Malignant Melanoma Arising from a Small Congenital Melanocytic Naevus

Takahiro Kiyohara, Masanobu Kumakiri and Sachio Kouraba
Department of Dermatology, Fukui Medical University, 23-3 Shimoaizuki, Matsuoka-cho, Yoshida-gun, Fukui 910-1193, Japan.
E-mail: kiyo @ fmsrsa.fukui-med.ac.jp
Accepted May 14, 2003.

Sir,

Malignant melanomas occasionally arise from small congenital melanocytic naevi (CMN) (1, 2) which measure less than 1.5 cm in maximal diameter.

CASE REPORT

A 29-year-old woman presented with a subcutaneous nodule within a pigmented macule on her left neck. The elliptic macule measured 12×6 mm (Fig. 1), and had been present since birth, judging from her family's statements. The subcutaneous nodule had gradually grown within the macule 12 months previously. The flesh colour around the black macule had changed into a blue tone occurring with the nodularity. There were no other pigmented macules on the body nor superficial lymphadenopathy.

The haematoxylin-eosin stained specimen showed two components (Fig. 2). The superficial component had a wedge-shaped appearance, suggesting benignity, and was composed of abnormal melanocytes of the naevus. In the lower epidermis and papillary dermis, epithelioid melanocytes were arranged in nests, accompanied by coarse melanin granules. The nests partially existed within lymphatic vessels. The melanocytes in the reticular dermis were ovoid and smaller than the upper layer of cells, and were arranged in strands between collagen bundles rather than in nests. They were accompanied by a few melanin granules. Maturation was apparent. There were no atypical cellular features. The deep component was contiguous with the base of the superficial one. The spherical mass compressed the surrounding collagen bundles and had irregularly distributed, dense melanin deposits. The mass was composed of atypical, large, spindle and epithelioid cells which had high nucleo-cytoplasmic ratios, a few large nucleoli and atypical mitoses. There was no contiguity with the epidermis on a search of serial sections and the melanocytes in the basal layers were not atypical. Lymph node metastasis was not demonstrated histopathologically.

Immunohistochemically, the atypical cells in the deep component were positive for S-100 protein and HMB-45 and negative for MIB-1. The cells in the superficial component were positive only for S-100 protein. The superficial component was a compound naevus, and the deep one was a malignant melanoma. Breslow's tumour thickness was 7 mm (Clark's level V).

Various examinations revealed no evidence of other primary or metastatic lesions. Since neither local recurrence nor metastasis has appeared during 6 years of follow-up after local excision, we acknowledge that there is no proof for the neoplasm being melanoma biologically.

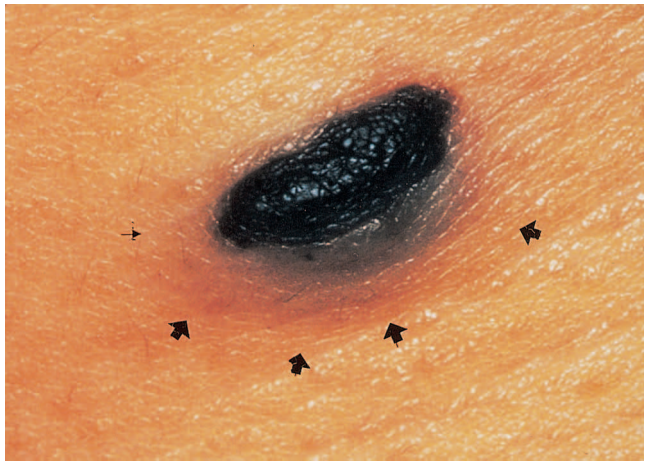

Fig. 1. 12×6 mm-sized, smooth-surfaced, elliptic macule with a subcutaneous nodule (arrows) on her left neck.

