Melanoacanthoma on the nipple of a middle-aged woman: A diagnostic challenge

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CLINICAL PRESENTATION

A 50-year-old woman sought medical consultation due to a 7 × 8-millimeter pigmented lesion on the left nipple. It had been present for one year and showed growth for the past 6 months. The patient had a history of left breast cancer, which had been treated with 36- radiotherapy sessions on the areolar region. Clinically, the lesion was sharply demarcated with a velvety surface. Reflectance confocal microscopy (RCM), a near-infrared low-power laser (830-nm diode, power < 35 mW; Vivascope 1500, Caliber ID), and digital dermoscopy (Medicam 1000; 20× magnification, FotoFinder Systems GmbH) were performed prior to biopsy.

Reflectance confocal microscopy

At the epidermal level, RCM showed a slightly irregular honeycomb pattern with scattered bright monomorphous dendritic cells (Fig 1). At the dermo-epidermal junction, a widening of the interpapillary spaces was observed with the presence of diffuse anucleated bright cells and focal areas of ill-defined papillae (Fig 2).

Dermoscopy

Dermoscopy revealed an atypical pigmented network (Fig 3). Since criteria to exclude malignancy were lacking, an excisional biopsy was performed.

Abbreviations used:

RCM: reflectance confocal microscopy
SK: seborrheic keratosis

Histopathology

Histopathology (Fig 4) revealed a hyperplastic epidermis with hyperkeratosis, acanthosis, and proliferation of basaloid cells with increased pigmentation in the basal layer. Throughout the lesion, intermingled with the keratinocytes, dendritic melanocytes were observed. These findings were consistent with seborrheic keratosis (SK), melanoacanthoma variant.

DISCUSSION

Melanoacanthoma is an uncommon, deeply pigmented variant of SK, which may be difficult to distinguish from melanoma on clinical grounds. Histologically, it is characterized by an acanthotic proliferation of basaloid and spinous keratinocytes, with sporadic pigmented dendritic melanocytes.[1] In our case, the location on the nipple was challenging. It is a sensitive area for surgery, with possible functional and aesthetic consequences, and data on the diagnostic accuracy of dermatologic non-invasive imaging techniques applied to the nipple and areola complex is limited.[2]

Melanoacanthoma has been scarcely characterized with dermoscopy and with RCM. In 2015, Chung

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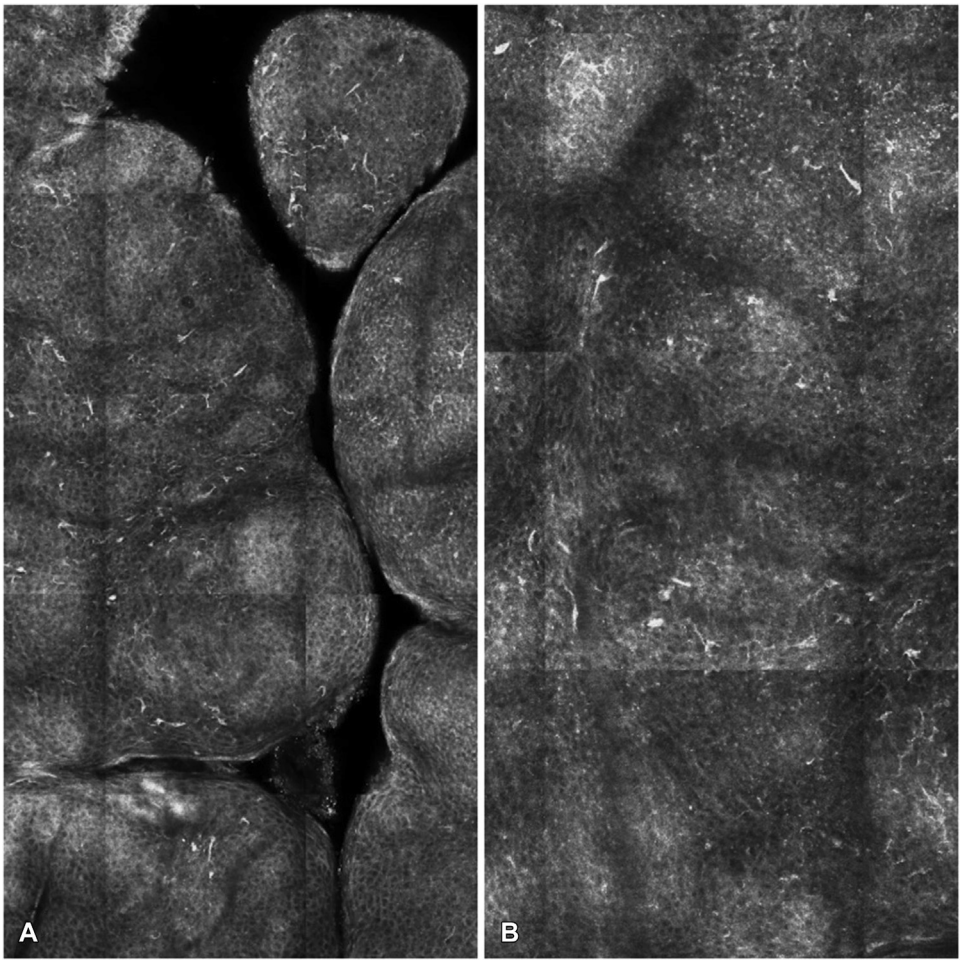

Fig 1. Melanoacanthoma. **A** and **B,** Reflectance confocal microscopy (RCM) mosaics (**A,** 2.5×1 mm^2 and **B,** 1.5×0.5 mm^2 close-ups) at the level of the spinous granular layer showing a slightly irregular honeycomb pattern with bright monomorphous dendritic cells and refractile anucleated round cells.

