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Case Report

Keratoacanthoma on lower lip –A Case Report

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ABSTRACT:

Keratoacanthoma is a frequently encountered benign epidermal neoplasm that clinically manifests as a dome-shaped keratin-filled crater, typically found on sun-exposed regions. It is believed to originate from hair follicles due to exposure to actinic rays. It resembles a low-grade squamous cell carcinoma both morphologically and microscopically. Although there are numerous pharmacological treatment options available, surgery is considered the gold standard for treating keratoacanthoma. We present a case of keratoacanthoma located on the lower lip that was surgically excised.

Keywords: Keratoacanthoma, Squamous cell carcinoma, molluscumsebaceum,self- limiting tumor

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INTRODUCTION

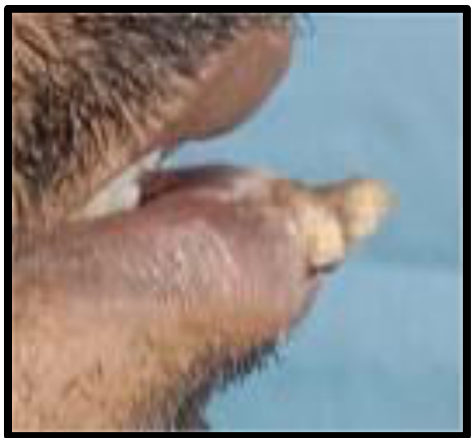
Keratoacanthoma is a benign proliferative neoplasm of epithelial origin that typically develops in sun-exposed areas. Keratoacanthoma was first described in 1889 by Jonathan Hutchinson as a crateriform ulcer on the face. Dr. Walter Freudenthal in 1940's coined the term Keratoacantoma .[1]Keratoacanthoma emerges from ectopic sebaceous glands on mucosal membranes, subungual, palms, and feet; it also originates from outer root sheath cells beneath the infundibulum on the lip. Furthermore, studies have shown that they can occur in conjunction with inflammatory skin conditions, scarring, congenital abnormalities, and genetic predisposition.[2,3] Characteristic clinical features of Keratoacantoma include well-defined, firm papule, plaque or nodule that may appear flesh-colored or in a reddish hue, epidermis appears glossy, and numerous telangiectasias are visible just below the surface. There is a keratin depression covered by a crest at the center of the lesion. Keratoacanthoma consists of three distinct phases: proliferative phase, stable phase, and an involutional phase, which typically lasts for four to six months. It is worth noting that keratoacanthoma often resolves on its own, although recurrence has been observed in 3-5% of cases. As Keratoacanthoma and Squamous cell carcinoma (SCC) have similar etiology and morphological appearance, it's important to differentiate them. [4]

CASE REPORT

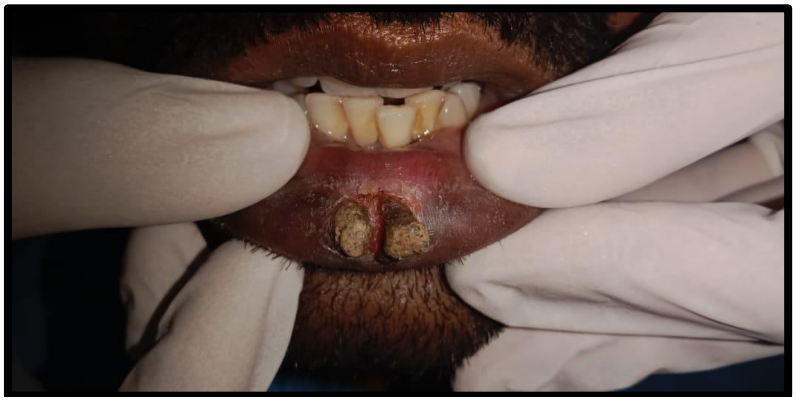
A 35-year-old male patient visited our department with a chief complaint of growth on the lower lip for three years which had gradually progressed and attained the present size.[fig;1] The lesion was also associated with persistent pricking type of pain, which was continuous in nature and aggravated with movement. Patient revealed that he had self-excised an identical lesion three years back and there was a recurrence. The patient has no pertinent medical background.

On clinical examination a proliferative exophytic growth of size approximately 0.5*1 cm was noticed on the lower lip region with a keratotic plug protruding out like a horn, with well-defined borders. [fig;2] On palpation, the lesion was tender, firm in consistency and indurated with evidence of bleeding. Based on the history and clinical examination, a provisional diagnosis of Cheilitisglandularis on lower lip, was given and differential diagnosis of

