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CASE REPORT

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Management of huge verrucous carcinoma of lower lip: A case report at a tertiary hospital in northern Tanzania

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Key Clinical Message

Well-differentiated variant of squamous cell carcinoma. Slow growing, exophytic, cauliflower-like growth easily confused with a viral wart. Cutaneous, anogenital, and oral variant exist. Risk factors for oral variant include alcohol and smoking. Histopathologically exhibits lobules with a pushing margin and blunt borders.

Abstract

Verrucous carcinoma (VC) is a low-grade variant of squamous cell carcinoma with specific clinicopathologic features and good prognosis when affecting skin. We report the case VC of lip in a-70-year-old lady. She underwent surgical excision with excellent outcomes. A brief review of the literature is provided.

KEYWORDS

case report, management, oral, verrucous carcinoma

1 | INTRODUCTION

Verrucous carcinoma (VC) is a low-grade variant of squamous cell carcinoma (SCC) with specific clinical, morphologic, and cytokinetic features. It is among the rarest forms of all oral cancers.[1,2] Oral verrucous carcinoma (OVC), was first described by Lauren V Ackermann in 1948. It was also known as "Verrucous Carcinoma of Ackermann" or "Ackermann's Tumor".[2] Other names used in literature are Buschke-Loewenstein tumor.[3] It is a slow-growing tumor, which presents predominantly as an exophytic growth with a pebbly, micronodular surface and tends to spread locally with no evidence of lymph node and distant metastasis even in advanced cases.[2–4]

It is a tumor which presents as a tan/ white, warty growth with a broad base attachment.[5] It was reported to occur in the larynx, esophagus, skin, scrotum, and perineum, while the most frequent occurrence site is oral cavity.[6] The most common sites for its occurrence in oral cavity include buccal mucosa, mandibular alveolar crest, gingiva, lip, and tongue.[5] Its etiology is not well-known, but habit of tobacco use in both smoking and smokeless form, alcohol consumption, betel nut chewing, and opportunist viral infections are the most associated etiologies.[2,4] Herein, we report an OVC in a 70-year-old female patient with delayed presentation but successfully treated. A brief review of the literature is also presented.

2 | CLINICAL CASE PRESENTATION

A 70-year-old female patient reported to our facility complaining of a new growth on his lower lip for 8 months. She stated that the new growth was insidious in onset and began as a papule that was gradually and progressively increasing over time to the present size over 8 month's duration. She gave positive history of pain and bleeding from the lesion. She reported to have been chewing tobacco since 40 years and kept the tobacco on the labial mucosa and vestibule for approximately 20 min on regular basis. She has been a social alcohol drinker for 50 years.

On general physical examination, she was moderately built and well oriented to time, place, and person. On extraoral examination, no palpable lymph nodes were noted. There was a solitary, well-demarcated, roughly oval shaped growth measuring approximately 8 cm in diameter and was located on right side of lower lip vermilion border and labial mucosa, (Figure 1). The tumor was extending from vermilion border till 6 cm over the labial mucosa and mesiodistally from level of teeth 33–45. The margins were raised and well-defined. The surface was white and pink with papillary projections with cauliflower-like growth. On intraoral examination, encrustation was seen on the right side of lower lip at the 3 cm from vermilion border. It was firm in consistency and the margins were indurated and non-tender.

Panoramic x-ray was obtained with no bone involvement. Chest x-ray was normal. Complete blood count, random blood sugar level revealed no abnormality. Based on the clinical examination, the provisional diagnoses of verrucous leukoplakia of lower lip, giant condyloma, verrucae warts, keratoacanthoma, and erythroleukoplakia of lower lip were entertained. Histopathology of the incisional biopsy demonstrated a well-differentiated squamous proliferation with exophytic and endophytic components consisting of exophytic component with papillomatosis and hyperkeratosis. The endophytic component was characterized by blunt projections of well-differentiated squamous epithelium with deep bulbous processes and a pushing margin, (Figures 2 and 3). Diagnosis of verrucous carcinoma was suggested. The patient was counseled for wide local excisional biopsy and the procedure was scheduled after obtaining the patient's informed consent. Excisional of the lesion was done, the specimen was sent for histopathology analysis. The size of the defect after excision was about 6x4cm. Repair was done by primary closure of the lip, vermilion border, and oral mucosa. Lip continuity was obtained. Histopathology of the excisional biopsy highlighted similar morphology as it was the case for incisional biopsy, thus, confirmed the diagnosis of VC with free surgical margins. During subsequent follow-up visits of the patient after 3 months, Figure 4A and 1 year Figure 4B respectively, the patient had no signs of recurrence.