Fig 2. Melanoacanthoma. Reflectance confocal microscopy (RCM) mosaic (2.5×3 mm^2) at the dermal-epidermal junction showing widening of the interpapillary spaces with the presence of diffuse anucleated bright cells and focal areas of ill-defined papillae.

et al reported a case series on dermoscopic features of eight melanoacanthomas. Though all lesions had at least one dermoscopic feature associated with SK, six also showed features suggestive of melanoma.[3] As for RCM, Shahriari et al observed numerous dendritic cells at the basal and suprabasal layer in a verrucous melanoacanthoma, which was considered suggestive of melanoma.[1] Porto et al observed pagetoid dendritic cells, but also reported findings suggestive of SK, such as a regular honeycomb pattern and keratin-filled invaginations in the epidermis.[4]

In the melanoacanthoma presented herein, ruling out melanoma proved difficult, even with dermoscopy and RCM imaging. In hindsight, we believe that under RCM, the presence of a regular proliferation of typical dendritic cells in the basal and suprabasal layers of the epidermis, with the absence of atypical nucleated round cells and a predominance of edged papillae, with or without

Fig 3. Melanoacanthoma. Dermoscopy showing atypical pigment network. On the right, the clinical presentation of melanoacanthoma on the left nipple. The patient provided written consent for publication of her clinical images.

other SK features, can be clues to a diagnosis of melanoacanthoma. These observations, however, require validation in additional patients. Physicians should be aware that melanoma can have SK features or occur in association with SK. Doubtful lesions should be histologically evaluated.

Conflicts of interest

None disclosed.

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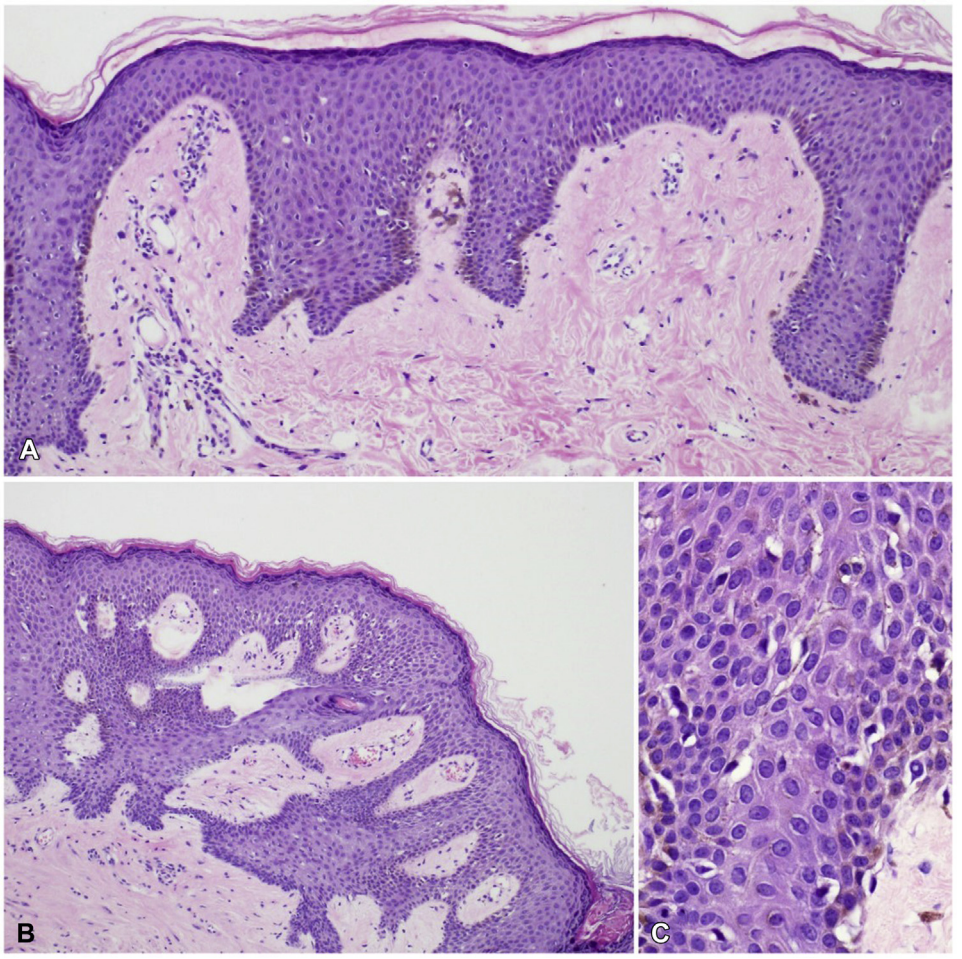

Fig 4. Melanoacanthoma. **A** and **B,** Histology (hematoxylin-eosin–stain; original magnification, ×40 [**A**] and ×100 [**B**]). The hyperplastic epidermis shows hyperkeratosis, acanthosis, and proliferation of basaloid cells associated with increased melanic pigmentation in the basal layer. Dendritic melanocytes are observed in the basal and suprabasal layers. **C,** Histology (hematoxylin-eosin–stain; original magnification, ×400). Typical dendritic melanocytes scattered throughout the epidermis.