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Case Report

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Oral Focal Mucinosis- Presenting as conventional epulis with unconventional histopathology- Revealed by Special stains

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Abstract

Epulis like tumour is a common presentation in the oral cavity and histopathologic revelations range from fibrous hyperplasia to pyogenic granuloma. Oral focal mucinosis is a histopathologic diagnosis based on the presence of myxoid areas. It is a rare presentation in the oral cavity. Etiology is unknown, however the pathogenesis is related to the increased secretion of hyaluronic acid by the fibroblast or myxoid degeneration of connective tissue. Here we report a case of 35 year old woman presenting with a gingival growth in the lower front tooth region and the lesion was clinically diagnosed as fibroma and on histopathologic analysis diagnosed as Oral Focal Mucinosis. We present this case as it is commonly seen on the gingiva and palate and emphasize that histopathologic study is essential to confirm the clinical suspicion. This case contributes to the knowledge of the existing literature and also discusses the histopathologic differential diagnosis of Oral Focal Mucinosis.

Keywords: Oral focal mucinosis, Myxoid areas, Epulis.

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INTRODUCTION

Oral Focal Mucinosis (OFM) is a connective tissue lesion which was initially described in 1974 by Tomich [1]. Clinically the lesion presents as a common epulis, an asymptomatic mass which shows a characteristic histopathological findings due to the presence of significant amount of myxomatous connective tissue bounded by collagen fibers [2]. The exact etiology is not known, but pathogenesis is related to the increased secretion of hyaluronic acid by fibroblasts and hence the presence of myxoid areas [1, 2].

It is a rare pathology occurring predominantly in adults and has a female predilection [3]. The lesion is commonly seen on the gingiva followed by the hard palate [4]. Presenting with no characteristic clinical features, however histopathology along with histochemical study is vital for the diagnosis of oral focal mucinosis. Hence we conclude that histopathological evidence remains the mainstay in the diagnosis of oral focal mucinosis (OFM).

CASE HISTORY

A woman aged 35 came with a complaint of growth in the lower front tooth region since 6 months. The growth was initially small in size and gradually progressed. The medical history was noncontributory.

On intraoral examination the growth was confined to the gingiva extending from buccal to the lingual mucosa in relation to 32 and 33 (Figure 1). It was not associated with any secondary symptoms. The size of the lesion was about 1cm x 1cm in size, confined to the gingiva extending both bucally and lingually in relation to 32 and 33. The colour of the lesion was that of the normal mucosa. The swelling was nontender, soft to firm in consistency without any fluctuation, bleeding or pus discharge. The oral hygiene status revealed presence of plaque and calculus. The intraoral periapical radiograph showed no

evidence of bone loss.

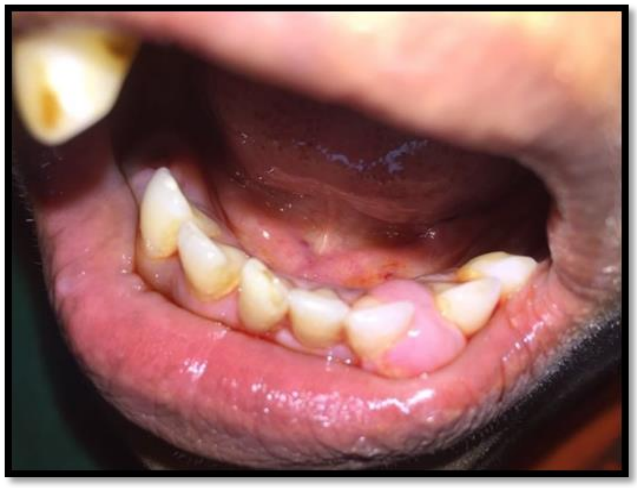

Figure 1: Clinical image: Shows nodular lesion in the mandible extending from the buccal to lingual aspect in the region of 32 and 33.

On the basis of clinical examination, it was provisionally diagnosed as fibroma and a differential diagnosis of peripheral ossifying fibroma and pyogenic granuloma was given. Oral prophylaxis was performed by scaling and root planing following which the lesion was excised.

