

# A rare massive exophytic gingival growth

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## Abstract

Oral surgeons ought to be aware of variety of lesions that can present as focal exophytic gingival overgrowths. Most gingival lesions arise due to local irritating factors. The case presented share dramatic clinical pictures and findings of a long-standing fibrous gingival lesion. A massive growth of 6×7 cm in size and 5 years duration from the maxillary left posterior gingival region in a 64-year-old female causing severe facial disfigurement is presented. Lesion was characterized by the central core of woven bone formation. The article discusses on the clinical findings of peripheral ossifying fibroma and stresses on the unrestricted growth potential of this interesting lesion.

## Introduction

Oral surgeons often come across patients having swelling arising from the gingiva. Although Pyogenic granuloma, is considered the most common gingival growth, practitioners should be aware of other possible pathological processes. Various pathologies present as focal fibrous overgrowths and peripheral ossifying fibroma is a benign reactive lesion that usually arises from the interdental papillae.<sup>1,2</sup> Some of these gingival lesions can have an unexpected clinical course if not diagnosed and treated early as presented in the following case.

## Case Report

A 64-year-old female was referred to the Department of Oral and Maxillofacial Surgery, with a disfiguring growth on left side of face (Figure 1). Patient had a growth originating from the upper left posterior interdental papillae distal to upper left first molar. The growth was of 5 years duration (Figure 2).

Growth was firm, non-tender, pink, lobulated, non-ulcerated, sessile about 6×7 cm in maximum diameter. Patient's periodontal status was poor. Growth appeared to be bilobed with a palatal extension to midline. The buccal part of the swelling was oval in shape and obliterated the left buccal vestibule, which caused

facial disfigurement. The lesion was gradually increasing in size and patient had neglected the lesion and did not seek treatment. The patient reported to the clinic only when the lesion started to interfere with speech and swallowing. These complaints started gradually, approximately 9 months before she sought treatment.

The gradually growing lesion did not show any evidence of ulceration or bleeding. Cervical lymphadenopathy was absent. Since the lesion was attached by a pedicle to the gingiva the provisional diagnosis was that of a peripheral exophytic gingival growth. Considering these factors it was decided to do an excision biopsy under general anesthesia.

On excision the base of the lesion was not found to cause any bony changes. Figure 3A shows the excised gross specimen. A plain radiograph of the excised lesion showed areas of calcification at the center of the lesion (Figure 3B). Cut section showed a gritty white structure. This corresponded to the area of opacity seen on the radiograph.

Histopathology of the excised lesion showed stratified squamous surface epithelium showing elongated branched and confluent rete ridges suggestive of pseudoepitheliomatous hyperplasia. The underlying connective tissue was moderately collagenous, showing plump proliferating fibroblasts and sprinkling of chronic inflammatory cells composed of lymphocytes and plasma cells. Figure 4A is the scanner view showing the surface epithelium with the underlying lesion. The cellular connective tissue shows areas of ossification (Woven bone) with osteoblasts and incremental lines in it (Figure 4B). Based on these histopathological and radiological features, diagnosis of peripheral ossifying fibroma (POF) was made.

## Discussion

Focal overgrowths of the gingiva include pyogenic granuloma (PG), irritation fibroma, giant cell fibroma, peripheral giant cell granuloma, peripheral ossifying fibroma (POF) and peripheral odontogenic fibroma.<sup>3</sup>

Peripheral exophytic gingival lesions have various other names in the literature including peripheral fibroma with calcification, fibroepithelial polyp, fibroid epulis, fibrous hyperplasia, calcifying or ossifying fibroid epulis, leading to confusing terminologies.<sup>4,5</sup>

Different authors have pointed out the confusing terminologies seen in the literature regarding the peripheral gingival lesion.<sup>4,5</sup> Zain *et al.*, 1990 have suggested a collective term fibroblastic gingival lesions.<sup>4</sup> These lesions are reactive chronic inflammatory hyperplasias with minor trauma and chronic irritation being important etiologic factors.<sup>4</sup> Local factors include calculus, poor quality restorations and ill-fitting dentures. Zain *et al.*, has concluded

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that PG may be the initial stage in the formation of a reactive fibrous lesion.

In a study of a large series of 207 cases of POF by Buchner, 60 % of lesions were in the maxilla and in both jaws more than 50% occurred in the incisor/ cuspid region. The female to male ratio of occurrence was 1.7:1.<sup>6</sup> Zhang *et al.* in his study of 2439 cases of reactive gingival lesions stated that the POF has a peak incidence in the fifth to sixth decade.<sup>7</sup>

POF is a solitary, slow growing, nodular mass that is pedunculated or sessile. This gingival growth is thought to arise from the periodontal ligament. The pedicle is usually from the interdental papilla. POF has been typically described to be lobulated or cauliflower in shape.<sup>2,6</sup>

POF in some cases may initially develop as a PG that undergoes fibrous maturation and calcification.<sup>8</sup> It has been postulated that PG and POF represent the progressive stage of the same spectrum of pathosis.<sup>8</sup> It is not known whether the present lesion developed as PG and gradually matured into a POF.

