Acta Scientific Dental Sciences (ISSN: 2581-4893)

Volume 7 Issue 5 May 2023

Case Report

Verrucous Carcinoma of Buccal Mucosa-A Rare Case Report

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DOI: 10.31080/ASDS.2023.07.1625

Received: March 20, 2023

Published: April 24, 2023

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Abstract

Verrucous carcinoma is a type of benign tumour also called Ackerman's tumour most commonly seen in skin and oral mucosa. It may present as proliferative/finger-like projections, Cauliflower-like growth or may be ulceroproliferative. Although the most commonly involved site for VC is considered to be the buccal mucosa, the most affected areas in the present studies were the mandibular retromolar and molar area (41.6%) followed by the buccal mucosa (16.6%), the hard palate (16.6%), the floor of the mouth (16.6%) and the lip mucosa (8.3%) [1].

The most common etiologies reported in existing literature are smokeless tobacco, alcohol and certain viruses, commonly Human Papilloma Virus (HPV). However, HPV is not as associated with VC as it is with Squamous Cell Carcinoma (SSC) [2].

Recent studies [13,14] as well as practical experience have proven that the reconstruction of small primary defects with a buccal fat pad shows promising results in VC. Here in this paper, we discuss the case of a 50-year-old female patient presenting with a proliferative growth in her buccal mucosa and detail the diagnosis and management.

Keywords: Verrucous Carcinoma (VC); Buccal Fat Pad; Neck Dissection (ND); Squamous Cell Carcinoma (SCC)

Introduction

Verrucous carcinoma is a non-metastasizing, well differentiated variant of Squamous cell carcinoma with anaplastic changes, which often presents as a warty, exophytic tumour [3]. The edge of the tumour is of an expanding type with usually no vascular or perineural invasion [4]. Histologically, VC presents with a hyperplastic epithelium with abundant keratin superficially projecting as exophytic church-spire keratosis and also depicting parakeratin plugging.

Surrounding neck nodes may be enlarged and are usually reactive or inflammatory, which may simulate metastasis [5]. The prognosis is generally good following wide surgical excision and reconstruction. Addition of radiation therapy has not shown any additional improvement and some studies show a poorer outcome (Disease Specific Survival rate and Overall survival rate) in patients with VC treated with adjuvant Radiotherapy compared to those managed with surgery alone [6].

Oral Squamous Cell Carcinomas (OSCC) is a malignant tumour usually arising on the tongue, lips and floor of the mouth. Some OSCCs arise in apparently normal mucosa, others are preceded by clinically obvious premalignant lesions, especially erythroplakia and leukoplakia. It presents as an ulcer with fissuring or raised exophytic margins, but might also appear as a lump, a red lesion (erythroplakia), as a white or mixed white and red lesion, as a non-healing extraction socket or as a cervical lymph node enlargement, characterized by hardness or fixation.

Case Report

A 52-year-old female patient presented with a history of pain over her inner left cheek for the past 15-20 days. The pain was mild, continuous, responsive to analgesics and was localised to its primary site with no radiation to nearby areas. She also reported a mass over her buccal mucosa since two months which was small initially but had grown gradually to its current size. Apart from a trauma to the left side of the face 20 years ago for which suturing was done over the Ala of the nose, the patient had no significant past history.

She confessed to chewing tobacco and arecanut 5-6 times a day for the past 40years. She was habituated to keeping the quid on the left buccal vestibule for five minutes before spitting it out. However, had quit the habit six months prior due to pain in the oral cavity.

On clinical examination the patient was moderately built and nourished and appeared to have no systemic abnormalities.

Extra-oral inspection revealed a mild, diffuse swelling on the left lower 1/3rd of the face extending superoinferiorly 1cm below the imaginary line drawn from the ala of nose and tragus of the left ear, to the left commissure of lip to the lower border of the mandible. Antero-posteriorly, it extended from the left mid pupillary line to the perpendicular line drawn from left side lateral canthus. The overlying skin appeared normal with no sinus or discharge. The swelling was soft to firm in consistency on palpation, with mild induration and tenderness but no fixity to underlying tissue.

Intra-orally, a whitish-yellow, 2cmx2cm exophytic growth was observed with finger-like projections over the left buccal mucosa posteriorly in the 37, 38 regions. It extended superoinferiorly, 1cm below the upper gingivobuccal sulcus to 1mm above the lower gingivobuccal sulcus; anteroposteriorly, 2mm posteriorly to left side commissure to the left side retromolar trigone. The borders were well defined and surrounding mucosa appeared normal.

On palpation, the lesion was tender, indurated and leathery in consistency but with no bleeding or discharge on palpation, and no fixity to underlying structures.

Cervical lymphedenopathy was palpated on the left side at Level IB and Level II, round to oval in shape, approximately 1 x 1.5 cm firm in consistency. They were non-tender and fixed to underlying tissue. Seven months later, post biopsy, the lesion had increased in size presently approximately 3 X 2.5 cm i.e extending from 36 to 38 region, superiorly to the linea alba.

The growth was suspected to be malignant and differential diagnoses of Squamous cell carcinoma, Verrucous carcinoma and Squamous papilloma were considered. Following routine blood investigations, chest radiographs and an ECG, a Digital Orthomopentamograph and CT scan of the face were ordered. Biopsy and histopathological analysis of the tissue revealed irregular acanthosis, papillomatosis and an area of parakeratosis. Features were suggestive of Condyloma acuminata with a strong suspicion of malignancy.

Upon the suspicion of Verrucous Carcinoma, the patient was counselled regarding the necessity for surgical management. Wide local excision was performed and reconstruction of the primary defect was done with buccal fat pad. Samples from the excised lesion and lymph nodes sent for histopathology showed evidence of carcinoma.

