CASE REPORT

Unusual Location of Verrucous Carcinoma: A Case Report

Lucy Ortiz,* Maite Santillán,* Paulina Dassum, Cristina Pazmiño,** Soonyi Romo,** Cristina Solorzano*****

* *Dermatology Residents, Universidad Espíritu Santo, Guayaquil – Ecuador*
** *Dermatology Residents, Universidad Católica de Santiago de Guayaquil – Ecuador*
*** *Dermatologist "Úraga, Dermatología y Estética.*

Correspondence:
Lucy Ortiz
lucyortiz_94@hotmail.com

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ABSTRACT

Verrucous carcinoma is a well-differentiated variant of squamous cell carcinoma with low risk of systemic complications but locally aggressive behavior. It predominantly affects males between 50 and 60 years of age. It is associated with human papillomavirus (HPV), and most cases occur in the oral cavity, genital area, and soles. However, extremity presentations are rare, and due to this rarity, incidence is uncertain. It is often underdiagnosed because of its clinical resemblance to other skin conditions.

Histologically, diagnosis may be difficult due to the tumor's deceptively benign appearance. Complete excision or Mohs micrographic surgery is the treatment of choice. We present the case of a 75-year-old patient with a slowly growing exophytic tumor over the past five years, following a leg burn.

INTRODUCCIÓN

Verrucous carcinoma is an uncommon variant of squamous cell carcinoma, with a low risk of systemic complications but locally aggressive behavior, causing tissue destruction and recurrence. First described by Ackerman in 1948 as an oral cavity carcinoma, this tumor can appear on both mucosal and cutaneous surfaces. When it affects the oral cavity, it is known as "florid oral papillomatosis," in the genitourinary tract as "Buschke-Löwenstein tumor," and on the feet as "epithelioma cuniculatum," these being the most frequent presentations.[1,2]

The pathogenesis of verrucous carcinoma is uncertain and debated. HPV types 6, 11, 16, and 18 are strongly associated with tumors in the oral cavity, genital region, and foot, respectively. Chronic mechanical or chemical skin lesions, inflammation, and trauma may also play a role in tumor development, especially depending on the tumor site.[3]

This carcinoma is more common in males, usually affecting those aged 50–60. Unlike typical squamous cell carcinoma, verrucous carcinoma rarely occurs in sun-exposed areas such as the extremities, and is seldom found on the scalp or face. Timely diagnosis and surgical excision are crucial.

CLINICAL CASE

A 75-year-old male patient with a history of leg burn 23 years ago presented with a five-year history of a

verrucous, papillomatous tumor approximately 6 cm in size, located in the popliteal fossa. It gradually grew in a linear pattern on the posterior thigh, remaining asymptomatic (Figure 1). An incisional biopsy was performed, with a presumptive diagnosis of squamous cell carcinoma.

The pathology report showed marked acanthosis, papillomatosis, and hyperkeratosis, minimal atypia, some individual and grouped keratinizing cells forming keratin pearls, and multifocal lymphocytic exocytosis. The dermis had blood vessels and a lymphoplasmacytic infiltrate (Figure 2).

Based on these histopathological findings, verrucous carcinoma was diagnosed. The patient was referred to a specialty hospital, where several surgeries were performed over six months, culminating in wide excision, graft reconstruction, and sentinel lymph node study, which was negative. The patient is currently tumor-free, with no recurrence.

DISCUSSION

Verrucous carcinoma is a highly differentiated squamous cell carcinoma variant, characterized by slow growth, low metastatic potential, and good prognosis.[1,4]

The plantar region is the most common site (53%), but there are few reported cases in the popliteal region.[1,2] In many cases, the tumor arises from pre-existing chronically inflamed lesions, such as ulcers, inflamed cysts, or burn scars.[9]

Clinically, it appears as an exophytic tumor with epithelial projections and a broad base, which may ulcerate or present with lymphadenopathy.[6,7,11,12]

Due to its rarity and resemblance to other conditions such as pseudoepitheliomatous hyperplasia, viral warts, giant condyloma acuminatum, and verrucous tuberculosis, it is frequently underdiagnosed.[1,8]

Figure 1. Verrucous, papillomatous tumor approximately 6 cm in size located in the popliteal fossa.

