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Case Report

Oral Squamous Acanthoma – A Histopathologic Entity Or Not

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Abstract

Oral squamous acanthoma (OSA) is an uncommon benign epithelial lesion of the oral cavity, presenting as a solitary, painless, sessile or pedunculated mass. It is considered a variant of oral squamous papilloma, characterized by acanthosis without papillomatosis. Although typically asymptomatic, OSA can cause discomfort or functional impairment depending on its size and location. Diagnosis is primarily based on clinical and histopathological examination, with characteristic features including hyperkeratosis, acanthosis, and elongated rete ridges. Treatment involves conservative surgical excision, with a low recurrence rate reported in the literature. Here, we present a rare case of OSA in a 55-year-old female patient, highlighting its clinical and histopathological characteristics, differential diagnosis, and management. This case underscores the importance of considering OSA in the differential diagnosis of oral lesions and the significance of histopathological analysis in confirming the diagnosis.

Keywords: Acanthoma, benign, dysplasia, papilloma, trauma

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INTRODUCTION

The oral epithelium is a mucous membrane lining that guards the oral cavity by serving as a primary barrier [1]. The absence of most of the different adnexal structures present in the skin may explain why the oral epithelium does not display the large array of benign and malignant tumours or reactive lesions seen on the skin. The squamous acanthoma is a rare lesion that is most likely a reactive epithelial phenomenon rather than a true neoplasm; yet akin it is not included as a new entity because it lacks a distinct clinical appearance from which it could be inferred. It is more common elderly individuals with no site predominance in oral cavity [2].

Oral squamous acanthoma (OSA) is a rare, benign epithelial lesion that typically presents as a solitary, painless, sessile or pedunculated mass in the oral cavity [3]. It is considered to be a variant of the more common oral squamous papilloma, characterized by acanthosis without papillomatosis. Although generally asymptomatic, OSA can cause discomfort or interfere with oral functions depending on its size and location. Clinically, OSA appears as a well-defined, exophytic lesion with a smooth or verrucous surface, usually measuring less than 1 cm in diameter. It most commonly occurs on the buccal mucosa, followed by the tongue, lip, and gingiva. The etiology of OSA remains unclear, but chronic irritation, trauma, or viral factors have been suggested as potential contributing factors.

Diagnosis of OSA is primarily based on clinical and histopathological examination. Histologically, OSA is characterized by hyperkeratosis, acanthosis, and elongated rete ridges without evidence of dysplasia or malignancy. The treatment of choice for OSA is conservative surgical excision, with a low recurrence rate reported in the literature. It is exclusively identified via histopathological analysis. As per literature, there are only very few cases diagnosed as squamous acanthoma [4]. This case report describes a rare presentation of OSA in a 55-year-old female patient, emphasizing the clinical and histopathological features, differential diagnosis, and management of this benign oral lesion.

CASE REPORT:

A 55-year-old female presented with a complaint of entrapment of both lips between the teeth in upper and lower arch for past 1 year. The patient did not notice any abnormality in the oral cavity until the dentist found it and also the medical history was non-contributory to the lesion. On examination, there was evidence of multiple very small firm mucosal growths identified on the upper and lower labial mucosa which was asymptomatic. These lesions showed indistinctive borders from the surrounding normal mucosa. It was slightly pale with the surface showing papillary projections. On palpation, it was firm, non-mobile and non-tender. Approximately, these lesions measured about 0.5-1 cm. The clinical pictures of these multiple lesions are depicted in figure 1 (A, B & C).

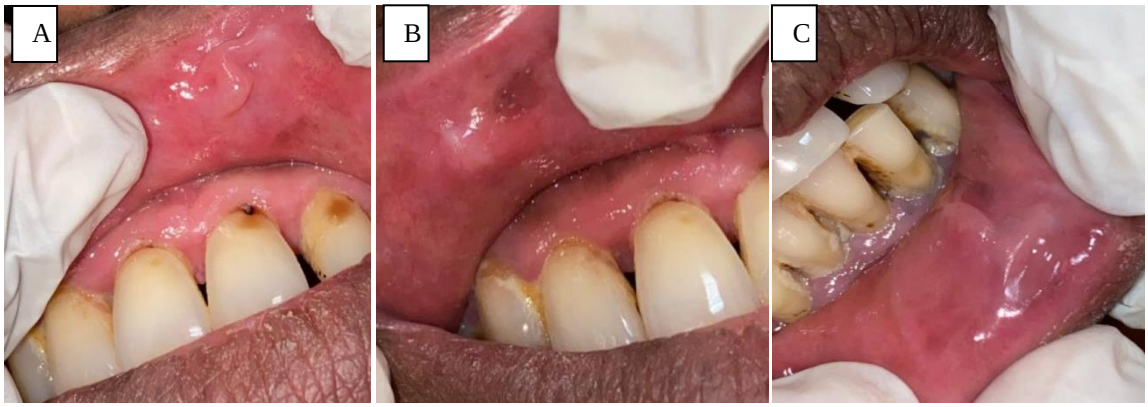

Figure 1 showing multiple soft tissue lesions seen on the A) Right labial mucosa B) Left labial mucosa C) Lower labial mucosa

Localized excision of these lesions was performed and submitted to the department of oral pathology for histopathological evaluation. These excised specimens were subjected to formalin for fixation. These were further processed and tissue sections were made.

On histopathological evaluation, H&E-stained tissue sections show a hyperparakeratinized stratified squamous epithelium of variable thickness with elongated rete ridges which were seen confluent in many areas exhibiting a pseudoepitheliomatous hyperplasia. Mucopolysaccharide keratin dystrophy/ toto bodies were evident in few superficial epithelial cells. The connective tissue stroma seen was mature and fibrous with intense foci of chronic inflammatory cells predominantly the lymphocytes and plasma cells. Numerous capillaries of variable size and shape were evident indicating that it is highly vascularised with extravasations of RBCs. The histopathological picture is depicted in figure 2 (a & b).

