

Letter to the Editor

Verrucous carcinoma of foot at an unusual site: Lessons to be learnt

DOI: 10.4103/2278-330X.208839

Dear Editor,

Verrucous carcinoma is a rare variant of squamous cell carcinoma occurring in the feet. It is a low-grade tumor commonly arising from areas of chronic trauma and irritation. These lesions often tend to be ignored by patients and clinicians who treat it like any other nonhealing ulcer. When diagnosed and treated early, it is fully curable. Late intervention leads to the local destruction of tissues and need of extensive excision that may result in amputations. Thus, this case is reported to highlight how a chronically neglected unidentified verrucous carcinoma of the foot could be managed successfully with excellent cosmesis and function due to timely intervention.

A 63-year-old daily wage laborer presented with the complaints of a nonhealing ulcer over the dorsum of the right foot, for the past 30 years [Figure 1]. Thirty years back, he developed the ulcer from a blister on the dorsum of his right foot which he acquired while working, sitting with his legs crossed. He was asymptomatic for the past 30 years though the ulcer did not heal with routine treatment. For the past 4 months, there is a foul smelling discharge from the ulcer with associated pricking pain which brought him to us. On examination, he has an irregular warty growth over the dorsum right foot arising from an ulcer with associated foul smelling discharge and tenderness to palpate. Suspecting a malignancy clinically, we did magnetic resonance imaging (MRI) of the foot with wedge biopsy. Imaging revealed only soft tissue lesion with no bony involvement. Biopsy revealed bulbous proliferation of neoplastic squamous cells with nuclear

pleomorphism and keratin pearl formation with the impression of verrucous carcinoma [Figure 2]. Wide local excision with assessment of margin status was done [Figures 3 and 4]. The raw area postexcision was covered with split thickness skin graft [Figure 5]. The patient was discharged with a fully functional limb and excellent cosmesis.

Verrucous carcinoma of the foot is a relatively uncommon malignancy, usual site being the ball of the great toe.^[1] It usually develops as a chronic nonhealing ulcer at the sites of constant trauma and local irritation at weight bearing areas and later transforms into malignancy. It is due to the same reason these lesions are often mismanaged as an infective ulcer or a viral wart for years before the patient turns up with a florid growth with surrounding infiltration.

The term verrucous carcinoma was coined by Ackerman in 1948, and Aird *et al.*^[2] described the uncommon form of verrucous carcinoma of foot termed as epithelioma cuniculatum in 1954. Other sites of verrucous carcinoma include the oral cavity and anogenital region. Epithelioma cuniculatum usually affects older males, with a mean age of 52–60 years.^[3] Although it is a low grade variant of squamous cell carcinoma which never metastasizes, it is notorious to cause local infiltration and destruction of the local structures through its chronic course.^[3] Metastasis from verrucous carcinoma has been reported only five times in literature, being lymph nodes in all and lung in one patient.^[4,5] Though plantar verrucous carcinoma is common in the soles, it can develop even on dorsal surface in areas of occupational friction as is evident from the above-mentioned case.

Two cases of bilateral epithelioma cuniculatum have been described in literature. One patient was treated successfully with excision and selective toe amputation.^[6] The other underwent bilateral forefoot amputations.^[7]

(Continue on page 68...)

(Letter to the editor continue from page 63...)

Though human papilloma virus—types 6, 11, 16, and 18 have been implicated in the pathogenesis of verrucous carcinoma, most authors could not substantiate the presence of HPV in specimens.^[8,9]

Radiographs of the involved area to look for bony involvement are necessary. Computerized tomographs can identify bony erosions in better way than MRI scans. The current treatment for verrucous carcinoma is surgical excision—a wide local excision rather than a marginal excision since the margins are not always apparent intraoperatively. It is a locally malignant destructive tumor; hence, the presence of bony involvement on imaging presses the need for amputation. Inability to provide adequate tumor-free margins may result in a local recurrence of the tumor and multiple attempts at excision resulting in recurrence warrants amputation.^[4,10] Other therapeutic modalities include topical chemotherapy, electrocautery, cryotherapy, and laser therapy, but all have high recurrence rates. Radiotherapy is not recommended due to possibility of malignant transformation to squamous cell carcinoma. The long-term prognosis is good with surgical excision with cure rates up to 99%.^[11]

