

# Hairy Blue Nevus

—A Variant of Blue Nevus ?—

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**A 2-month-old female infant presented with a bluish-black, flat, hairy patch, 1.2cm in diameter, on the posterior aspect of her neck since birth. Histologic sections from the lesion showed numerous diffusely scattered dermal melanocytes throughout the dermis. The histopathologic and clinical findings were not fully consistent with any other known dermal melanocytosis.**

**The diagnosis of "hairy blue nevus" was proposed for this unique lesion. (Ann Dermatol 1:123-125, 1989)**

*Key Words:* Blue nevus, Dermal melanocytosis, Hairy blue nevus

Dermal melanocytosis is characterized by the presence of ectopic melanocytes in the dermis. Melanocytosis assumes several morphologic forms, including mongolian spot, blue nevus, nevus of Ota, nevus of Ito, and dermal melanocyte hamartoma.<sup>1,2</sup>

We report, herein, an unusual type of dermal melanocytosis, in which the clinical lesion has features of congenital hairy melanocytic nevus except its blue color, but the histologic changes show changes consistent with a common blue nevus, so that is not completely consistent with either of these entities.<sup>3</sup>

## REPORT OF A CASE

A 2-month-old female infant presented with a bluish-black, flat, hairy patch on the posterior aspect of her neck. The lesion was congenital and no appreciable change in appearance had occurred since birth. The baby shows no congenital abnormalities,

but show the symptoms of cerebral palsy.

On physical examination, a bluish-black, flat, hairy patch, measuring 1.2 cm in diameter was seen on the posterior aspect of her neck (Fig. 1). A clinical diagnosis of congenital hairy melanocytic nevus was made and a 3-mm punch biopsy specimen was taken from the center of the lesion when the patient was first seen on May 11, 1988. There was no hyperpig-



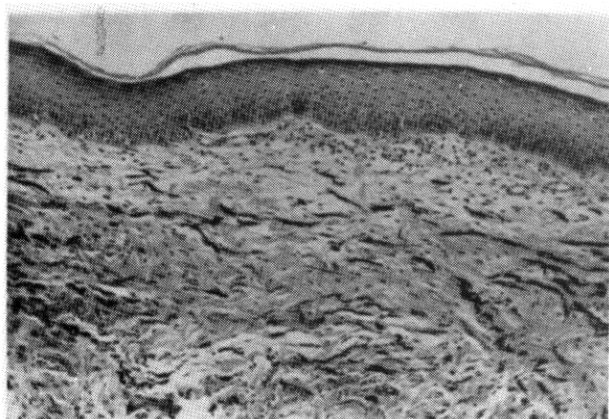
**Fig. 1.** Bluish-black, 1.2 cm in diameter, round hairy patch on the posterior neck. White macule in the lesion represents the previous biopsied site.

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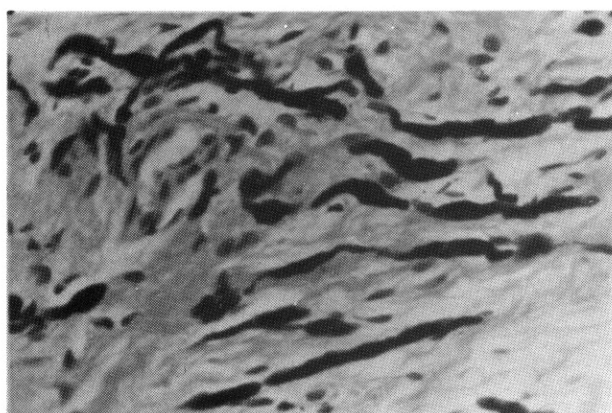
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**Fig. 2.** Numerous spindle-shaped dermal melanocytes diffusely located in the upper and mid dermis (H & E stain,  $\times 100$ ).



**Fig. 3.** Dermal melanocytes with long slender, tapering, melanin-laden dendritic processes (H & E stain,  $\times 400$ ).

mentation or melanocytic hyperplasia of the dermo-epidermal junction and numerous heavily pigmented bipolar melanocytes were diffusely located in the upper and mid dermis (Fig. 2, 3). There was no significant nuclear atypia or other evidence of malignancy. The lesion had no tendency to resolve or progress during the observation period of 1 year.

