

## Case Report

### Recurrent Peripheral Ossifying Fibroma -A Case Report

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#### ABSTRACT

Peripheral ossifying fibroma (POF) is a reactive, non- neoplastic, inflammatory, hyperplastic soft tissue growth of the gingiva. Lesions are most commonly found in the anterior maxilla occurring in younger population with increased incidence in females. It usually appears as a smaller lesion and may increase in size and mostly lobulated with varying colours. It is believed to comprise about 9% of all gingival growths and to arise from the gingival corium, periosteum, and the periodontal membrane. We present an unusual case of a large POF in a 42-year-old woman that presented on the mandibular anterior region

**Key words:** Ossifying Fibroma, Reactive growth, Hyperplastic, Anterior Mandible.

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#### INTRODUCTION

The localized growths that are considered to be reactive rather than neoplastic in nature are most commonly found in sites like gingiva. Many of these lesions are hard to be identified on clinical examination and can be identified as special entity only on the basis of typical and microscopic examination. One of such reactive lesion is peripheral ossifying (POF).<sup>1</sup> It has been described with various synonyms and is believed to arise from the periodontal ligament comprising about 9% of all gingival growths.<sup>2</sup> POF is a reactive soft tissue growth that is usually seen on the interdental papilla.<sup>3</sup> It may be pedunculated or broad based; usually smooth surfaced and varies from pale pink to cherry red in color.<sup>4, 5</sup> It occurs about 9% of all gingival growths and to arise from the gingival corium, periosteum, and the periodontal membrane. It has further reported that it represents a maturation of a pre-existing pyogenic granuloma or a peripheral giant cell granuloma.<sup>6</sup> The size of the lesion appears small, found mainly in the

anterior maxilla with a higher predilection for females, and it is more common in the second decade of life.<sup>7</sup> A clinical case report of a 42-year-old female patient with a large peripheral ossifying fibroma in the anterior mandible showing significant growth and interference with occlusion is presented.

#### A CASE REPORT

A 42 year old female patient came to the department of oral medicine and radiology with a chief complaint of growth in lower front tooth region for past six months [fig 1]. Patient gives history of trauma in the lower front tooth region before fifteen years. After six months of trauma she noticed a small growth in the lower front tooth region. The growth was painless and it was removed at Tirunelveli Government Hospital. Five years back she noticed a small swelling in the same region and there was no progression in growth. In last 6 month the growth she noticed a slow progression. It increased in size to attain the present size. However there was a history of

opposing upper tooth impinging on the growth and it was still painless .No relevant medical history. Past dental history revealed an extraction two weeks priorly in upper back tooth region without any post operative complications. No relevant family history. No adverse habits.

On intraoral examination on inspection single solitary growth was seen in the lower anterior region in relation to 44,43,42 .It was irregular shape and about the size of 3x3 cm which was extending buccolingually from lower labial vestibule to anterior lingual sulcus region[Fig 2] . Mesiodistally from 41 to 44 region. Pale pink in colour and the surface appears smooth. Tooth indentation seen on surface of the growth [fig 3]. Displacement of tooth 42 mesially and 43 distally. No ulceration present. On palpation all inspectory findings with respect to number, size, shape and extent were confirmed. Non tender, firm in consistency, no bleeding and ulceration present. Base is pedunculated. Teeth 42 and 43 are vital. So provisionally diagnosed as irritational fibroma in relation to 42, 43 region. The differential diagnosis considered were fibrosed pyogenic granuloma, peripheral giant Cell Granuloma, Peripheral Ossifying Fibroma

Intraoral periapical radiograph of 42, 43 region and OPG shows ill defined radioopacity of size 1.5x1 cm irregular shape present in between 42 and 43 region[Fig4,5] . Migration of 42 mesially and 43 distally. widening of PDL space of 42 and 43.Mandibular anterior occlusal radiograph shows ill defined radioopacity of size less than 1 cm irregular shape present buccally in between 42 and 43 region [Fig 6].

**Fig 1:** Profile view of the patient



**Fig 2:** Single solitary growth seen in the lower anterior region in relation to 44,43,42



**Fig 3:** Tooth indentation seen on surface of the growth



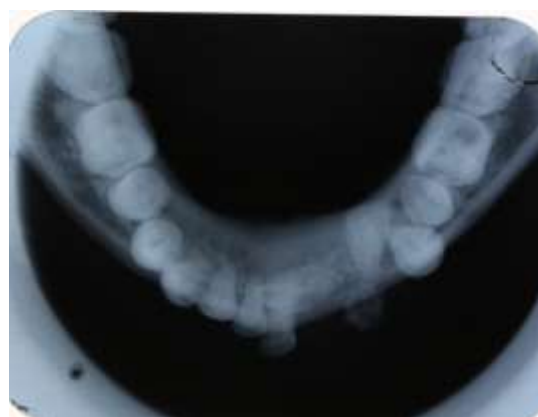
**Fig 4:** IOPA shows ill defined radioopacity of size 1.5x1 cm irregular shape present in between 42 and 43 region



