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A Giant, Deep, Benign Fibrous Histiocytoma with a Palisading Pattern

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Dear Editor:

A 42-year-old male patient presented to our clinic with a skin-colored mass that had been present for 2 years; his medical and family histories were otherwise unremarkable. Physical examination revealed a soft, movable, skin-colored mass on his upper left back, with a brown, bean-sized pedunculated nodule on the overlying skin (Fig. 1A). Excisional biopsy was performed. The tumor, which was well demarcated and localized in the subcutaneous layer, measured $5.4 \times 5.1 \times 2.1$ cm (Fig. 1B). The histopathological examination indicated that the lesion was an encapsulated mass, located in subcutaneous tissue with a central cavity. The tumor was well-circumscribed by a fibrous capsule, and no honeycomb pattern was observed in the marginal area. In the tumor periphery, large blood vessels with a dilated, branching appearance were observed (Fig. 2A). The tumor cells were arranged in a palisading and partially storiform pattern, with focal myxoid change (Fig. 2B). Under high magnification, the tumor cells were spindle shaped with elongated nuclei and an ill-defined cytoplasm; individual cells were infiltrating between collagen bundles and arranged in a palisading pattern, similar to Verocay bodies (Fig. 2C). