LETTER TO THE EDITOR

Metastatic amelanotic melanomas showing spontaneous regression after skin biopsies

Dear Editor,

Clinically, amelanotic melanoma is frequently misdiagnosed due to the lack of melanin in the cells and it accounts for only 2–8% of all melanomas. Clinically, amelanotic melanoma resembles a superficial type of basal cell carcinoma, keratoacanthoma, squamous cell carcinoma, Merkel cell carcinoma, hemangioma and pyogenic granuloma, thus leading to a delay in diagnosis. Spontaneous regression of metastatic amelanotic melanoma is extremely rare, with only one case having been reported, and the precise mechanism of regression remains unknown. Here, we present a case of spontaneous regression of metastatic amelanotic melanoma after skin biopsies of the lesions.

A 79-year-old woman was referred to us for further evaluation of skin tumors. The first lesion was an ulcerated plaque on her right plantar that persisted for 1 year and multiple tumors subsequently appeared on her left elbow and left buttock. Physical examination revealed an ulcerated plaque of 25 mm x 15 mm in size on the right plantar, and a red nodule of 16 mm x 14 mm in size on the left elbow, and ulcerated nodules on the left buttock (Fig. 1a). Incisional skin biopsies were performed and histopathological examination of the lesions showed atypical tumor cells with abundant mitoses in the entire dermis without melanin pigment (Fig. 1b). Immunohistochemically, the tumor cells were positive for human melanoma black (HMB)-45, Melan-A and S100 protein. Based on these findings, we diagnosed the patient as having amelanotic acral melanoma with multiple cutaneous metastases. 18F-fluorodeoxyglucose positron emission tomography/computed tomography showed no signs of other metastases.

Intriguingly, 7 weeks later, the primary lesion on her right plantar showed a reduction in size to 15 mm x 10 mm and metastatic lesions of the left elbow and left buttock disappeared spontaneously (Fig. 1c). Histopathologically, although small tumor cell foci surrounded by dense lymphocytic infiltrate still remained in the dermis of the primary lesion, there were no residual tumor cells in the metastatic lesions of the left elbow and left buttock resulting in scars (Fig. 1d).

![Figure 1](image-url)

**Figure 1.** (a) Clinical appearance of an ulcerated plaque on the right plantar (left) and metastatic tumors on the left elbow (middle) and left buttock (right) at the first visit. Arrows indicate the primary lesion. (b) Histopathological examination of the lesions of the plantar (left), knee (middle) and buttock (right) revealed atypical cells without melanin pigment (hematoxylin–eosin [HE], original magnification ×200). (c) Clinical appearance of the lesions on the right plantar (left), left elbow (middle) and left buttock (right) at 7 weeks after incisional skin biopsies. Arrows indicate the primary lesion. (d) Histopathological examination of the lesions of the plantar (left), knee (middle) and buttock (right) after partial skin biopsies. Complete regression of metastatic tumors is shown (middle and right) (HE, ×100).

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There has been only one case of spontaneous regression of metastatic amelanotic melanoma as seen in our case, reported by Maurer et al.\(^3\) While the spontaneous regression rate of primary melanoma is estimated to be between 13.8% and 50%, that of metastatic melanoma lesions is only 0.23% including Maurer’s case.\(^3,4\) It is difficult to ascertain the incidence of metastatic amelanotic melanoma and even more difficult to ascertain its incidence of spontaneous regression, but there is no doubt that it is extremely rare. The mechanisms of spontaneous regression of metastatic melanoma are unknown. Possible etiologies have been reported including operations, infections, radiation therapy and immunological factors.\(^3,4\) In the present case, however, incisional biopsies directly induced regression of all the lesions, which was not an abscopal effect.\(^5\) Spontaneous regression of a metastatic lesion of melanoma can occur after surgical manipulation.

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