Histopathologic slide stained with hematoxylin and eosin showed the presence of connective tissue and overlying epithelium. Connective tissue was seen to be made up of loosely arranged areas resembling myxoid tissue interspersed with spindle and stellate shaped fibroblast. Epithelium was atrophic with thinned out rete-ridges (Figure 2). Slides were subjected to special stains to determine the composition of connective tissue with Alcian Blue (pH 2.5) and Van Gieson stain. Alcian blue staining revealed positivity by the presence of blue colour in the myxoid areas due to its hyaluronic acid composition (Figure 3). Positive Van Gieson staining was seen only in areas surrounding the myxoid areas which showed collagen fibres arranged in bundles and only scanty areas were seen within the myxoid component (Figure 4). On the basis of histopathological findings and histochemical staining technique it was diagnosed as Oral focal mucinosis.

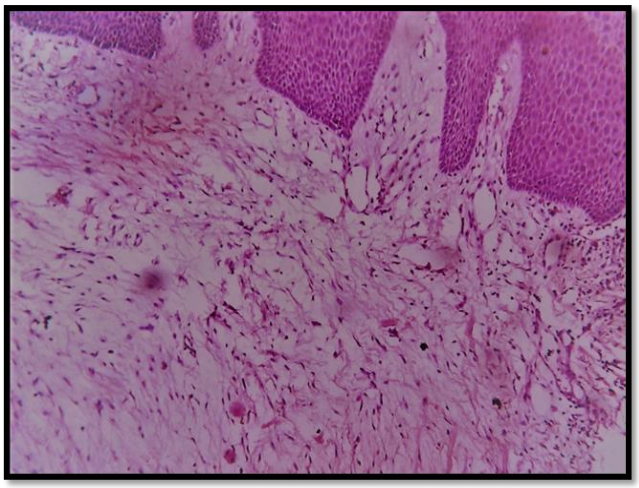

Figure 2: Photomicrograph 1. H&E stain shows Loose connective tissue with a myxoid areas and overlying stratified squamous epithelium. 40X

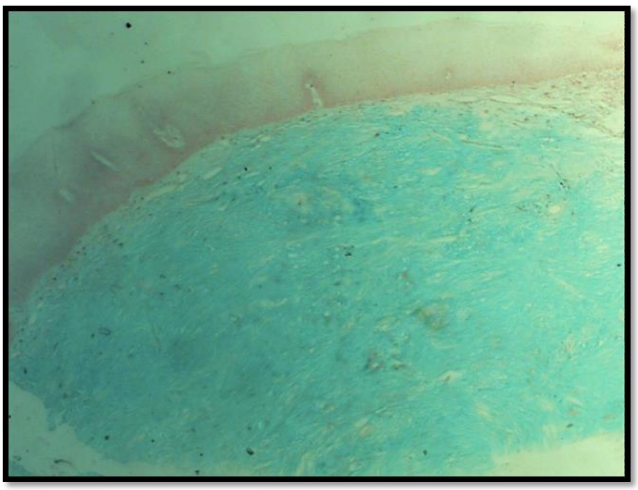

Figure 3: Photomicrograph 2. Alcian blue stain (pH 2.5) shows positive areas due to blue staining in the connective tissue. 40X

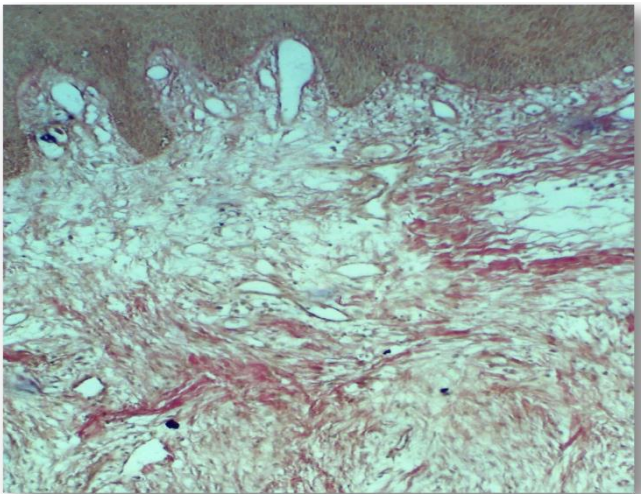

Figure 4: Photomicrograph 3. Van Gieson stain shows pink positive areas mainly surrounding the myxoid areas and scantily seen within the myxoid stroma in the connective tissue.

