Managing a pigmented skin lesion on the foot

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CASE

A woman, aged 69 years, presented with a lesion on the sole of her left foot that had been present and slowly enlarging for over a year (Figure 1). She was not concerned by the lesion, but her podiatrist advised her to get it checked. The lesion was asymptomatic.

She is of Māori background and has no previous personal or family history of skin cancer. She has well-controlled hypertension and diabetes and is otherwise in good health.

QUESTION 1

What differential diagnoses would you consider?

ANSWER 1

The differential diagnoses to consider for acral pigmented lesions include melanoma, acral naevus, trauma-related haemorrhage, tinea nigra and an exogenous stain.

CASE CONTINUED

The lesion was slightly raised, disrupting the surface of the acral skin. Polarised dermoscopy revealed absence of the lines of a parallel furrow pattern (PFP) seen commonly in benign acral naevi. Instead, it showed an area of segmental radial lines of brown colour and an eccentric structureless blue and grey pattern (Figure 2).

QUESTION 2

What is your preferred diagnosis for this lesion?

QUESTION 3

What is your initial management of this skin lesion?

ANSWER 2

The acral skin is characterised by alternating furrows and ridges, which are responsible for creating the dermatoglyphic patterns. In melanoma, the pigment initially tends to cluster around the ridges forming lines in a parallel ridge pattern (PRP). In invasive and thicker melanoma, the lines disappear and other patterns including structureless areas predominate.[1]

Although haemorrhage can present as red–black structureless blotches on dermoscopy, the lack of history of trauma and duration of presence rule out this benign presentation.[2]

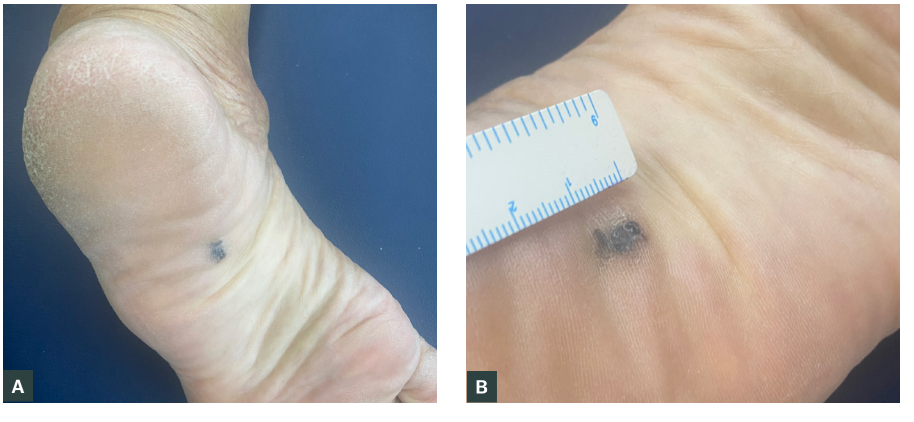

Figure 1. (A) Overview of the skin lesion. **(B)** A close-up view of the skin lesion.

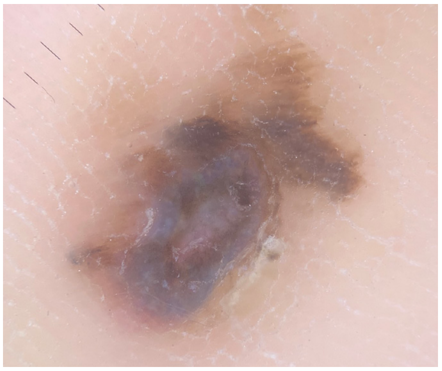

Figure 2. Polarised dermoscopic image of the skin lesion.

The raised nature of the skin lesion, the dermoscopic eccentric structureless blue area and the absence of the PFP are highly suspicious of invasive melanoma.

ANSWER 3

A systematic enquiry looking for any symptoms suggestive of local or distant metastasis should take place along with a full skin check and examination for any lymphadenopathy.

The initial management of a pigmented lesion that has a nodular component and a clinical suspicion of melanoma should be surgically excised with 2-mm margins.[1,3]

CASE CONTINUED

The lesion was surgically removed. The defect was closed with an ellipse (Figure 3).

Histopathology revealed a thick invasive melanoma of superficial spreading type (SSM) and a Breslow thickness of 1.9 mm (Clark IV). There were 12 mitoses per high-powered field (high-risk feature). No ulceration or regression was noted.

QUESTION 4

What further management would benefit this patient?

ANSWER 4

Sentinel lymph node biopsy (SLNB) should be considered for patients with melanoma greater than 1 mm in thickness or greater than 0.8 mm with other high-risk pathological features.[3] It is preferable to perform the SLNB at the time of the primary wide excision.[4]

The patient was referred to a tertiary melanoma centre where she had a SLNB at the time of the wide local excision and graft repair. The SLNB was reported as negative.

Conclusion

Acral melanoma is the least common subtype of melanoma, accounting for 2–3% of melanoma diagnoses; however, it is the most common subtype of melanoma in populations with darker skin. A study found that acral lentiginous melanoma was the most common subtype in Pacific people.[5]

Melanoma in acral skin is more often of the lentiginous subtype rather than the SSM subtype, making this case of acral SSM even more unusual.[6]

Melanoma in acral skin often presents at a more advanced stage. Contributing to this is the challenge elderly patients face in observing the soles of their feet, lack of knowledge in minority populations about their risk for melanoma, decreased access to care and other cultural factors.[7]

Features suspicious of invasive melanoma should be taken seriously and an urgent review for biopsy is needed. It is always important to remember not to monitor a nodular lesion if melanoma is suspected.[3]

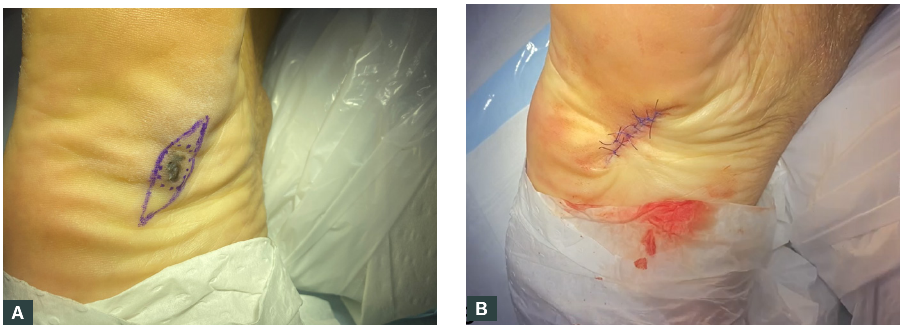

Figure 3. (A) An excisional biopsy with 2-mm margins. **(B)** Successful closure using a primary ellipse.

Key points

- Melanoma diagnosis should be considered for acral pigmented skin lesions.
- Excisional biopsy is the preferred method for obtaining the histological diagnosis.
- Involving a multidisciplinary team should be considered in managing melanomas.

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Competing interests: None.

Funding: None.

Provenance and peer review: Not commissioned, externally peer reviewed.

AI declaration: The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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