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Keratoacanthoma of Lower Lip: Case Report

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Abstract: *Keratoacanthoma is a. self-limited benign lesion usually presenting as a solitary, dome shaped nodule with a central crater filled with keratin. It frequently occurs on the sun exposed areas of the skin. Keratoacanthoma can be difficult to differentiate from oral squamous cell carcinoma both clinically and microscopically as it shows epithelial proliferative lesion that eventually presents with very similar clinical features to squamous cell carcinoma. Many KA appear in the vermilion border of the lips and therefore dental professionals must be familiar of the disease. This article reports the case of a 45-year-old male patient presenting with an exophytic ulcerative tumor in her lower lip that resolved after incisional biopsy.*
Keywords*: Keratoacanthoma, Low grade malignancy, Keratin, Lower lip*

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I. Introduction

Keratoacanthoma (KA) is a common, benign keratinocytic neoplasm that usually presents as a solitary, dome-shaped, pink or flesh-colored nodule developing a central keratin-filled crater. [1]

It is aproliferative lesion that commonly affects the vermillion border of the lips.The disease usually represents a diagnostic challenge for the clinician since both clinical and histopathologic features of KA may resemble those of a well differentiated squamous cell carcinoma. Keratoacanthoma is relatively common low grade malignancy .It is considered to be a variant of invasive squamous cell carcinoma. This article presents a photographic documentation of a KA in the lower lip of a 45-year-old male. Initially it was provisionally diagnosed as a SCC and the patient was submitted to an incisional biopsy.

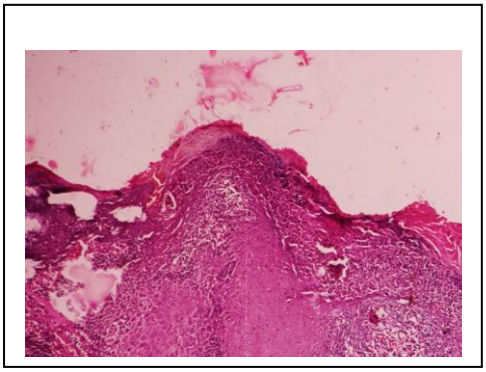
II. Case report

A 45-year-old male farmer by occupation reported in the Department of Oral Medicine and Radiology, with the chief complaint of growth in the lower lip since one and half month. There was history of previous local trauma from antagonist tooth and the patient reported continuous out-door working without sunscreen protection .Growth was initially of mustered size nodule over the lower lip. It gradually increased to three times of its size in one month. So, patient reported to general physician for the same complaint where he was provisionally diagnosed with traumatic ulcer and was prescribed with antibiotic and topical corticosteroid .Patient took medication for 5 days. However, no reduction in growth was achieved.Patient started experiencing pain in the same region which was gradual on onset, dull in intensity and intermittent in nature. Pain aggravated on touching over the growth. Growth continued to grow in size to attain present size of 1 x 2 cm.

On examination, a single raised well demarcated sessile exophytic growth of size approximately 1×2cm was seen at the labial mucosa of upper lip, about two cm anterior to right corner of mouth to 2.5cm posterior to midline . Colour of the lesion was pink intersperded with whitish hyperkeratotic foci .On palpation it was non tender, oval, elevated, and sessile with well-circumscribed borders. The surface texture was rough.. It was firm in consistency with no pus discharge.

Lower lip showing exophytic growth

An initial differential diagnosis of actinic kerastosis, keratoacanthoma, oral squamous cell carcinoma, was made. In early phase of treatment patient is advised cuspal grinding with 13.Patient was reported a 15 days later when the lesion rapidly increased in size associated with increased keratinization. Patient was advised incisional biopsy .