Patient is on regular follow up and no recurrence was observed till date.

DISCUSSION

Oral focal mucinosis (OFM) has a rare occurrence in the oral cavity and it is considered to be an oral counterpart of the cutaneous lesion, cutaneous focal mucinosis (CFM) or cutaneous myxoid cyst [1]. CFM was described in 1966 by Johnson and Helwig for an asymptomatic, solitary growth which showed myxoid areas admixed with spindle shaped fibroblast [5]. They commonly occur on the face, trunk and extremities. Pathogenesis is related to the increased production of hyaluronic acid by fibroblasts or myxoid degeneration of collagen fibres [2, 6, 7].

OFM lesions presents as an epulis, an asymptomatic nodular growth which is of the same colour as that of the adjacent mucosa which measures up to 2 cm in the largest dimension [6]. Histopathologic revelation of these epulis like growth may vary from the common fibrous hyperplasia to pyogenic granuloma, peripheral ossifying fibroma and peripheral giant cell granuloma. These epulis like lesions showing features of OFM is a rare occurrence.

The etiology of OFM remains uncertain but may be related to trauma. OFM affects females more than males and is seen in adults. Some authors have shown its occurrence even in young age as well [8, 9].

Majority of the lesions present as asymptomatic nodules which merge with the adjacent mucosa and measures upto 2cm in the greatest dimension [7].

From the clinical point of view, it is not possible to distinguish OFM from other lesions. Their clinical presentation led to differential diagnoses such as fibroma, fibrous hyperplasia and pyogenic granuloma, prevalent among the cases reviewed in the literature. A total of 65 cases have been reported till date [10]. No case was observed to be clinically diagnosed as OFM, and the basis for final diagnosis was the histopathological exam.

The microscopic study of OFM shows presence of loosely arranged myxoid tissue intermixed with stellate, oval or fusiform- shaped fibroblasts in a delicate fibrillar stroma. The surface epithelium may show atrophy with flattening of rete ridges. There are few blood vessels and inflammatory cells seen in the myxoid areas, and may even present as perivascular inflammatory infiltrate [4].

Histopathologic differential diagnosis of OFM are lesion showing myxoid areas like the soft tissue myxoma, mucocele (mucus extravasation phenomenon), odontogenic myxoma, myxoid areas seen in salivary gland tumours and myxoid areas seen in neurofibroma [6].

Soft tissue myxoma are tumours containing loosely arranged, myxoid areas with delicate reticular fibres and invades into the surrounding tissue. However, OFM does not show invasion into adjacent tissues and also lacks reticular fibres [4].

Mucocele is a common lesion of the oral cavity showing myxoid areas with granulation tissue which is not seen in oral focal mucinosis. Minor salivary glands are absent in the anterior region of hard palate and gingiva/alveolar ridge mucosa, where the present lesions was found. Hence due to the location mucocele was not considered in the clinical differential diagnosis.

Odontogenic myxoma is another lesion showing myxoid areas with the presence of reticular fibres. It is seen to occur within the jaw bone and are seen to invade into the adjacent structures [2]. However OFM does not present in the jaws.

OFM can be differentiated from nerve sheath myxoma, has prominent mucoid matrix and stellate shaped cells, numerous mast cells arranged in lobular pattern. The cells are positive for S-100. These features are absent in OFM.

Surgical excision or lasers or electrocautery is the treatment of choice and the lesion does not recur.

CONCLUSION

Oral focal mucinosis which is reported as rarity in the oral cavity can be considered in the differential diagnosis of soft tissue lesions presenting on the gingiva or palate. Clinicians must subject tissue which is excised for histopathologic study as the clinical appearance may be deceptive emphasizing the need for performing biopsy in order to conduct the case in the most adequate manner.

Conflict of interest: None.

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