Recurring melanoma
A case study

Steven Tomas
MBBS(Hons), FRACGP, CertDerm, CertSkinCancerMed(SCSA), is a general practitioner, Dubbo, New South Wales.
stomas101@australiaonline.net.au

BACKGROUND
Melanoma occurs more frequently in Australia then anywhere else in the world, and has a notoriously unpredictable prognosis and the potential for very late recurrence.

OBJECTIVE
This article presents a case study of a patient who experienced a local melanoma recurrence 19 years after initial diagnosis and treatment, and again 8 years later.

DISCUSSION
Definitive treatment, followed by a long disease free period and the cessation of specialist follow up, may lull one into believing a melanoma is 'cured'. As the main long term medical provider, the general practitioner is uniquely placed to detect late recurrence at a stage that could allow life saving treatment.

Case study

In 1980, at the age of 50 years, Mrs A underwent excision of a 'melanotic naevus' from her left forearm. Histopathological examination revealed a superficial spreading melanoma with a Breslow thickness of 0.35 mm. There was evidence of tumour regression that may have resulted in underestimation of the tumour thickness. The distance from the tumour to the excision margins was not noted, although the histology report stated the 'excision is complete'. Wider excision was not performed.

The patient had an uneventful recovery and regular follow up was prescribed.

In 1999, at the age of 70 years, a nodule developed in the scar of the previous melanoma excision. Excision of the lesion revealed a superficial spreading melanoma (mainly in situ) of Breslow thickness 0.2 mm and Clark level 2. The area was re-excised with at least 10 mm lateral and 20 mm deep margins. No residual tumour was discovered in the re-excised specimen.

In 2007, Mrs A presented with a 2 week history of a new, pale white-red 8 x 6 mm nodule having developed in the previous melanoma excision scar line. *Figure 1* shows the left forearm bearing the new nodule as well as what appears to be the operation scar from 1980, and the scar from excision of the first recurrence in 1999.

Figure 2 shows the dermoscopic image of the lesion. The lesion here is characterised by an amorphous amelanotic pink/red structure with small pinpoint vessels.

The nodule was excised revealing a dermal deposit of amelanotic melanoma cells that did not appear to arise from the overlying epidermis. The melanoma was noted to have a Breslow thickness of 2.2 mm, a Clark level of 4 and no ulceration. Several foci of perineural invasion were seen, as were small deposits of melanoma in the dermis discontinuous from the main lesion. *Figure 3* and *4* show the histological appearance of the tumour.

Clinical examination of the patient failed to reveal any evidence of distant metastasis. The patient went on to have wide excision and sentinel node biopsy (*Figure 5*).

Mrs A had no known family history of melanoma and only one known nonmelanoma skin cancer. There were no other significant comorbidities.

'The progression of malignant melanoma of skin is more erratic than many neoplasms (and) that strange variations from the expected course are frequent'.[1] Melanoma is the third most common cancer in Australia (excluding other forms of skin cancer). While only 14% of people diagnosed with melanoma ultimately succumb to the disease, it still accounts for more than 850 deaths each year.[2] Most melanoma recurrences happen within the first 10 years of initial diagnosis.

Discussion

Approximately 1–7% of melanomas recur after at least 10 years of disease free survival.[3,4] Recurrences 15 years or more after the initial diagnosis are termed 'ultra late'. One case reported a patient who experienced a 35 year disease free period before tumour recurrence.[3] Two patients remained disease free for periods of 45 and 47 years. However, these two latter cases involved ocular melanoma primaries.[5]

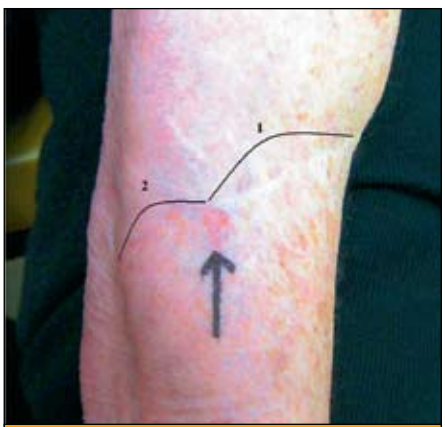

Figure 1. Left dorsal forearm showing the recent melanoma recurrence (arrow), the first (1980) operation scar labelled '1', and the recurrence operation scar (1999) labelled '2'

Figure 2. Dermoscopic view of the melanoma recurrence revealing an amorphous amelanotic pink-red structure with small pinpoint vessels

One study found that patients were more likely to have late (>10 years) rather then early (<10 years) recurrences if they had thinner primary melanomas, were younger, female, and had a melanoma located on an extremity.[1]

Several theories have been proposed as to why melanomas recur many years after definitive surgery. These include factors such as tumour properties and host defence, although the literature is speculative at best.