FIGURE 1 Photograph of the patient demonstrating the gross appearance of verrucous carcinoma lesion on the lower lip.

3 | DISCUSSION

VC is a subtype of squamous cell carcinoma that affects skin and mucosa and has characteristic slow growth and bland histological features. A long-standing verrucous or cystic lesion that is unresponsive to routine medical treatment should raise suspicion for VC.[1,2] Clinically, VC is a low-grade tumor with good prognosis when affecting skin. Association with human papillomavirus (HPV) infection is rarely reported in mucosal and genital areas; and this may represent incidental colonization. As it was the case in our patient, association with alcohol consumption and smoking have been reported in OVC.[2–4] It can arise in association with inflammatory and neoplastic conditions. Diagnosis can be delayed due to bland histopathologic features and mimicking reactive processes. Caution should be exercised when making diagnosis in superficial or fragmented biopsies.

The classic clinical, topographic, and histologic features of VC have been well-documented and corroborated by numerous workers since Ackerman's original description of the entity in 1948.[4] The prevalence of OVC for total carcinomas affecting the oral cavity and oropharynx is low and ranges between 2% and 12%.[8] It is most commonly affects elderly male with adverse habits of tobacco and

alcohol.[2] But in the present case was elderly female with a thick cauliflower-like growth in her lower lip histologically proved to be a VC.

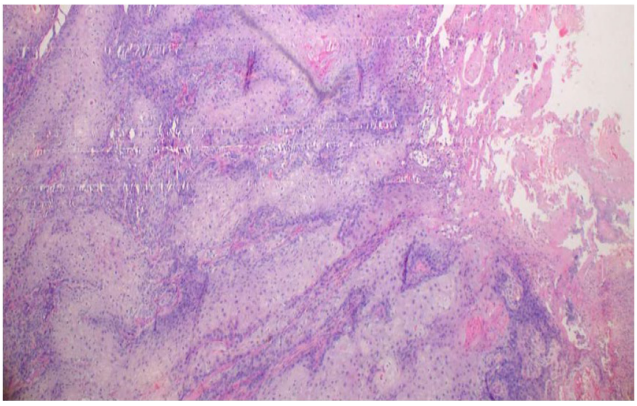

FIGURE 2 Histopathology of verrucous carcinoma demonstrating a well-differentiated squamous proliferation with papillomatosis and hyperkeratosis, H&E staining 40× original magnification.

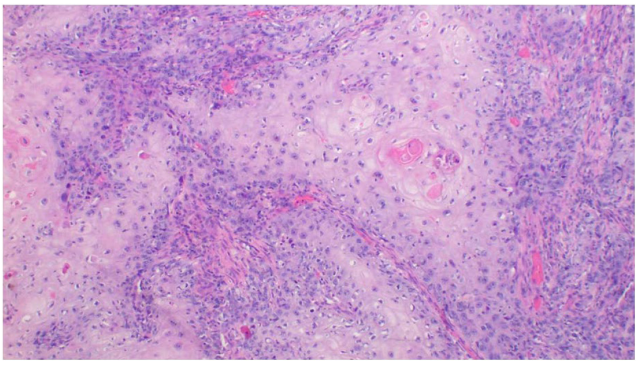

FIGURE 3 Photomicroscopy of verrucous carcinoma highlighting a well-differentiated squamous epithelium with minimal nuclear atypia, deep bulbous processes, and a pushing margin, H&E 200× original magnification.

The most common sites for its occurrence in oral cavity include buccal mucosa, mandibular alveolar crest, gingiva, and tongue.[5,9] However in our case, the lesion was located on the lower lip. It arises from leukoplakias or erythroplakias, as well as proliferative verrucous leukoplakia.[7] Use of tobacco is considered the most common etiological factors for OVC.[4] This is similar to our patient in which she reported to use tobacco for 50 years. The role of the HPV in OVC oncogenesis is much less important than in the squamous cell carcinoma.[8] Chronic repetitive mechanical traumas/irritation may contribute to VC.[7] Studies suggest that OVC primarily affects patients between 40 and 60 and the mean age at diagnosis in most of patients was 69 years on average (median 71 years).[4,5,7] This was similar to our patient who was 70 years old.

