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Dermoscopic and confocal features of an axillary "special site" nevus

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ABSTRACT

"Nevi of special sites" is a term that denotes melanocytic nevi presenting in specific anatomic locations including the scalp, genital area, flexural sites, and acral sites [1]. Nevi from these anatomic sites display at times histopathologic features that may lead the reading pathologist to recommend re-excision of these benign nevi. Reflectance confocal microscopy (RCM) is a noninvasive imaging tool that allows for visualization of epidermal, dermal-epidermal junctional (DEJ), and superficial dermal tissue structures at cellular level resolution. RCM features of special site nevi have not been previously described in the literature. Defining the RCM characteristics of special site nevi may increase diagnostic accuracy and assist in ruling out melanoma.

Here, we report a case of a pigmented lesion appearing in the axilla of a patient with a recently diagnosed melanoma. Dermoscopic and histopathologic results were consistent with the diagnosis of nevus in flexural anatomic sites. In this case, RCM showed a regular honeycomb pattern of epidermal keratinocytes and enlarged, non-homogenous, discohesive nests at the DEJ, a pattern that corresponded well with the histopathologic findings. Larger studies are needed to establish RCM features of special site nevi in order to reliably rule out melanoma and lower the rate of unnecessary excisions of these benign nevi.

Case Presentation

A 23-year-old woman with recently diagnosed invasive melanoma of the back presented with an asymmetric, dark brown papule measuring 7 x 5 mm in the right axilla (Figure 1).

Dermoscopy revealed a homogenous globular pattern at the center with brown to gray-bluish pigmentation and slight vascular blush, while at the periphery there were regular globules (Figure 2).

The leading diagnosis was irritated melanocytic nevus, while the possibility of melanoma was considered, given the patient's history of melanoma as well as the lesion's variegation of color and increased vascularity. An RCM examination showed enlarged junctional nests of cells with marked

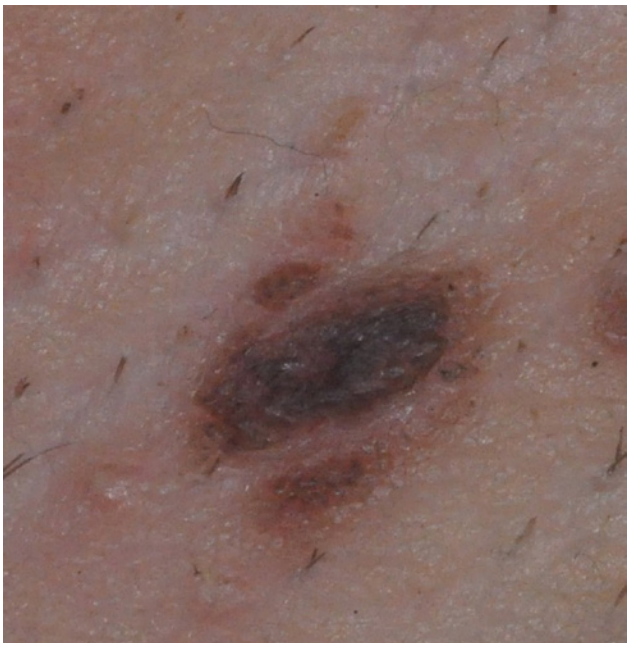

Figure 1. Clinical photograph of a pigmented axillary papule measuring 7 x 5 mm. [Copyright: ©2017 Dutt et al.]

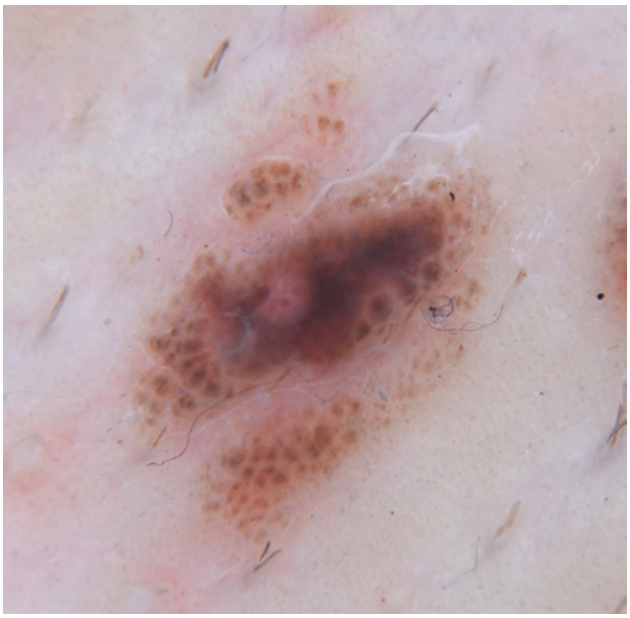

Figure 2. Dermoscopic image, under contact polarized light, depicts a globular homogenous pattern with variegated color. [Copyright: ©2017 Dutt et al.]

