Dermoscopic Evolution of Vascular Pattern in Two Cases of Amelanotic Melanoma

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Sir,

Hypo/amelanotic skin lesions present a diagnostic challenge, and dermoscopic analysis can often help in determining whether a lesion is benign or malignant (1–3). The presence of a vascular pattern characterized by polymorphic vessels, such as hairpin-like, pinpoint and linear irregular vessels, may be the only significant dermoscopic finding of amelanotic melanoma (AM) (4).

As described previously, morphological changes in dermoscopic patterns have been associated with the characteristic evolution of benign melanocytic naevi after a long-term follow-up of 12 months (5, 6). Rapid and irregular modifications often suggest malignancy (6). The diagnosis of early-phase AM is especially challenging.

We report here two cases of AM characterized by dermoscopic changes in vascular pattern observed during a follow-up period of 6–10 months after the initial visit.

CASE REPORTS

Case 1. A 36-year-old woman was examined for a pink, 8 × 4 mm, asymptomatic nodule on the right thigh (Fig. 1a). The patient reported that the lesion had been present for more than 3 years but had enlarged during the last year. Dermoscopic examination showed light-brown pigmentation at the periphery, surrounding a central hypopigmentation. A small erosion was present in the central area of the lesion, and dotted vessels and some hairpin-like and irregular vessels were seen at the periphery of the lesion (Fig. 1b). Physical examination revealed 4 stereotypical dermatofibromas on the lower extremities which were dermoscopically characterized by a central white scar-like structure and a light-brown peripheral network. No atypical naevi were seen, and the patient reported no personal or family history of melanoma. Based on clinical and dermoscopic features, the lesion on the thigh was diagnosed as irritated dermatofibroma, and the patient was advised to return for follow-up in 3 months.

The patient was seen again only after 10 months when the lesion had increased in size (10 × 4 mm). Dermoscopic analysis showed an increase in colour and size of the peripheral brown pigmentation and a more prominent polymorphic vascular pattern characterized by numerous dotted, linear irregular and hairpin-like vessels (Fig. 1c). The four similar lesions on the lower extremities appeared clinically and dermoscopically unchanged. The lesion on the right thigh was surgically excised and histopathological examination revealed a nodular melanoma (Breslow thickness 2.55 mm, Clark level IV).

Case 2. A 43-year-old woman presented with numerous pink-reddish melanocytic naevi on the trunk and arms. An asymptomatic, 5 mm pink papule located on the right thigh (Fig. 2a) was dermoscopically characterized by a pink-whitish core surrounded by slight reticular brown pigmentation, with a few linear irregular telangiectasia (Fig. 2b). The other hypomelanotic skin lesions showed a light-brown to reddish pigmentation with a prevalence of dotted vessels. The patient reported no personal or family history of melanoma, and physical examination showed no atypical melanocytic lesions.

On the basis of clinical and dermoscopic findings, including the dermoscopic similarity to the other lesions, the diagnosis of hypopigmented naevi was made. The patient was advised to return to the clinic in 3 months for follow-up.

The lesion on the right thigh appeared clinically and dermoscopically substantially unchanged at the 3-month follow-up visit. After 6 months, the lesion remained clinically unchanged, but dermoscopy showed a polymorphic vascular pattern in one part of the lesion, characterized by linear irregular vessels, hairpin vessels, and dotted vessels (Fig. 2c). The other hypopigmented naevi remained unchanged. Based on the dermoscopic changes we chose to excise the lesion on the right thigh. The histopathological diagnosis was early invasive melanoma (Breslow thickness 0.68 mm; Clark-level III).

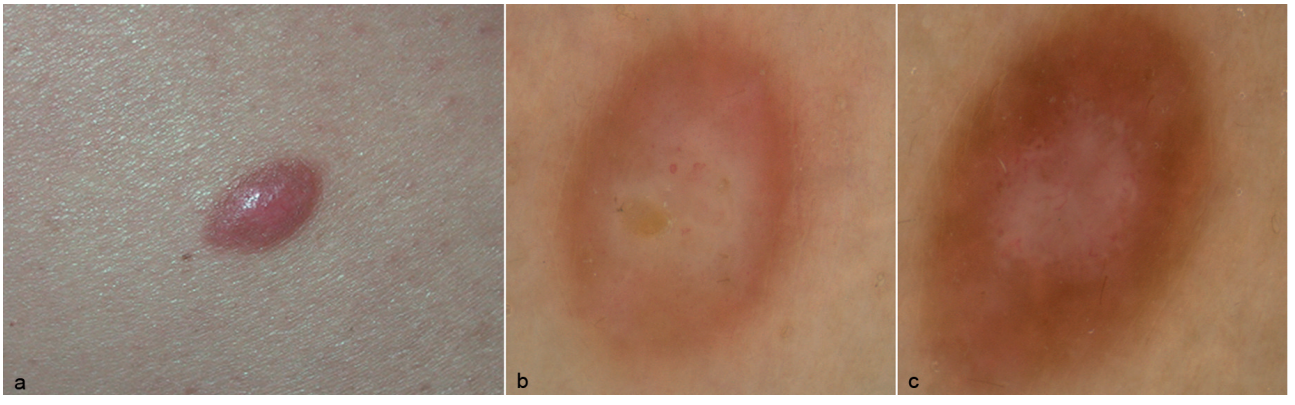

Fig. 1. (a) Amelanotic nodule on the right thigh (8 × 4 mm) of a 36-year-old woman. (b) Initial dermoscopic appearance of the lesion, showing a light peripheral brownish pigmentation associated with a central white scar-like structure. A small erosion in the middle part of the lesion was also present. Numerous pin-point vessels and some hairpin-like and irregular vessels could be detected at the periphery of the lesion. (c) Dermoscopic aspect of the lesion after 10 months of follow-up. Presence of a polymorphic vascular pattern characterized by numerous dotted, linear irregular and hairpin-like vessels.