In terms of survival, one study showed that patients with local or regional node recurrence had the best chances as opposed to distant or visceral metastatses.[5] This study also commented that aggressive treatment is warranted following a recurrence to achieve prolonged survival times. Interestingly, another study revealed that the likelihood of cure increased with a progressively longer cancer free period before the recurrence.[6]

The National Health and Medical Research Council has compiled guidelines on the treatment of melanoma, which are indispensable for the primary care physician.[2] Over the years, there has been a marked increase in conservatism when treating melanoma. Recommended margins for the surgical treatment of melanoma are now a fraction of previous practices as research failed to reveal any benefit from the more radical approaches. Despite this, the initial treatment provided in the case study would be considered to be very conservative. Currently there are marked differences between specialists in how melanoma is treated. This subsequently puts a degree of onus on the referring general practitioner to ensure that reasonable treatment is being given to the patient.

Adhering to recommended guidelines is even more important when the lesion is amelanotic. The lack of pigment severely interferes with the clinician's ability to locate early cutaneous recurrence, particularly if it is thin and not palpable. It is not clear why amelanotic melanomas lack pigment, although it is thought to relate to a deficiency in the enzyme required to produce melanin.[7] In the above case, one can only hypothesise that perhaps due to mutation of the tumour over the years before the clinical recurrence, the melanin producing capabilities were lost. There is scant literature on this phenomenon although a case of the reverse was reported, where a primary amelanotic melanoma of the vagina recurred as a pigmented melanoma.[8]

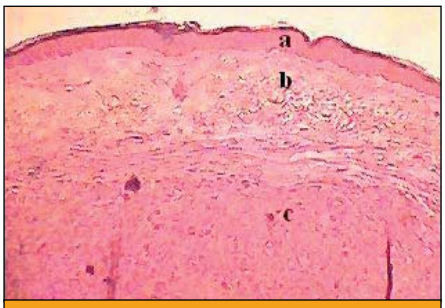

Figure 3. Low power histopathology view demonstrating the normal epidermis (a) and dermis (b) with a large deposit of nodular amelanotic melanoma cells (c) within the dermis. The lack of connection to the epidermis and the history of previous melanoma surgery would suggest that this lesion is a recurrence

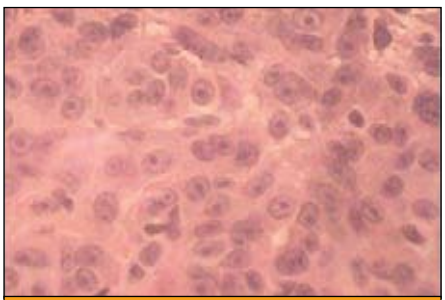

Figure 4. High power view of the dermal deposit showing typical oval epithelioid melanoma cells with large nuclei and prominent nucleoli

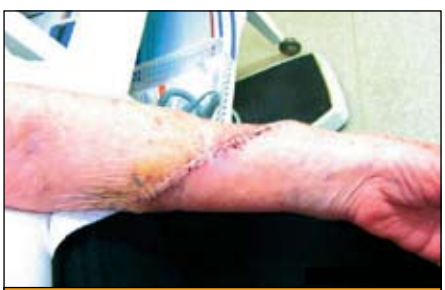

Figure 5. Postoperative view after wide re-excision

The above case highlights the need for a pragmatic approach. Careful and sensitive patient counselling is required to assist with the early detection of possible local or distant recurrences and the development of other melanomas (the risk of which is increased in these patients).

Every patient treated for melanoma should be offered regular skin checks and education on the importance of routine self examination, sun protection and avoidance habits.

With the Australian hospital system unable to offer the necessary long term follow up care, this is an area preferably handled by the patient's GP. Annual skin cancer checks and node examinations are probably a good starting point after the recommended follow up period has expired. A low threshold of suspicion for new or rapidly changing skin lesions is important for the GP and patient alike. These safeguards appear to be necessary for the life of the patient.[4]

Summary of important points

- Melanoma is the third most common cancer in Australia (excluding other forms of skin cancer).
- Melanoma leads to the death of over 850 people each year in Australia.
- 1–7% of recurrences of melanoma occur 10 years after initial diagnosis and treatment.
- Recurrences of cutaneous melanoma has been recorded as occurring as late as 35 years after original diagnosis.
- Life long surveillance should be considered in all patients diagnosed with melanoma.

Conflict of interest: none declared.

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afp **CORRESPONDENCE** email: afp@racgp.org.au