

## Cutaneous Amelanotic Melanoma Metastasis and Dermatofibromas Showing a Dotted Vascular Pattern

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Sir,

Dermoscopic patterns specific for hypopigmented and amelanotic cutaneous lesions have not yet been thoroughly characterized, which makes dermoscopic diagnosis of these lesions difficult. Among hypopigmented malignant cutaneous neoplasia, differential diagnoses may include primary melanoma, local recurrent melanoma and cutaneous melanoma metastases from a primary pigmented melanoma. In most cases of poorly pigmented primary melanoma, dermoscopic analysis can detect the presence of pigmented structures such as atypical pigment network and/or irregular dots/globules. True “amelanotic” melanoma, lacking any pigmented structures, are rare, and the presence of an atypical vascular pattern characterized by linear irregular and/or dotted vessels may support the diagnosis of melanoma (1, 2). Only a few reports describe dermoscopic findings of pigmented, hypopigmented and amelanotic melanoma metastases (3–6).

In rare cases, dermatofibroma may clinically simulate melanoma, but can be differentiated by the presence of a central white scar-like patch surrounded by a delicate pigment network or a diffuse, light-brown pigmentation (7). We report here dermoscopic features of three hypopigmented lesions. A dotted vascular pattern was observed in the absence of any pigmented structure in a cutaneous amelanotic local recurrent melanoma and in two dermatofibromas.

### CASE REPORTS

#### Case 1

A 52-year-old woman with a 2-year history of melanoma (Breslow thickness: 2.4 mm; Clark Level: IV; T3bN1M0) located on the external side of the left foot, but no atypical naevi, underwent periodic follow-up examinations at our clinic. In the previous month she had developed cerebellar and lymph nodal metastases requiring systemic chemotherapy. An asymptomatic, erythematous and firm papule, 0.7 cm in size, that had developed approximately 2 months earlier was present on the external side of the left foot, 2 cm from the surgical scar of the previously excised melanoma (Fig. 1a). A similar erythematous papule, with an uncertain time of onset, was observed on the right foot (Fig. 2a).

Dermoscopic analysis was performed with a digital computerized system (DBDermo-Mips, Digital Epiluminescence Microscopy Melanoma Image Processing Software, Biomips, Florence, Italy) (8). Both lesions showed an unspecific pattern characterized by the presence of dotted vessels in the absence of pigment network or other pigmented dermoscopic structures, such as irregular dots/globules or streaks (Figs 1b and 2b). Histopathologic examination of the lesion located on the left foot near the surgical scar showed an infiltrate of

melanoma cells in the whole dermis. Numerous dilated blood vessels were observed in the papillary dermis. A diagnosis of melanoma metastasis was established based on clinical and histopathologic features. By contrast, the lesion located on the right foot was histopathologically characterized by the presence of a pronounced fibrosis, a moderate number of fibroblasts and numerous teleangectasia within the dermis. The diagnosis of dermatofibroma was made on the basis of these findings.

#### Case 2

A 33-year-old man was referred to our clinic for an asymptomatic, erythematous and firm nodule, 1.3 cm in size, located on the internal side of the right knee, and that had been present for 15 years but had grown rapidly during the previous 5 months. He had no clinical history of melanoma and no atypical naevi. Dermoscopic analysis revealed the presence of dotted vessels mostly distributed at the periphery of a white scar-like area. Histopathologic examination showed fibrosis and the presence of numerous fibroblasts and teleangectasia within the dermis and was compatible with the diagnosis of dermatofibroma.

