

A rare occurrence of ossifying fibroma in male patient: A case report

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SUMMARY

Peripheral ossifying fibroma is a lesion of the gingival tissues that predominantly affects female and is usually located in the maxilla anterior to the molars. The conclusive diagnosis is established by histological examination, which discloses the presence of cellular connective tissue with focal calcifications. Surgery is the treatment of choice, though the recurrence rate can reach 20%. Here we present a 30 year old male patient with a gingival growth.

Key words: Gingival growth, traumatic fibroma, ossifying fibroma.

Introduction

Benign fibrous like overgrowths arising from the mucous membrane are termed as fibromas and are frequent growths in the oral cavity. Many of the fibrous growths originate from underneath the periodontium, similar to peripheral ossifying fibroma (POF). It is a lesion of the gingival tissues representing up to 2% of all oral lesions that are biopsied. POF is an occasional growth of the anterior region of mandible. It frequently associated with interdental papilla. Poor oral hygiene, local irritants are most common etiologic factors for this lesion. It may differ in colour from pale pink to cherry red. It is either sessile or pedunculated. Peculiarly, it has very high recurrence rate.^[1]

POF mainly affects females in the second decade of life. The lesions are most often found in the gingiva, located anterior to the maxillary molars. Clinically, POF manifests as a well-defined and slow-growing gingival mass measuring around 2 cm in size and located in the interdental papilla region the base may be sessile or pedunculated, the color is identical to that of the gingiva or slightly reddish and the surface may appear ulcerated. Here we report a case of POF in a 30 year old male patient. [1, 2, 3, 4, 5]

Case Report

A- 30 -year old medically fit male patient reported to the dental hospital with complaint of slow growing gingival growth on right maxillary region since last nine months. The size of the growth increases gradually and reaches present size. Patient also gave the history of mild pain associated with it. On Clinical examination revealed that growth was exophytic and arising from interdental papilla of right maxillary lateral incisor and canine. [Figure 1] It was approximately 1.5cm × 1 cm × 1 mm in size and lesion was pinkish red, smooth surfaced, oval and flattened in shape, firm in consistency, with mild tender on palpation non-fluctuant and pedunculated. Intra-oral periapical radiograph revealed no bony involvement. Based on the history, clinical examination and the radiographic examination we gave a clinical diagnosis of traumatic fibroma. The other lesions with similar features considered are peripheral ossifying fibroma, pyogenic granuloma and peripheral giant cell granuloma.

The lesion was excised completely along with Periosteum and periodontal pack was given [Figure 2]. Histological examination revealed fibrous lesion covered with parakeratinized Stratified squamous epithelium. The underlying connective tissue stroma was moderately collagenous with clearly demarcated highly cellular zone seen in the deeper areas. This zone contains numerous blood vessels with endothelial cell proliferation with little oval basophilic collection suggestive of ossification.

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Plump fibroblasts along with fibers were also seen in this zone. Sub epithelial inflammatory cell infiltrate was noticed [Figure 3]. Based on the histopathological report we gave a Final diagnosis of peripheral ossifying fibroma. The pack was removed after 8 days and the patient was recalled after three months for review. No recurrence was reported within duration of 3 months. [Figure 4].



Figure 1. Pre-operative view-Pale pink gingival growth seen in interdental space of right maxillary lateral and canine region



Figure 2. Intraoperative view – surgical excision of gingival growth

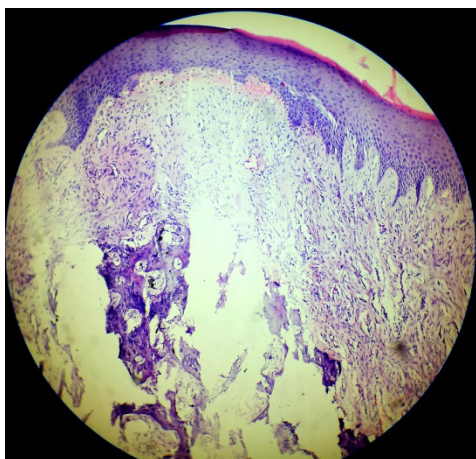


Figure 3. histopathological view – shows blood vessels with endothelial cell proliferation with little oval basophilic collection suggestive of ossification



Figure 4. post surgical view after 3months

Discussion

Peripheral ossifying fibroma has been described as separate lesion since 1872 by Menzel. It is benign, reactive lesion exclusive to gingiva and arises mostly from interdental papilla. [6] Other terminologies used for peripheral ossifying fibroma such as peripheral cementifying fibroma, ossifying fibro-epithelial polyp, peripheral fibroma with osteogenesis, peripheral fibroma with calcification, calcifying or ossifying fibrous epulis and calcifying fibroblastic granuloma [4,5]

The exact etiology and pathogenesis of POF are not known [2, 3]. It has been suggested that these lesions originate in the cells of the periodontal ligament for the following reasons: [4, 5]

- POF exclusively appears in the gingival tissue, close to the periodontal ligament; oxytalan fibers are found within the mineralized matrix of some lesions
- The age distribution of the lesions is inversely proportional to the number of permanent teeth lost
- The fibro cellular response of POF is similar to that of other reactive gingival lesions originating in the periodontal ligament
- Oxytalan fibers are found within the mineralized matrix of some lesions

POF mainly affects females in the second decade of life [1, 2, 3]. And occurs frequently in specific periods of life such as puberty and pregnancy, the existence of hormonal factors in the development of POF has been an optional. In our reported case the patient is thirty year old male. Other factors that have been implicated in the etiopathogenesis of POF are trauma and local irritants such as tartar, microorganisms, and chewing forces. [2, 5].

Histologically, POF is composed of cellular fibrous tissue with areas of fibro vascular tissue that often contain an inflammatory component with abundant plasma cells [7]. The lesion is not encapsulated. When the lesions mature, the stromal cellularity decreases, and bony tissue increases [1, 5]. Ossification is usually seen in the cellular zone, and shows considerable variation both quantitatively and qualitatively. From small rounded calcified deposits to large trabecular bone areas surrounded by osteoblasts may be observed [7]. 10% of

all POF may comprise odontogenic epithelial nests as vestigial representation of dental lamina. In present case also little amount of ossification seen

The treatment of choice for POF is local resection with peripheral and deep margins including both the periodontal ligament and the affected periosteal component [1, 5, 7, 8]. In present case also we advised the complete resection of the lesion. In addition, elimination of local etiological factors such as bacterial plaque and tartar is required [5]. The teeth associated with POF are generally not mobile, though there have been reports of dental migration secondary to bone loss. Extraction of the neighboring teeth is usually not considered necessary. [5, 7]. The exposed bone should be covered with neighboring gingival flaps. Chen et al. reported a case in which the gingival defect was adequately covered using an artificial dermal graft. [8] Recurrence is probably a result of inadequate resection of the lesion, failure in sectioning the periodontal ligament, or the development of new lesions [1, 7]. Recurrence rates have been reported from 7% to 45%. [9,10] In the series of Cundiff 16% of cases recurred, while in a series of 50 cases reported by Eversole & Roving, the recurrence rate was 20%.

Conclusion

POF is a comparatively uncommon, solitary, non-neoplastic gingival growth. A confirmatory diagnosis is made based on histopathologic evaluation. POF has a high recurrence rate of about 8% to 16%, hence the mass should be excised deep into the periosteum with complete removal of all irritants.

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