## DISCUSSION

Dermal melanocytosis is characterized by the presence of ectopic melanocytes in the dermis after birth. During the first half of fetal life, pigment-forming cells, considered to be precursors of junctional melanocytes, are present in the dermis of the whole integument. And then, dermal melanocytes migrate to their designated site at the dermo-epidermal junction. Dermal melanocytoses occur when the melanocytes fail to reach the

epidermal basal cell layer. The factors responsible for the failure of dermal melanocytes to reach their destination at the base of the epidermis are still unknown.<sup>1, 2, 3</sup>

Dermal melanocytoses are most commonly found in the skin of Asiatics and other darkly pigmented people.<sup>5</sup> The pigmented lesion in our patient was a single, bluish-black, well demarcated, flat, hairy patch situated on the posterior aspect of the neck. The lesion was present at birth and had no tendency to resolve or progress during the observation period of 1 year. Clinically, we thought this case was a congenital hairy melanocytic nevus. Both the nevus of Ota and the nevus of Ito have brown, slate gray or bluish-black pigmentation in a neural distribution and the lesions usually appear at birth or shortly thereafter.<sup>6, 7</sup> The mongolian spot is a bluish gray pigmentation which occurs typically in the sacral region of the newborn and usually disappears during childhood.<sup>8</sup> The lesion in our case does not fit into any of above mentioned entities because of its well defined margins, bluish-black color, size and location, and its hairy nature.

The blue nevus appears as a sharply circumscribed, slightly raised, rounded, pigmented lesion.<sup>9</sup> Several types of blue nevus have been described; (1) common, (2) cellular, (3) macular (plaque type),<sup>10</sup> (4) atypical,<sup>11</sup> and (5) others.<sup>12-15</sup> In our case, the lesion is a 1.2 cm, bluish-black, flat patch with a hairy nature, so it is not consistent with any types of known blue nevus.

The various types of dermal melanocytosis differ in the concentration and location of the melanocytes. Histologically, there are two forms of blue nevi. The common blue nevus consists of a highly concentrated melanocytic aggregation forming bundles or in a patchy distribution in the dermis. Numerous melanophages are usually present. The cellular type of blue nevus has, in addition to the dermal melanocytes, a large proportion of closely aggregated spindle-shaped cells.<sup>16</sup> In our case, the number of dermal melanocytes is more than that of a mongolian spot or dermal melanocyte hamartoma, and similar to those of a common blue nevus, but their distribution pattern is similar to that of a mongolian spot,<sup>17</sup> so this feature is not consistent with any type of the above mentioned dermal melanocytoses. The differential diagnoses discussed are summarized in Table 1.

**Table 1.** Differential diagnostic features of dermal melanocytic lesions

	Mongolian Spot	Common Blue Nevus	Nevus of Ito	Dermal Melanocytic Hamartoma	Present Case
Onset	at birth or soon after	at birth or later in life	at birth or soon after	at birth	at birth
Course	tends to disappear	persistent	persistent	persistent	persistent?
Color	uniform gray-tan, slate blue	uniform slate blue or bluish black	uniform brown, slate gray or blue black	speckled gray-blue	uniform bluish black
Type of lesion	macule	papule or nodule	patch	macule or patch	patch
Hair	normal for site	normal for site	normal for site	normal for site	terminal hair
Distribution	random; usually sacral area	usually dorsa of hands and feet	supraclavicular, scapular and deltoid region	random	posterior neck
Histopathology	scattered melanocytes in lower half or two thirds of dermis in low concentration no melanophages	highly concentrated melanocytes in middle and lower third of dermis melanophages usually present	moderate number of melanocytes in upper dermis no melanophages	moderate number of melanocytes in upper dermis no melanophages	diffusely scattered, numerous melanocytes through dermis no melanophages

We report an unusual type of dermal melanocytosis which does not fit into any of the above mentioned categories, and for which we propose the name "hairy blue nevus".<sup>3</sup> More examples of this type of dermal melanocytosis will be necessary to make it a distinctive clinical entity.

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