A Rare Conjunctival Melanoma

Leslie Marshall D.O., Christopher Weyer, D.O., Elizabeth Young D.O.

Background

Primary conjunctival melanomas (CM) are a rare type of melanoma. They account for approximately 5% of all cases of ocular melanomas, with ocular melanomas representing only 3.7% of all melanoma cases. The majority of primary ocular melanomas occur in the uvea, but interestingly, CM and uveal melanomas bear little genetic similarity to one another. CM has far greater mutation commonality with mucosal and cutaneous melanoma. 1-4

In this report, we describe a patient with a rare epitheloid cell type conjunctival malignant melanoma who was successfully treated with wide local excision.

Case Description

A 72 year-old Caucasian male with a history of basal cell carcinoma presented for routine outpatient dermatologic examination. On examination, he is noted to have a 0.4 cm firm, black pedunculated nodule on the right medial canthal conjunctiva (Figure 1). The patient was previously unaware of the lesion. A conjunctival biopsy was performed due to suspicion for malignant melanoma. Of note on the biopsy, the lesion was not fixed to the sclera.

Histopathology revealed an epitheloid cell type conjunctival malignant melanoma with a Breslow thickness of 2.2 mm involving the deep and lateral margins (Figures 2,3). Immunohistochemistry of the tumor revealed positive staining with S100, melan-A, and HMB-45. PHH3 staining showed rare invasive tumor cells consistent with rare mitotic activity.

The patient was referred for treatment including wide local excision with cryotherapy to the margins and subsequent sentinel node biopsy. The patient had negative sentinel lymph node biopsy and is over 2 years disease free (Figure 4).

Discussion

CM is a disease mainly of 55 to 65-year-old Caucasians and lacks notable gender predilection. Rarely it has been reported in pediatric, Asian, and black populations. Clinical presentation typically consists of an enlarging fixed pigmented nodule in the peri-limbal area with the presence of feeder vessels. Poor prognostic factors include tumor thickness greater than 2 millimeters, de novo origin, ulcerated or nodular tumors, involvement of adjacent tissue structures, older age, nonwhite race, male gender, and local recurrence. Local recurrence is estimated to be 45% and 59% at five and ten years, respectively.

CMs are thought to arise de novo in 16-26% of cases. These lesions portend a poorer prognosis than CM arising from a precursor lesion. The risk factors for development of CM are largely unknown, but ultraviolet radiation is thought to play a role in pathogenesis, as the conjunctiva is the only mucosal surface with natural exposure to sunlight. Furthermore, NRAS (neuroblastoma RAS viral (v-ras) oncogene homologue) and BRAF (v-RAF murine sarcoma viral oncogene homologue B1) mutations may be found in CMs and are also found in sun exposure related cutaneous melanomas.

The most common treatment modality utilized is excision with 3-6 mm of tumor free conjunctival margin with double freeze slow thaw cryotherapy to the margins. Exenteration is no longer commonly recommended, except in extensive cases of orbital invasion.

References