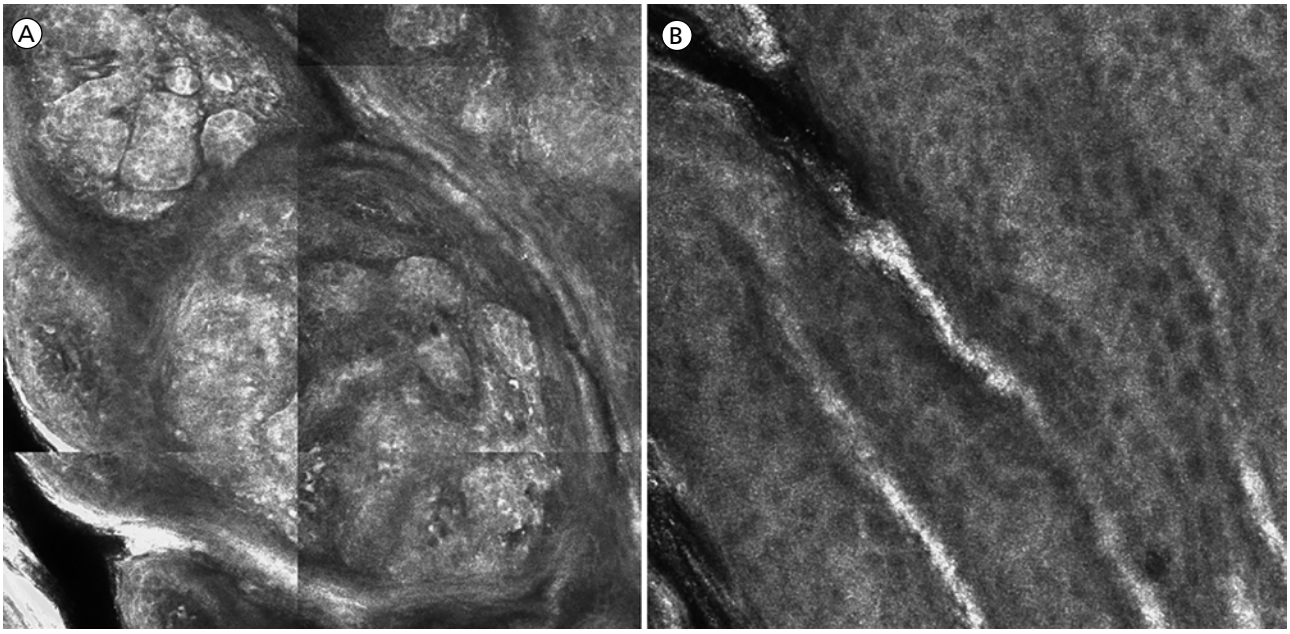

Figure 3. (A) RCM at the level of the dermal-epidermal junction shows enlarged junctional nests with diminished cohesion of melanocytes. (B) RCM at the spinous granular level reveals a regular honeycomb pattern. [Copyright: ©2017 Dutt et al.]

differences in size and shape. Within the nests, there was diminished cohesion of melanocytes (Figure 3A).

The surface of the skin showed a papillomatous contour, and at the level of the spinous and granular layers, a regular honeycomb pattern was seen (Figure 3B).

There was complete absence of reflective cells in pagetoid pattern. The RCM findings rendered the diagnosis of melanoma unlikely. Histopathologic analysis confirmed the diagnosis of a nevus. The presence of enlarged junctional nests with discohesive cell clusters (Figure 4) were consistent with the recent histopathologic descriptions of nevi in flexural sites.

Discussion

Flexural nevi that fit criteria for "special site" nevi may be clinically indistinguishable from other types of melanocytic nevi [2]. They are usually greater than 6 mm and have an irregular border [3].

