



FIGURE 1. Verrucous carcinoma. A, A large, exophytic, verrucous plaque on the left lateral ankle in an area of prior skin graft placement. B, Multiple adjacent surgical scars from prior limb salvage surgery.

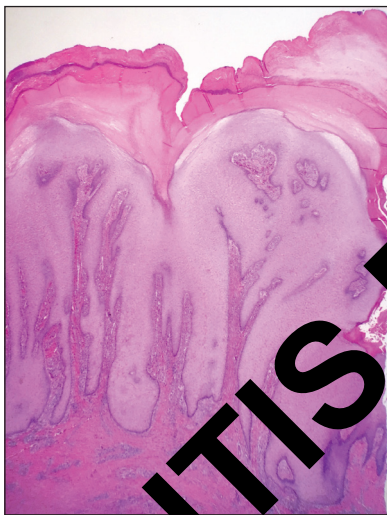


FIGURE 2. Biopsy of the lesion demonstrated minimal squamous atypia in a predominantly exophytic squamous proliferation, with focal endophytic pushing borders by rounded bulbous rete ridges into the mid and deep dermis (H&E, original magnification $\times 40$).

with hyperkeratosis, papillomatosis, and acanthosis can be mistaken for verruca vulgaris, keratoacanthoma, and pseudoepitheliomatous hyperplasia,⁶ which are characteristic of verrucous hyperplasia. Accurate diagnosis can be difficult with a superficial biopsy because of the mature appearance of the epithelium,⁷ prompting the need for multiple and deeper biopsies⁸ to include sampling of the base of the hyperplastic epithelium in which the characteristic bulbous pushing growth pattern of the rete ridges is visualized. Precise histologic diagnosis can be further confounded by external mechanical factors, such as pressure, which can distort the classic histopathology.⁷ The histopathologic features leading to the diagnosis

of verrucous carcinoma in our specimen were minimal squamous atypia present in a predominantly exophytic squamous proliferation with human papillomavirus cytopathic effect and focal endophytic pushing borders by rounded bulbous rete ridges into the mid and deep dermis (Figure 2).

Diagnostic uncertainty can delay surgical excision and lead to progression of verrucous carcinoma. Unfortunately, even with appropriate surgical intervention, recurrence has been documented; therefore, close clinical follow-up is recommended. The tumor spreads by local invasion and may follow the path of least resistance.⁴ In our patient, the frequent tissue manipulation may have facilitated aggressive infiltration of the tumor, ultimately resulting in the loss of his remaining leg. Therefore, it is important for clinicians to recognize that verrucous carcinoma, especially one that develops on a refractory ulcer or scar tissue, may be a complex malignant neoplasm that requires extensive treatment at onset to prevent the amputation of a limb.

REFERENCES

- Ackerman LV. Verrucous carcinoma of the oral cavity. *Surgery*. 1948;23:670-678.
- Yoshitatsu S, Takagi T, Ohata C, et al. Plantar verrucous carcinoma: report of a case treated with Boyd amputation followed by reconstruction with a free forearm flap. *J Dermatol*. 2001;28:226-230.
- Schwartz R. Verrucous carcinoma of the skin and mucosa. *J Am Acad Dermatol*. 1995;32:1-14.
- Bernstein SC, Lim KK, Brodland DG, et al. The many faces of squamous cell carcinoma. *Dermatol Surg*. 1996;22:243-254.
- Costache M, Tatiana D, Mitrache L, et al. Cutaneous verrucous carcinoma—report of three cases with review of literature. *Rom J Morphol Embryol*. 2014;55:383-388.
- Shenoy A, Waghmare R, Kavishwar V, et al. Carcinoma cuniculatum of foot. *Foot*. 2011;21:207-208.
- Klima M, Kurtis B, Jordan P. Verrucous carcinoma of skin. *J Cutan Pathol*. 1980;7:88-98.
- Pleat J, Sacks L, Rigby H. Cutaneous verrucous carcinoma. *Br J Plast Surg*. 2001;54:554-555.