Dermoscopy and Confocal Microscopy of Nested Melanoma of the Elderly Recognizing a Newly Defined Entity

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Nested melanoma of the elderly represents a distinct morphologic variant of superficial spreading melanoma, typified by the presence of large intraepidermal nests. However, the clinical, dermoscopic, and confocal aspects have been depicted only partially.

In our cases series, nested melanoma was a flat, irregularly shaped lesion with variably pigmented and irregularly distributed globules on dermoscopic examination. Confocal microscopy revealed the presence of a "clod" pattern made of large compact nests with variable atypia. These findings correlated well with histopathologic features.

Nested melanoma of the elderly should be included in the differential diagnosis when a flat pigmented lesion, showing dermoscopically an irregular globular pattern, is seen in a patient older than 60 years.

REPORTED CASES

Case 1
A 65-year-old woman with a history of melanoma was referred for her periodic skin examination. A suspicious pigmented lesion was noticed on her back. Clinically, the lesion differed from the neighboring nevi because of the large size (1.4 cm) and irregular shape and color. Dermoscopically, the lesion was asymmetric and characterized by a prevalent globular pattern with pigmented globules varying in size and color (Figure 1).

Confocal microscopy revealed the presence of a predominant "clod" pattern at the dermoepidermal junction. The clod pattern was made by large and compact dense nests that filled the interpapillary space while distorting and enlarging it (Figure 2). On close examination, cytologic atypia was found within the nests (Figure 3).

The lesion was excised and subsequent histopathologic examination revealed a junctional melanocytic proliferation with a predominant nested pattern. This was typified by striking, mostly roundish nests of regular size and shape along the dermoepidermal junction. Cytologic atypia within the nests was evident, together with a minor single cell growth pattern and focal epidermotropism. With the combined clinical, dermoscopic, confocal, and histopathologic features, a final diagnosis of melanoma in situ was made.

Case 2
A 70-year-old woman sought consultation for the presence of a solitary growing lesion on her right calf. Dermoscopically, the pattern was predominantly globular, with pigmented globules showing striking variation for color and distribution within the lesion. Confocal microscopy revealed pagetoid spread focally present along with cytologic atypia at the dermoepidermal junction (Figure 5). Histopathologic examination revealed an early invasive melanoma (Breslow thickness of 0.4 mm) with a striking nested pattern of growth. The nests were composed of monomorphic, small, pigmented cells alternating with occasional single atypical, larger melanocytes.

IMPORTANCE

Nested melanoma of the elderly is a newly identified histopathologic variant of superficial spreading melanoma, characterized by intraepidermal large nests. However, the clinical, dermoscopic, and confocal aspects have been depicted only partially.

OBSERVATIONS

In our cases series, nested melanoma was a flat, irregularly shaped lesion with variably pigmented and irregularly distributed globules on dermoscopic examination. Confocal microscopy revealed the presence of a "clod" pattern made of large compact nests with variable atypia. These findings correlated well with histopathologic features.

CONCLUSIONS AND RELEVANCE

Nested melanoma of the elderly should be included in the differential diagnosis when a flat pigmented lesion, showing dermoscopically an irregular globular pattern, is seen in a patient older than 60 years.
Case 3

A 56-year-old man was referred for the presence of a growing lesion on his calf. Clinically, the lesion was an irregularly pigmented, flat 0.6-mm lesion on its major axis (Figure 6). Dermoscopically, there was asymmetry in color and structure, with irregularly distributed dots and globules over a light to dark brown structureless background. Histopathologic examination revealed an in situ melanoma composed of large intraepidermal nests of atypical melanocytes.

Discussion

Nested melanoma of the elderly is a newly described histopathologic variant of superficial spreading melanoma.\(^1,2\) Histopathologic criteria include the presence of a nested pattern, with striking large cut nests, regularly shaped and sized, and evenly scattered along the dermoeipidermal junction. Sharp lateral circumscription, focal areas of lentiginous proliferation of melanocytes at the dermoeipidermal junction, and occasional pagetoid scattering of melanocytes are also described. This melanoma usually occurs in adults older than 60.
Figure 3. Cytologic Atypia

Case 1. A, Confocal image showing detail of the nests, which were characterized by cytologic atypia (arrows) (scale bar = 50 μm). B, Histopathologic features show the presence of large intraepidermal nests. The melanocytes within the nests show mild to moderate cytologic atypia and prominent nucleoli (hematoxylin-eosin, original magnification ×400).

Figure 4. Predominant Globular Pattern With Pigmented Globules

Case 2. A, Solitary growing lesion on the right calf of a 70-year-old woman. B, Clinically, the variegated lesion is 2.5 × 2 cm. C, Dermoscopy (original magnification ×10) reveals a predominant globular pattern with pigmented globules showing striking variation for color and distribution within the lesion.
years and presents as a thin melanoma with a mean Breslow thickness of less than 1 mm. Using array comparative genomic hybridization, multiple genomic aberrations have been found in this melanoma type. A similar pattern also has been found in a control group of superficial spreading melanomas, outlining that nested melanoma can be considered a special variant of superficial spreading melanoma.

Kutzner et al reported the dermoscopic features of these melanomas, including asymmetry, multicomponent overall structure, irregular blotches, atypical pigment network, and large, irregular dots and globules. In our study, we observed the same repetitive and quite monotonous dermoscopic pattern, typified by a prevalent globular pattern with globules varying in shape, color, and distribution. Remarkably, all melanomas arose in the elderly and were large in size.

Recent data support the evidence that a globular pattern is commonly found in growing melanocytic nevi, correlating with the physiologic growth of nevi in young adults. Con-
versely, the presence of globules is unlikely in the elderly, whose nevi are usually fewer than those in young adults and mostly represented by intradermal nevi with a homogeneous pattern. Thus, the presence of a large pigmented lesion with an irregular globular pattern in the elderly should raise suspicion of melanoma.

Under confocal microscopy, a grossly regular clod pattern (patient 1) was observed at low magnification, with atypical cells within the nests visible only at higher magnification. In the case (patient 1) was observed at low magnification, with atypical cells and an irregular globular pattern in a patient older than 60 years.

Remarkably, the correct diagnosis of nested melanoma of the elderly should always rely on a good clinicopathologic correlation. In case 1, the lesion was difficult to interpret for the pathologist, and only a careful evaluation of combined clinical, dermoscopic, confocal, and histopathologic features led to the correct diagnosis of melanoma in situ.

In conclusion, nested melanoma of the elderly should be included in the differential diagnosis when a flat, large pigmented lesion, showing dermoscopically an irregular globular pattern, is seen in a patient older than 60 years.

**REFERENCES**


