Dysplastic melanocytic naevus syndrome

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Case history

Mr BS, 55 years of age, presented with numerous naevi in 2001. His history included a 0.85 mm thickness Clarke 3 malignant melanoma excised from his scalp at 50 years of age.

Initial examination revealed dozens of likely dysplastic melanocytic naevi (DMN) on his skin, especially on the trunk. The diagnosis of dysplastic melanocytic naevus syndrome was confirmed when several of the most concerning naevi were biopsied for confirmatory histology. Mr BS also demonstrated numerous pigmented seborrhoeic keratoses, many of which were quite dark and irregular. There was no evidence of any residual or recurrent melanoma.

Dermoscopy of his dysplastic melanocytic naevi (DMN) showed pigment patterning that was often disrupted with brown dots frequently seen erratically placed through a naevus. Many of the DMN were irregular in shape, asymmetric, had variable colouration and had borders that were at times sharply defined and at times poorly defined. Mr BS therefore has two significant risk factors for the development of a second primary melanoma: a past history of melanoma and DMN syndrome.

Digital dermoscopic images of Mr BS's remaining DMN were taken. He also had digital clinical photography of most of his skin demonstrating the existing lesions. Dermoscopic images were labeled with numbers on the body photographs. All photographs were stored on his computer medical record file.

Mr BS was reviewed every 4–6 months and his skin was examined with reference to his baseline photographs and digital dermoscopic images. His recorded DMN remained similar in appearance from examination to examination. In April 2005, the dermoscopic view of a lesion on his abdomen had changed significantly when compared to an image recorded 4 months earlier. The lesion had grown in a medial direction, with the new component to the lesion being dark and displaying disrupted pigment patterning. There were also some peripheral dots and globules appearing in the lesion and the suggestion of radial streaming. *Figure 1* shows a dermoscopic image of Mr BS's naevus in late 2004. *Figure 2* shows the same naevus in April 2005. *Figure 3* shows Mr BS's abdomen in April 2005. The changing lesion is just to the right of the umbilicus.

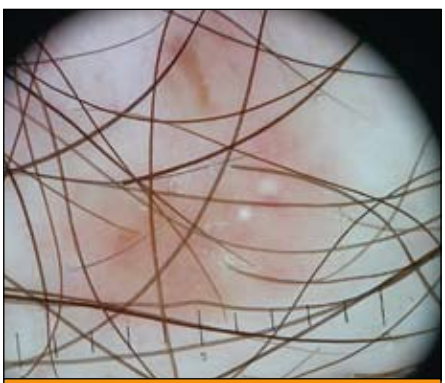

Figure 1. Dermoscopic image in late 2004

Local excision confirmed that this lesion was a second primary superficial spreading melanoma. It was an early Clark 3, Breslow 0.5 mm thick melanoma. This was subsequently widely excised with a 10 mm minimum margin (*Figure 4*).

Ongoing management will focus on the early detection of any further primary melanoma. If Mr BS is to die from metastatic melanoma, it will most likely be a melanoma not yet present on his skin but one that was delayed in diagnosis and management. He will need regular careful ongoing examinations, both of his existing DMN and any new lesions that develop. This surveillance should be undertaken by a clinician very familiar with dermoscopy and with access to clinical photography.

Summary of important points

- A patient with five or more DMN has a >40 fold risk of developing melanoma.[1] Management centres on surveillance of the skin with clinical photography and dermoscopic imaging.[2]
- DMN syndrome is sometimes inappropriately managed by removing all the DMN. Melanoma

