Case Report

Peripheral Cemento-Ossifying Fibroma with Myxoid Component

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Abstract

Peripheral ossifying fibroma is a non-neoplastic enlargement of the gingiva and is precipitated by local irritation and minor trauma. We report a case of peripheral ossifying fibroma arising from the anterior oral cavity of a female patient, showing the typical clinical, radiological & histopathological features, alongwith a myxoid component in the connective tissue.

Introduction

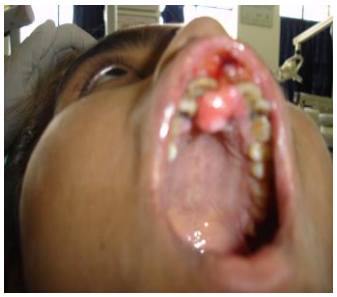
Peripheral ossifying fibroma (POF) is a non-neoplastic enlargement of the gingiva and is precipitated by local irritation and minor trauma. Although being reported to reach more than 6 cm, they are usually less than 1.5 cm in diameter, and the diagnosis can be made by clinical inspection and biopsy.[1] To the best of our knowledge, POF with a myxoid component in the oral cavity has not been previously described in the literature. We report an unusually large POF overlying the maxillary alveolar ridge and anterior hard palate, along with histopathological correlations.

Case Report

A 25 year old female patient reported with a painless growth in the upper front teeth region maxillary anterior region of 2 years duration. The swelling was initially small and has gradually grown to the present size. On examination, a reddish-pink irregular exophytic pedunculated lesion, measuring approx. 3 cm x 5 cm, was seen involving the gingiva of maxillary central incisors (FIG 1&2).The swelling was firm on palpation. It appeared to arise from the free gingival margin of the involved teeth and extended up to the anterior palatal surface of maxillary incisors, causing midline diasthema. Maxillary central incisors were grade 1 mobile. The large size of the swelling resulted in incompetence of lips. Radiographs showed drifting of the maxillary central incisors and bone resorption of the associated teeth (Fig 3).Based on the above findings, provisional diagnosis given were peripheral ossifying fibroma, peripheral giant cell granuloma, pregnancy tumor, peripheral odontogenic fibroma and focal fibrous hyperplasia.

Biopsy of the lesion was advised (FIG 4&5). Excisional biopsy showed orthokeratinized stratified squamous epithelium with irregular hyperplasia. Underlying connective tissue revealed fibrous proliferation with abundant plump fibroblasts and collagen fibres. Areas of hematoxylic calcification were seen, resembling cementum-like tissue.

Few areas showed presence of osseous tissue. At some places, myxoid tissue was evident. Histopathology was suggestive of Peripheral cemento-ossifying fibroma with myxoid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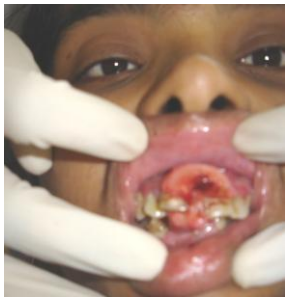
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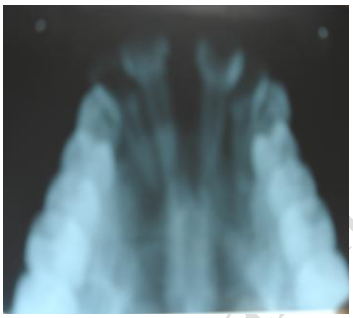
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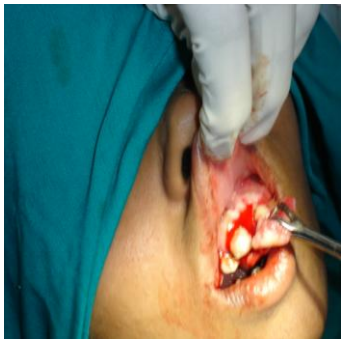
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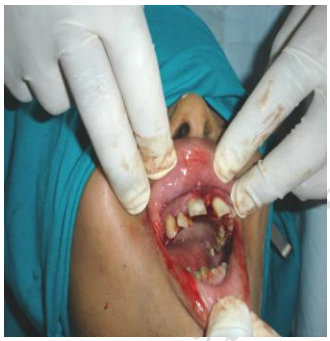
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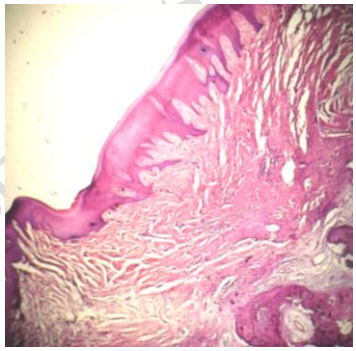
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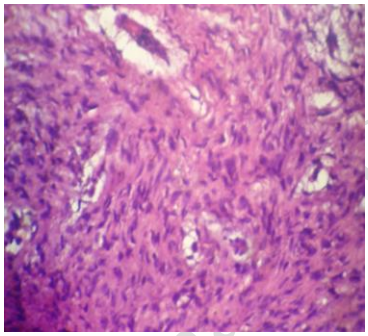
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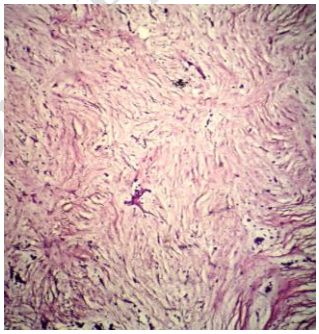
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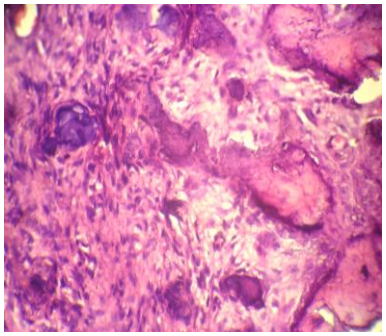
FIG 9

