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Photo Vignette

Rapidly growing pigmented tumor on a scalp nevus sebaceous of a pediatric patient: Observation or excision

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Abstract

A 14-year-old girl presented with a new, rapidly growing, pigmented tumor on a previously existing yellowish, verrucous plaque on the scalp. The patient received complete surgical excision. Routine histology ruled out basal cell carcinoma (BCC) and the histological diagnosis was pigmented trichoblastoma arising in nevus sebaceous (NS). It is important to define management for new lesions developing in pediatric patients with existing nevus sebaceus.

Keywords: nevus sebaceous, basal cell carcinoma, pigmented trichoblastoma

Introduction

NS is a congenital skin hamartoma that typically appears on the head, neck, and face. NS often begins as a hairless plaque, becoming verrucous during puberty; tumors may appear subsequently. In the pediatric population, benign and malignant neoplasms can appear in NS [1].

Case synopsis

A 14-year-old girl presented with a new, rapidly growing, pigmented tumor on a previously existing yellowish, verrucous plaque on the scalp. The mother showed concern over the growth of the new tumor on the existing NS. The patient denied any other symptoms. Clinically, an 8mm well-circumscribed black nodule on a 4-cm tan-yellow plaque on the right temporal scalp was revealed (Figure 1a). The patient received complete surgical excision.

The histology shows NS with a nodular tumor located in the dermis with no epidermal connection (Figure 2a). The tumor is characterized by nests of basaloid cells showing peripheral palisading, without atypia, mitosis, or clefting at the stromal-tumor interface (Figure 2b). In addition, melanocytes with heavy pigmentation are demonstrated (Figure 2c). The stroma is fibrocellular with invaginations into nests of basal cells reminiscent of hair follicles (papillary mesenchymal bodies) (Figure 2d).

The final diagnosis was NS associated with pigmented trichoblastoma.

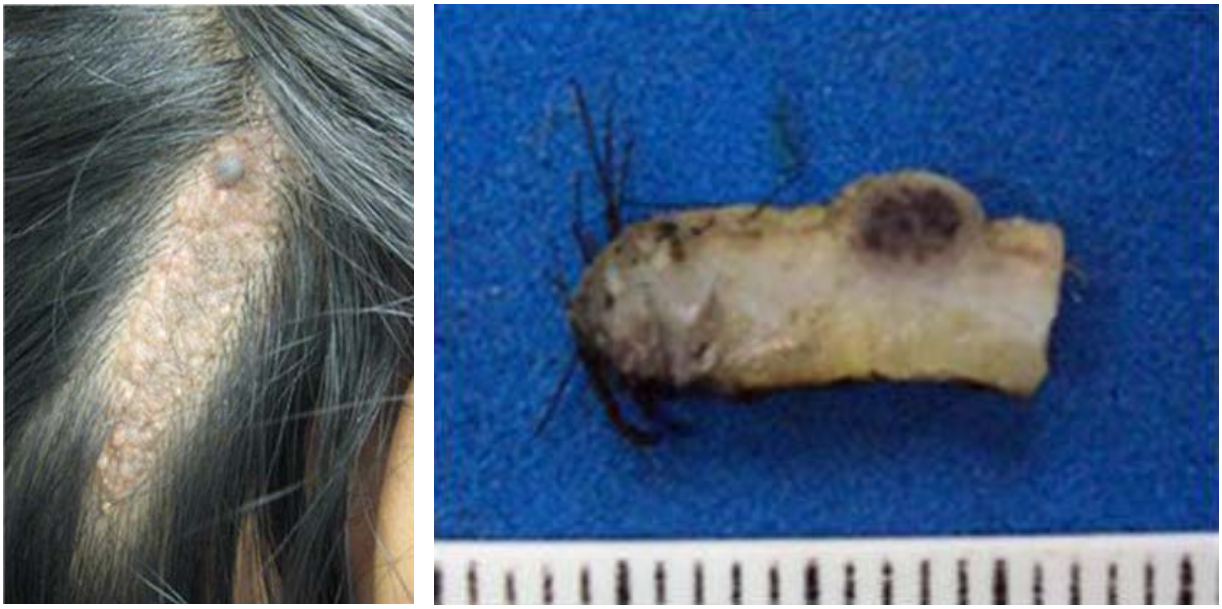

Figure 1. A: Clinical features: A pigmented nodule on the verrucous plaque: B: The cut surface of the tumor is well circumscribed, solid with dark black pigmentation.