Salum *et al.* in a study of 138 cases had statistically proven that PG has a greater frequency of reddish colour while POF has a tendency for pinkish colour.<sup>9</sup> It is to be noted that the present lesion also had a pinkish colour pointing to its fibrous nature.

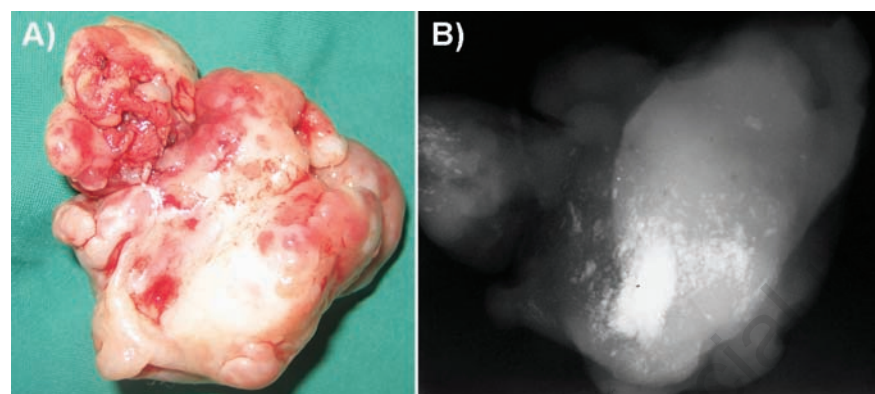
The histological spectrum of POF is wide and was described in detail by Buchner *et al.*<sup>6</sup> Some lesions at an early stage have been diagnosed as PG in cases in which the pathologist has ignored the minute granular foci of miner-



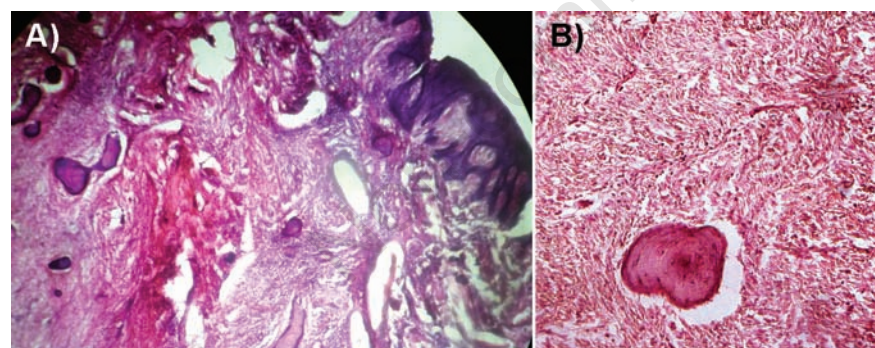
**Figure 1.** Frontal photograph of the patient showing facial disfigurement on the left side due to the intraoral swelling.



**Figure 2.** Intraoral photograph showing the lesion arising from the upper left posterior alveolus distal to first molar. Note the lobulated character of the lesion.



**Figure 3.** A) Image showing the excised gross specimen; B) Plain radiograph of the excised lesion showing the central core of ossification and calcification starting in the peripheries.



**Figure 4.** A) Scanner microphotograph view showing the surface epithelium with the underlying lesion (H&E stain, original magnification 40x); B) Histopathology view showing the woven bone (H&E stain, original magnification 400x).

alization. Mineralization is an inherent potential of the parent tissue (periodontal ligament/periosteum).<sup>6</sup> Studies have reported presence of variations of mineralized tissue ranging from mature lamellar bone, woven bone, dystrophic calcification and acellular cementum.<sup>6,9</sup> Shetty *et al.* in their study of 22 cases of POF, 50% of the mineralized masses comprised of woven bone.<sup>10</sup>

The present case showed a core of central woven bone formation with flecks of calcification

starting in the periphery of the lesion. The ossification commenced at the center of the lesion and has proceeded in a centripetal manner.

Kfir *et al.*, in a clinicopathological study of 741 cases of reactive lesion of gingiva, reported that size of the POF is usually smaller than 1.5 cm in diameter.<sup>5</sup> Growth potential of POF has been stressed only in two earlier articles. Bodner *et al.*, 1987 reported a POF of 6 cm diameter in the posterior mandible in a 70-year-old female.<sup>11</sup> Poon *et al.*, 1995 reported a

maxillary POF, 9 cm in diameter and 5 years duration in a 32-year-old female.<sup>12</sup>

Patient has been recurrence free for the past three years. The ideal treatment for POF is surgical excision along with the involved periodontal ligament and periosteum. A recurrence rate of 8% to 20% has been reported in the literature.<sup>6</sup>

It is evident now that POF if left untreated has an unrestricted growth potential and can take an unexpected clinical course. The authors would like to present this case considering its dramatic intra oral appearance. The present lesion is interesting considering its long standing duration and the size it has attained causing facial deformity.

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