Microinvasive Squamous Cell Carcinoma Arising Within Seborrheic Keratosis

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Squamous cell carcinoma (SCC) arising within seborrheic keratosis (SK) is rare. We report an 84-year-old woman who presented with a rapidly growing black tumor on her left palpebral eyelid of several years' duration. Clinical examination revealed an elevated hemorrhagic black tumor that measured 0.9×0.9×0.6 cm. A clinical diagnosis of SK was made, but basal cell carcinoma could not be ruled out; therefore, excision with wide margins was performed. Histologically, the tumor was symmetrical and composed of benign basaloid cells with pseudohorn cysts in a reticulated pattern. The tumor showed heavy melanin deposition. The features were indicative of SK. An atypical cell cluster was seen in the central low area. These cells showed keratin pearls, individual keratinization, mitotic and apoptotic figures, nuclear atypia, and microinvasion, indicating microinvasive SCC. Immunohistochemistry revealed the microinvasive SCC area was true SCC. This case suggests that microinvasive SCC can arise within pigmented reticulated SK.

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Seborrheic keratosis (SK) is a benign hyperplastic tumor of the epidermis that is more common in older individuals.[1] There are several types of SK; reticulated SK is characterized by reticular proliferation of basaloid cells and melanin pigmentation. Squamous cell carcinoma (SCC) is a malignant neoplasm with differentiation into the stratified squamous epithelium.[2] Keratinization and intercellular bridges are marks of SCC. Several cases of SCC have been reported in the literature, including cases of Bowen disease arising within SK,[3-9] but to our knowledge, there have been no comprehensive studies on SCC within SK. We report a rare case of microinvasive SCC arising within a pigmented reticulated SK.

Case Report

An 84-year-old woman presented to the dermatology department with a rapidly growing black tumor on her left palpebral eyelid. Clinical examination revealed a nodular mass that was black in color and measured 0.9×0.9×0.6 cm (Figure 1). The tumor had been present for several years, but the patient recently noticed rapid enlargement and hemorrhage. A clinical diagnosis of SK was made, but basal cell carcinoma could not be ruled out; therefore, excision with wide margins was performed.

Histologically, the tumor was symmetrical with atypical cells located in the center. An aggregate of malignant atypical cells was present in the basal part in the center of the tumor (Figure 2). The atypical cells showed keratin pearls, individual keratinization,

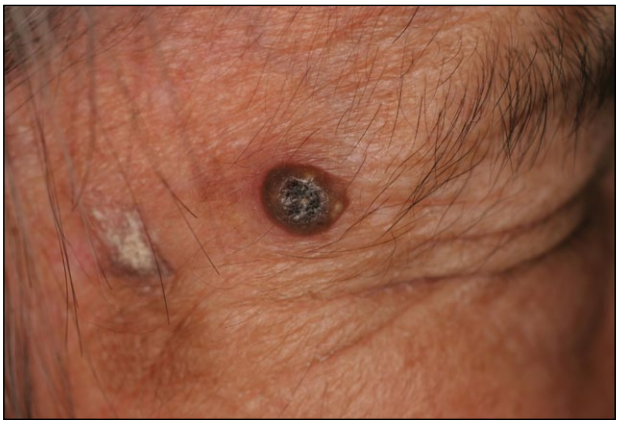

Figure 1. Gross features of the tumor. The slightly elevated black tumor measured 0.9×0.9×0.6 cm.

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The authors report no conflict of interest.
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clumping cells, nuclear atypia, and apoptotic and mitotic figures (Figure 2B), indicating that they were SCC cells. They also showed microinvasion. The rest of the tumor biopsy showed reticular proliferation of basaloid cells, a few pseudohorn cysts, and heavy melanin pigmentation. No atypia was noted in this area; therefore, the other part showed typical features of pigmented reticulated SK. Because the lateral and vertical margins were negative for tumor cells (Figure 2A), it was concluded that the lesion had been completely removed.

Immunohistochemical analysis using the Dako EnVision™+ kit, as previously reported,[10,11] included the following antibodies: pan-cytokeratins (AE1/AE3 and CAM5.2), melanosome (HMB-45), S-100 protein, proteins p63 (4A4) and p53 (DO-7), Ki-67 (MIB-1). Immunohistochemically, the tumor cells were positive for pan-cytokeratins AE1/AE3 and CAM5.2, p63, p53, and Ki-67 (labeling index, 50%). They were negative for melanosome (HMB-45) and S-100 protein. The other parts of the tumor showed typical features of pigmented reticulated SK. There were gradual merges between the 2 lesions (Figure 2A). A pathologic diagnosis of microinvasive SCC arising within a pigmented reticulated SK was made. The patient showed no signs of recurrence 7 months following excision of the tumor.