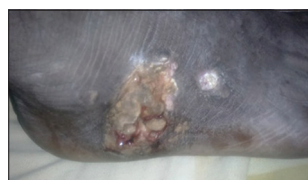


Figure 1: Verrucous carcinoma dorsum of foot

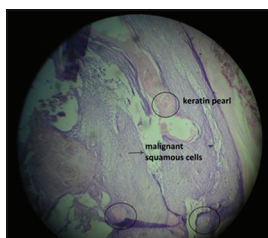


Figure 2: Histopathological picture



Figure 3: Postwide local excision



Figure 4: Granulated raw area after 2 weeks



Figure 5: After split skin grafting

This case here had a verrucous carcinoma on the dorsum of foot which is an unusual site without any mention in the literature. The patient was a daily wage laborer who used to work sitting with his legs crossed. Thus, we presume that his occupational posture causing chronic irritation to the dorsum of his feet was the predisposing factor for the lesion. Wide local excision with delayed skin cover after confirmation of margin status provides excellent cosmesis as seen here.

Though an uncommon lesion, the entity of verrucous carcinoma arising from areas of chronic trauma needs attention especially among primary physicians. When diagnosed early, surgical excision can prevent morbidity and disability in these patients. The misdiagnosis of these lesions commonly leads to delayed treatment for years and progression of the disease to local infiltration before the patient presents to the surgeon.

Hence, any nonhealing ulcer of the foot should not be neglected, and focus of malignancy needs to be ruled out.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

D. Nagarajan, Malarvizhi Chandrasekhar, Jim Jebakumar, K. Aravind Menon

Department of General Surgery, Stanley Medical College, Chennai, Tamil Nadu, India

Correspondence to: Dr. K. Aravind Menon, E-mail: aravindmenonk@gmail.com

References

- Schwartz RA. Verrucous carcinoma of the skin and mucosa. *J Am Acad Dermatol* 1995;32:1-21.
- Aird I, Johnson HD, Lennox B, Stansfeld AG. Epithelioma cuniculatum: A variety of squamous carcinoma peculiar to the foot. *Br J Surg* 1954;42:245-50.
- Pempinello C, Bova A, Pempinello R, Luise R, Iannaci G. Verrucous carcinoma of the foot with bone invasion: A case report. *Case Rep Oncol Med* 2013;2013:135307.
- McKee PH, Wilkinson JD, Black MM, Whimster IW. Carcinoma (epithelioma) cuniculatum: A clinico-pathological study of nineteen cases and review of the literature. *Histopathology* 1981;5:425-36.
- Kao GF, Graham JH, Helwig EB. Carcinoma cuniculatum (verrucous carcinoma of the skin): A clinicopathologic study of 46 cases with ultrastructural observations. *Cancer* 1982;49:2395-403.
- Seehafer JR, Rahman D, Soderstrom CW. Epithelioma cuniculatum: Verrucous carcinoma of the foot. *Cutis* 1979;23:287-90.
- Suen K, Wijeratne S, Patrikos J. An unusual case of bilateral verrucous carcinoma of the foot (epithelioma cuniculatum). *J Surg Case Rep* 2012;12:1-3.

(Continue on page 78...)

(Letter to the editor continue from page 68...)

8. Coldiron BM, Brown FC, Freeman RG. Epithelioma cuniculatum (carcinoma cuniculatum) of the thumb: A case report and literature review. *J Dermatol Surg Oncol* 1986;12:1150-5.
9. Miller SB, Brandes BA, Mahmarian RR, Durham JR. Verrucous carcinoma of the foot: A review and report of two cases. *J Foot Ankle Surg* 2001;40:225-31.
10. Affleck AG, Leach IH, Littlewood SM. Carcinoma cuniculatum arising in focal plantar keratoderma. *Dermatol Surg* 2007;33:745-8.
11. Lesic A, Nikolic M, Sopta J, Starcevic B, Bumbasirevic M, Atkinson HD. Verrucous carcinoma of the foot: A case report. *J Orthop Surg (Hong Kong)* 2008;16:251-3.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

How to cite this article: Nagarajan D, Chandrasekhar M, Jebakumar J, Menon KA. Verrucous carcinoma of foot at an unusual site: Lessons to be learnt. *South Asian J Cancer* 2017;6:63-78.

© 2017 The South Asian Journal of Cancer | Published by Wolters Kluwer - Medknow