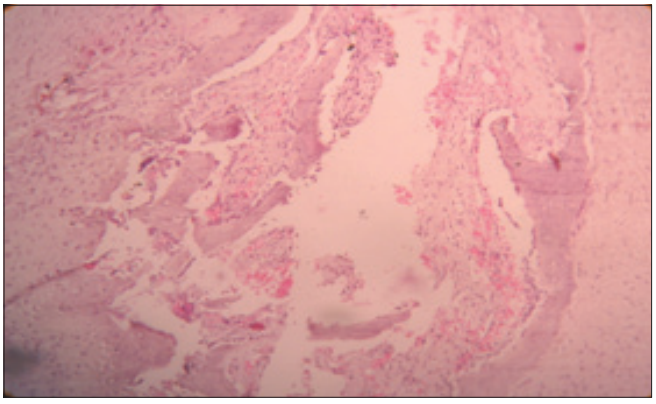

Figure 3: Microscopic picture (×10)

POF, and peripheral giant cell granuloma was made after clinical and radiographic examination.

Excisional biopsy was performed, and the specimen was sent for histopathological examination. Histopathological examination confirmed the diagnosis of POF [Figure 3].

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, POF, calcifying fibroblastic granuloma, peripheral cementifying fibroma, peripheral fibroma with cementogenesis, 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.[10]

The POF mainly affects women in the second decade of life. The lesions are most often found in gingiva, located anterior to molars and in the maxilla. However in our case, it was present in the mandibular region of a male patient.

Two schools of thought have been preferred to explain the histogenesis. The first group of researchers believed that POF develops from cells of periodontal ligament/periosteum, which has been accepted by many. The widely accepted etiopathogenesis for POF is the inflammatory hyperplasia of the cells of the periosteum or periodontal ligament, as there is excessive proliferation of mature fibrous connective tissue in 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.[11] Eversole and Rovin stated that the constant irritation present during exfoliation of the deciduous teeth and eruption of the permanent teeth may result in an increased incidence of reactive lesions which originate from the periodontal ligament.[12]

The second group of researchers believe that POF lesions were simply a more mature variant of pyogenic granuloma. They state that POF might have developed initially as PG and subsequent maturation led to the ossification of the lesion. Thus, these two lesions represent the progressive stages of the same spectrum of pathosis.[13]

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