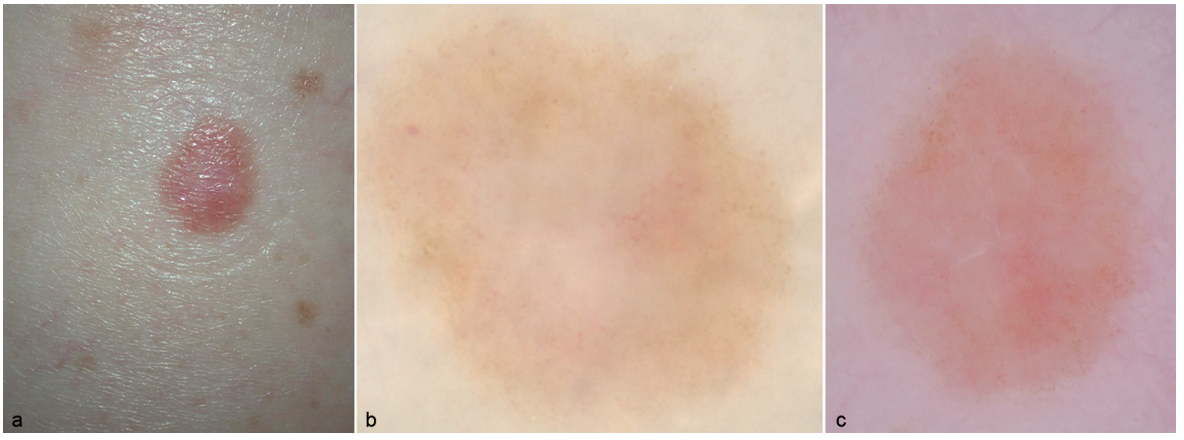

Fig. 2. (a) A 5 mm pink papule, located on the right thigh of a 43-year-old woman. (b) Dermoscopic aspect of the lesion at the time of the first observation. Presence of a pink-whitish structure surrounded by a light-brown pigmentation, with a few linear irregular telangiectasias. (c) Dermoscopic aspect of the lesion after 6 months of follow-up. Appearance of a polymorphic vascular pattern, characterized by linear irregular, hairpin and dotted vessels in part of the lesion.

DISCUSSION

The lack of pigmentation on visual inspection is the main difficulty encountered in clinical diagnosis of AM. Common clinical differential diagnoses of hypo/amelanotic melanoma (AM) may include hypomelanotic naevus, Spitz naevus, basal cell carcinoma, seborrhoeic keratosis, dermatofibroma, keratoacanthoma, pyogenic granuloma, haemangioma, Bowen's disease and melanoma metastasis (7–12).

Specific vascular structures at dermoscopic examination improve the diagnosis of hypo/AM (13, 14). Commonly, the presence of linear irregular and dotted vessels were the most frequent dermoscopic findings in this peculiar group of melanomas. The recognition of hairpin, dotted, and/or highly tortuous vessels should also be evaluated (1, 13, 14). The combination of milky-red globules or areas and irregular linear vessels are most frequently observed in highly invasive or nodular hypo/AM. In most cases the dermoscopic features that are characteristic of melanoma, such as irregular pigmentation, irregular dots and globules, and streaks are not useful in the diagnosis of such lesions.

In our two cases the atypical vascular pattern was clearly visible at follow-up of the lesions demonstrating the value of this morphological feature. The usefulness of the short- and long-term digital sequential dermoscopic follow-up has been clearly demonstrated by Kittler et al. (15). However, no studies emphasized the rule of the morphological change of the vascular pattern during dermoscopic follow-up. In case 1, the dermoscopic analysis of the lesion after a 10-month follow-up showed a more polymorphic vascular pattern consisting of linear irregular and hairpin-like vessels, and an increased homogeneous pigmentation at the periphery. In this lesion the diagnosis at the time of the first observation was strongly influenced by the similarity in clinical aspect of the lesion to other four dermatofibromas located on the lower extremities. In case 2, dermoscopy revealed the presence of linear irregular vessels, hairpin vessels, and dotted vessels after digital follow-up. Even a slight reticular pigmentation was also observed. The excision of the lesion due to the dermoscopic changes after a 6-month follow-up allowed us to diagnose early invasive hypomelanotic melanoma.

Our cases demonstrate once more that the presence of atypical vessels represent the dermoscopic clue for the diagnosis of hypo/AM. In such cases, the surgical excision of the lesion is mandatory to diagnose early invasive hypo/AM.

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