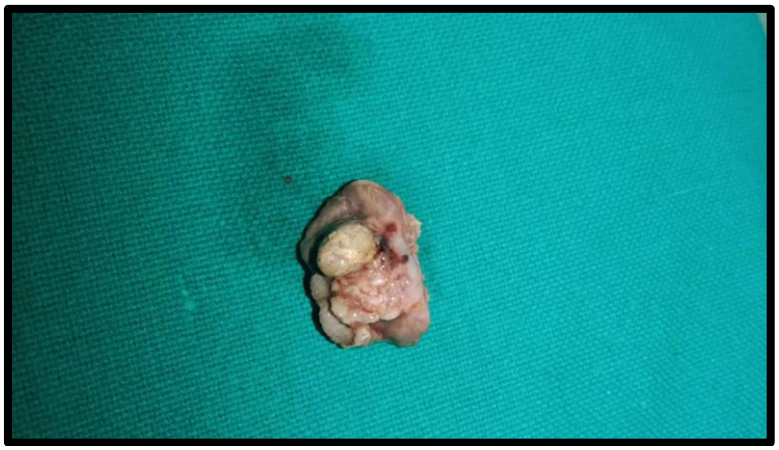
keratoacanthoma, actinic cheilitis, plasma cell cheilitiswere given. An excisional biopsy was planned, with a 5 mm safe margin from the periphery of the lesion, utilizing 2% lidocaine as the local anesthetic.[fig;3] The section was sent for histopathological examination, which disclosed the presence of hyperparakeratotic stratified squamous epithelium encased with keratin , elongated rete ridges and acanthosis with an intact basement membrane on Hematoxylin& Eosin staining, and was reported as keratoacanthoma. [fig;4]



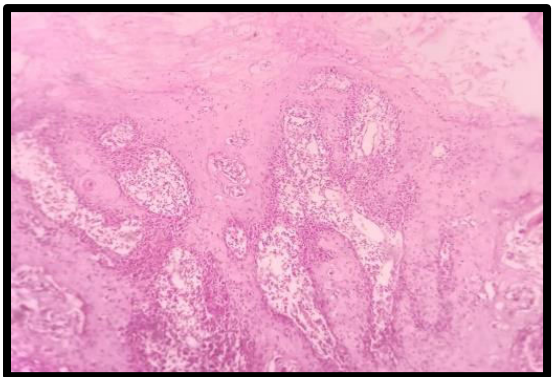
Fig; 1- Showing exophytic lesion



Fig; 2- Representing the Extensions of lesion



Fig; 3 - Excisional biopsy specimen



Fig; 4 -Histo-pathological picture of excisedspecimen

DISCUSSION

Keratoacanthoma is a benign rapidly proliferating epithelial tumor, which is also known as molluscumsebaceum that often occurs in sun-exposed areas with a male preponderance over 40 years of age, with an incidence of 100 to 150 instances per 100,000 people(5). In recent World Health Organization (WHO) classification of cutaneous malignancies, Keratoacanthoma was classified as a low-grade SCC, as it can transform into conventional SCCs with progressive loss of capacity for spontaneous regression.[6]

Clinically Keratoacanthoma begins as tiny papules that progress into well-defined, dome- or bud-shaped, umbilicated nodules with a hyperkeratotic plug in the center. Tumor proliferates rapidly over a few to several weeks and can reach 2 cm within a couple of months, with spontaneous resolution, which may heal with or without scarring. [4] Although spontaneous regression is a hallmark of Keratoacanthoma, in our case regression was not noticed and recurrence was observed with short span, which made us clinically diagnose it as chelitisglandularis, however it was finally diagnosed as keratoacanthoma based on the histopathological report.

Some common clinical variants of solitary Keratoacanthoma are giant keratoacanthoma (GKA) and keratoacanthomacentrifugummarginatum (KACM), which can grow to a maximum diameter of 5 to 20 cm, where spontaneous regression is not seen. Rarely does the distal part of a fingernail exhibit spontaneous involution; this variation is known as subunguial. [4] Keratoacanthoma rarely invades perineural space, literature has reported their metastasis into facial muscles, cranial nerves, cavernous sinus, parotid gland, and regional lymph nodes. [7]

Diagnosis of Keratoacanthoma is a challenge for the clinician as well differentiated squamous cell carcinoma and Keratoacanthoma exhibit similar clinical and histopathologic features. Diagnosis of Keratoacanthoma is done based on three key facets which include: 1. Characteristic clinical presentation of a rapidly developing crateriform lesion over weeks to months. 2. Triphasic evolution consisting of proliferation, stabilization, and regression (for untreated lesions). 3. Histopathology an adequate specimen with intact architecture.Literature has also demonstrated the effectiveness of reflectance confocal microscopy and dermoscopy in the diagnosis of KA.[6]

Multiple keratoacanthomas are reported in patients with Ferguson-Smith Syndrome, Torre's syndrome, and defective cell-mediated immunity. [5,6]

Surgical excision is considered as gold standard for treatment of Keratoacanthoma, Studies have shown that pharmacological management with systemic retinoids ,intralesional injections of methotrexate (IL-MTX) and 5 fluorouracil are effective with minimal adverse effects. [4]

The patient was on follow-up for 6 months, with no recurrence and had satisfactory cosmetic results.

CONCLUSION

Keratoacanthoma presents as a benign solitary skin lesion typically found in sun-exposed areas. As it resembles squamous cell carcinoma both clinically and microscopically, dentists must be vigilant in recognizing the lesion. Due to its unpredictable nature, managing this tumor can be difficult. Despite the esthetic concern posed by larger lesions, surgical management is the superior modality in treating KA.[8]

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