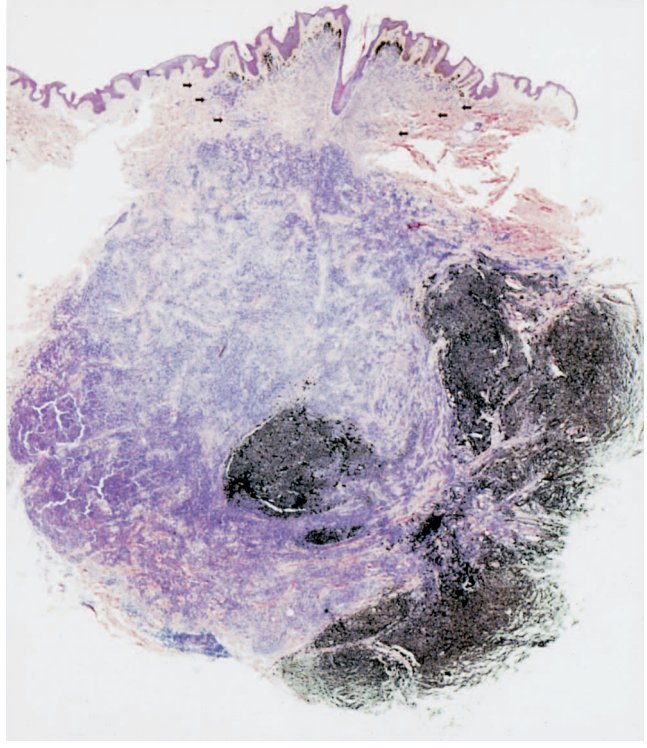

Fig. 2. The superficial, wedge-shaped component (arrows) and the deep, spherical one (haematoxylin-eosin; scanning view).

 ISSN 0001-5555

DISCUSSION

In the present case, the deep melanoma mass was contiguous with the base of the superficial compound naevus histopathologically. Although the differential diagnosis was of secondary melanoma, which had fortuitously seeded under an existing naevus, there was no other primary source detected despite careful clinical investigation. We concluded that the deep melanoma developed in the dermal component of the superficial compound naevus.

CMN measuring more than 20 cm in maximal diameter are referred to as giant type (3). Melanomas arising from non-giant CMN are exclusively of epidermal origin (1, 4), although those from giant CMN could develop in the dermal component (5). The development of melanoma in the dermal component of non-giant CMN has not been reported to our knowledge. There is only one case report of the development of melanoma in the dermal component of acquired naevus similar to the present case histopathologically (6). Melanomas of epidermal origin in past reports leave the question unresolved whether de novo melanomas occurred accidentally near the pre-existing, non-giant CMN or not. We describe the development of melanoma in the dermal component of a small CMN for the first time, thus offering further evidence that melanomas can arise even from small CMN.

REFERENCES

1. Illig L, Weidner F, Hundeiker M, et al. Congenital nevi $\leq$10 cm as precursors to melanoma. Arch Dermatol 1985; 121: 1274–1281.
2. Clemmensen O, Ackerman AB. All small congenital nevi need not be removed. Am J Dermatopathol 1984; 6 (Suppl 1): 189–194.
3. Elder D, Elenitsas R. Congenital melanocytic nevus. In: Elder D, Elenitsas R, Jaworsky C, Johnson B Jr, eds. Lever's Histopathology of the Skin, 8th edn. Philadelphia: J. B. Lippincott Company, 1997: 644–648.
4. Reed RJ. The histological variance of malignant melanoma: the interrelationship of histological subtype, neoplastic progression, and biological behavior. Pathology 1985; 17: 301–312.
5. Rhodes AR, Wood WC, Sober AJ, Mihm MC. Non-epidermal origin of malignant melanoma associated with a giant congenital nevocellular nevus. Plast Reconstr Surg 1979; 67: 782–790.
6. Tajima Y, Nakajima T, Sugano I, Nagao K, Kondo Y. Malignant melanoma within an intradermal nevus. Am J Dermatopathol 1994; 16: 301–306.