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Rapid dermoscopic evolution of a Spitz nevus in an adult masquerading as melanoma

Miloš D. Pavlović[1]✉, Vesna Jurčić[2], James Loubser[3]

[1]Faculty of Medicine, University of Maribor, Maribor, Slovenia. [2]Institute of Pathology, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia. [3]School of Medicine, St. George's University, St. George's, Grenada.

Abstract

Spitz nevi in adults should be closely monitored. Dermoscopy is the preferred method of in vivo imaging of melanocytic nevi and may provide clues for high-risk lesions. However, there is not a perfect match between the dermoscopic image of an individual nevus, the evolution of its change, and its histopathology. We present a case of a rapidly (over months) changing and growing nevus in an adult patient with dermoscopy suggesting a melanoma but eventually with a histology of a Spitz nevus with an accompanying immune reaction.

Keywords: Spitz nevus, dermoscopy, multicomponent, reticular, adult

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Introduction

Spitz nevi are melanocytic nevi that may have clinical, dermoscopic, and/or histopathologic features closely resembling melanoma (1). This is especially true in adults; the possibility of a symmetric spitzoid lesion being a melanoma increases with age, being exceedingly low until age 20 and rising to 50% after age 50 (2). Spitz nevi are usually macular or plaque-like, although nodular lesions exist and more commonly display atypical characteristics. As with many melanocytic tumors, dermoscopy helps identify suspicious lesions and guide their management. There are several global dermoscopic patterns in Spitz nevi: a typical pigmented spitzoid pattern, multicomponent pattern, nonspecific pattern, typical non-pigmented spitzoid pattern, globular pattern, reticular pattern, and homogenous pattern (3). Spitz nevi seem to evolve, changing their dermoscopic pattern and clinical appearances. This typically happens over years in children; this is probably one reason why most of these lesions disappear in adulthood (4). A rapid change, over months, of any melanocytic nevus in an adult should always raise a red flag because this often marks a malignant transformation (5). However, sometimes a completely benign histopathology is found beneath a highly suspicious clinical or dermoscopic presentation.

Case report

A 40-year-old man with a Fitzpatrick III skin phototype and negative personal and family history for skin cancer came for a routine skin examination in July 2020. He had around 20 small acquired junctional and compound melanocytic nevi (2–3 mm in diameter) but a nevus on the back stood out as darker, plaque-like, and a bit larger (5 mm; Figs. 1a, 1b). Dermoscopically it displayed a bit unusually, with a superficial pigmented pattern, short dark brown streaks, globules and blotches at the periphery, and a black to bluish homogenous center (Fig. 1c). Because the patient was unaware of the nevus, we asked him to come back in 3 months and review the lesion. He failed to present at that time and came for an examination 7 months later. The nevus had changed its shape and increased in size (7 × 6 mm), but dermoscopy was surprising, with a complete change in pattern (Fig. 1d). Now the nevus had an asymmetric multicomponent pattern with a homogenous dark bluish area, peripheral dots and globules, white lines, and a negative pigment network. The lesion was excised, and microscopic analysis showed a compound Spitz nevus with a brisk lymphocytic reaction and dermal melanophages. The nevus cells were positive for p16 and negative for BRAF on immunohistochemistry (Figs. 2a–d).

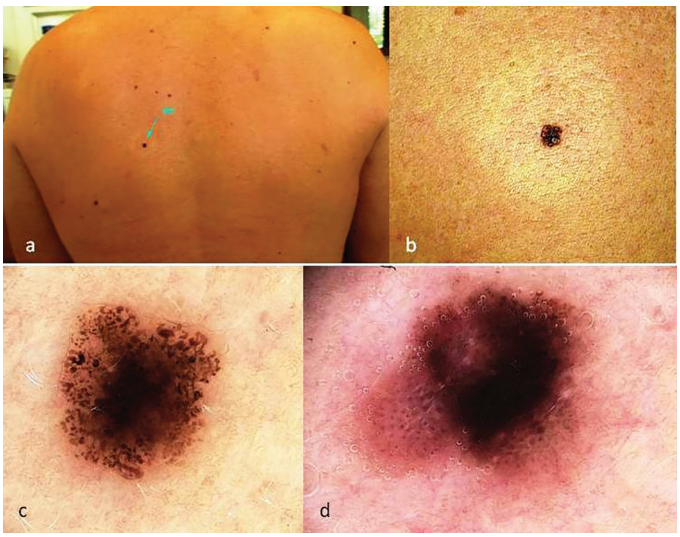

Figure 1 | (a) and (b) (close-up view), a roundish, symmetric dark brown plaque, 5 mm in diameter, with a regular border on the left scapular area; (c) the first dermoscopic image, revealing a pigmented lesion with peripherally arranged globules and interrupted streaks and a central dark brown and bluish homogenous area (original magnification 10×); (d) the second dermoscopic image of the same lesion taken 7 months later. The lesion is asymmetric (6 × 7 mm) with a wider dark brown and bluish area and outgrowths of areas of a negative pigmented network, reddish background, brown dots, and white lines (original magnification 10×).