Incisional biopsy reveals stratifiedsqaumous epithelium shows acanthosis, hyperkeratosis and para keratosis. Sub-epithelial tissue shows scattered dense lymphocyte infiltrate feature suggestive of acanthotichyperkeratotic lesion with dense chronic inflammation. Patient was recalled after 10 days for excision of lesion.Excisional biopsy reveals stratified squamous epithelium showing marked acanthosis hyperkeratosis with thinned out epithelium at places. The subepithelial tissues shows dense inflammatroyinfilterate composed of lymphocyte extending over the squamous epthelium obscuring the lower borders. Islands of salivary acini and ducts are seen. The duct are lined by inner cuboidal and outer myoepithelial layer are seen. Many congested blood vessels and areas of hemorrhage are seen. Skeletal muscle fibers are also seen. Excisional biopsy was suggestive of Acanthotichyperkeratotic lesion with chronic sialadinitis of lower lip

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III. Discussion

The keratoacanthoma is a common cutaneous neoplasm that most often occurs on sun-exposed sites in light-skinned persons of middle age or older. It is considered the prototype of cutaneous pseudo-malignancies because it is a rapidly growing tumor with a histologic pattern resembling squamous cell carcinoma. KA is a relatively common skin lesion. Although cutaneous KAs are considered to arise from hair follicles, the rare cases reported occurring on mucous membranes would suggest possible origin from surface epithelium.[1]

Sir Jonathan Hutchinson in 1889 provided the first description of the KA characterizing it as the "crateriform ulcer of the face," a form of acute epithelial cancer. Freudenthal was, however, credited with coining the name "KA," which was employed by Rook and Whimster (1950) in their report of 29 cases. Synonyms for the KA include KysteSebaceAtypique, Molluscum Pseudo Carcinomatosum, Verrucome Avec Adenite, self-healing primary squamous carcinoma, tumor like keratosis, multiple self-healing epithelioma of the skin, and keratocarcinoma. Although most early descriptions emphasized the solitary keratacanthoma; the multiple familial type of KAs were first described by Ferguson Smith in 1934 and the generalized eruptive type was described by Marian Grzybowski in 1950.[2]

The most important and frequent consideration in the clinical and histopathological differential diagnosis is SCC. Fortunately the morphological features and growth pattern of a KA are sufficiently distinctive to be diagnosed in most cases, KA tends to be both exophytic and endophytic with a central keratin-filled crater, whereas cutaneous SCC is mainly endophytic with ulceration often present. The crater is surrounded by overhanging epithelial "lips" which are absent in the SCC. Intraepidermal abscess are common in KA and rarely seen in SCC. In the present case, a non-healing ulcer of more than 6 weeks duration with typical bony-shape surface characterizes along with concomitant presence of bilateral leukoplakia led to the formulation of squamous cell carcinoma in clinical diagnosis. In such a clinical situation, histopathology is mainstay in diagnosis, which will confirmatively differentiates KA from squamous cell carcinoma. [3,4]

The case discussed here showed the characteristic appearance histopathologically in that the normal adjacent epithelium was elevated at the margins of the lesion, with an abrupt change from normal stratified epithelium to the lesion showing a hyperplastic-stratified squamous epithelium exhibiting parakeratin plugging. The epithelial islands were invading in pseudocarcinomatous fashion and walled-off by an inflammatory infiltrate. In addition, the base of the lesion was at the level of the sebaceous glands and not beyond it. A very important factor that has to be considered for the histopathological diagnosis to be accurate is that adequate amount of marginal tissue should always be included in the biopsy. Since an excisional biopsy was performed with sufficient adjacent normal tissue, the histopathological diagnosis was confirmed in this case. Although the

natural course of a KA is spontaneous regression, therapeutic regression is mandatory to differentiate it from SCC. Solitary KAs respond well to surgical excision. Excisional biopsy was performed in the present case as the size of the lesion was smaller in overall dimensions. Patient is still on follow-up without any evidence of recurrence. Other therapies used are cryotherapy with liquid nitrogen, electro dissection and curettage, radiation therapy, CO_2 laser surgery have been used in small KAs. Intralesional or topical treatment with 5-fluorouracil, corticosteroid, bleomycin, interferon alpha-2b, and methotrexate have also been used.

IV. Conclusion

Keratoacanthoma is a benign epithelial tumor that may present some histopathologic features similar to those of squamous cell carcinoma therefore keratoacanthoma at times poses difficulty in differentiation from oral squamous cell carcinoma and other aggressive entities. A correct diagnosis can avoid needless radical surgery. Incisional biopsy is mandatory for diagnosing KAsince it may be very difficult to distinguish KA from other aggressive pathological entities, it should be better managed by complete resection.

The giant form of KA affecting the lower lip is relatively rare. The giant KA is characterized by a failure to regress, and surgical excision represents the therapy of choice for this lesion.

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