Recurrence peripheral ossifying fibroma: A case report

Abstract

Peripheral ossifying fibroma (POF) is a one of reactive lesions that common effected to gingival, among of reactive lesions, POF has a character of recurrence. At the present we reported the POF case that recurrence in the healthy male 25 years old, who has surgery of this lesion at same area 2 times. Addition in this patient the lesion showed clinical features similar to pyogenic granuloma leading to confusion in the clinical diagnosis. Therefore, biopsy must be performing and completely treatment required removing periosteum, periodontal ligament and extraction the tooth that association for preventing the recurrence.

Key word: Peripheral ossifying fibroma, gingival reactive lesion, fibro-osseous lesions

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Introduction

In oral cavity, gingival is the most common site of the reactive lesions [1] [2] [3], there is numerous of the lesions that showed closely similar of clinical features reading to mistake of clinical diagnosis[4]. According to World Health Organization 2017 Classification of Head and Neck tumor, fibro-osseous lesions is a bone benign tumor that characterized by normal bone entity replaced by a fibrous connective tissue become to a newly mineralized product[5]. This lesion includes ossifying fibroma, familial gigantiform cementoma, fibrous dysplasia, cement-osseous dysplasia and osteocondoma[6]. Ossifying fibroma divided in two types: central type and peripheral type. The central type developed form endosteum enlarges to the modular cavity of the bone leading to bone expansion. For peripheral type growing from the cell of periodontal ligament, and it occurs on the soft tissue covering the tooth [7]. Peripheral ossifying fibroma (POF) is common occurred in the female and frequency found in 1st and 2nd decade of life. The clinical features usually appeared as sessile or pedunculated base, the color is pink like a normal mucosa and sometime is red and with usually smooth surface. The previous studies showed that POF has recurrence rate ranging from 8-20 %, which is caused by incomplete removal of the lesion and unable to avoid risk factor such as plaque or calculus [4, 8]. Therefore, in the present we reported a recurrence case of POF associated with plaque in the healthy male 25 years old.

Case report:

A 25 years old male of Laotian nationality was come to Oral medicine clinic, Faculty of Dentistry, University of Health Science, with a chief complaint of recurrence of asymptomatic gingival enlargement associated with tooth number 23 about 2 months, the patient give a history that he has a surgical excision of gingival at the same area last 4 years; now he found a new lesion and which was continuous growing in size. The patient was healthy and no systemic diseases. Extra-oral examination showed no other abnormalities. Intraoral examination found poor oral hygiene with plaque accumulation. The lesion was covered on third of the clinical crown of tooth number 23, and it appeared as nodular base with smooth surface, the color was reddish, firm on palpation and easy to bleeding on stimulus (fig.1). A panoramic examination appeared as non-demarcated in periapical radiolucent in alveolar region (fig2). According to clinical and radiographic features a clinical diagnosis of pyogenic granuloma was made, and excisional biopsy was performed. Microscopic presented trabeculae bone under the epithelium with adjacent fibroblast connective tissue (fig3 & fig4). Therefore, based on histopathological feature peripheral ossifying fibroma was considered of final diagnosis.

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Discussion

Peripheral ossifying fibroma (POF) was first explained by Shepherd et al in 1844, as an alveolar exocytosis, after that the term of POF was proposed in 1972 by Eversol and Robin [7, 9, 10]. In the literature, various names have been applied for POF such as peripheral cemento-ossifying fibroma, ossifying fibro-epithelial polyp, peripheral fibroma with osteogenesis, peripheral fibroma with cementogenesis, peripheral fibroma with calcification, calcifying or ossifying fibroma epulis and calcifying fibroblastic granuloma. The etiology of POF is not clear, may contribute to a variety of factors caused by irritation such as plaque, calculus and dental restorations[11]. The previous study has been described the pathogenesis of POF similar to pathogenesis of pyogenic granuloma with get calcified and after that it originated from an inflammatory hyperplasia in the cell of periodontal ligament[12]. Therefore, the disgusted POF from other gingival reactive lesion such as pyogenic granuloma, fibrous hyperplasia may confusion and leading to mistake clinical diagnosis. In the present we reported the POF case that clinical feature and radiological finding closely similar to pyogenic granuloma, since both of them showed appear as asymptomatic, well-demarcated, sessile or pedunculated or nodular base with smooth surface, the color was reddish, firm on palpation and easy to bleeding on stimulus [5, 13, 14]. Furthermore, in the initial state of POF may no change and no correlation with bone destruction in the radiographic like in the pyogenic granuloma; however, radiopaque calcification can be seen under radiographic in some case [15-17]. Therefore, biopsy is important for differential diagnosis of this lesion, since the histopathological features characterized by fibrous connective tissue and focal presence of calcification tissue including: the calcification can be woven or lamellar bone sometime surrounding by osteoid, or trabecular form; cementum - like material that shows as spherical bodies resembling cementum or large a cellular round – to – oval eosinophilic bodies; Dystrophic calcifications can be found small clusters of minutes basophilic granules or tiny globules to large, solid irregular masses[18, 19]. The completely remove the lesion also important for prevention the recurrence. Previous study has been reported that POF has a high rate recurrence than other gingival reactive lesions, since they presented relapse rate ranging from 8 – 20% [4, 20]. Completely treatment should be removal of the periodontal ligament and periosteum, root scaling and some case need to extraction the tooth that association for reduce recurrence of the lesion and should be closely followed up[21]. In this present case we didn't extraction the tooth N; 23 because patient not available. However, we also suggestion the patient come to clinic for follow-up.

