

Dermatology Digest

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FIGURE 1
Hyperpigmented
hairy lesion

An enlarging lesion on the knee of a teenager

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›CASE

A 16-year-old boy came to the dermatology clinic seeking evaluation of a lesion on his knee. The boy's parents had first noticed skin changes in the area about 2 years before, when the boy was 14 and just entering puberty. The lesion began as focal darkening of the skin on his left knee. This was followed over the next months by the appearance of an increasing number of hairs within the lesion, which continued to enlarge. Alarmed at the lesion's changing appearance and increase in size, the boy's parents consulted his pediatrician who, in turn, referred the family to dermatology.

The boy was in good health. A uniformly pigmented, 20×25-cm, light brown macule with irregular margins (see Figure 1) covered the entire surface of the left knee, spilling over onto the anterior thigh and leg; the posterior leg was spared. Compared with the surrounding area, the number of hairs within the borders of the lesion was definitely greater. No other skin changes were visible on his body.

A punch biopsy was performed. The specimen was embedded in paraffin to facilitate the cutting of ultrathin sections, which were then placed on slides and exposed to hematoxylin-eosin stain. This so-called differential staining imparts either a blue or pinkish orange color to the various tissues, allowing the viewer to visually distinguish, for example, nuclear tissue (stains blue) from fibers of the dermis (stain pinkish orange). This patient's specimen exhibited elongated rete ridges, an increase in bundles of smooth muscle fibers unassociated with either follicular units or vasculature, and increased melanin in the epidermis.

›THE MOST LIKELY DIAGNOSIS IS

- *Becker nevus*
- *Giant melanocytic nevus*
- *Tinea versicolor*
- *Café-au-lait spot*

›DISCUSSION

The teenager had a Becker nevus. The histologic findings, natural history, and hypertrichosis were totally inconsistent with giant melanocytic nevus, which is almost always congenital. In tinea versicolor, the lesion would have been slightly scaly, since the disorder represents an epidermal overgrowth of a commensal yeast organism, *Malassezia furfur*, which could have been found on a potassium hydroxide examination. Tinea versicolor would also have manifested with more irregular pigmentation and would have demonstrated an entirely different histologic picture. The hypertrichosis seen in this lesion, along with the biopsy results, effectively rules out a café-au-lait spot. The latter is worth considering, however, given the potential association with neurofibromatosis type 1.

The shoulder and chest are much more common locations for a Becker nevus, although it has been reported on multiple areas, including the arms and legs (as happened in this patient). The reported incidence is about 0.5%. Boys are affected far more often than girls, and onset almost always coincides with puberty. These two facts, taken along with the hypertrichosis, bolster the case for an androgenic basis for development of a Becker nevus. Even in the unusual patient who lacks hypertrichosis, studies have shown a marked increase in androgen receptors in lesional skin. The appearance and context generally make a Becker nevus very easy to diagnose, although biopsy was done in this case because of the unusual location. Rarely, a Becker nevus has been associated with hypoplasia of adjacent areas, such as breasts, arms, and legs.

Treatment There is no medical reason to treat a Becker nevus. The concerns are strictly cosmetic; these nevi have almost no malignant potential. Laser therapy is possible but carries the usual risks of dyschromia and lesion persistence. As of this writing, the family was mulling treatment options. **JAAPA**