

Deceptive Nature of Cutaneous Verrucous Carcinoma: A Case Report

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ABSTRACT

Verrucous carcinoma is a rare, slow-growing variant of squamous cell carcinoma, often presenting as an exophytic mass with well-defined borders. It is most commonly seen in mucosa of head and neck, predominantly in the oral cavity and larynx. We report the case of a 50 years-old male who presented with an unusual mass in the left upper thigh area for 35 years that reappeared following excision 20 years back, and this time, it was managed successfully with wide local excision and VY advancement flap to cover the defect.



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INTRODUCTION

Verrucous carcinoma (VC) is a slow growing rare variant of well-differentiated Squamous Cell Carcinoma (SCC) seen in skin, anogenital region, urinary bladder and oesophagus with predominance in mucosa of head and neck.¹ VC is exophytic with well-defined borders making it visually distinct from other malignancies.² The papillomatous or verrucous pattern of growth helps differentiate it from more aggressive SCCs.³ Despite having exceptionally low metastasizing potential, its ability to invade adjacent tissues underscores the importance of early diagnosis and complete surgical excision.⁴ This particular case report sheds light on vigilance for this variant of SCC, despite having been located at an unusual site. Amidst the wide treatment options available in our armamentarium, we were able to treat this large sized tumor surgically, successfully. A pre-operative biopsy helped make our provisional diagnosis concrete, and miniaturize any excessive treatment.

CASE REPORT

A 50 years old male patient presented with a large painless exophytic mass in the postero-lateral region of the left upper

thigh, extending upwards into the lower gluteal region for 35 years (Figure 1).

The growth was gradual in onset and associated with serous discharge. No similar growths were seen in other areas. He had undergone excision 20 years back whose histopathological reports were missing, and the mass had reappeared. Unfortunately, any document related to the treatment then, was unavailable, let alone the histopathological report. He was an occasional smoker and had a significant history of alcohol consumption without any other known comorbidities.

On examination, there was a large exophytic mass in the posterolateral aspect of the left upper thigh, extending upwards into the lower gluteal region, approximately 25cm in its largest dimension. It was a sessile cauliflower-like growth with fungating surface and was covered with serous discharge and crusts (Figure 1). Palpation validated the inspection findings. Additionally, the growth was friable, firm to hard, indurated, relatively fixed to the underlying surface, having well-circumscribed thick margins with findings of two enlarged (approximately 2x2cm), firm and

fixed left superficial inguinal lymph nodes. Based on history and examination, a provisional diagnosis of a malignant skin lesion was made and an initial wedge biopsy was performed which showed acute on chronic inflammation with pseudoepitheliomatous hyperplasia. Due to high suspicion of neoplasia, a repeat incisional biopsy was performed which showed bulbous, papillary ingrowth and outgrowth, hyperkeratosis without breach in basement membrane which was suggestive of verrucous carcinoma. Fine Needle Aspiration Cytology (FNAC) of left inguinal lymph nodes showed reactive lymphadenitis. (Figure 2). For this condition, he underwent wide local excision with a margin of 1 cm, followed by VY advancement flap to cover the defect size of 15*27cm (Figure 3). It was an axial pattern posterior thigh flap based on descending branch of inferior gluteal artery.

Following excision, he underwent 16 days of regular radiotherapy at Bhaktapur Cancer Hospital on advice of an oncologist before the histopathology reports were received. Later, when the diagnosis of cutaneous VC was confirmed, then the radiotherapy was stopped. The details of radiotherapy are not available as it was done at other center. One year following surgery, he had no evidence of recurrence.

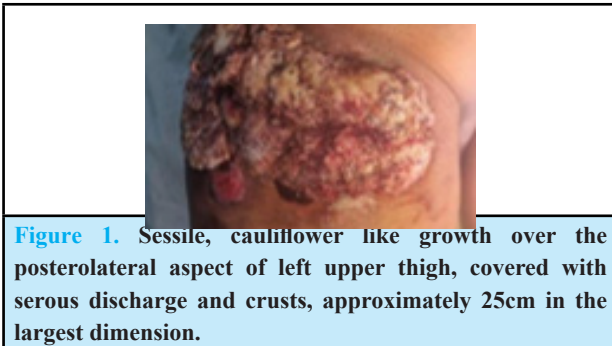


Figure 1. Sessile, cauliflower like growth over the posterolateral aspect of left upper thigh, covered with serous discharge and crusts, approximately 25cm in the largest dimension.

