

Peripheral Ossifying Fibroma: A Case Report

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Abstract

Peripheral ossifying fibroma is a non-neoplastic enlargement of the gingiva that usually arising from the interdental papilla. A 36-year-old female admitted to our clinic for routine care and management of recurring gingival growth. Examination revealed an approximately 1.5 x 1 cm pedunculated, not-tender, firm, pinkish red growth present on the interdental papilla of the maxillary incisors. Excisional biopsy was performed to obtain histopathologic evidence. A confirmatory diagnosis of peripheral ossifying fibroma is made by histopathologic evaluation of biopsy specimen. Although Peripheral ossifying fibroma is a benign and reactive lesion, the recurrence rate is quite high. Therefore, regular follow-up are necessary.

Introduction

Benign fibro-osseous lesions of the jaws present some problems in diagnosis and classification [1]. Peripheral Ossifying Fibroma (POF) is a non-neoplastic enlargement of the gingiva that usually arising from the interdental papilla. POF affects females more common than males. The anterior maxilla is the most common location of lesion. POF occurs in any age group, especially in the second decade of life [2]. The mucosal surface is often smooth or ulcerated and the color changes pink to red [3]. Although the etiology and pathogenesis remain unclear, trauma and local irritants, such as dental plaque, calculus, microorganisms, masticatory forces and poor restorations have been showed in the etiology of POF [4].

Case Report

A 36-year-old female admitted to our clinic for routine care and management of recurring gingival growth. The patient had been treated previously by many physicians and dental specialist for the same complaint, but the lesion were recurrent and persistent. History revealed that the lesion started growing on its own as a small papule approximately 2 years ago. The lesion was painless and occasionally bled when traumatized with toothbrush. There was no significant medical and familial history. Radiograph revealed no affected bone defect. In intraoral examination, an approximately 1.5 x 1 cm pedunculated, not-tender, firm, pinkish red gingival growth on the interdental papilla of the maxillary incisors was seen (Figure 1).

The patient was systemically healthy. After routine blood examinations, excisional biopsy of the growth was performed to obtain histopathologic evidence. Thorough curettage of the adjacent periodontal ligament, and periosteum was carried out to prevent recurrence (Figure 2). And then, gingivoplasty procedure was made. Periodontal pack was covered the denuded wound surface. Histomorphological examination revealed evidence of calcifications in the hypercellular fibroblastic stroma confirming the lesion as POF.



Figure 1: Clinical appearance of pinkish red, not-tender and 1.5x1 cm pedunculated gingival lesion.

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Figure 2: Complete removal of the granulation tissue. Gingivoplasty was performed.



Figure 3: Clinical appearance of one month after surgery.



Figure 4: Clinical appearance of six month after surgery. No recurrence was detected.

The follow-up of the case showed normal healing of the area and no recurrence of the lesion was detected at one and six month follow-up (Figure 3 and 4).

Discussion

Gingival lesions that imitate POF are peripheral giant cell granuloma, pyogenic granuloma, traumatic fibroma, calcifying epithelial odontogenic cyst, calcifying odontogenic cyst, etc. Differential diagnosis should be made with these lesions [5]. A confirmatory diagnosis of peripheral ossifying fibroma is made by the histopathologic evaluation of the biopsy specimen by a

dermatopathologist and a general pathologist. Masson-trichrome staining revealed minimal collagen formation and no muscle fibers. Histopathologic findings were compatible with a diagnosis of peripheral ossifying fibroma, which correlated with the clinical presentation. The following features are usually observed during microscopic examination: intact or ulcerated stratified squamous surface epithelium, benign fibrous connective tissue with different numbers of fibroblasts, rare to profuse endothelial proliferation, mineralized material consisting of mature, lamellar or woven osteoid, cementum-like material, or dystrophic calcifications, acute or chronic inflammatory cells in the lesions [6]. Because of observing these features in this case, peripheral ossifying fibroma was diagnosed.

Nearly 60% of the lesions occur in the maxilla and mostly occur anterior to molars. The lesion is most common in the second decade of life affecting mainly females [3]. Dental calculus, plaque, microorganisms, masticatory forces, poor restorations and dental appliances are considered to be the irritants triggering the lesion [7]. Treatment is required complete surgical intervention that ensures deep excision of the lesion including periosteum and affected periodontal ligament. Early diagnosis and thorough surgical intervention result in less risk of tooth and bone loss [8].

In this case, lesion was located on the attached gingiva of the right and left first maxillary incisors teeth. Treatment of POF consists, complete removal of the lesion and eliminating the local traumatic factors. Excision should be containing a border of normal tissue for preventing the risk of recurrence. Although, peripheral ossifying fibroma is a benign and reactive lesion, the recurrence rate is quite high [9]. Therefore, complete gingival curettage and regular follow-up are necessary. In this case, after the first and sixth month examination, no new lesion formation was observed.

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