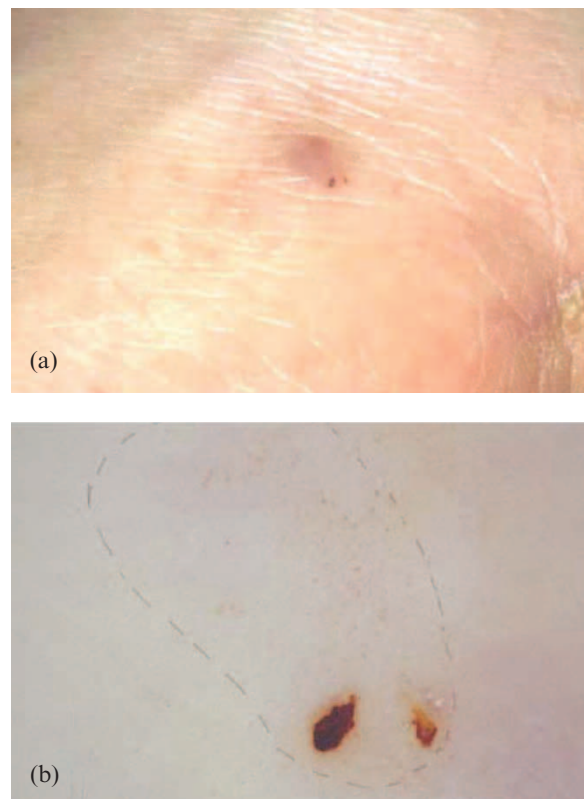


Fig. 1. Cutaneous local recurrent melanoma located on the external side of the left foot in a 52-year-old woman (case 1). (a) A 0.7 cm erythematous papule; (b) dermoscopic image showing a dotted vascular pattern.

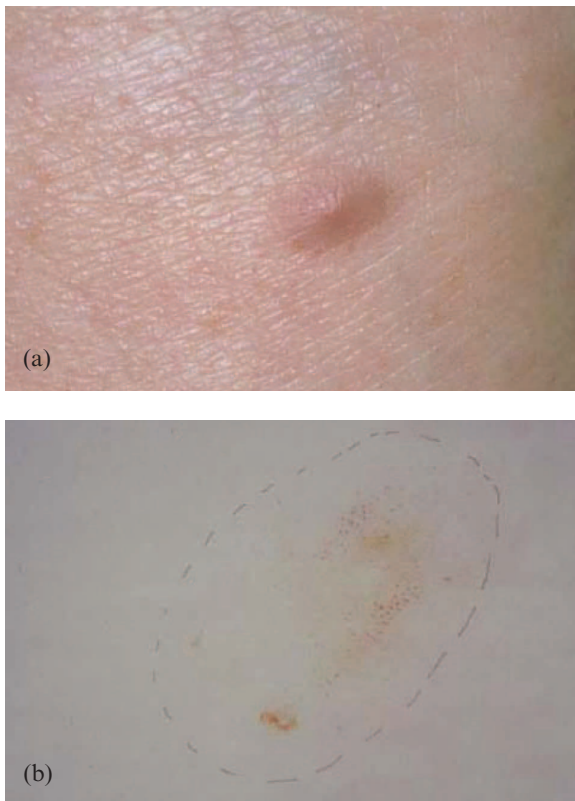


Fig. 2. Dermatofibroma located on the external side of the right foot in Case 1. (a) A 0.7 cm erythematous papule; (b) dermoscopic image showing numerous dotted vessels in the absence of pigment network or other pigmented dermoscopic structures.

## DISCUSSION

Dermoscopic analysis of the vascular pattern is helpful to diagnose poorly pigmented benign and malignant cutaneous neoplasms. Whereas arborizing vessels are the typical finding of basal cell carcinoma and “comma” vessels are characteristics of dermal naevi, the presence of dotted and/or linear irregular vessels is highly suggestive of primary melanoma (9, 10).

Areas of polymorphic and horizontally dilated capillaries, peripheral erythema, a saccular pattern, microscopic ovoid blood lakes and a light brown halo have been described among the dermoscopic features characteristic of cutaneous melanoma metastases (6). Other reports describe melanoma metastases showing dermoscopic criteria typical of benign melanocytic skin lesions and pigmented primary cutaneous melanoma (4, 5). We previously reported pigmented local recurrent melanoma to be dermoscopically characterized by a globular pattern with irregular bluish-red globules and a diffuse non-homogeneous bluish-brown pigmentation in the absence of dermoscopic criteria characteristic of primary cutaneous melanoma such as atypical pigment network, streaks, white and/or blue areas and peripheral black dots (3). The dermoscopic features of

amelanotic local recurrent melanoma have not yet been described. The dermoscopic pattern of dermatofibroma has been shown to consist of a central white scar-like patch surrounded by a delicate pigment network or a diffuse light-brown pigmentation. Several brown to black dots/globules within the central white scar-like patch and/or a reddish coloration around the central white scar-like patch may also be found (7). By contrast, in the present study we have observed a dotted vascular pattern as the only dermoscopic feature in one dermatofibroma and dotted vessels associated with a central white scar-like area in the other case.

In conclusion, a dermoscopic pattern characterized by the presence of dotted vessels was detected in both an amelanotic local recurrent melanoma and a dermatofibroma of a middle-aged woman, as well as in a dermatofibroma of a young man with no history of melanoma. These findings suggest that the presence of a dotted vascular pattern in the absence of dermoscopic features typical of melanocytic lesions does not lead to a definite diagnosis.

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