✉ Corresponding author: mdpavlovic2004@yahoo.com

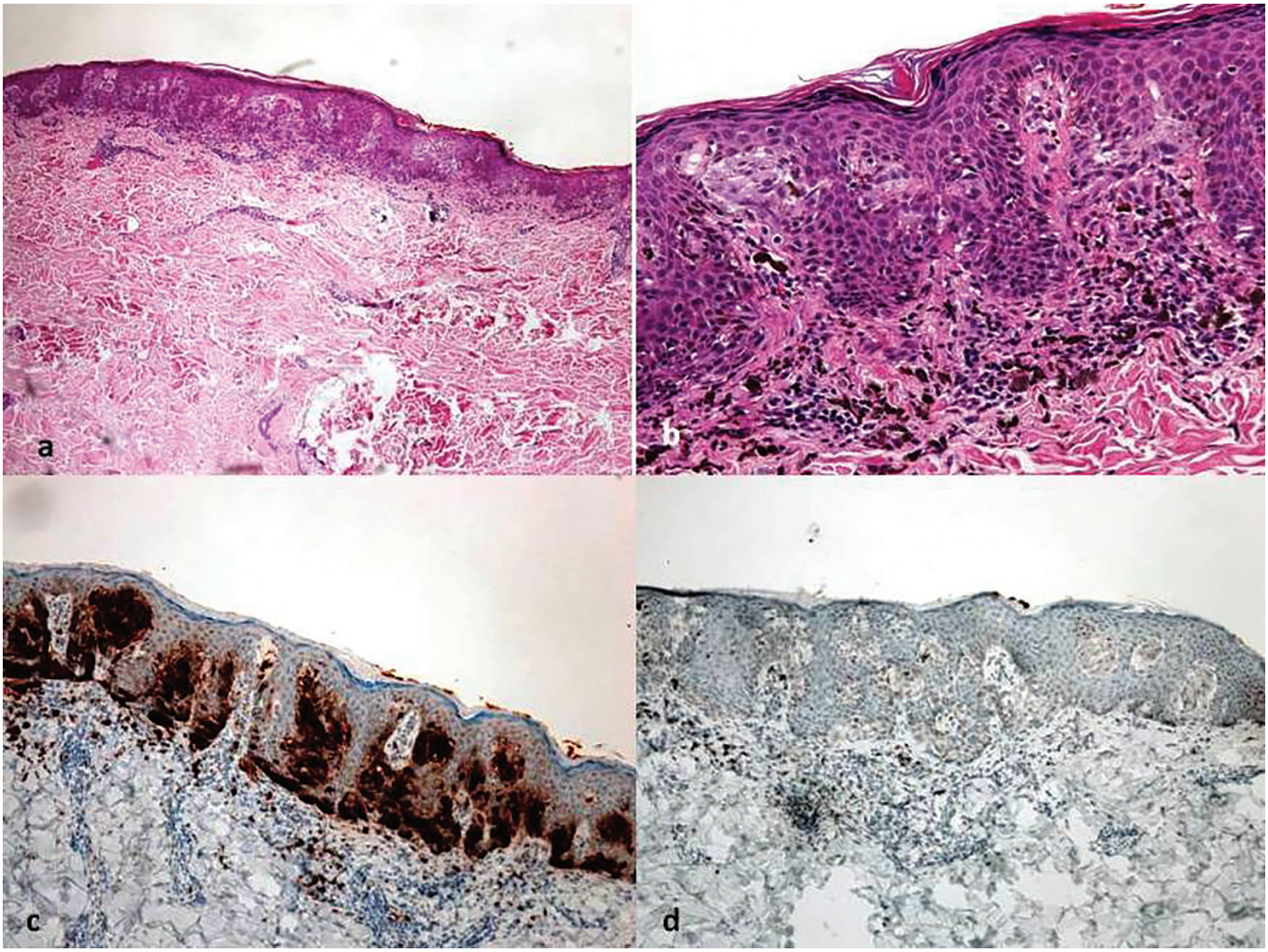

Figure 2 | Compound Spitz nevus: (a) scanning magnification shows a fairly symmetric lesion characterized by mostly junctional nests of unevenly pigmented melanocytes (H&E stain; original magnification 40×); (b) nests of sparsely pigmented, spindle-shaped melanocytes at the dermoepidermal junction and beneath numerous melanophages and lymphocytes in the papillary dermis (H&E stain; original magnification 200×); (c) the nevus cells are uniformly stained with p16; but (d) negative for BRAFV600E (counterstained with Mayer's hematoxylin, original magnification 100×).

Discussion

Melanocytic nevi may change during the life of an individual; however, in adults any sudden and significant change to a nevus should be taken seriously. This is even more important for Spitz nevi in adults (2). Usually the changes are observed over years, and rarely months (4, 6). In children a gradual substitution of an initially globular pattern with a starburst pattern has occasionally been documented, as well as further transformation of the starburst into the common pigmented network pattern (7, 8). These observations have rarely been made in adults. Our patient shows that even significant changes in morphology over a very short time span (a few months) may not correspond to adverse biological behavior of a Spitz nevus. A complete change in the dermoscopic pattern may be a consequence of an immune reaction to the growing nevus with accumulation of melanin pigment in the dermis in addition to epidermal hyperplasia (in our case, the picture resembled a "dissolving" pigmented spindle cell nevus becoming more globular), a kind of "regression" to an early childhood-like pattern (7). Immunohistochemistry staining for p16 and BRAF reaffirmed the benign nature of the nevus.

Generally, Spitz nevi display three major dermoscopic patterns: pigmented Spitz nevi with a starburst pattern, non-pigmented nevi with regular dotted vessels, and pigmented nevi with a globular pattern associated with reticular depigmentation (9). Around 9% of Spitz nevi and atypical Spitz tumors have multicomponent or atypical patterns. The probability that a spitzoid lesion is actually a melanoma increases with age, dermoscopically multicomponent and asymmetric patterns, and nodular versus flat lesion (2, 9). Despite a completely benign histology in our patient, malignancy was suggestive considering his age and the evolution of the nevus, with the initial symmetric "dissolving" starburst pattern transforming into an overtly asymmetric multicomponent (homogenous, globular, negative pigmented network and discrete blue-white veil) pattern.

This case illustrates that a dramatic change in dermoscopic features, more frequently seen in atypical Spitz tumors or Spitz melanoma over a short time period, is not necessarily accompanied by histology characteristic for Spitz tumors.

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