DISCUSSION

Ackerman first described verrucous oral cavity neoplasms in 1948, which led to the development of the clinicopathological concept of VC as warty growth, uncommon low-grade squamous cell carcinoma with local invasion and minimal metastasis.⁵ Verrucous carcinoma of different skin locations, anal-genital VC, foot VC, and oral-gastrointestinal VC (oral florid papilloma and Ackerman's tumor) are the four forms that are distinguished by the place of occurrence.⁶ The prevalence of VC is 1–3 cases for every 1 million people (0.075 per 100,000). Meanwhile, Cutaneous VC has only been reported as uncommon or rare with no accurate incidence. Cutaneous verrucous carcinoma occurs mostly in elderly individuals (60–70 years old) with a male predominance.⁷

Cutaneous VC that develops elsewhere in the skin, thigh as in our instance, are highly rare in contrast to oral, genito-anal, and palmoplantar verrucous carcinomas. Few studies have also reported the presence of VCs in unusual sites such as the axilla, shoulder and neck.^{6,8,9} Cutaneous VC clinically presents as a slow-growing warty mass, which often requires skin biopsy to

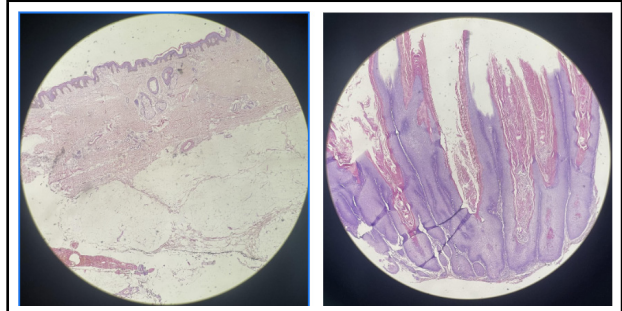


Figure 2. Normal skin at the margin of the lesion (keratinized stratified squamous epithelium) (Right); Lesion showing bulbous, papillary ingrowth and outgrowth, hyperkeratosis without breach in basement membrane (Left)



Figure 3. Placement of VY advancement flap

avoid the misdiagnosis or delay in treatment.¹⁰ VCs should be differentiated from typical squamous cell carcinoma (SCC), giant condyloma acuminatum (GCA), warty carcinoma (WC), and pseudoepitheliomatous hyperplasia (PEH) which might share similar clinical pictures but has different etiology, occurrence, pathological features like growth pattern, depth of invasion, morphologic features of acanthosis, severe keratinization and degree of dermal inflammation.^{7,11} PEH is a benign condition characterised by hyperplasia of the epidermis and adnexal epithelium closely simulating SCC.¹² It is commonly mistaken for SCC.¹³ Henceforth, distinguishing the two, if and when required by a repeat or even a deeper biopsy, is vital because the entire treatment process and prognosis of the patient changes. Erroneous under-diagnosis might lead to grave consequences, raising not just the morbidity of the condition, but also might end up in mortality. At the end of the day, strong clinico-pathological correlation is key to arrive at a final diagnosis before proceeding for a definitive surgical management. Cutaneous VC requires aggressive treatment.

Although previous literature has reported increasing involvement of lower extremities mostly on lower legs, involvement of thigh

areas have relatively low occurrence of VC.¹⁴ The incidence on the lower leg area is often associated with chronic venous ulcerations and chronic inflammatory processes.^{11,14} Trauma and poor local hygiene can also be the cause which also makes legs more susceptible to skin infections and inflammations.¹⁵ Studies have shown that SCC has threefold increasing chances of metastasis with increasing size (more than 2 cm) and depth (more than 6 mm) of invasion.¹⁶ However, in our case, the mass had the largest dimension of 25 cm and yet it did not show any signs of metastasis. This particular fact helped us in placing cutaneous verrucous carcinoma into our list of differential diagnoses. Literature has recommended surgical resection with preoperative CO2 laser and photodynamic therapy as the most preferred treatment for Cutaneous VC due to its local aggression and chance of metastasis. Other suggested treatment options include cryosurgery, interferon- α , chemotherapy and immunotherapy.¹¹ Treatment options available in our armamentarium with variable recurrence rates in decreasing order are: Debridement> Curettage> Topical imiquimod> Excision> Mohs' micrographic surgery.¹⁷ We have preferentially opted for wide local excision

in our case since other better treatment options like Mohs' micrographic surgery isn't available at our centre.

CONCLUSION

A verruciform group of cutaneous lesions can be grotesque in appearance; however, these lesions are only locally invasive and metastasize rarely, almost never. The relatively better prognosis following timely and adept treatment likens cutaneous verrucous carcinoma to a sheep dressed in wolf's clothing, amidst other variants of squamous cell carcinoma. Also, a thorough and if required, repeated histological analysis is necessary, whenever we are suspicious of neoplastic lesions.

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Conflict of Interest: None.

Consent: JNMA Case Report Consent Form was signed by the patient and the original article is attached with the patient's chart.