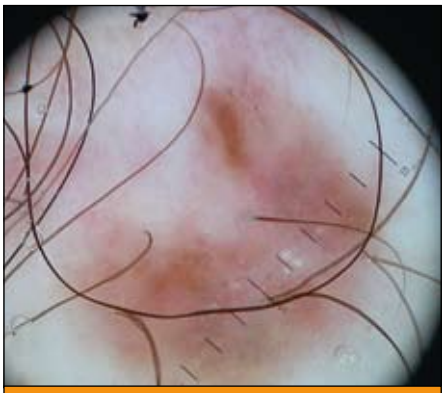

Figure 2. Dermoscopic image in April 2005

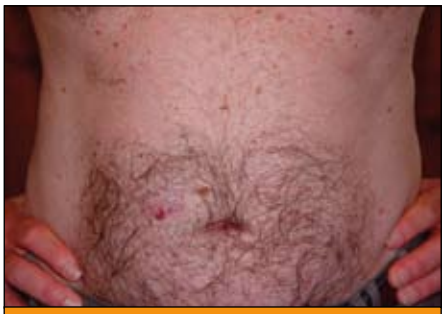

Figure 3. Abdomen showing lesion to the right of umbilicus

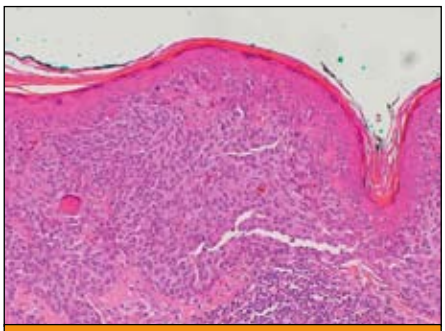

Figure 4. Irregular proliferation of atypical spindled melanocytes in the dermis and epidermis. The cells show no downward maturation and at the base of the lesion is a lymphocytre infiltrate

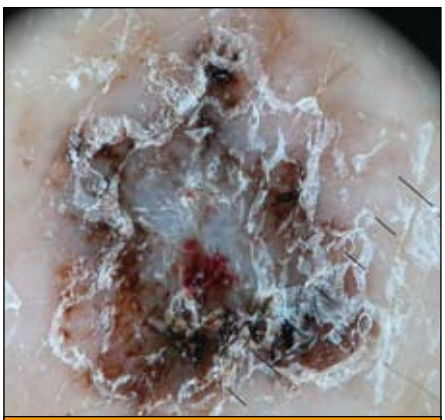

Figure 5. Typical dermoscopic appearance of a malignant melanoma

Dermoscopy of melanoma

While Mr BS's superficial malignant melanoma did not demonstrate classic dermoscopic features, the clear change resulted in biopsy and diagnosis. In contrast, *Figure 5* shows numerous dermoscopic features of malignant melanoma including scar-like depigmentation, thickened and disrupted pigment patterning, and radial streaming. Note that within the lesion there are regions coloured: white, red, grey, black, brown and blue. In this case histology confirmed an obvious clinical dermoscopic diagnosis.

Recording a dermoscopic image does not need expensive equipment. Cheap readily available commercial digital cameras can be attached to inexpensive dermoscopes. The images can be downloaded into computer based medical records already in place in most Australian general practices. An outlay of $2000 will provide a practice with the dermoscope and camera to record dermoscopy on existing software (*Figure 6*).

Figure 6. Digital camera and dermoscopes

frequently develop in areas of the skin previously not demonstrating dysplastic naevus. Removing all a patient's DMN still leaves the patient at high risk of subsequent melanoma development.

- While DMN can be watched rather than excised, a changing DMN should lead the clinician to consider excision.
- Use of dermoscopy will improve diagnosis of melanoma while reducing the number of benign lesions excised.[3]
- General practitioners wishing to improve their skills in skin cancer management should consider dermoscopic training. As little as 4 hours of dermoscopy training has been shown to significantly enhance the skills of GPs in detecting melanoma.[4]
- Pigmented seborrhoeic keratoses are usually characteristic, but at times diagnosis is unclear. A biopsy is needed when melanoma cannot be excluded. A large study demonstrated that 0.66% of removed seborrhoeic keratoses were melanoma.[5] Document photographs and dermoscopic images of all seborrheic keratoses that are sufficiently suspicious to require histology.

Conflict of interest: none declared.

References

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