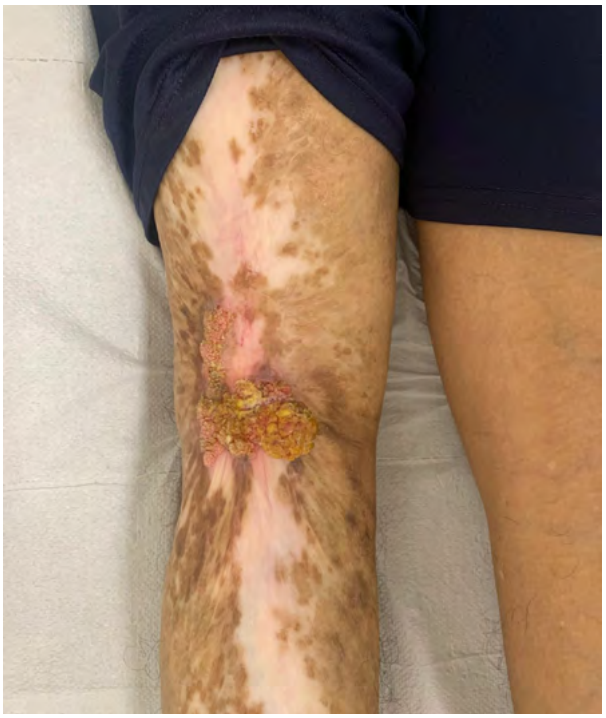
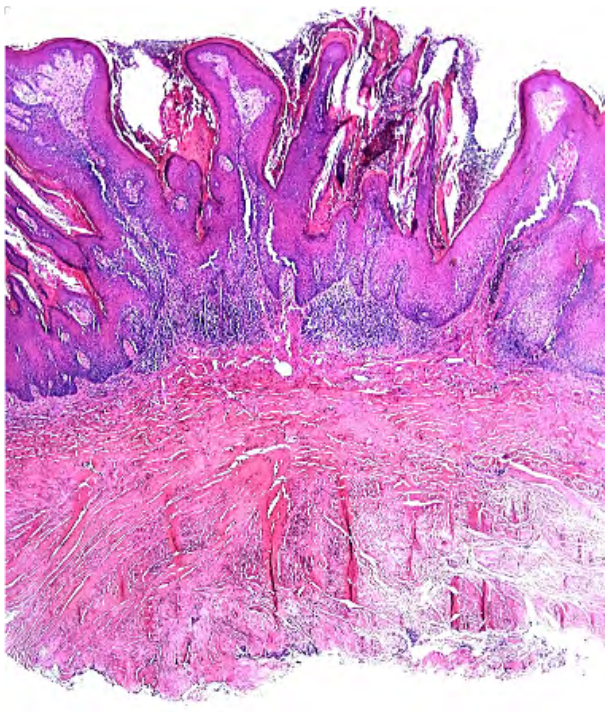


Figure 2. Acanthosis, papillomatosis, and hyperkeratosis; minimal atypia. The dermis contains blood vessels with a lymphoplasmacytic infiltrate.



Histologically, the diagnosis is challenging due to the tumor's benign appearance, with minimal cellular and nuclear atypia and low mitotic activity. Extensive biopsies including the transition zone between the tumor and healthy skin are crucial for accurate histopathologic diagnosis.[5,7,14]

Wide surgical excision with at least 1 cm of clear margins is the treatment of choice to avoid recurrence. Mohs micrographic surgery offers the highest cure rate.[3,7,13]

In our case, proper incisional biopsy allowed diagnostic confirmation, which is key to effective treatment and better prognosis. Although this carcinoma variant has low complication risk, sentinel lymph node study is necessary to assess disease spread and guide treatment.

Other treatments like radiotherapy have been described, but there are reports of anaplastic transformation.[4,6,9,10]

Chemotherapy may reduce tumor size quickly, though it can lead to long-term resistance.[11,12,15]

CONCLUSION

Verrucous carcinoma is a rare variant. Its diagnosis is complex due to deceptive clinical appearance and requires detailed histopathological evaluation.

This case is notable for the tumor's location on a burn scar. Literature suggests such carcinomas may develop in scar tissue, though the exact relationship between burns and verrucous carcinoma remains unclear.

Chronic inflammation and repeated trauma at the burn site could contribute to tumor development. Although HPV may play a role in some cases, there is insufficient evidence to consider it a predominant etiological factor in most cases.

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ORCID

Lucy Ortiz https://orcid.org/0000-0002-2687-0309
Maite Santillán https://orcid.org/0000-0002-1366-8187
Paulina Dassum https://orcid.org/0009-0007-3049-977X
Cristina Pazmiño https://orcid.org/0000-0002-0138-8129
Soonyi Romo https://orcid.org/0009-0007-1248-2931