

Ripple-pattern melanotrichoblastoma arising within nevus sebaceus

Sir,

Nevus sebaceus (NS), also known as nevus sebaceus of Jadassohn, is a cutaneous congenital hamartoma. There are several different neoplasms associated with NS. Among them, syringocystadenoma papilliferum and trichoblastoma are the most common benign tumors.^[1] Trichoblastoma (TB) is a solitary, non-ulcerated, flesh-colored to bluish-black papule or nodule located mostly on the head and neck. It is derived from the follicular germinative cells with hair papilla-like structures. We reported an extremely rare subtype of TB arising within nevus sebaceus.

A 34-year-old healthy Taiwanese male presented with a dome-shaped, blue-black nodule that erupted from a yellowish hairless plaque on the left side of the temporal scalp. The plaque was present since birth. The patient noticed the pigmented nodule 3 years ago. Physical examination showed a yellowish, verrucous, hairless plaque that measured 6.0 cm × 5.0 cm. A dome-shaped, blue-black nodule, 1.0 cm in diameter, was present in the lower half of the plaque [Figure 1].

Histopathologic examination revealed epidermal papillomatosis and numerous sebaceous glands in



Figure 1: A 6.0 cm × 5.0 cm yellowish, verrucous, hairless plaque located on the left temporal scalp. A dome-shaped, blue-black nodule, 1.0 cm in diameter, was present in the lower half of the plaque

the dermis with reduced numbers of hair follicles. A well-circumscribed tumor nodule was found without epidermal connection or clefting artifact between the basaloid tumor islands and the adjacent stroma [Figure 2]. The nodule was composed of bland basaloid cells arranged in parallel rows of epithelial ribbons, and abundant melanin pigment was also observed. No significant cytologic atypia or abnormal mitoses were found [Figure 3]. Immunohistochemical staining revealed numerous HMB45-positive dendritic melanocytes in both the pigmented and nonpigmented epithelial cell compartments [Figure 4a]. Epithelial membrane antigen (EMA) highlighted sebaceous glands of nevus sebaceus. There were no vacuolated EMA-positive sebocytes found in the central blue nodule [Figure 4b]. We diagnosed the scalp lesion as a rare case of ripple-pattern melanotrichoblastoma arising in a background of congenital nevus sebaceus.

TB is a well-circumscribed nodule composed of follicular germinative cells arranged in variably sized nests located in the dermis, sometimes

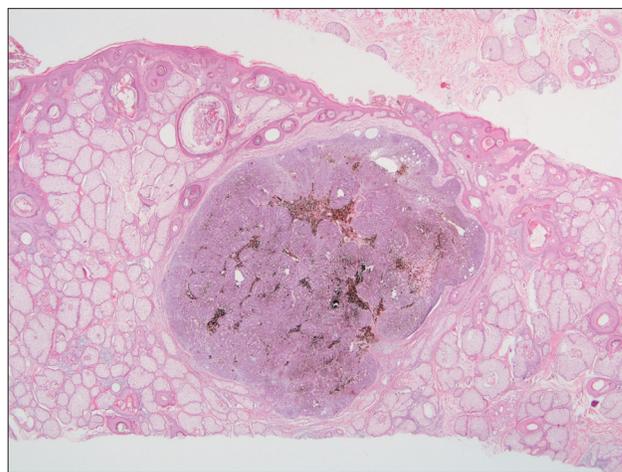


Figure 2: Epidermal papillomatosis and hyperplastic sebaceous glands in the superficial dermis with reduced follicular structures were observed. Besides, a well-demarcated tumor nodule was in the dermis without obvious epithelial stromal retraction cleft (H and E, ×20)

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extending to the subcutaneous tissue. In the recent study, the most basaloid neoplasms arising in NS previously diagnosed of basal cell carcinoma have been considered as TB.^[2] Pigmented TB is a rare pathological presentation. The pathologic features are not only the presence of basaloid tumor cells arranged in the nodular pattern but also large amounts of melanin deposition within and around the tumor lobules.

Melanotrichoblastoma is a rare subtype of pigmented TB. Besides the deposition of heavy melanin, it is characterized by the presence of abundant dendritic melanocytes within tumor nests (Figure 4a). In the literature, only two cases have been reported, but none of them were related to NS.^[3,4] In 1992, Kanitakis

et al.^[3] presented the first case of a 32-year-old woman with a heavily pigmented nodule on the scalp. The histopathologic findings are compatible to pigmented TB with a well-circumscribed tumor consisting of nodules with uniform basaloid tumor cells, some of them present as the reminiscent of hair follicle germs, and heavy melanin deposition. Besides, the proliferation of dendritic melanocytes were dispersed in the basaloid tumor cells. Due to the resemblance to melanoacanthoma composed of the proliferation of melanocytes and keratinocytes, the author called the tumor melanotrichoblastoma. In 2011, Kim *et al.*^[4] reported the second case of a 51-year-old male with a giant melanotrichoblastoma, 6 cm × 4.3 cm × 3 cm in size, on his back. In our present case, a dome-shaped blue-black nodule, 1 cm in diameter, arose from a yellowish, verrucous, hairless plaque on the left temporal scalp. The histopathologic findings are a smooth-bordered tumor with basaloid cells arranged in the ripple pattern, lots of melanin deposition, and the proliferation of dendritic melanocytes in the background of NS. It is the first reported case of ripple-pattern melanotrichoblastoma arising from a pre-existent NS.