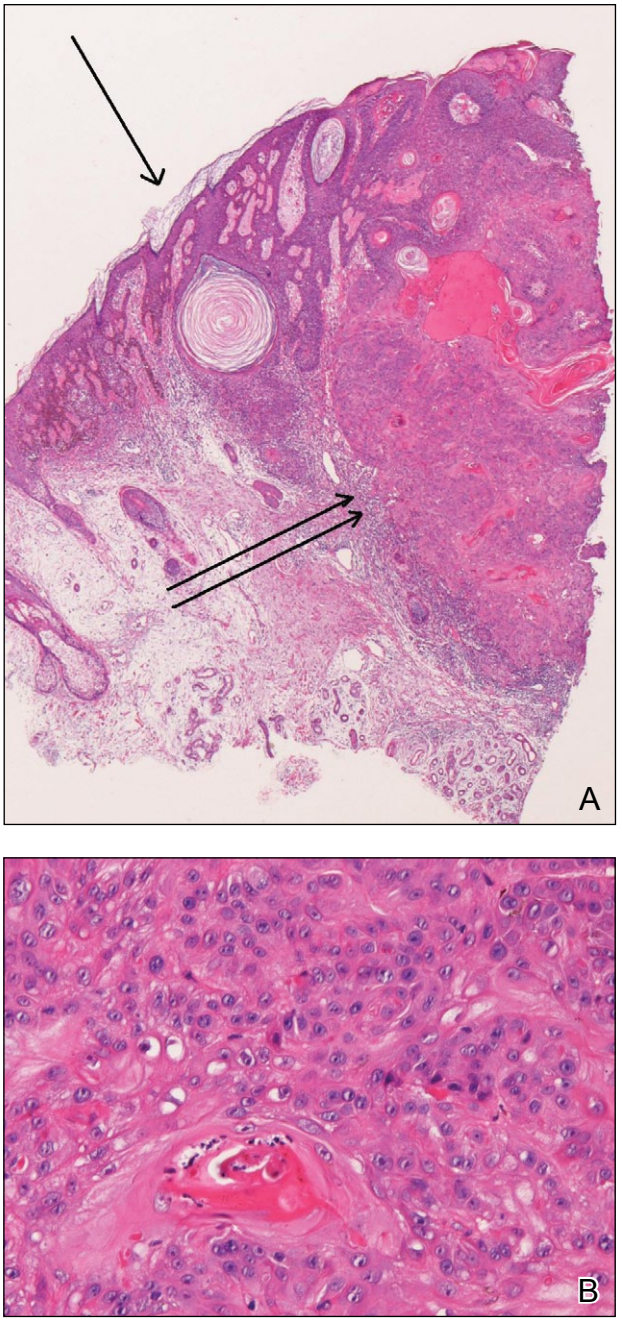

Figure 2. Histopathology of the left half of the tumor revealed an atypical cell cluster in the basal part in the center of the tumor (double arrows). Reticulated seborrheic keratosis was demonstrated on the periphery (single arrow)(A)(H&E, original magnification ×10). The squamous cell carcinoma cells demonstrated hyperchromatic nuclei and prominent nucleoli. Keratin pearls, individual keratinization, a few clumping cells, apoptotic figures, and mitotic figures were seen. The focus was hypercellular. No melanin pigmentation was seen (B) (H&E, original magnification ×200).

Comment

The atypical cell cluster in our patient was histologically and cytologically malignant. The microinvasive features (ie, broad and strong expression of p53, high Ki-67 labeling index) also were indications of the malignancy of the atypical cells. The atypical cell cluster showed squamoid features, keratin pearls, individual keratinization, and a positive reaction from p63 (an SCC marker), all indicating that the lesion was SCC. Therefore, we diagnosed the lesion as microinvasive SCC. Our case does not represent Bowen disease because microinvasion was seen. Histologically, the diagnosis was not basal cell carcinoma, and histologically and immunohistochemically our patient's lesion was not melanoma.

Seborrheic keratosis is a benign keratinocytic tumor characterized by basaloid cell proliferation and pseudohorn cysts. It is classified as acanthotic, reticulated, pigmented, clonal, irritated, hyperkeratotic, or flat.[1] Our patient's benign lesion showed reticular proliferation of basaloid cells with melanin deposition, and a few pseudohorn cysts also were present. Based on these findings, the lesion was diagnosed as pigmented reticulated SK. In our case, there were gradual transitions between the SCC and the SK, which indicated that the microinvasive SCC arose within the pigmented reticulated SK. Similar cases of Bowen disease arising in pigmented reticulated SKs have been reported.[6,9] In our patient, the clinical fact

that the lesion was present for many years, rapidly enlarged, and recently showed hemorrhage suggested that the SCC arose within SK.

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