CASE REPORT

PERIPHERAL OSSIFYING FIBROMA OF ORAL CAVITY: HISTOPATHOLOGIC DIFFERENTIAL DIAGNOSES

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Peripheral ossifying fibroma is a benign neoplasm that usually develops from gingiva, presenting as an exophytic smooth surfaced pink or red nodular mass that is sessile or is less frequently seen on a pedicle. From the Indian perspective, it is usually noticed in 5th–6th decades of life with female predilection. Microscopically, the tumour shows stratified squamous epithelium and highly cellular fibrous stroma, sparse endothelial proliferation with fibroblasts and dystrophic calcifications. It has to be differentiated histopathologically from pyogenic granuloma, fibroma, peripheral giant cell granuloma, peripheral odontogenic fibroma and fibrous hyperplasia. A case of peripheral ossifying fibroma of maxillary gingiva in a 55-year-old Indian woman is reported.

Keywords: Peripheral ossifying fibroma, oral cavity, gingival growth, histopathologic differential diagnosis

INTRODUCTION

Gingiva is a common site for neoplastic and non-neoplastic lesions. Neoplasms are characterised by progressive autonomous growth that can be either a benign or a malignant course.[1] The peripheral ossifying fibroma (POF) is a benign neoplasm that presents as an exophytic, smooth-surfaced, pink or red nodular mass that is sessile, or is less frequently seen on a pedicle.[2] POF was the most frequent benign neoplasm (45.4%) seen in the gingival biopsies of the South Indian population as reported by Shamim *et al.*[3] It is usually noticed in the 5th decades of life, with more cases reported in female.[3] The present paper reports a case of POF of maxillary gingiva in a 55-year-old Indian woman.

CASE REPORT

A woman aged 55 years reported with a painless gingival growth of size 3×2 Cm in left maxillary posterior region extending from first molar region to maxillary tuberosity (Figure-1) of two years duration. The growth was initially smaller in size. The patient had some difficulty in mastication and deglutition due to the large size of the growth. The overlying mucosa was partly ulcerated and slightly erythematous. The lesion was soft in consistency with corrugated surface.

Regional lymph nodes were normal. Radiographic investigation using occlusal and intraoral periapical radiographs were with in normal limits. The possibility of epulis was considered on the basis of clinical findings. The lesion was surgically excised and the specimen was subjected to histopathological examination and serial sections were studied.

Microscopically the lesion showed partly ulcerated stratified squamous epithelium and highly cellular fibrous stroma, sparse endothelial proliferation with fibroblasts and dystrophic calcifications (Figures 2a, b, and c). Based on the conventional microscopy a diagnosis of peripheral ossifying fibroma was made. No recurrence of the lesion has been found till date.

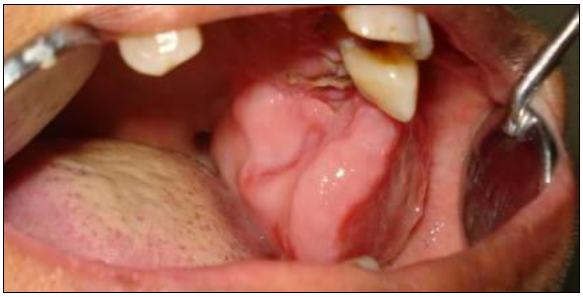

Figure-1: Intraoral view demonstrating a gingival growth of size 3×2 cm in left maxillary posterior region extending from first molar region to maxillary tuberosity

Figure-2a: Photomicrograph showing partly ulcerated stratified squamous epithelium and highly cellular fibrous stroma, sparse endothelial proliferation with fibroblasts and dystrophic calcification. HE ×5

