

# Muco-cutaneous Keratoacanthoma Involving Maxillary Lip

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**Abstract** Keratoacanthoma (KA) is a benign proliferative lesion of the skin that frequently occurs on sun exposed areas like the face and extremities. Originating within the sebaceous apparatus of the skin, the tumor can be difficult to differentiate from a well differentiated squamous cell carcinoma (SCC). Although the tumor has been reported to occur on the lower lip, this article presents a unique and rare case of keratoacanthoma involving the maxillary lip. The behavior of such tumor and its management has also been discussed.

**Keywords:** appendages, hair follicle, keratin, epithelium, biopsy, muco-cutaneous junction

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## 1. Introduction

Keratoacanthoma is benign epithelial proliferation that grows rapidly and originates in the supra Sebo-glandular portion of the hair follicles. [1] The lesion occurs frequently on the sun exposed areas of face, neck, forearms that is predominantly found more in elder male individuals. [2,3] With etiology still obscure, some suspected factors include Actinic rays, HPV (papilloma virus), trauma, genes and immunosuppression. [4,5,6] Around the oral cavity, the lesion presents a firm, solitary, reddish papule that rapidly progress to a dome shaped sessile nodule with a central crater like ulceration or so called keratin plug. The lesions vary in size ranging from a diameter of 2 cm on face to 40 cm in other parts of the body. [7,8,9] This article presents a case which is unique because it is present in a young individual with a rare location in maxillary lip (contrary to reported cases involving mandibular lip) [10]. These two features make the lesion described of paramount importance due to its clinical and histological resemblance to well differentiated squamous cell carcinoma.

## 2. Case Report

A 24 year old male patient was referred to the department of Prosthodontics for crown placement in relation to an endodontically treated mandibular first molar. Medical history revealed that the patient had developed frequent painful ulcer in the oral cavity about one year back which subsided on their own. No history of trauma, infection or injury was disclosed. The existing

lesion on the lip started during that time, but did not subside for which he had sought treatment from a local doctor who had asked him to apply petroleum jelly. The patient also reported that he had developed a tendency to poke the lesion either with fingers or with his tongue. The patient was habituated to smoking since 5 years and would also chew tobacco at times. Extra oral examination revealed a well demarcated non tender, immobile exophytic nodular growth located within the vermilion border and the mucocutaneous junction of the maxillary lip. Lymph node palpation was negative. After consultation with department of oral medicine and diagnosis, the patient was subjected for complete hemogram, X- ray of chest and other routine biochemical tests. The test results were negative and the immediate need for excisional biopsy was stressed. Subsequently the lesion was completely excised with a broad beveled incision that was then followed by a primary closure. The biopsy specimen was then sent to a histopathological laboratory. The report showed well defined proliferating parakeratinized epithelium of stratified squamous type with thick stratum granulosum and slightly proliferative spinous and basal cell layers. The lesion is composed of small epithelial island growing downwards and is surrounded by intense chronic inflammatory cells. The pathological findings are consistent to conclude the diagnosis of solitary keratoacanthoma. After the surgical excision, the patient was given a post-surgical dressing and instructions. The patient reported initially after two weeks and later frequently with no evidence of recurrence.

## 3. Discussion

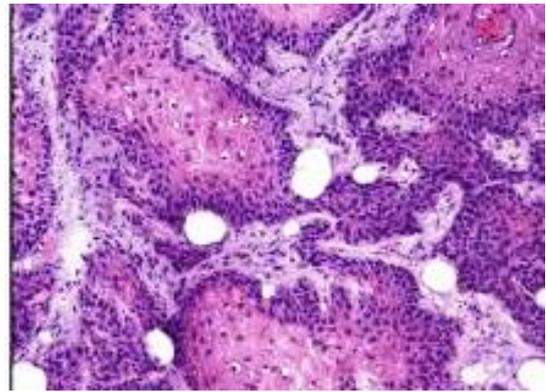
Keratoacanthoma (KA) is a common skin tumor that is characterized by dome shaped nodule with a central crater-like keratin plug. [11] Its uniqueness is that it shows strong clinical and histological similarity to well differentiated squamous cell carcinoma. [2,5,12] However a study has shown that chromosomal instability is higher in KA. [13] SCC on the other hand has ability to metastasize whereas KA undergoes spontaneous regression and hence is considered a self-limiting tumor. KA occurrence in isolation is widely recognized to have a reported frequency of 12%. [2] When present in this region, it is more likely to arise from the skin of the lips rather than the labial mucosa. [5,6] The same could be true in the present case also. As with other solitary keratoacanthoma, the present case also showed persistence for almost one and a half year before showing complete regression after surgery. This unusual behavior is a subject of debate regarding the treatment approach one should adopt. [14,15] its self-limiting capability has been attributed to the unexplained immunological mechanism of the parent tissue of origin. [2] Treatment modalities that have been proposed in the literature include cryosurgery, lasers, curettage and cauterization, radiotherapy, topical podophyllin and 5-fluorouracil, intralesional bismuth, bleomycin, interferon Alfa- 2a, mehtotrexate and triamcinolone. [3,4] the present case is to be considered a complete resolution by surgical intervention indicative of keratoacanthoma. However, further studies are required to understand the mechanisms that are involved in proliferation, growth control, self-regression and limited invasiveness of the tumor.

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**Figure 1.** Lesion of the upper lip. Note central crust with surrounding areas of healing



**Figure 2.** Photomicrograph shows islands of epithelium that are projecting towards the connective tissue with ballooning cells that are filled with keratin

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