REFERENCES

1. Odar K, Kocjan BJ, Hošnjak L, Gale N, Poljak M, Zidar N. Verrucous Carcinoma of the Head and Neck – Not a Human Papillomavirus-related Tumour? *J Cell Mol Med*. 2014 Apr;18(4):635–45. DOI: <https://onlinelibrary.wiley.com/doi/10.1111/jcmm.12211>
2. Cooper JS, Zhang Q, Pajak TF, Forastiere AA, Jacobs J, Saxman SB, et al. Long-Term Follow-Up of the RTOG 9501/Intergroup Phase III Trial: Postoperative Concurrent Radiation Therapy and Chemotherapy in High-Risk Squamous Cell Carcinoma of the Head & Neck. *Int J Radiat Oncol Biol Phys*. 2012 Dec 1;84(5):1198–205. DOI: <https://doi.org/10.1016/j.ijrobp.2012.05.008>
3. Sethi N, Agrawal M, Patel A, Dande A, Reddy LS. Beyond the Surface: A Case Report of Verrucous Carcinoma in a Young Female. *Cureus*. 16(9):e70367. DOI: <https://doi.org/10.7759/cureus.70367>
4. Nnko KA, Pima RT, Baraka CJ, Chalya D, Rwakatemba DS, Mremi A. Surgical Management of a Huge Oral Verrucous Carcinoma: A Case Report and Review of the Literature. *SAGE Open Med Case Rep*. 2024 May 22;12:2050313X241252344. DOI: <https://doi.org/10.1177/2050313X241252344>
5. Ackerman LV. Verrucous Carcinoma of the Oral Cavity. *Surgery*. 1948 Apr;23(4):670–8. Available from: <https://www.scirp.org/reference/referencespapers?referenceid=1258647>
6. Assaf C, Steinhoff M, Petrov I, Geilen CC, de Villiers EM, Schultz-Ehrenburg U, et al. Verrucous Carcinoma of the Axilla: Case Report and Review. *J Cutan Pathol*. 2004 Feb;31(2):199–204. DOI: <https://doi.org/10.1111/j.0303-6987.2004.00163.x>
7. Ye Q, Hu L, Jia M, Deng LJ, Fang S. Cutaneous Verrucous Carcinoma: A Clinicopathological Study of 21 Cases with Long-term Clinical Follow-up. *Front Oncol*. 2022 Oct 13;12:953932. DOI: <https://doi.org/10.3389/fonc.2022.953932>
8. Sand M, Bechara FG, Sand D, Kukies S, Frommhold K, Mann B. Carcinoma Cuniculatum on the Shoulder: An Atypical Localisation of a Verrucous Carcinoma. *J Plast Reconstr Aesthet Surg*. 2009 Aug;62(8):e267–269. DOI: <https://doi.org/10.1016/j.bjps.2007.12.025>
9. Brito Y, Zubair S, Taki El-Din Z, Mwaniki J, Nair A, Tiesenga F. A Rare Case of Verrucous Carcinoma and Trichoblastoma of the Neck: A Case Report and Literature Review. *Cureus*. 15(4):e38236. DOI: <https://doi.org/10.7759/cureus.38236>
10. PĂTRAȘCU V, ENACHE O, CIUREA R. Verrucous Carcinoma - Observations on 4 Cases. *Curr Health Sci J*. 2016;42(1):102–10. DOI: <https://doi.org/10.12865/chsj.42.01.15>
11. Chauhan K, Jassal V, Sara GK, Bansal V, Hatwal V. Histopathological Study of Verrucous Lesions and its Mimics. *J Microsc Ultrastruct*. 2021 May 27;9(2):86–97. DOI: https://doi.org/10.4103/JMAU.JMAU_47_19
12. Zayour M, Lazova R. Pseudoepitheliomatous Hyperplasia: A Review. *Am J Dermatopathol*. 2011;33:112–26. DOI: [10.1097/DAD.0b013e3181fcfb47](https://doi.org/10.1097/DAD.0b013e3181fcfb47)
13. Calhoun KH, Wagner RF, Jr, Kumar D, Hokanson JA. Pseudoepitheliomatous Hyperplasia Mistaken for Cancer after Delayed Reconstruction. *South Med J*. 1995;88:454–7. DOI: [10.1097/00007611-199504000-00014](https://doi.org/10.1097/00007611-199504000-00014)
14. Jungmann J, Vogt T, Müller CSL. Giant Verrucous Carcinoma of the Lower Extremity in Women with Dementia. *BMJ Case Rep*. 2012 July 9;2012:bcr2012006357. DOI: <https://doi.org/10.1136/bcr-2012-006357>
15. Penner KE, Manji KA, Craig AB, Grootegeed RA, Leaming TR, Wirth GA. Atypical Presentation of Verrucous Carcinoma: A Case Study and Review of the Literature. *Foot Ankle Spec*. 2013 Aug;6(4):318–22. DOI: <https://doi.org/10.1177/1938640013489341>
16. Chan MP. Verruciform and Condyloma-like Squamous Proliferations in the Anogenital Region. *Arch Pathol Lab Med*. 2019 July;143(7):821–31. DOI: <https://doi.org/10.5858/arpa.2018-0039-RA>
17. Shwe Daniel S, Cox SV, Kraus CN, Elsensohn AN. Epithelioma Cuniculatum (Plantar Verrucous Carcinoma): A Systematic Review of Treatment Options. *Cutis*. 2023 Feb;111(2):E19–24. DOI: <https://doi.org/10.12788/cutis.0720>