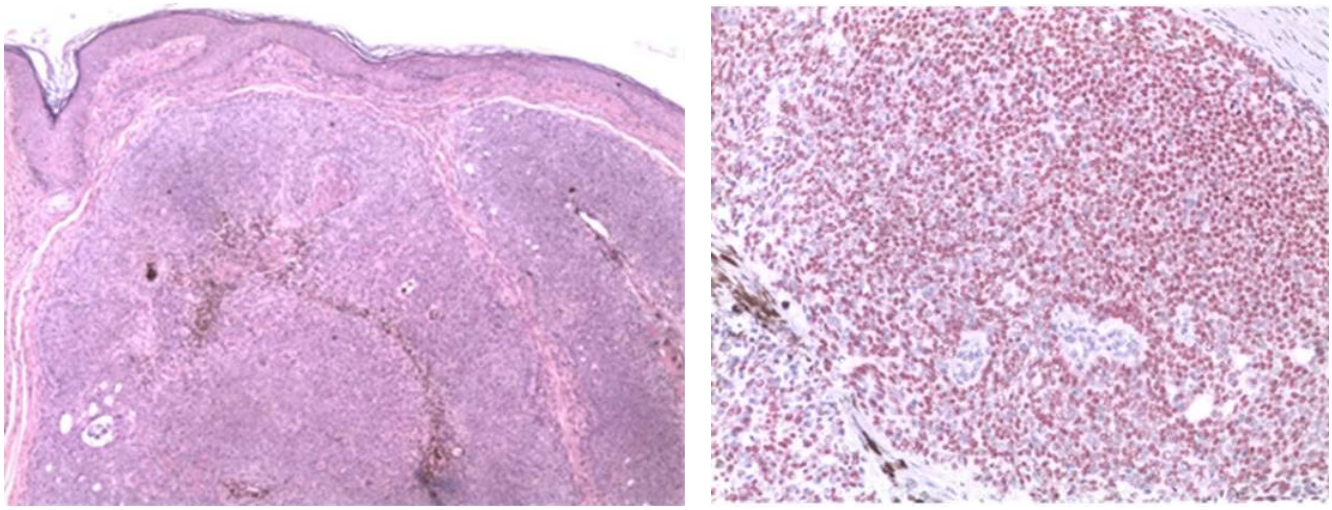

Figure 2. A: Hematoxylin and Eosin. Low power view showing nodular pigmented tumor involving the dermis and heavy melanin deposits B: Immunohistochemistry.:Tumor epithelial cells are positive for P-63.

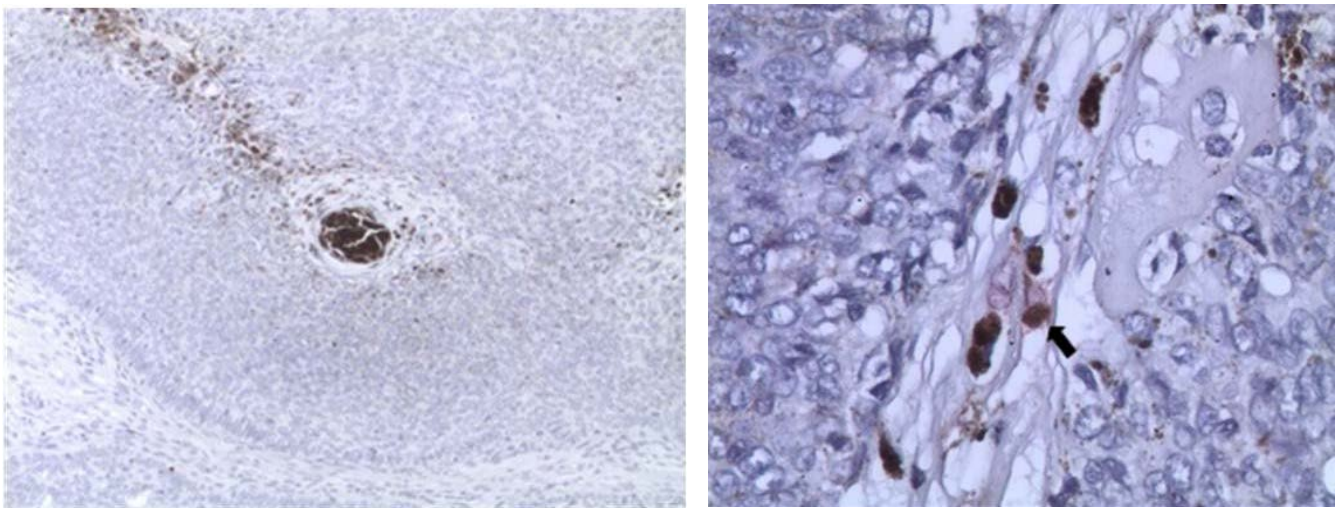

Figure 2. C: Immunohistochemistry: Tumor epithelial cells are negative for Bcl-2. D: Immunohistochemistry: Melanin deposits are focally positive for S-100 (Arrow).

Discussion

NS has a recognized malignant potential. BCC is the most common form of skin cancer associated with NS and has been observed in pediatric patients [1]. For this reason it was important to investigate for BCC [2].

Routine histology results showed the tumor to have no epidermal connection and no atypia or mitosis. In addition to the presence of papillary mesenchymal bodies, there were melanocytes between neoplastic cells. Furthermore, there were no clefts at the stromal-tumor interface. Based on these findings, we ruled out BCC; pigmented trichoblastoma was diagnosed. Trichoblastoma is a common benign tumor arising from NS. Histologically, it recapitulates primitive hair follicles [1]. A pigmented variant of trichoblastoma is rare [2,3]. To the best of our knowledge, only a few cases arising in a nevus sebaceus have been reported in the literature, ours being the youngest case reported to date [2, 3].

In pediatric patients with NS only, previous reports have shown that excision is not necessary [4, 5]. However, in secondary tumors developing within the NS, clinically observed features are insufficient to make the exact diagnosis of benign or malignant lesions. It is important to define optimal management for new lesions developing in pediatric patients with existing NS [5, 6].

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