Typically, VC is a locally invading tumor and does not spread to the local lymph nodes. If lymph nodes are palpable, they usually present as an inflammatory reaction in large secondarily infected lesions.[5,7] As it was the case in our patient, pathologically, the classical histopathologic features include intact basement membrane, without disruption of stratification and broad rete pegs, which appear to punch into the underlying tissue. The most important pathological difference between VC and squamous cell carcinoma is that there is a good cytological differentiation throughout the tumor in case of VC.[7]

Treatment of VC is as yet challenging, no well-defined guidelines for effective and safe management of this disease are available. The index case had a delayed presentation but successfully treated by a wide local surgical excision. Surgical excision with adequate margins has proven to be effective in the management of these tumors. Other modes such as cryosurgery, carbon dioxide laser, chemotherapy, intralesional or iontophoretic methods, photodynamic therapy, systemic

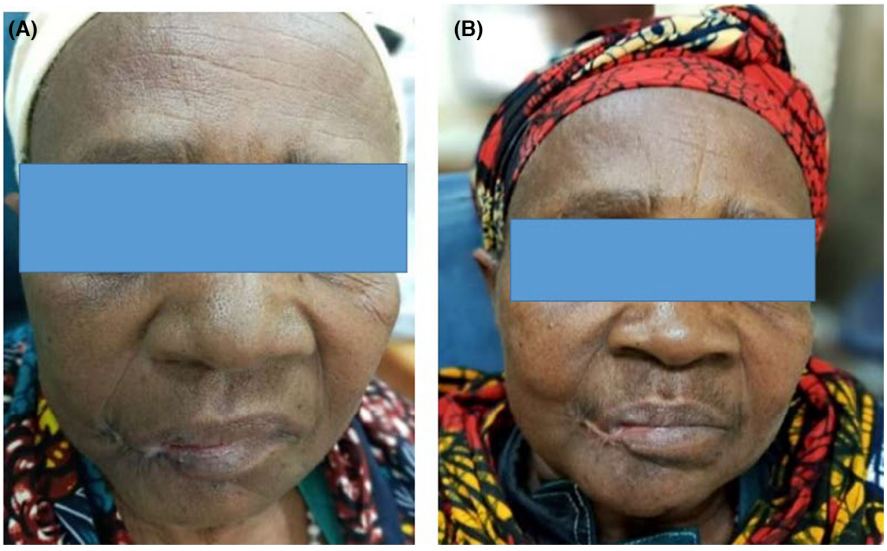

FIGURE 4 Photograph of the patient during follow-up visits after 3 months (A) and 1 year (B) respectively after surgery.

retinoid therapy, radiotherapy have been documented.[6] Radiotherapy alone has not shown significant effect in treatment of OVC and also caused anaplastic transformation of the neoplasm.[4] However, radiotherapy has generally been recommended in the presence of adverse risk factors in the histopathology report.[10] This is similar to our case in which surgical excision with adequate margin was done with great success. The overall prognosis of OVC has generally been considered to be good with overall survival rates exceeding 80%.[5,10] The prognosis of VC is better than that of other kinds of life-threatening malignant tumors.[4]

4 | CONCLUSION

Our report describes a case of VC on the lower lip. VC is a variant of well-differentiated squamous cell carcinoma. VC grows gradually, has a tendency of local invasion and seldom metastasizes. Surgical excision must be as complete as possible while ensuring the safety of the neighboring anatomical structures, and treatment should include regular patient follow-ups. There was neither local recurrence nor distant metastasis observed in 2 years. Surgical resection with sufficient safety margin is recommended.

AUTHOR CONTRIBUTIONS

Kanankira A. Nnko: Conceptualization; data curation; writing – original draft. **Deogratius S. Rwakatema:** Writing – review and editing. **Steven M. Bina:** Data curation; writing – review and editing. **Samweli F. Mwita:** Data curation; writing – review and editing. **Alex Mremi:** Conceptualization; investigation; writing – review and editing.

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CONFLICT OF INTEREST STATEMENT

All authors have declared that no competing interests exist.

DATA AVAILABILITY STATEMENT

None.

ETHICS STATEMENT

Ethical approval was waived by the authors' institution.

CONSENT

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

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