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PERIPHERAL OSSIFYING FIBROMA: A Clinical Case Report

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ABSTRACT
Gingival lesions are a common clinical finding in teenage female patients. Since the location and size of the lesion affect the rarity of these lesions, the site of the lesion's occurrence is crucial. On the other hand, the debate over whether peripheral odontogenic fibroma (POF) or peripheral ossifying fibroma should be diagnosed still exists. The management of a rare case of POF in an adolescent female patient located on the labial side of her maxillary incisors is dealt with in the current case report. The patient was followed up for 5months after her surgical excision.

Keywords: Gingival Overgrowth, Peripheral ossifying fibroma (POF), Reactive benign lesion.

INTRODUCTION:
A POF is characterized by an area of surface ulceration that manifests as a painless, haemorrhagic, frequently lobulated mass of gingiva or alveolar mucosa [1,2,3]. Depending on the level of surface inflammation and edema, the size of the lesions can vary. Histopathologically, POF is identified by the presence of clumped submucosal proliferation of primitive oval and bipolar mesenchymal cells as well as sporadic bone, cementum-like, or dystrophic calcified areas [4,5]. Most often, a lesion starts in the interdental tissue, which is frequently connected to an inflammatory fibrous hyperplasia [6]. Here is a case report of a twenty-year-old female adolescent with POF highlighting the variation in clinical presentation and histopathological characteristics.

CASE PRESENTATION
A 30-year-old female who had a primary chief complaint of an unusual swelling in the anterior maxillary region with lip incompetency had come to the Department of Periodontics [Fig 1]. According to the history, there was a reoccurrence of soft tissue growth in anterior region of jaw for which she had underwent surgical excision one and a half a year back. Intraoral examination revealed a single pedunculated gingival growth has grown significantly over the last six months despite the absence of any clinical cause. Vitality tests on the teeth near the lesion yielded positive results.

Clinically, the lesion was a raised, oval-shaped mass that measured 9 cm x 2cm, with a smooth, shiny surface devoid of bleeding or ulceration. The lesion was firm, nodular, nontender, sessile, and noncompressible upon palpation, yet it was also strong and without any surface ulceration, purulence, or bleeding. Radiographically, there was no periapical radiolucency in relation to the maxillary incisors .

Electrosurgery was used to first dissect the lesion completely from the base [Fig 2]. The excised specimen was then sent for histopathological evaluation to the department of pathology [Fig 3]. The histopathological examination indicated an abundance cell of fibroblasts, thin collagen fibers, blood capillaries, and inflammatory cells inside a mass of connective tissue that was partially covered by Para keratinized Stratified Squamous Epithelium. Additionally, it showed a few irregular calcified masses with irregularly shaped trabeculae and droplets of basophilic material [Fig 4]. There was no indication of any tissue that resembled cementum. The case has been identified as POF based on the clinical and histological findings. The healing of the gingiva and oral mucosa was normal, without any gingival defects after removal of the stimulus or the irritant. There was no sign of the lesion returning at the site of excision five months after follow-up [Fig 5].

DISCUSSION:

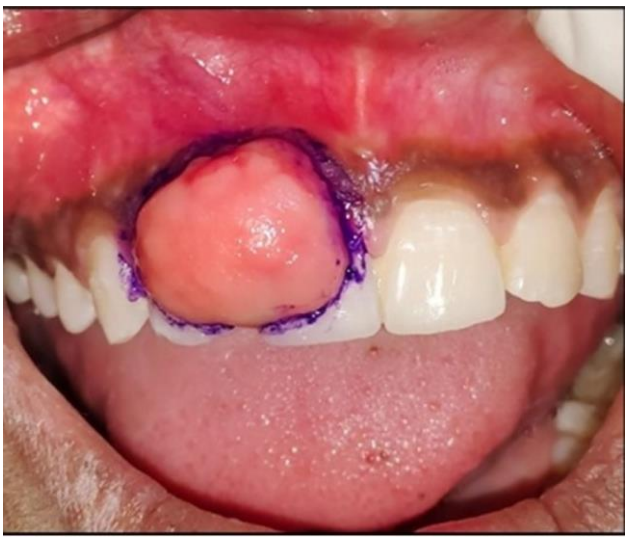
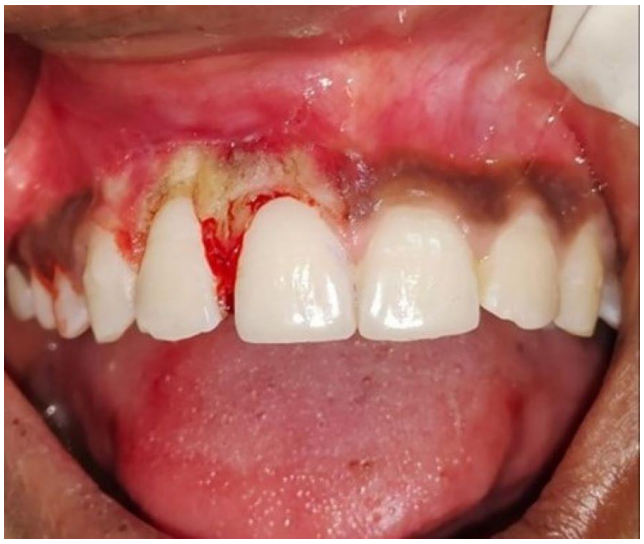
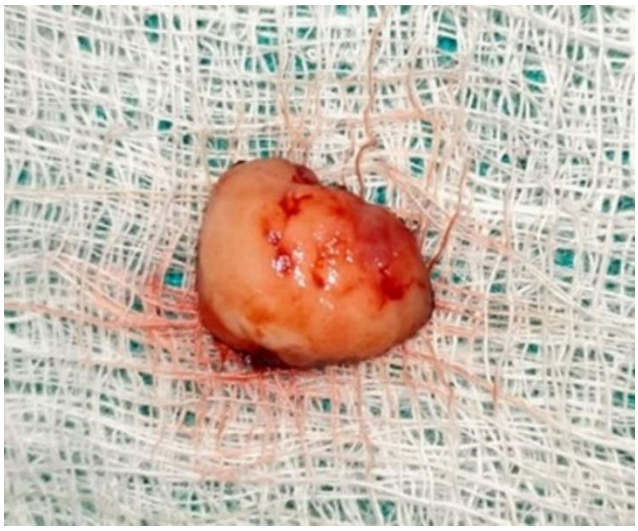
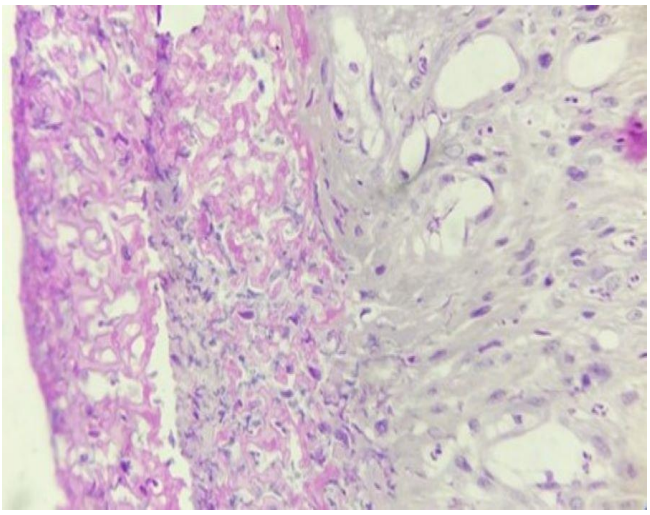
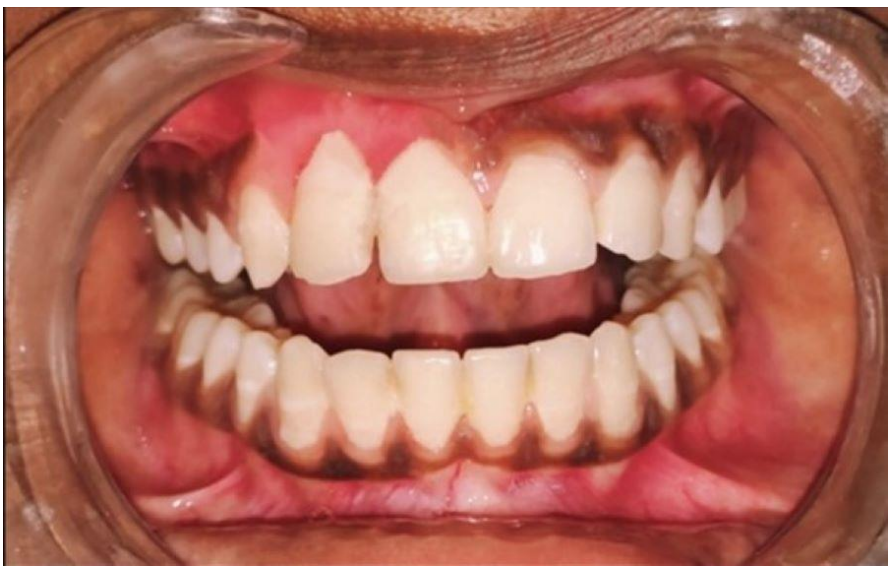
POF is a localized, slow-growing, reactive lesion emerging from pluripotent cells of the periodontal ligament [7]. Despite the nomenclature suggesting a neoplasm, a POF is regarded as a reactive lesion. Numerous terms, including fibrous epulis, calcifying fibroblastic granuloma, and peripheral fibroma with calcification, have been used to refer to it in the literature [8].

Histologically, it appears distinct from the neighbouring bone and consists of growing fibroblasts which are scattered with intermittent bone or calcified masses. There are two main categories of osseous fibromas: central and peripheral. The endosteum or periodontal ligament next to the root's apex serves as the nidus of origin for the central type, which over time causes the medullary space to enlarge and result in extra oral swelling. In contrast, the peripheral type develops in relation to the soft tissues in the tooth-bearing regions of the jaws [9,10]. Clinically, the lesion presents as a nodular mass that is pink to red, occasionally ulcerated, and may be pedunculated or sessile [11]. In this particular case, the lesion is sessile, has a smooth surface, and is not infected.

The only bone changes seen on radiographs in POF are pressure-related cupping defects, tooth displacement occasionally, and scattered radiopaque calcification regions. However, a large lesion that has been present for a long time may show bone-destructive changes [12]. In terms of histopathology, POF is not encapsulated and exhibits a stratified squamous epithelial lining with sporadic calcified patches with a backdrop of highly cellular connective tissue [13]. In the present case, the lesion is sessile and surrounded by a thick periosteum. Therefore, it is excluded from peripheral odontogenic tumor, epulis/papilloma, and PG. Both pregnancy epulis and PGs have the potential to develop and change throughout time to become less vascular and more collagenous.

CONCLUSION:

A slow-growing lesion with restricted growth potential, known as a POF, is one that undergoes connective tissue metaplasia, which produces bone, or dystrophic calcification. When considering the recurrent nature of the pathology, the uniform clinical presentations that occur in both men and women, across a wide age range, and with a variety of histopathological features have increased the need to thoroughly review the differential diagnoses.

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