The axillary nevus in the present case exhibited regular, uniform globules, but with variegated pigmentation pattern on dermoscopy. While specific dermoscopic features of flexural nevi have only been identified in a few case reports, some authors have categorized axillary lesions with those of

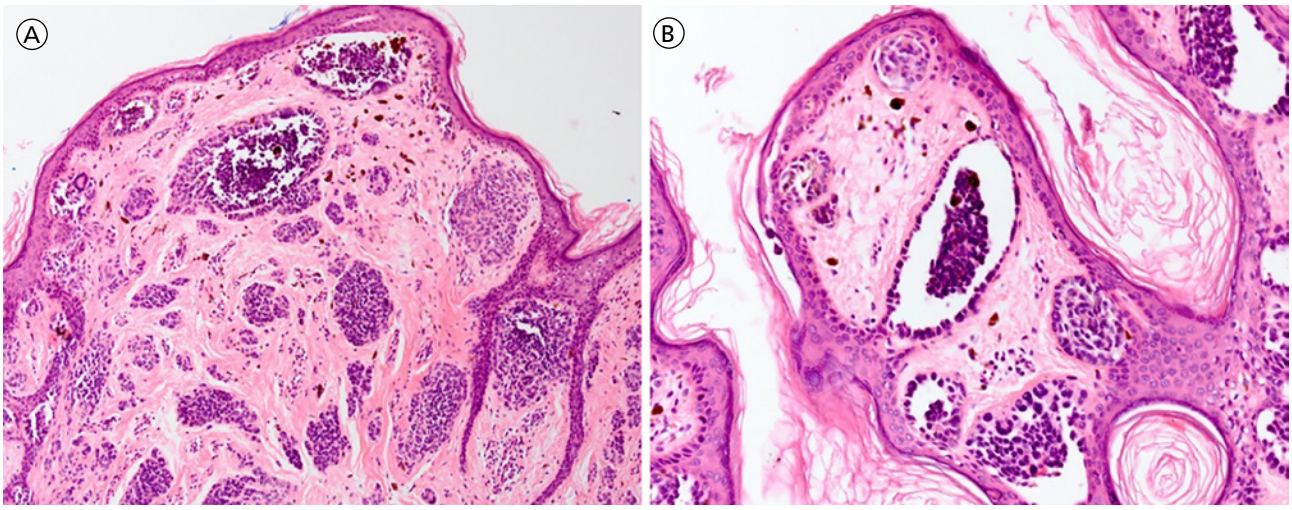

Figure 4. Histopathologic images (H&E) confirm the diagnosis of a nevus showing enlarged, discohesive, junctional nests. [Copyright: ©2017 Dutt et al.]

the breast and other locations along the "milk line" due to their overlapping histopathologic features and the possible contribution of embryologic and hormonal influence [3,4]. A retrospective study of the dermoscopic features of 104 nevi and 13 melanomas from the breast and chest found the presence of atypical pigment network and irregular globules did not discriminate well between nevi and melanoma [5]. This is in contrast to studies that were not "site-specific," in which atypical pigment network and irregular globules were sensitive and specific for melanoma [6,7]. This discrepancy indicates that the when evaluating the dermoscopic characteristics needed to differentiate nevi from melanoma, the anatomic site should be taken into consideration. Thus, ancillary diagnostic methods that can assist to exclude, reliably and reproducibly, melanoma in "special" anatomic locations are warranted.

RCM is a noninvasive tool that utilizes differences in refractivity of skin structures to visualize the epidermis, dermal-epidermal junction, and dermis at the cellular level [8]. While there exists a considerable amount of data on RCM features of melanoma and nevi [9,10] RCM features specific to flexural or other special site nevi have not yet been elucidated. The well-conserved honeycomb pattern of keratinocytes visualized at the spinous and granular levels in this case is more consistent with RCM findings of nevi [11]. In contrast, the RCM finding of enlarged, discohesive junctional nests with variability in shape, size, and spacing may elicit concern for melanoma, but have also been described in an RCM study of nevi, denoted by the authors as dysplastic nevi, from non-special anatomic sites [9]. Absence of large, bright pagetoid cells in the epidermis and cytologic atypia at the basal layer were criteria supporting the diagnosis of a nevus [11].

Two histopathologic patterns have been observed in flexural nevi; one with a papillomatous epidermis and mild cytologic atypia that rarely raises concern, and another with irregular nests and uniform junctional cytologic atypia that the pathologist may, at times, find to be more concerning for melanoma [12]. A study of the histopathologic characteristics of 40 cases of nevi on flexural sites such as the axilla, umbilicus, and inguinal creases showed a primarily "nested and discohesive" pattern [13]. This junctional nested pattern correlates well with the histopathology of our patient's axillary nevus, although cellular atypia was not observed in this case.

In high-risk patients, such as the individual in this case, it is important to achieve a balance between careful surveillance of lesions for any clinical or dermoscopic concern and prevention of unnecessary excisions. The consistency between RCM and histopathologic features of the special site nevus described in this case report support the possibility of diagnosing such nevi less invasively in the future. Larger studies are needed to define specific criteria required to distinguish special site nevi from melanoma when the clinical and dermoscopic features are indeterminate.

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