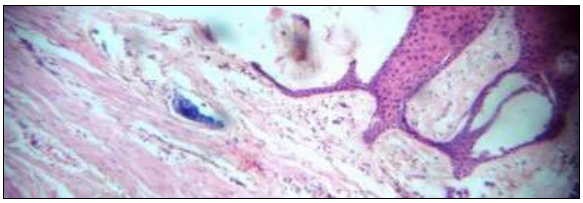

Figure-2b: Partly ulcerated stratified squamous epithelium and highly cellular fibrous stroma, sparse endothelial proliferation with fibroblasts and dystrophic calcification. HE ×10

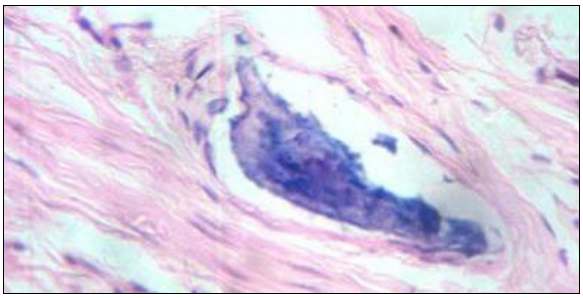

Figure-2c: Photomicrograph showing highly cellular fibrous stroma, sparse endothelial proliferation with fibroblasts and dystrophic calcification. HE ×40

DISCUSSION

The peripheral ossifying fibroma (POF) has been defined by a variety of terms such as ossifying fibrous epulis, calcifying fibroblastic granuloma and peripheral cementifying fibroma that have reflected partly the type of calcifications apparent histologically.[4] Peripheral ossifying fibroma was named as peripheral odontogenic fibroma and Gardner in 1982 proposed that the term should be restricted to the extra osseous counterpart of central odontogenic fibroma (World Health Organization type), which is a completely different entity.[4] Peripheral ossifying fibroma is a common solitary gingival growth thought to arise from the periodontal ligament.[5]

In the present case, the peak incidence of peripheral ossifying fibroma was in the fifth decade, which was comparatively older than that reported by Ababneh.[6] Most of the lesions are less than 1.5 cm in size, although larger ones occasionally occur as reported by Poon *et al*[7] and Bodner *et al*[8]. Migration of teeth with interdental bone destruction has been reported by Poon *et al*.[7] Shamim *et al*[3] and Stablein *et al*[9] group POF as a neoplastic lesion. According to Kfir *et al*[10] and Buchner *et al*[11] POF is considered as a reactive lesion.

Clinical differential diagnosis includes peripheral giant cell granuloma, pyogenic granuloma, fibroma and peripheral odontogenic fibroma.[2] Histologically, POF should be differentiated from peripheral odontogenic fibroma. Unlike the POF, the peripheral odontogenic fibroma is a real tumourous condition and has an odontogenic epithelium and dysplastic dentine.[2] It has been observed that POF in some cases may initially develop as a pyogenic granuloma that undergoes subsequent fibrous maturation and calcification.[12] Histopathologically peripheral giant cell granuloma and fibroma shows focal collections of multinucleated giant cells lying in richly vascular bed and cellular stroma and stretched atrophic stratified squamous epithelium with rich dense fibrous tissue respectively. The inflammatory component will be predominant in inflammatory fibrous hyperplasia.

If POF is suspected, a histopathologic diagnostic approach should always be adopted. The histopathologic diagnosis of POF rests on several criteria including benign fibrous connective tissue with varying contents of fibroblasts, myofibroblasts and collagen, sparse to profuse endothelial proliferation and mineralised material which may represent mature, lamellar or woven osteoid or cementum like material or dystrophic calcifications.[5] Most of these features were satisfied in the case reported here.

CONCLUSION

The present case calls attention to a POF of maxillary gingiva presented as a growth. Conventional Histopathology using hematoxylin and eosin stain act as a gold standard in the diagnosis of POF. Oral Pathologist often detects this lesion. It has to be differentiated histopathologically from similar gingival growths (pyogenic granuloma, fibroma, peripheral giant cell granuloma, fibrous hyperplasia, and peripheral odontogenic fibroma).

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