

A freckle on the foot

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With sufficient training and expertise, clinicians can use dermoscopy to improve diagnostic accuracy for melanocytic lesions and other common skin tumours.

Case presentation

A 68-year-old man presented with a pigmented lesion on the plantar surface of his right foot (Figure 1), which he said had changed in colour and increased in size over the previous 12 months. The lesion measured 10 mm in maximum diameter and was irregularly shaped, with a mixture of colours including browns and black. Dermoscopy revealed an asymmetrical lesion with pigment aligned in a parallel ridge pattern (Figure 2).

Diagnosis

A clinical diagnosis was made of acral lentiginous melanoma.

Discussion

Melanocytic lesions on the palms of the hands and soles of the feet pose a diagnostic challenge. Dermoscopically, they have appearances that are distinct from naevi and melanomas at other body sites.

Most benign acral naevi possess pigment that is preferentially aligned within the parallel grooves of the skin surface striations (dermatoglyphics), which is known as the parallel furrow pattern. Less frequently, they have additional pigment that is arranged perpendicularly to the furrows, giving a grid-like appearance known as the lattice pattern. When this lattice is particularly delicate and fine, it is referred to as a filamentous or fibrillar pattern and is a benign feature. Sometimes brown globules may also be seen in a symmetrical distribution throughout benign acral naevi.

Early acral lentiginous melanomas, on the other hand, typically have a distinct dermoscopic appearance with pigment aligned along the dermatoglyphic ridges. This is known as the parallel ridge pattern and occurs in the vast majority of such tumours. Generally, the ridges are broader than the grooves or furrows, which is a useful feature in differentiating benign from malignant acral lesions. A valuable clue to the ridge pattern is the presence of tiny hypopigmented eccrine gland openings dotted along the ridges (although this is not seen clearly in our example).

As an acral lentiginous melanoma becomes thicker and more advanced, the more familiar dermoscopic features of melanoma

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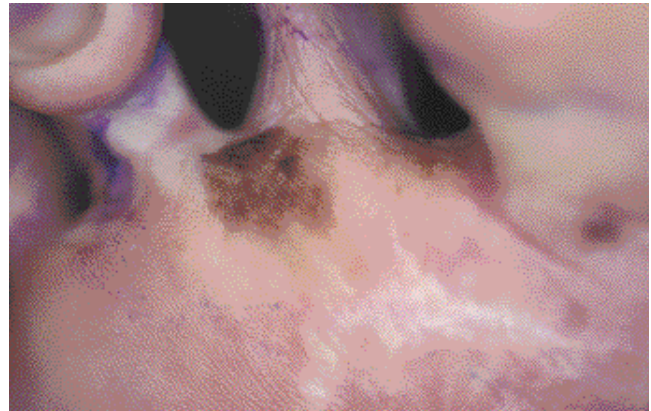


Figure 1. The atypical pigmented macule located in the second interdigital cleft of the right sole.

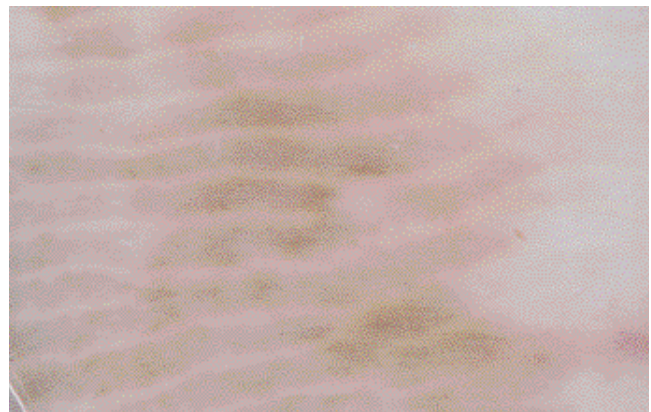


Figure 2. Dermoscopy showing a parallel ridge pattern.

(as seen in nonacral sites) become apparent. A small number may be amelanotic, providing an even greater diagnostic challenge, and these tumours are frequently mistaken for warts or squamous cell carcinomas.

Keypoints

There are distinct dermoscopic appearances for early acral lentiginous melanomas (which are seen more commonly in Asians or dark-skinned people) and for benign melanocytic lesions on the palms and soles. A parallel ridge pattern should prompt the clinician to consider an excisional biopsy to exclude acral lentiginous melanoma. **MT**

Further reading

1. Menzies SW, Crotty KA, Ingvar C, McCarthy WH. An atlas of skin surface microscopy of pigmented skin lesions: dermoscopy. 2nd ed. Sydney: McGraw-Hill; 2002.

DECLARATION OF INTEREST: None.