FIG 1&2: reddish-pink irregular exophytic pedunculated lesion, measuring approx. 3 cm x 5 cm, was seen involving the gingiva of maxillary central incisors; FIG 3: Radiographs showed drifting of the maxillary central incisors and bone resorption of the associated teeth; FIG 4&5: Excisional biopsy of the lesion; Fig 6: Fig 5. H & E stained section showing an intact overling hyperplastic stratified squamous epithelium; FIG 7: H & E stained section showing fibroblastic connective tissue; FIG 8: H & E stained section showing myxoid tissue; FIG 9: H & E stained section showing cementum-like material and osteoid tssue in a fibrovascular stroma

component. The patient has remained tumour-free for 20 months of follow up.

Discussion

Peripheral ossifying fibroma (POF) is a lesion of the gingival tissues representing up to 2% of all oral lesions that are biopsied. Other terms used in reference to POF are peripheral cementifying fibroma, peripheral fibroma with cementogenesis, peripheral fibroma with osteogenesis, peripheral fibroma with calcification, calcified or ossified fibrous epulis, and calcified fibroblastic granuloma.[2] In 1982, Gardner recommended that the only term used to describe this entity should be POF.[3]

The clinical features of a POP were described by Buchner and Hansen, and consist of a localized growth on the gingiva with a pedunculated or sessile base. POFs usually range in color from pink to red and commonly occur on the interdental papilla.[3] Females are more commonly affected than males[4,5,6] and, and the anterior maxilla is the most common location of involvement.[7] Although they are generally < 2 cm in diameter, size can vary; reports range from 0.2–3.0 cm to 4 mm–8 cm and some lesions may be as large as 9 cm in diameter. Cases of tooth migration and bone destruction have been reported, but these are not common.[8] Our case also presented the typical findings reported in the literature.

The aetiology of POF is unclear. Trauma or local irritation such as dental plaque, calculus, ill-fitting dental appliances and poor-quality dental restorations are all known to precipitate the development of POF. Inflammatory hyperplasia originating in the superficial PDL is considered to be a factor in the histogenesis of the POF.[1] Hormonal influences may play a role, given the higher incidence of POF among females, increasing occurrence in the second decade and declining incidence after the third decade.[8]

Gardner stated that POF cellular connective tissue is so characteristic that a histologic diagnosis can be made with confidence, regardless of the presence or absence of calcification.[8] Histologically, POFs are a nonencapsulated mass of a cellular fibroblastic connective tissue covered by stratified squamous epithelium. In its early stages, the lesion may be ulcerated and composed of cellular, fibroblastic tissue with granular foci of dystrophic mineralization. Buchner and Hansen state that at this early stage some lesions have been clinically diagnosed as a pyogenic granuloma. As the ulcer heals, the dystrophic calcification matures into bone and the cellular fibroblastic connective tissue matures to give the appearance of a fibrous epulis. Our case was that of a mature POF, with fibroblastic connective tissue showing cementum-like material and osteoid tissue. Additionally, we could also see some myxoid areas in the connective tissue, which has not been previously reported. POFs differ from a clinically similar lesion, the peripheral odontogenic fibroma, in that they lack the odontogenic components found in this latter lesion.[3]

The recommended treatment of POF is a local surgical excision that extends to

include the periosteum with submission for histomorphologic examination. Inclusion of the periosteum during the excision decreases the recurrence of this lesion.[3] In addition, elimination of local etiological factors such as bacterial plaque and tartar is required.[2]

Conclusion

Our case of peripheral ossifying fibroma reflects the typical features of this disorder, as reported in the literature, and confirms its benign nature. In conclusion, a slowly growing soft tissue mass with speckled calcifications in the anterior oral cavity of young adults should raise the suspicion of a reactive gingival lesion such as POF.

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