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Conclusion

Peripheral ossifying fibroma is a one of reactive lesions that affected on gingival and it is closely similar clinical and radiological feature to other reactive lesions, sometime difficult to differential diagnosis among of these lesions. Hence, biopsy should be performing and completely treatment required removing periosteum, periodontal ligament and extraction the tooth that correlation the lesion to prevent the recurrence.

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Fig.1: Intra-oral examination, the lesion showed nodular base with smooth surface, it is covered on third of the clinical crown of tooth number 23; the color was reddish and has an alveolar bone expansion.

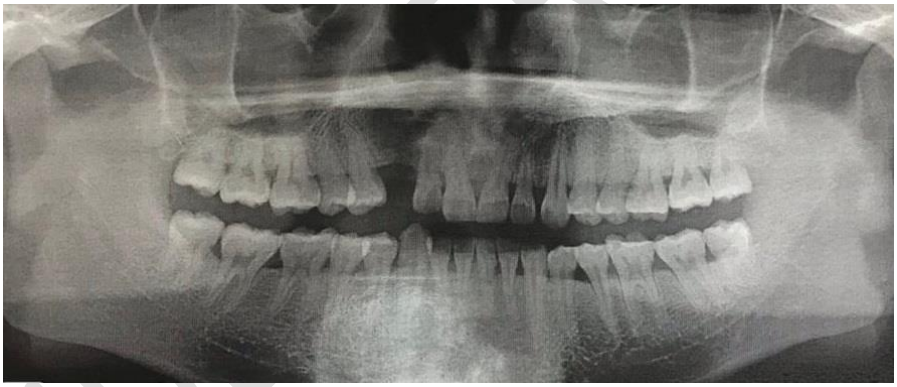

Fig2: Panoramic view: non demarcated in periapical radiolucent in alveolar region

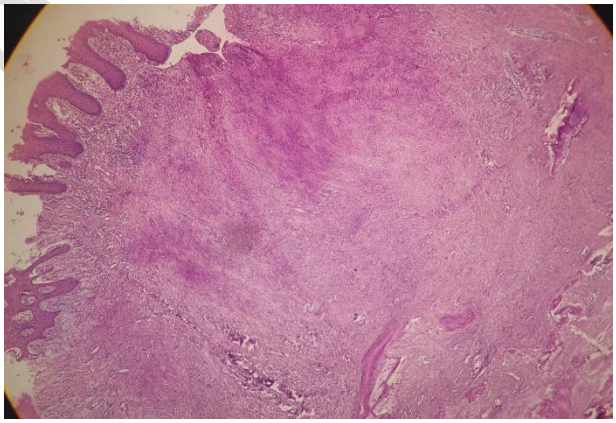

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Fig3: Low power microscope of H & E straining of gingival showing bone formation

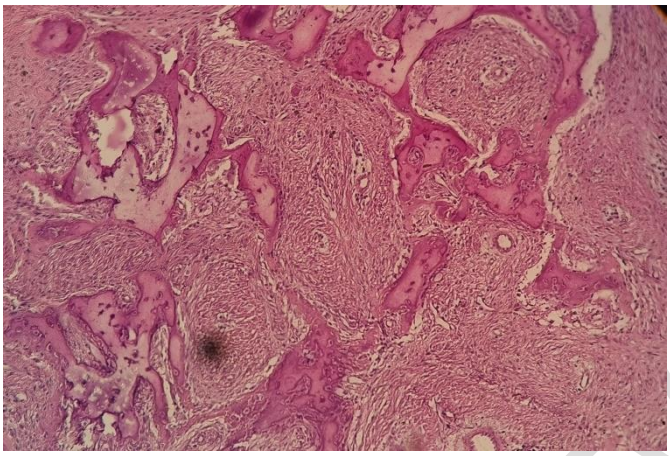

Fig4: High power showing trabeculae of bone with adjacent fibroblast connective tissue

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