SHORT COMMUNICATIONS

Desmoplastic Malignant Melanoma Clinically Presenting as a "Cyst"

Haley D. Heibel, MD[1], Robin Burger, MD[2], and Clay J. Cockerell, MD, MBA[3,4]

[1] Department of Dermatology, Northwestern University Feinberg School of Medicine, Chicago, IL
[2] Advanced Dermatology and Cosmetic Surgery, Delray Beach, FL
[3] Cockerell Dermatopathology, Dallas, TX
[4] Departments of Dermatology and Pathology, UT Southwestern Medical Center, Dallas, TX

We recently reviewed the histopathology of an excision of a lesion that had been clinically diagnosed and managed as a cyst. The lesion was present on the back of a 58-year-old female (Figure 1) and had been injected with intralesional steroids for over one year with minimal improvement, which led to a biopsy.

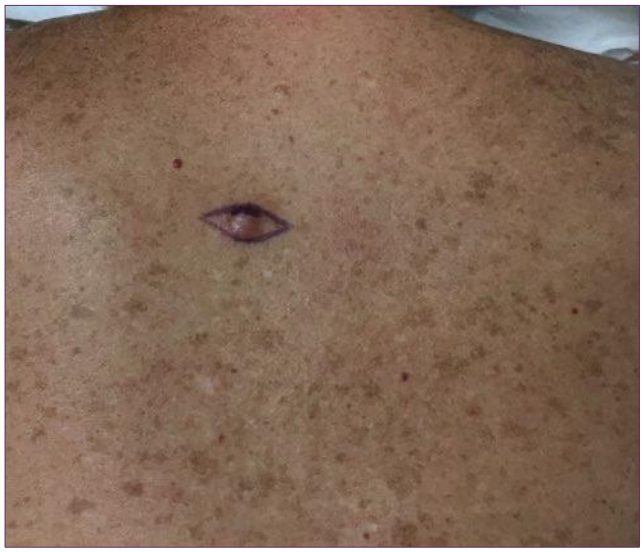

Figure 1. Desmoplastic melanoma. This lesion presented clinically as a "cyst."

Histopathologic analysis of the excision revealed an atypical proliferation of pleomorphic spindle cells in a desmoplastic stroma with lymphoid aggregates in the dermis extending near to the subcutaneous fat (Figure 2). Immunohistochemical stains were positive for SOX-10 and negative for CD34 and CD68 confirming the diagnosis of desmoplastic malignant melanoma (DMM).

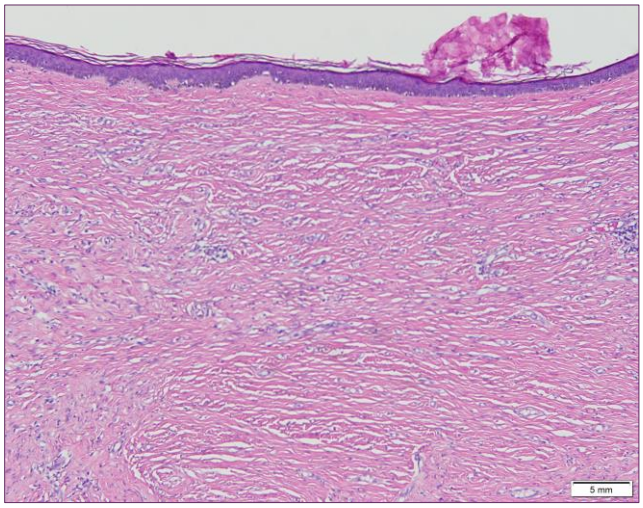

Figure 2. Histology of desmoplastic melanoma (H&E, 40x) demonstrating an atypical proliferation of pleomorphic spindle cells in a desmoplastic stroma with lymphoid aggregates in the dermis extending to near the subcutaneous fat.

DMM often eludes clinical diagnosis as it usually does not have characteristic features of melanoma. Many lesions are not pigmented and may present as an indurated plaque or nodule often on the head and neck region.[1-3] They may clinically resemble

a scar, dermatofibroma, neurofibroma, fibromatosis, basal cell carcinoma, or squamous cell carcinoma, which may lead to misdiagnosis and a delay in appropriate treatment.[2,4] Comprising less than 2-4% of primary cutaneous melanomas, the rarity and lack of characteristic morphology may impede the correct clinical diagnosis of DMM.[2,4]

Over the last number of years, we have histologically diagnosed 7 cases of DMM that were submitted by well-trained and experienced dermatologists with a clinical impression of "cyst." While a number of different entities, including serious malignancies such as metastatic neoplasms, may be thought to be cysts clinically, DMM is not a lesion that is characteristically thought to present as a cyst. Thus, this is a cautionary note to alert dermatologists that DMM should be considered in the clinical differential diagnosis of a cyst in some cases. When a lesion that is thought to be a cyst has an unusual morphology or does not respond to therapy in a reasonable time, a biopsy should be performed in a fashion that will allow for an accurate diagnosis to be rendered. An incisional or excisional biopsy may be preferred, given that DMM may be difficult to diagnose histologically as well. Delay in diagnosis can lead to adverse patient outcomes and medicolegal liability. The knowledge that DMM may present clinically as a "cyst" can lessen the likelihood of such delay and avoid these consequences.[2]

Conflict of Interest Disclosures: None

Funding: None

Corresponding Author:
Haley D. Heibel, MD
875 North Michigan Avenue
Suite 1525
Chicago, IL 60611
Phone: (312) 227-6817
Fax: (312) 227-9402
Email: haley.heibel@northwestern.edu

References:

1. Barnhill RL, Gupta K. Unusual variants of malignant melanoma. *Clin Dermatol*. 2009;27(6):564-587.
2. Cabrera R, Recule F. Unusual clinical presentations of malignant melanoma: A review of clinical and histologic features with special emphasis on dermatoscopic findings. *Am J Clin Dermatol*. 2018;19 (Suppl 1):15-23.
3. Rongioletti F, Smoller BR. Unusual histological variants of cutaneous malignant melanoma with some clinical and possible prognostic correlations. *J Cutan Pathol*. 2005;32(9):589-603.
4. Chen LL, Jaimes N, Barker CA, Busam KJ, Marghoob AA. Desmoplastic melanoma: A review. *J Am Acad Dermatol*. 2013;68(5):825-833.