

Pods, dots and blobs

ALEX J. CHAMBERLAIN FACD

With sufficient training and expertise, clinicians can use dermoscopy to improve diagnostic accuracy for melanocytic lesions and other common skin tumours. Dermoscopy may also be applicable in the examination of other elements of the skin including vasculature, hair and nails.

Case presentations

Case 1

A 41-year-old English-born woman presented for assessment of a changing pigmented lesion on the left upper abdomen (Figure 1a). She had been aware of the lesion for about nine months. There was no prior personal or family history of skin cancer but she did admit to significant solarium use, estimated at more than 200 exposures.

The lesion in question was variably pigmented and measured 8 by 5 mm. Dermoscopically, the pattern was multicoloured, reticuloglobular and disordered with an asymmetric distribution of peripheral black and brown dots and globules (Figure 1b). In some areas, the globules were attached to the pigment network, so called pseudopods (seen best between 10 and 12 o'clock). On suspicion of melanoma, a diagnostic excisional biopsy was performed on the day of presentation.

Case 2

A 52-year-old male executive was under surveillance because of a history of non-melanoma skin cancer. He was noted to have an atypical pigmented macule over the left side of the neck (Figure 2a) on a background of abundant naevi (at least 250). The patient was completely unaware of the lesion.

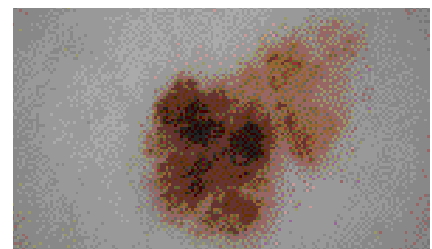
Dr Chamberlain is Research Co-ordinator at the Victorian Melanoma Service, Alfred Hospital, Prahran, Melbourne, Vic.

Dermoscopically the lesion was reticuloglobular and the network was sometimes atypical in areas. At four to five o'clock there was a collection of peripherally based grey-brown globules of variable size grouped together (Figure 2b). The lesion was duly excised and submitted for histopathology.

Case 3

An 18-year-old student being treated for acne enquired specifically about an enlarging pigmented lesion on the left side of the chest (Figure 3a). The lesion had been present for some years but had been noted to be growing in size in a symmetric manner over the preceding months. Clinically the lesion was light brown with some central hyperpigmentation. It measured a maximum of 5 mm in diameter.

Dermoscopically the lesion showed a reticuloglobular pattern with brown globules arranged symmetrically at the perimeter of the lesion (Figure 3b). The lesion was monitored clinically and with dermoscopic photographs for 12 months



Figures 1a to b. Case 1. a (top). Pigmented lesion on the left upper abdomen. b (bottom). Dermoscopy of the lesion showing an asymmetric array of peripheral globules and pseudopods.

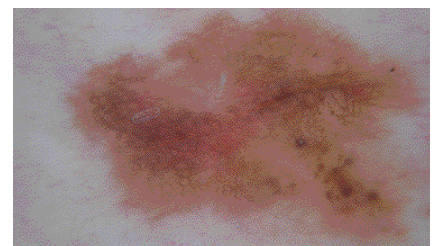
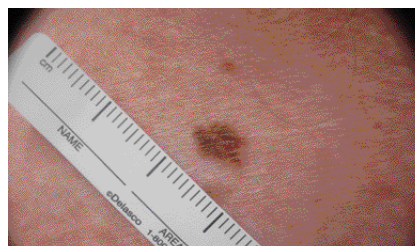
and showed complete stability, consistent with a benign naevus.

Diagnosis

The diagnosis in case 1 was a 0.6 mm level III superficial spreading melanoma and in case 2 was a 0.45 mm level II superficial spreading melanoma. The diagnosis in case 3 was a benign enlarging melanocytic naevus.

