
Verrucous oral focal mucinosis

Sir,

A 60-year-old woman presented with an asymptomatic verrucous lesion on the right buccal mucosa that had grown slowly over the past 6 months. There was no history of bleeding from the lesion. The patient was

a tobacco-chewer for many years. On examination, there was a cluster of verrucous papules coalesced to form a finger-like projection [Figure 1]. The lesion was grayish-white, firm, non-tender and there was no bleeding to touch. The underlying and surrounding mucosa appeared normal. There was no cervical lymphadenopathy. General and systemic examinations were within normal limits.

Biopsy from the lesion revealed a sub-epithelial, localized non-encapsulated area of loose myxomatous connective tissue stroma with stellate-shaped fibroblasts [Figures 2 and 3]. The overlying epidermis showed hyperkeratosis, acanthosis and papillomatosis. Alcian blue stain revealed blue staining in the areas of prominent mucin deposition [Figure 4]. After clinico-pathological correlation, a diagnosis of verrucous focal mucinosis was made. The lesion was excised surgically.

Oral focal mucinosis is a rare, benign condition of unknown etiology. The first description was given by Tomich (1974) who reported eight such cases as the oral counterpart of cutaneous focal mucinosis.^[1] It has been postulated that idiopathic focal hyperproduction of hyaluronic acid from the fibroblasts contributes to the pathogenesis. Oral focal mucinosis occurs primarily in adult patients and has a female preponderance. Oral mucosa overlying the bone such as gingiva and hard palate are most frequently involved, the next common areas of occurrence are buccal mucosa and tongue.^[2] The classical clinical presentation of the lesion is as an asymptomatic, soft to firm, sessile or pedunculated mass with a smooth surface. The color of the lesion is the same as that of surrounding normal mucosa. It is most often mistaken for fibroma, pyogenic granuloma or mucocele. A smooth and non-ulcerated surface is the differentiating feature; however, a pebbled and lobulated surface has also been described.^[2] In this case, the lesion was verrucous with grayish-white clusters of firm papules and normal surrounding mucosa. Clinical differential diagnoses of verrucous oral lesions include oral papilloma, verruca vulgaris, proliferating verrucous leukoplakia, verruciform xanthoma, verrucous carcinoma and papillary squamous cell carcinoma.^[3] In the absence of distinct and specific clinical features, diagnosis is based on histopathology.

Oral papilloma and verruca vulgaris are characterized by hypergranulosis and koilocytes on biopsy. Proliferating verrucous leukoplakia presents with a hyperplastic epidermis and dysplasia. Verrucous carcinomas are locally aggressive low-grade malignancies with koilocytes, individual cell keratinization and squamous pearl formation.^[4] Papillary squamous cell carcinomas show large atypical cells with mitotic figures involving the entire epidermis. Histopathologically, verruciform xanthoma is characterized by foamy histiocytes in the papillary dermis. Oral focal mucinosis is characterized by a localized, sub-epithelial, non-encapsulated area



Figure 1: Clustered verrucous papules coalescing to form a plaque with finger-like projections

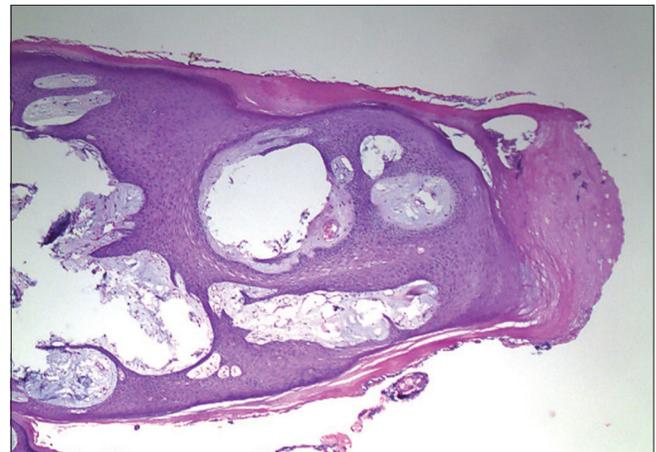


Figure 2: Papillomatous projection with sub-epithelial bluish material (H and E, x100)

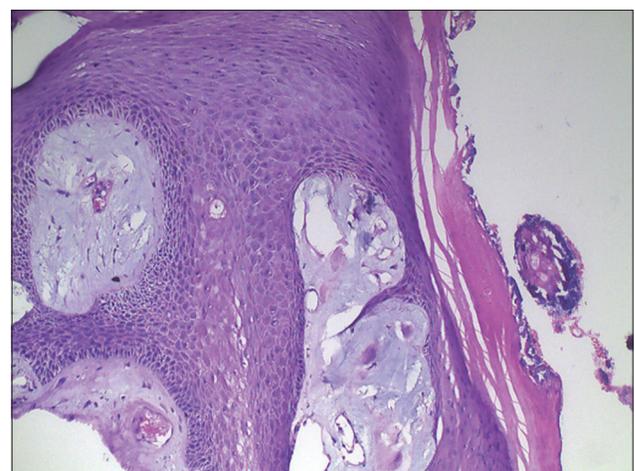


Figure 3: Subepithelial mucin deposition (H and E, x400)

of loose, myxomatous connective tissue encircled by normal collagen bundles. The myxomatous areas show minimal to absent reticulin fibers and fragmented

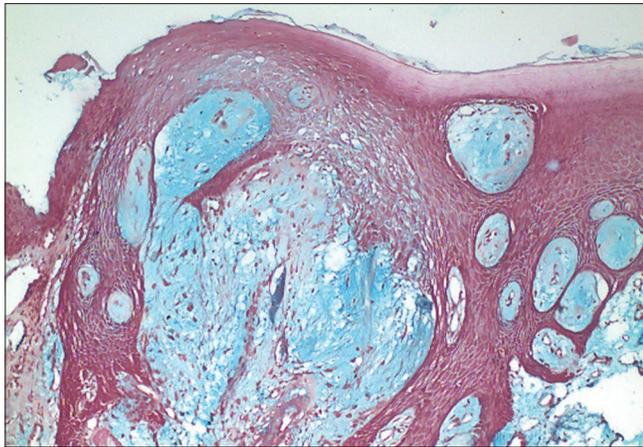


Figure 4: Mucin deposition (Alcian blue, x100)

collagen fibers replaced by mucin.^[5] There are delicate fibrillary processes extending from the fibroblast cytoplasm. In superficial lesions, there is secondary atrophy of the epidermis with loss of rete ridges. In our patient, there was hyperkeratosis and papillomatosis overlying the sub-epithelial areas of localized mucin deposition which differs from previous reports. The histopathological differential diagnoses include soft-tissue myxoma, myxomatous change in fibrous lesions, nerve sheath myxoma and mucous retention phenomenon.^[5] A sharp delineation and paucity of reticulin fibers differentiate oral focal mucinosis from soft tissue myxoma and myxomatous changes in fibrous lesions. Nerve sheath myxoma can be recognized by the presence of mast cells and a conspicuously lobular architecture. The mucous retention phenomenon or mucous retention cyst shows a circumscribed cavity containing mucoid material. The composition of the cavity is variable; it is formed by a lining of flattened cuboidal or columnar epithelial cells of the salivary gland duct in mucous retention cyst or compressed fibrous connective tissue or granulation tissue in mucous extravasation cyst. Infiltration by leukocytes and mononuclear phagocytes may be seen. In cases with atypical clinical features, histopathology helps to arrive at the correct diagnosis. The lesion is treated by surgical excision and has no tendency to recur.^[6]

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Conflicts of interest

There are no conflicts of interest.

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