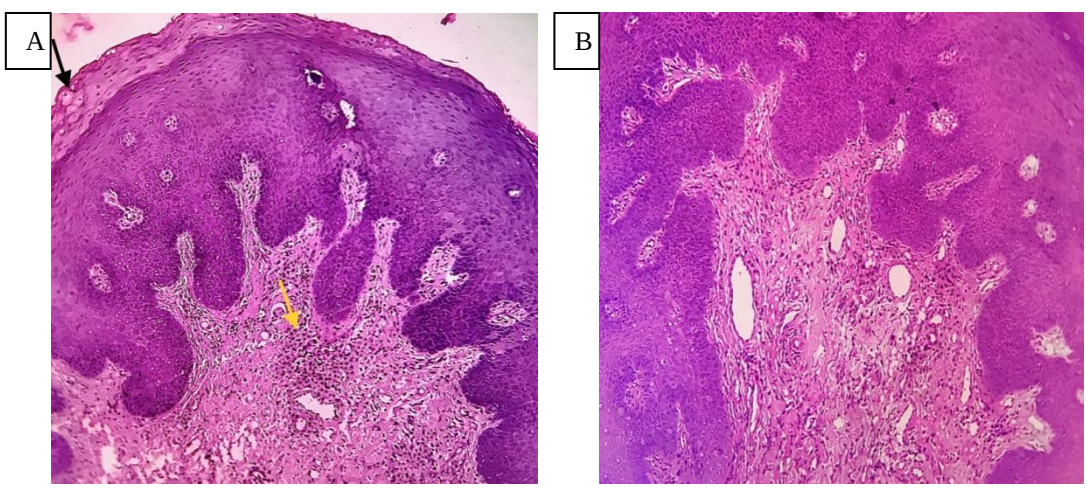

Figure 2 showing A) Black arrow – Mucopolysaccharide keratin dystrophy; Yellow arrow – foci of inflammatory infiltrate underneath hyperplastic & hyperkeratotic epithelium. B) elongated pseudoepitheliomatous hyperplasia and dense underlying connective tissue stroma with moderate inflammation & vascularity.

DISCUSSION:

Squamous acanthoma is a new entity postulated by Charles.E.Tomich and his colleagues in the year of 1974. They looked into eight cases that had been reported to them, but they were unable to make a conclusive diagnosis due to their bewilderment. However, by establishing this new entity, this unfortunate scenario was turned into a fortunate one [2]. Another author experienced the exact same scenario in 1978 and decided to follow the footsteps of the above-mentioned author by diagnosing 2 more cases under the same entity [3]. Following then, this entity was never used again until now. This could be because of the overlapping histological features with other similar lesions.

Eosinophilic hyaline inclusions (EHIs) or globules have been reported in various cutaneous tumors, including vascular lesions, myoepithelial neoplasms, and basal cell carcinoma. Well-demarcated intraepidermal squamous lesion with an admixture of - Predominantly enlarged keratinocytes harboring distinct eccentric intracytoplasmic eosinophilic hyaline inclusions (EHIs) with a smaller population of keratinocytes displaying pale cytoplasm [5]. The intracytoplasmic EHIs stained red with Masson's trichrome and were negative with periodic-acid Schiff with and without diastase. However, our lesion does not have any hyaline body inclusions.

Large cell acanthoma displayed distinct characteristics with low Ki-67 proliferation index, while dysplasias and papillomas showed higher indices. Dysplasia exhibited abnormal biomarker expressions, and papillomas had a normal cytokeratin pattern but higher proliferation index. The findings suggest that large cell acanthoma is a benign entity with unique features, requiring treatment due to recurrences without invasion [6]. Cutaneous infundibular keratinizing acanthoma (IKA) is a rare benign neoplasm of hair follicles, characterized by a keratin-filled crypt opening to the skin surface. It is typically found on the back, neck, head, and shoulders. Microscopically, it appears as dermal nodules filled with keratin and lined by stratified squamous epithelium. Microscopically, the lesions consist of well-differentiated squamous epithelium with a continuous border of basal cells, appearing as a simple or multiloculated cyst filled with keratin. The keratin within the lesions displays a concentric lamellar mass with a keratotic pearl aspect [7]. Clear cell acanthoma is a rare, benign lesion typically seen in middle-aged to elderly individuals. It presents as an erythematous papule with squama at the periphery, commonly found on the lower limbs. The examination showed clear keratinocytes, parakeratosis, neutrophils throughout the epidermis, and dilated, tortuous blood vessels within the dermal papillae [8].

The early change of the epithelium for a reactive lesion is the proliferation of the rete ridges giving a pseudoepitheliomatous hyperplasia with thickened keratin layer as the lesion matures. This histological condition is reversible, thus if the irritant is eliminated, the epithelium will revert to its normal morphology over time. If the irritant continues to irritate the epithelium, it may ulcerate, become hyper plastic or even become neoplastic [9][10]. The inflammation is variable. These features do not conclude the diagnosis of a lesion as an individual entity. This entity continues to remain uncertain from 1974 till now. The diagnosis of squamous acanthoma does not alter the treatment modalities according to the maxillofacial surgeons. So, the diagnosis of squamous acanthoma is non-contributory. This pure histopathological feature is not a contributory feature to confirm the diagnosis of squamous acanthoma.

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Conflicts of interest
There are no conflicts of interest

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