

## Regressing metastatic melanoma and vitiligo-like depigmentation in an Indigenous Australian

Elizabeth M Christou, Diona L Damian and John F Thompson

**TO THE EDITOR:** A 69-year-old Indigenous Australian man, with no known Caucasian ancestry, presented in 2008 with a 7-week history of depigmentation of the face and neck, which was initially intensely pruritic and erythematous. He had neither a personal history nor family history of vitiligo, but a 2 mm thick, Clark level III, superficially spreading melanoma had been widely excised from his right lateral calf in 2001; results of a right inguinal sentinel node biopsy had been negative. In 2005, multiple small local recurrences on the right lower leg had been surgically removed. Two years later, further histologically confirmed local cutaneous and subcutaneous recurrences were excised, but new lesions continued to develop. His medical history included type 2 diabetes mellitus, hypertension, atrial fibrillation and coronary artery bypass grafting. He had no family history of melanoma.

The onset of facial inflammation and depigmentation over a few days in 2008 was associated with complete regression of some leg lesions and partial regression of others. The facial inflammation settled spontaneously within a week. Computed tomography of the abdomen and pelvis at this time did not show any distant disease. The patient was unconcerned by the depigmentation and declined treatment. Over the following 5 months, the extent of his head and neck depigmentation increased (Box, A) and he developed more melanomas on his right lower leg, including one with a depigmented rim (Box, B). Positron emission tomography identified several areas of focally increased metabolism corresponding to the right lower leg lesions, but no evidence of disease elsewhere. The leg lesions have demonstrated only slow progression, and the patient continues to have 6-monthly follow-up at our department, as well as ongoing local review.

Cutaneous melanoma is rare in Indigenous Australians, with only two reported cases of acral lesions.<sup>1,2</sup> In melanoma, immunogenic factors may play a key role in disease course. Antibodies that cross-react with antigens on melanocytes and melanoma cells, such as tyrosinase, tyrosinase-related-protein-1 and tyrosinase-related-protein-2, can lead to both vitiligo-like

### Vitiligo-like depigmentation associated with melanoma in a 69-year-old Indigenous Australian man



**A:** Extensive depigmentation of the face and neck 5 months after the onset of vitiligo.



**B:** Depigmentation around the largest subcutaneous metastasis on the right lower leg.

autoimmune depigmentation and tumour regression.<sup>3</sup> T-cell-mediated responses to melanoma antigens, such as MART-1 (melanoma antigen recognised by T-cells-1), are also enhanced in melanoma patients with depigmentation,<sup>3</sup> which has been reported in approximately 3% of patients with stages III and IV melanoma.<sup>4</sup> Vitiligo is a positive prognostic factor and has been reported in association with tumour regression distant from the depigmentation.<sup>4</sup> In conclusion, this case of vitiligo-like depigmentation, affecting both the head and neck

and a cutaneous metastasis, highlights the immune responsive potential of metastatic melanoma.

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