Differential diagnosis would include basal cell carcinoma (BCC); however, the histological findings of BCC within NS include aggregations of basaloid tumor cells that vary markedly in size and shape, limited fibrous stroma, retraction artifact separating tumor and surrounding stroma, cytologic atypia, aberrant mitoses, and the lack of follicular differentiation.^[2] In our case, we observed a well-circumscribed dermal tumor nodule without connection to the overlying epidermis and no obvious mitoses or retraction

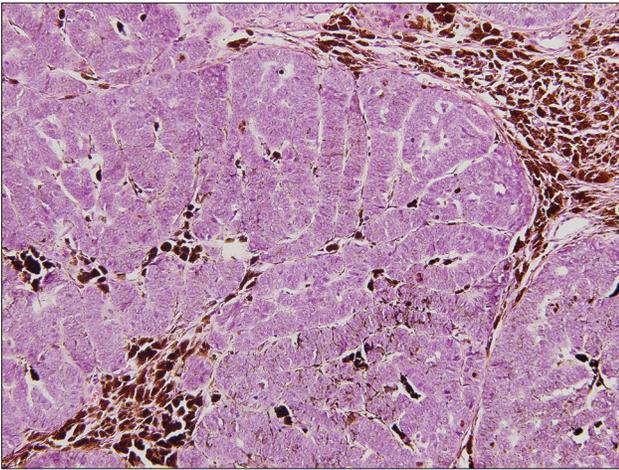


Figure 3: Basaloid cells with elongated cytologically bland nuclei arranged in parallel rows of epithelial ribbons, and abundant melanin pigment was also observed. No high-grade cytologic atypia or mitoses were seen (H and E, ×200)

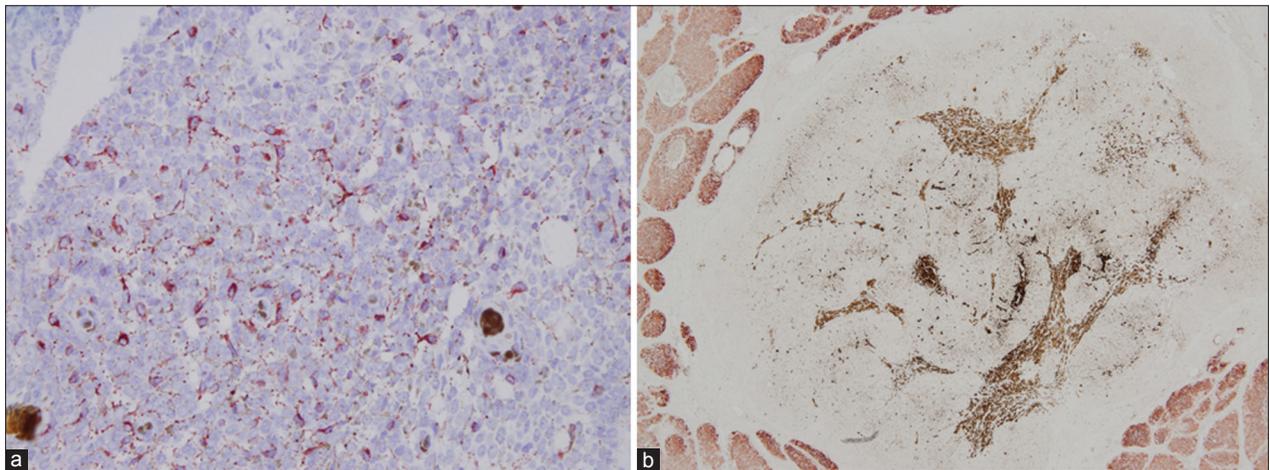


Figure 4: Immunohistochemistry (a) HMB45 (×400): scattered dendritic melanocytes within the tumor nodule (b) EMA (×200): multiple vacuolated positive sebocytes in the sebaceous glands of nevus sebaceus. No sebaceous differentiation in the tumor

artifact was found [Figures 2 and 3]. Sebaceoma is a benign sebaceous neoplasm, which is composed of basaloid, sebaceous germinative cells, and/or ductal structures. It may associate with nevus sebaceus,^[1] and a ripple pattern may be one of the pathologic features.^[5] In the present case, no sebaceous differentiation was observed. We further confirmed by the negative immunohistochemical staining of EMA [Figure 4b].

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REFERENCES

1. Cribier B, Scrivener Y, Grosshans E. Tumors arising in nevus sebaceus: A study of 596 cases. *J Am Acad Dermatol* 2000;42:263-8.
2. Kadu S, Schaeppi H, Kerl H, Soyer HP. Basaloid neoplasms in nevus sebaceus. *J Cutan Pathol* 2000;27:327-37.
3. Kanitakis J, Brutzkus A, Butnaru AC, Claudy A. Melanotrichoblastoma: Immunohistochemical study of a variant of pigmented trichoblastoma. *Am J Dermatopathol* 2002;24:498-501.
4. Kim DW, Lee JH, Kim I. Giant melanotrichoblastoma. *Am J Dermatopathol* 2011;33:e37-40.
5. Ansai S, Kimura T. Rippled-pattern sebaceoma: A clinicopathological study. *Am J Dermatopathol* 2009;31:364-6.

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