Figure 1: Preoperative picture showing the lesion over buccal mucosa.

Figure 2: Postoperative picture showing buccal mucosa after resection and buccal fat pad reconstruction.

Discussion

Verrucous carcinoma is a variant of Squamous Cell Ccarcinoma of low-grade. Though they may present with similar clinical features, their treatment differs greatly. Thus, it is vital to make an accurate diagnosis. VC of the oral cavity is extrememly rare and represents only 3-4% of oral carcinomas [7]. It is associated with the use of smokeless tobacco, poor oral hygiene and alcohol, with a lesser association with HPV infection due to its nullification of the tumour supressor gene. Repeated trauma and irritation to the buccal mucosa is also a prerequisite in some cases [12].

Histopathological findings are crucial in diagnosis and often, superficial biopsies may yield incorrect results. VCs have a good cytological differentiation throughout compared to SCC [8], but may be mistaken for benign lesions, such as verrucous hyperplasia [9]. This is because verrucous hyperplasia is generally superficial and does not extend into deeper tissues.

However, VC is so commonly precceded by verrucous hyperpasia, that it is wise to treat the latter as a VC with regular and close follow-up. VC has a lower reccurence rate, especially compared to other carcinomas of the oral cavity. Since it metastasizes only locally, surgical modalities are successful in managing it as long as an appropriate margin for excision is taken. Irriadiation may be added supplementally if there is extension to the retromolar area [10].

In the discussed case, the outcome was good following surgical resection and reconstruction with buccal pad fat. The buccal pad of fat was easy to harvest and was seen to mucolize in nearly seven days. It had its own blood supply so was considered to be less likely to fail. Due to it being adjacent to the second molar tooth, there was no scarring and minimal fibrosis. In cases where nasolabial flap, split skin graft or collagen grafting may be done, there can be comparatively more fibrosis [13].

However, this patient had a clear resection margin, improvement in mouth opening post surgery and has had no recurrence till date.

Buccal Fat pad has easy accessibility, an ideal location, rich blood supply, and high rate of epithelialization. It has hence been called a "versatile flap". Its success in reconstruction is credited to its rich vascular supply, decreased morbidity to the donor site, ease of harvest, and a decreased incidence of complications [13].

Conclusion

Verrucous carcinomas are a rare oral cancer with a promising prognosis. However, the outcome depends on timely and accurate diagnosis as well as skill full excision during surgery.

Clinical expertise among healthcare providers needs to be high when examining patients with predisposing factors and relevant past history. Cauliflower like or finger-like exophytic outgrowths of the oral cavity require prompt investigation and biopsy for HPE.

Adequate specimens should be taken for biopsy, since accurate histopathology reporting cannot be done on superficial samples [11]. The sample should then be assessed correctly to differentiate it from both verrucous hyperplasia and squamous cell carcinoma. A promising outcome can be expected when resection is done with an adequate safety margin.

Bibliography

1. Santosh HN., *et al*. "Verrucous carcinoma: A clinicopathological study". *Journal of Oral and Maxillofacial Pathology* 23.2 (2019): 303.
2. Sadasivan A., *et al*. "Verrucous lesions of the oral cavity treated with surgery: Analysis of clinico-pathologic features and outcome". *Contemporary Clinical Dentistry* 3 (2012): 60-63.
3. Santosh HN., *et al*. "Verrucous carcinoma: A clinicopathological study". *Journal of Oral and Maxillofacial Pathology* 23.2 (2019): 303.
4. Demian SDE., *et al*. "Perineural invasion and anaplastic transformation of verrucous carcinoma". *Cancer* 32 (1973): 395-401.
5. Shafer WG., *et al*. "A Textbook of Oral Pathology. Philadelphia: WB Saunders Company. Benign and malign tumors of the oral cavity (1983): 127-130.
6. Mohan S., *et al*. "Adjuvant radiotherapy is not supported in patients with verrucous carcinoma of the oral cavity". *Laryngoscope* 127.6 (2017): 1334-1338.
7. Santosh HN., *et al*. "Verrucous carcinoma: A clinicopathological study". *Journal of Oral and Maxillofacial Pathology* 23.2 (2019): 303.
8. Verma M and Lata J. "Verrucous carcinoma - An enigmatic entity". *Indian Journal of Dental Research* 2 (2011): 33-36.
9. Lee CH., *et al*. "The precancer risk of betel quid chewing, tobacco use and alcohol consumption in oral leukoplakia and oral submucous fibrosis in southern Taiwan". *British Journal of Cancer* 88 (2003): 366-372.
10. Nair MK., *et al*. "Oral verrucous carcinoma. Treatment with radiotherapy". *Cancer*.
11. A Santoro., *et al*. "A Troubling Diagnosis of Verrucous Squamous Cell Carcinoma ("the Bad Kind" of Keratosis) and the Need of Clinical and Pathological Correlations: A Review of the Literature with a Case Report". *Journal of Skin Cancer* (2011): 4.
12. Mehrotra D., *et al*. "Oral verrucous lesions: Controversies in diagnosis and management". *Journal of Oral Biology and Craniofacial Research* 2 (2012): 163-169.

13. Sidana S., *et al*. "Buccal Fat Pad as Pedicled Graft in a Case of Oral Verrucous Carcinoma". *International Journal of Medical and Oral Research* 3.6 (2017): 117-120.

14. Tideman H., *et al*. "Use of the buccal fat pad as a pedicled graft". *Journal of Oral and Maxillofacial Surgery* 44.6 (1986): 435-440.