

## Blue Nevus With Satellite Lesions Mimicking Malignant Melanoma<sup>☆</sup>



### Nevo azul con satelitosis que simula melanoma maligno

To the Editor:

Blue nevus is considered to be a benign acquired melanocytic nevus with blue pigmentation that results from the accumulation and differentiation of melanocytic cells in the dermis.<sup>1</sup> We describe the case of a common blue nevus with satellite lesions that mimicked locally disseminated malignant melanoma. Fewer than 10 such cases have been reported in the literature.<sup>2,3</sup>

A 57-year-old man with no personal or family history of skin cancer presented at our hospital during the annual skin cancer prevention and detection campaign with tumor lesions on his scalp and forehead. They were asymptomatic and had appeared a year earlier.

Physical examination showed an asymmetric bluish-black tumor lesion with irregular borders and a serosanguineous crust. The lesion measured 16 x 5 mm in diameter and was accompanied by satellite guttate lesions with a diameter of 1 to 2 mm (Fig. 1). Dermoscopic examination showed a homogeneous blue pattern with shiny white streaks and peripheral serosanguineous crusts (Fig. 2A).

Based on the clinical and dermoscopic findings and with a tentative diagnosis of malignant melanoma, it was decided to perform an excisional biopsy of the largest lesion and a smaller adjacent one. Histologic examination in both cases showed fibrosis and a proliferation of spindle-shaped nevus cells, with marked intracytoplasmic melanin pigmentation and melanophages in the dermis (Fig. 2B). There were no signs of malignancy and a diagnosis of common blue nevus was made.

Blue nevus was first described by Max Tieche in 1906.<sup>4</sup> It is considered to be the result of an ectopic accumulation of melanocytes retained in the dermis during migration from the neural crest to the epidermis.<sup>5</sup>

Blue nevus is usually acquired and it typically presents as a solitary asymptomatic bluish or bluish-black tumor located



Figure 1 Bluish-black tumor with irregular borders and guttate satellite lesions.

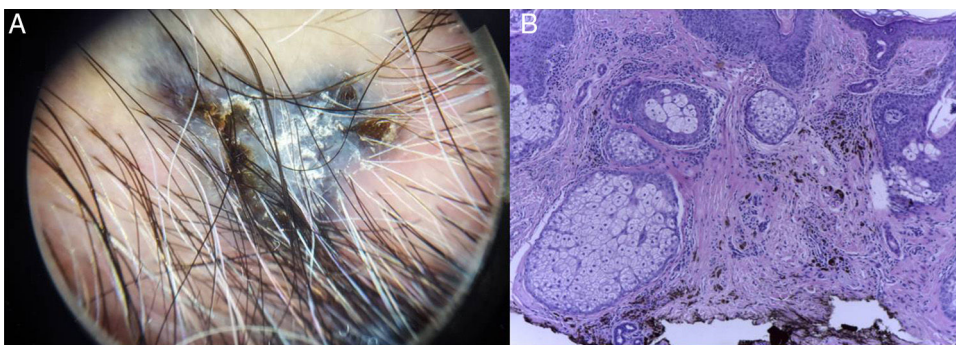


Figure 2 A, Dermoscopic findings showing a homogeneous blue pattern with shiny white streaks. B, Fibrosis and proliferation of nevus cells with marked intracytoplasmic melanin pigmentation and melanophages in the dermis, with no signs of malignancy.

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**Table 1** Clinical and Histologic Variants of Blue Nevus.

Variant	Histologic Features
Common blue nevus	Dendritic melanocytes in the dermis
Cellular blue nevus	Dendritic melanocytes in the dermis admixed with cell islands (dumbbell pattern)
Combined blue nevus	Dendritic melanocytes in the dermis with abundant dendritic cells in the epidermis
Sclerosing blue nevus	Features of a blue nevus with exaggerated fibrosis in the dermis
Epithelioid blue nevus	Pigmented epithelioid melanocytes, few melanophages, and few dendritic melanocytes
Hypomelanotic/amelanotic blue nevus	Features of blue nevus with proliferation of cells associated with desmoplastic stroma
Plaque-type blue nevus	Features of common nevus with cellular nevus and infiltration of subcutaneous tissue
Deep penetrating blue nevus	Nevus cells extending into the dermis
Common blue nevus with satellite lesions	Features of common blue nevus
Agminated blue nevus	Features of common blue nevus
Atypical blue cellular nevus	Atypical cells with polymorphous nuclei
Malignant blue nevus	Malignant cells of melanocytic origin in the deep dermis with normal epidermal cells

Source: Table modified from Savoia et al.<sup>7</sup>

on the head or neck or on the dorsum of the hands or feet.<sup>2,3</sup>

Several clinical and histologic variants have been described (Table 1), the most common of which are common blue nevus, cellular blue nevus, and combined blue nevus.<sup>6,7</sup> The variant described herein, blue nevus with satellite lesions clinically mimicking malignant melanoma with cutaneous metastases, is rare.<sup>2,7-9</sup> The etiology and pathogenesis of the satellite lesions are unknown, although the intense concentration of periadnexal and perivascular nevus cells indicates that they could be caused by the infiltration and dissemination of nevus cells through the perivascular route.<sup>2,3</sup>

Dermoscopic examination typically shows a diffuse homogeneous blue or steel blue structureless pattern, although polychromasia and structures typically associated with melanoma may be seen.<sup>6</sup>

Malignant transformation of blue nevus is a controversial topic,<sup>8-10</sup> but there have been reports of the rare malignant blue nevus variant arising from a pre-existing blue nevus, at the site of an excised blue nevus, or in association with de novo melanoma. This clinical variant mainly affects patients like ours, i.e., men with lesions on the scalp.<sup>8,10</sup>

In conclusion, not all tumor lesions with satellite lesions are predictive of malignancy, but a histopathologic study is recommended because of the overlapping clinical and dermoscopic features.<sup>2,7,9,10</sup>

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

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