International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319-6505, Impact Factor: 6.614
Available Online at www.journalijcar.org
Volume 8; Issue 09 (D); September 2019; Page No.19979-19981
DOI: http://dx.doi.org/10.24327/ijcar.2019.3887.19981

Case Report

PERIPHERAL OSSIFYING FIBROMA- A CASE REPORT

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A R T I C L E I N F O

Article History:

Received 4th June, 2019
Received in revised form 25th July, 2019
Accepted 23rd August, 2019
Published online 28th September, 2019

Key words:

Female Predominance, Gingival Growth, Peripheral Ossifying Fibroma, Reactive

A B S T R A C T

Peripheral ossifying fibroma is a relatively uncommon non-neoplastic gingival growth that is considered to be reactive in nature and postulated to appear secondary to irritation or trauma. It usually occurs in young adults with a female predominance and are solitary in nature. We report a case of peripheral ossifying fibroma in a 36-year old female. Various clinical, radiographic and histopathological characteristics along with etiopathogenesis and differential diagnosis are also discussed.

INTRODUCTION

Localized gingival enlargements are fairly common and typically represent reactive soft tissue proliferative lesions, rather than true neoplasms and usually seen on interdental papilla.[1] Reactive or inflammatory lesions represent more than 90% of histopathologically analyzed gingival biopsies[2] and among which commonly include diagnosis of pyogenic granuloma, fibrous hyperplasia, peripheral ossifying fibroma and peripheral giant cell granuloma.

Various names have been cited in the literature for peripheral ossifying fibroma (POF) such as cementossifying fibroma, peripheral fibroma with osteogenesis, peripheral odontogenic fibroma, calcifying fibroblastic granuloma etc.[3]

POF is a well demarcated and occasionally encapsulated lesion consisting of fibrous tissue containing variable amounts of mineralized material resembling bone (ossifying fibroma).[4] It is considered to be the soft tissue counterpart to central ossifying fibroma.

CASE REPORT

A 36-year old female patient reported with a complaint of swelling in the upper right posterior region since 20 days.

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Patient experienced sharp pain associated with the swelling which aggravated on mastication, radiating towards ear and relieved by taking medication. Patient had a history of occasional bleeding on provocation. There was no history of trauma or similar growth in the past. The medical, surgical and family histories were non-contributory. Swelling was prominent in upper right side of face extra-orally. Intra-oral examination revealed a reddish pink, solitary, well defined oval shaped gingival growth with diffuse borders ranging 3x4 cm in size in relation to upper right second premolar. The growth had a smooth surface and appeared to arise from the underlying soft tissue. It was sessile, non-mobile, tender on palpation, firm in consistency and bled on touch (Fig. 1).

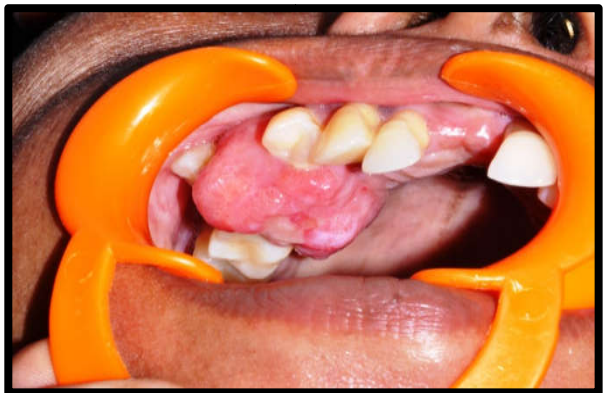

Fig 1 Intra oral photograph showing the gingival growth

Based on the history and clinical findings, the case was differentially diagnosed as fibrosed pyogenic granuloma, peripheral ossifying fibroma, peripheral odontogenic fibroma, solitary fibroma and fibrosed peripheral giant cell granuloma.

Routine hematological and radiographic investigations were undertaken. The complete hemogram was within the normal limits. Intra oral periapical radiograph (IOPAR) revealed a calcified mass in upper right premolar region. (Fig. 2).

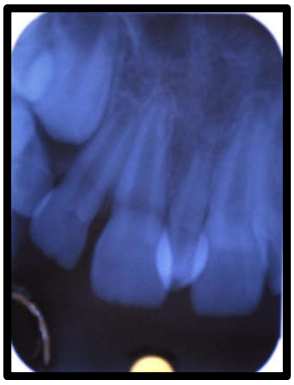

Fig 2 IOPAR showing Right Maxillary Anteriors

Surgical excision of the tissue was performed along with its surrounding tissue (Fig. 3). Second premolar was also extracted along with lesion (Fig. 4).

