Facial trichoblastic carcinoma treated with Mohs micrographic surgery: A new indication for Mohs?

Andres Garcia, MD, Jeannie M. Nguyen, MD, Cloyce L. Stetson, MD, and Michelle B. Tarbox, MD
Lubbock, Texas

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INTRODUCTION

Trichoblastic carcinoma (TC) is a malignant adnexal neoplasm rarely seen within the clinical setting. Thus, a discussion on the standard of care has not been established.

Abbreviations used:

BCC: basal cell carcinoma
MMS: Mohs micrographic surgery
TC: trichoblastic carcinoma

CASE REPORT

A 94-year-old white woman presented to our clinic with a slow-growing, well-demarcated 3- × 2-mm ulcerated pigmented papule on the nasal tip that had been present for 6 months. Clinically, the lesion resembled a pigmented basal cell carcinoma (BCC). Given patient's age, the family wanted the least invasive treatment option; thus, a 6-mm punch excision was performed. Histology found an acanthotic epidermis with full-thickness dysmaturation of keratinocytes, with multiple cords and strands of atypical keratinocytes dissecting through the dermis. Additionally, large lobulated areas of epithelial hyperplasia of keratinocytes with clear cytoplasm reminiscent of the outer root sheath of the hair follicle were identified (Figs 1-3). These findings were consistent with invasive TC but had involved margins. The patient was subsequently treated with Mohs micrographic surgery (MMS). Clear surgical margins were obtained after 2 stages of MMS resulting in the 20- × 17-mm defect. A full-thickness skin graft using a Burow triangle was used to close the defect.

DISCUSSION

TC is a malignant adnexal neoplasm rarely encountered in the clinical setting. The naming of trichoblastoma originated from the overarching term *trichoepithelioma* to distinguish a neoplasm with follicular germinative differentiation.[1] Reports of this malignant neoplasm are sparse throughout the literature, and, given its low occurrence rate, the prevalence is difficult to determine. Clinical identification of this neoplasm is difficult. Its presentation is similar to that of other adnexal neoplasms in that it appears as either a nonspecific flesh-colored papule or nodule or mimics a BCC (as in this report). A clinical photo was not obtained by the clinician who performed the biopsy.

Immunostains have been used in a few case reports to help other investigators differentiate this neoplasm from a BCC or trichoepithelioma, but results have varied thus far. One case report of an aggressive trichoepithelioma that was later determined to be a TC by Ackerman et al[1] showed that CD34 stained positively in tumor stroma but not in a reference BCC. Additionally, Bordelon et al[2] found that BCL-2 was diffusely positive in BCCs but was only present at the rim of cells in the tumor lobule of a TC.

Most cases on this entity are case reports or case series in which excisions were performed with some cases reporting recurrences. The demographics of TC vary widely and range from young teenagers to our 94-year-old white female patient. This neoplasm does not have a predilection for a certain gender or ethnicity. Metastases have been documented in several case reports. One case specifically mentions

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Correspondence to: Andres Garcia, MD, 3601 4th Street, Department of Dermatology, Lubbock, TX 79430. E-mail: andres2.garcia@ttuhsc.edu or agarcia326@gmail.com.

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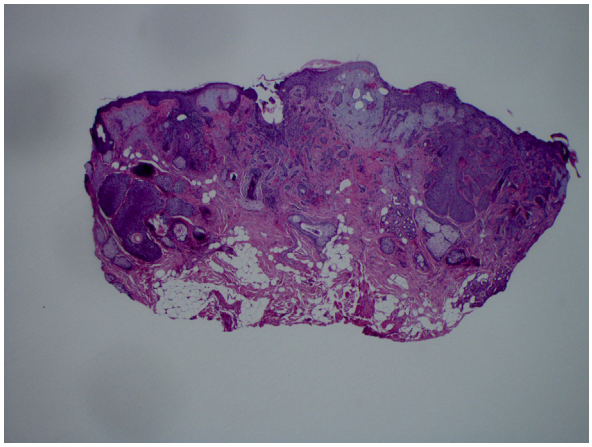

Fig 1. Original punch excision (Original magnification: ×4.)

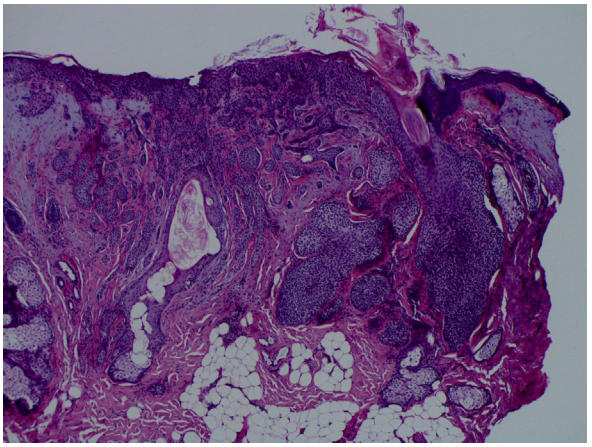

Fig 2. Original punch excision. Note characteristic architecture of the TC. (Original magnification: ×10.)

use of epirubicin-cisplatin combination therapy with adjuvant radiotherapy with massive tumor necrosis.[3] However, other reports are not as specific as to how metastases were treated after excision of the primary tumor.

Given the brevity within the literature on this malignant neoplasm, a standard of care or treatment algorithm has not been determined. Some investigators recommend margins of 1- to 3-cm, but these recommendations are not practical in many anatomic locations, especially in cosmetically sensitive areas such as the face. To our knowledge, there are very few reports with TC being treated with MMS.[4,5] However, even these cases treated with MMS report large defects generated from multiple stages secondary to these infiltrative tumors. We suggest that MMS be considered as the treatment of choice over wide local excision because of the neoplasm's tendency toward an aggressive and infiltrative growth pattern. This finding is consistent with our findings, as our original clinical lesion size of 3 × 2 mm resulted in a post–Mohs defect of 20 × 17 mm. Although we agree that this is aggressive resection with regard to MMS, 2 factors weighed in on this approach. Chiefly, our patient's ability to tolerate manipulation of nasal tissue was minimal despite topical and intralesional anesthesia. Secondly, presurgical review of the literature educated the authors on the common subclinical extent of these tumors. We report successful treatment with MMS at 6-month follow-up and will continue to follow up with our patient long term for TC recurrence. The goal of this report is to add to the literature and to stimulate discussion on therapeutic options with consideration for MMS to be the standard of treatment for this rare malignant neoplasm.

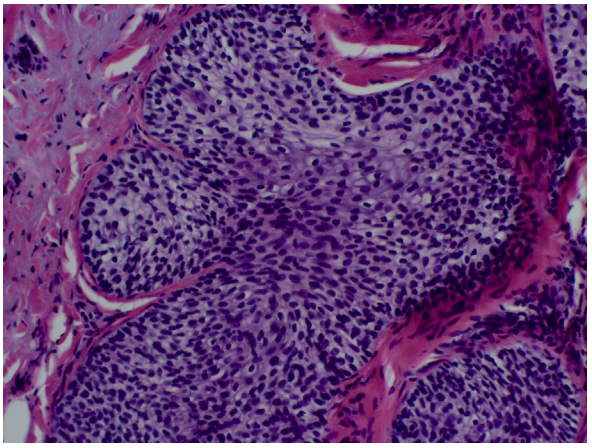

Fig 3. Original punch excision. Keratinocytes are highly reminiscent of the outer root sheath of the hair follicle. (Original magnification: ×40.)

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