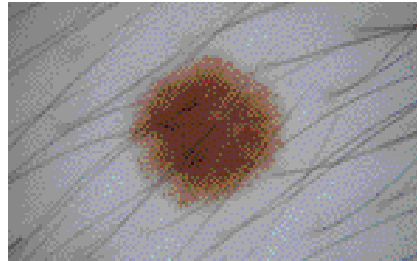
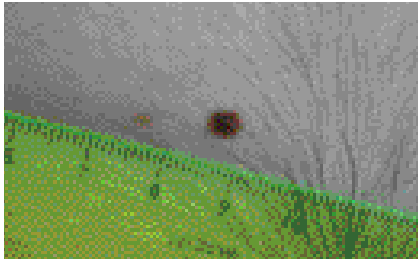
Discussion

This series of cases highlights the significance of size and distribution of globules as a diagnostic feature of melanoma (see the box on page 72). The term 'globules' refers to ovoid structures typically greater



Figures 2a to b. Case 2. a (left). Pigmented lesion on the left side of the neck (scale in centimetres). b (right). Dermoscopy of the lesion showing asymmetric grey-brown globules.

continued



Figures 3a to b. Case 3. a (left). Pigmented lesion on the chest (scale in centimetres). b (right). Dermoscopy of the lesion showing peripherally based globules in a regular array.

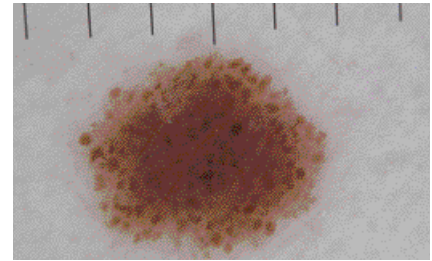


Figure 4. Dermoscopy of a benign globular naevus (scale in millimetres).

than 0.1 mm in diameter and implies that the lesions are melanocytic in nature. Their colour ranges from black to brown to red. Globules correlate histologically with junctional nests of melanocytes.

The distinction between globules and dots is loosely based on size – dots are typically the size of a pinpoint. Although peripherally positioned multiple black dots or globules are a useful diagnostic

feature of melanoma, brown globules are also seen in many benign naevi. The size and position of the globules are the key factor in determining whether a pigmented lesion might be suspicious for a melanoma.

Case 1 demonstrates an array of peripherally based dots, globules and pseudopods at the western aspect of the lesion. The pseudopods are distinct in that they are attached to the network by a stalk

and these are even more specific for the diagnosis of invasive melanoma.

Case 2 is a more subtle example of irregularly distributed globules aiding in the diagnosis of melanoma. Although the network is a little atypical (broadened ropes and irregular holes, using a net analogy), this would not be suspicious for melanoma in its own right. The globules seen here are a mixture of sizes and are peripherally based.

When globules are present in benign naevi they are typically distributed throughout the whole lesion (Figure 4) or especially distributed centrally and reside on the lines of the network. A readily recognisable feature of benign evolving or enlarging naevus is the presence of radially arranged globules in association with a central reticular network as seen in case 3.

Key points

The presence of irregularly sized and distributed globules in a pigmented lesion should prompt consideration for melanoma. This pattern will sometimes be seen in dysplastic naevi. Benign enlarging naevi frequently show a radially arranged pattern of peripheral brown globules. **MT**

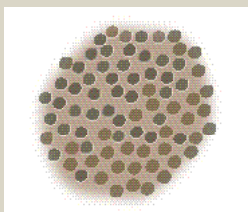
Further reading

Kittler H. Frequency and characteristics of enlarging common melanocytic naevi. *Arch Dermatol* 2000; 136: 316-320.

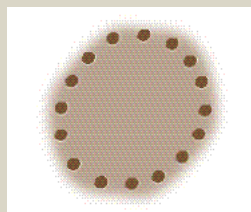
COMPETING INTERESTS: None.

A schematic representation of variations in globular patterns

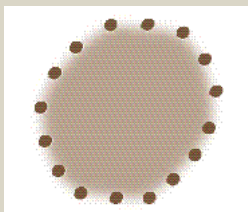
Benign pattern



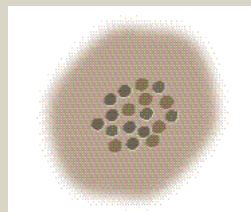
Diffuse regular globular



Reticuloglobular (peripheral symmetric globules)

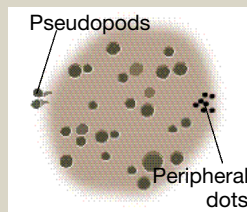


Peripheral marginal globules (pattern of benign enlarging naevus)

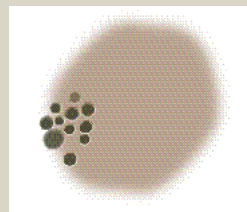


Reticuloglobular (centrally located globules)

Malignant pattern



Diffuse but disordered asymmetric globules with focal peripheral black dots and pseudopods



Focal asymmetric peripheral globules