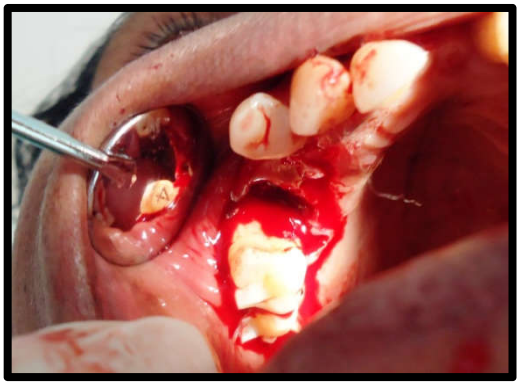

Fig 3 Surgical excision of the tissue

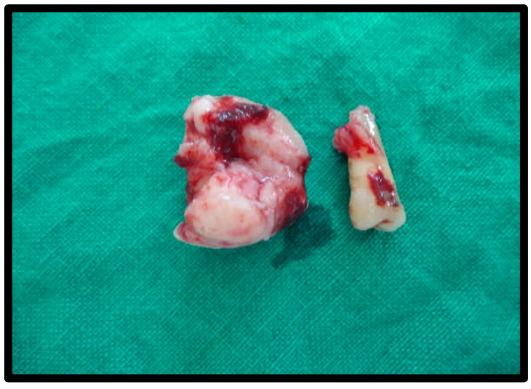

Fig 4 Extracted 2nd premolar along with lesion

Histopathological examination of the specimen showed a delicate connective tissue stroma covered by ulcerated stratified squamous epithelium which was disrupted at places. The bulk of the lesion was composed of cellular mass of connective tissue comprising of large number of plump proliferating fibroblasts, mixed inflammatory cell infiltrate and mineralized component in the form of interconnecting trabeculae of woven bone (Fig 5).

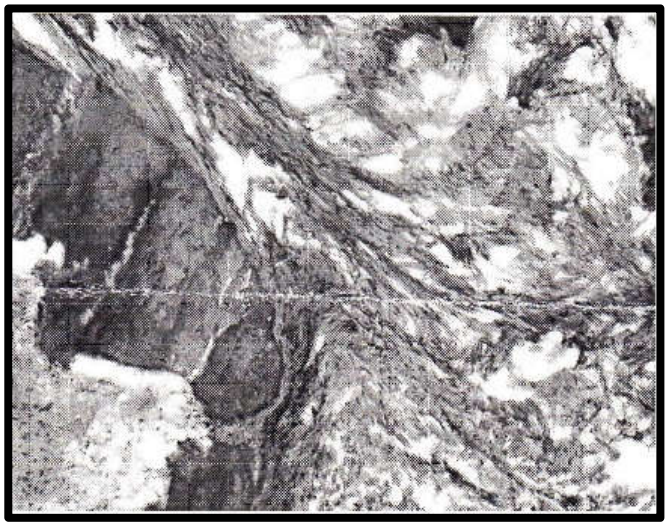

Fig 5 Histopathological examination of the specimen

Based on the clinical, radiographic and histopathological findings, a final diagnosis of peripheral ossifying fibroma was made.

DISCUSSION

POF, coined by Eversol and Robin**,** is a relatively uncommon, solitary, non-neoplastic gingival growth with calcification.[5]

The etiopathogenesis of POF is unclear. Certain factors which may influence the development of the lesion including trauma or local irritants such as subgingival plaque and calculus, dental appliances, poor-quality dental restorations, microorganisms, masticatory forces, food lodgement and iatrogenic factors.

An origin from cells of periodontal ligament has been suggested because of exclusive occurrence of POF from interdental papilla, the proximity of gingiva to PDL, the presence of oxytalan fibres within the mineralized matrix of some lesions, the age distribution which is inversely related to the number of lost permanent teeth, and the fibrocellular response similar to other reactive gingival lesions of periodontal ligament origin.[6]

The lesion affects females more often than males (2-4 times) between the age of 25-36 years.[3] In the present case too POF occurred in a 36 year old female. The peak occurrence in the second decade and declining incidence after third decade of life in females suggests hormonal influences.[7] Approximately 60% of POFs occur in the maxilla and more commonly found in the anterior region, with 55-60% presenting in the incisor-cuspid region.[8] In the case reported, lesion was present in right maxillary bicuspid region.

The lesion though usually measures less than 1.5 cm and rarely reaches more than 3 cm in diameter, but may reach to much larger size of 6 cm and 9 cm.[6,9] The surface may be either intact (34%) or ulcerated (66%).[7] The reported case was of 3×4cm in diameter.

Radiographically, radiopaque foci within soft tissue tumour mass are observed if the lesion represents varying stages of a fibroma with ossification, however, ossification or calcification may not be evident in all case.[6]

POF can cause displacement of teeth with interdental bone destruction.[10] Displacement of right second bicuspid was reported in this case. Histopathologically, POF, can exhibit

stratified squamous epithelium. The deeper fibroblastic component is highly cellular with central areas of calcification.

Treatment of POF consists of elimination of etiological factors, scaling and planing of adjacent teeth and surgical excision along with affected periodontal ligament and periosteum to minimize the possibility of recurrence.[9]

Long term postoperative follow-up is extremely important because of the high growth potential of incompletely removed lesion and a relatively high recurrence rate of approximately 20%.

POF clinically resembles as pyogenic granuloma, peripheral giant cell granuloma or odontogenic tumors, so radiographic and histopathological examination is essential for accurate diagnosis.

CONCLUSION

It is difficult clinically to differentiate between the various gingival lesions. For positive identification, the lesion must be examined thoroughly both radiographically and histologically. Also regardless of the surgical technique employed, its complete removal as well as complete elimination of the etiological factors -must be achieved to prevent recurrence.

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How to cite this article:

Gagandeep *et al* (2019) 'Peripheral Ossifying Fibroma- A Case Report', *International Journal of Current Advanced Research,* 08(09), pp. 19979-19981. DOI: http://dx.doi.org/10.24327/ijcar.2019.3887.19981

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