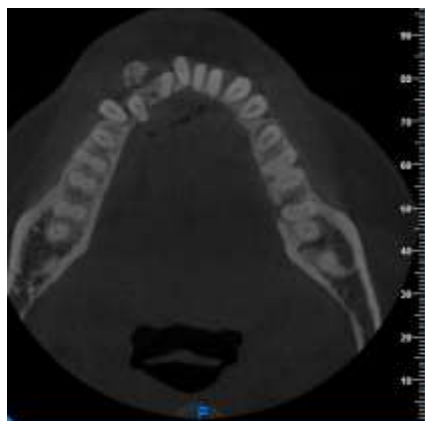
**Fig 5:** OPG reveals ill defined radioopacity present in between 42 and 43 region and migration of 42 and 43



**Fig 6:** Mandibular anterior occlusal radiograph shows radioopacity present buccally to the alveolar ridge



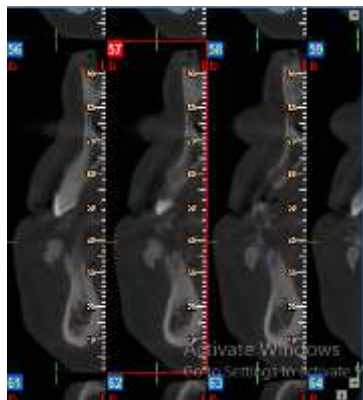
**Fig 7:** CBCT axial view



**Fig 8:** CBCT coronal view



**Fig 9:** CBCT cross sectional view



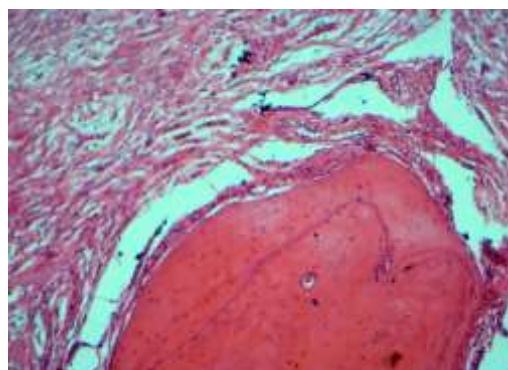
**Fig 10:** Excision of the growth



**Fig 11:** Extraction of 42 and 43 and sutures are placed



**Fig 12:** Histopathological features shows bony spicules were seen within the connective tissue surrounded by osteoblastic rimming and osteocytes were seen within the bone



In CBCT sagittal, axial and cross sectional slices shows a homogenous hyperdense area seen buccally to 43 and 42 region. The radiopacity was not attached to the buccal cortical plate and a similar small multiple radioopacity was seen between 42 and 43 [Fig 7,8,9]. Then the excisional biopsy of the growth was planned and done along with the extraction of 42 and 43 [Fig 10, 11]. The excised tissue was sent for histopathological investigation. On evaluation the microscopic findings identified were hyper plastic stratified squamous surface epithelium with underlying connective tissue stroma, Connective tissue with dense bundles of collagen fibers. Bony spicules were seen within the connective tissue surrounded by osteoblastic rimming and osteocytes were seen within the bone [Fig 12]. Hence final diagnosis was peripheral ossifying fibroma in relation to 42 and 43 region was made.

## DISCUSSION

Peripheral ossifying fibroma (POF) is one of the inflammatory reactive hyperplasia and a non-neoplastic entity, that occurs on the gingiva in response to recurrent trauma or chronic irritation<sup>1</sup>. It was early reported by Shepherd in 1844 as alveolar exostosis.<sup>2</sup> Eversol and Robin in 1972, later coined the term as peripheral ossifying fibroma<sup>3</sup>. Other synonyms used in ancient literature are peripheral cementifying fibroma, calcifying or ossifying fibroid epulis, mineralizing ossifying pyogenic granuloma,

peripheral fibroma with calcifications, calcifying fibroblastic granuloma.<sup>4</sup> It has an increasing incidence in 20 years of age and decreases after 30 years. Only 0.5% cases are reported in older age group.<sup>6,7</sup>

Bone involvement, is seldom seen in most of the cases, some variations are noted like, Superficial erosion of bone Foci of calcifications, Widening of the periodontal ligament space and thickened lamina dura, Migration of teeth with Interdental bone loss.<sup>7,8</sup> Multicentric POF can also occur in oral and maxillofacial region and is observed in genetic associated conditions like: Nevroid basal cell carcinoma syndrome, Multiple endocrine neoplasia-type II, Neurofibromatosis, Gardner syndrome. Clinically it can be differential diagnosed are Pyogenic Granuloma, Peripheral Giant Cell Granuloma (PGCG), Peripheral Odontogenic Fibroma.<sup>9</sup>

Treatment requires proper surgical intervention that ensures deep excision of the lesion including periosteum and affected periodontal ligament. Complete root scaling and debridement of adjacent teeth and/or removal of other sources of irritants should be accomplished. In addition, POF may also cause erosion of bone, displacement of teeth, and can interfere or delay eruption of teeth. Early recognition and definitive surgical intervention result in less risk of tooth and bone loss. The recurrence may vary from 7 to 20% according to different authors.<sup>10</sup>

## CONCLUSION

Peripheral ossifying fibroma (POF) is difficult to differentiate clinically among various reactive gingival lesions, particularly in the initial stages of examination. Regardless of the surgical technique employed, it is important to eliminate the etiological factors and every tissue has to be histologically examined for confirmation of diagnosis. thus early

diagnosis plays an important role in preventing an ominous change of lesion.

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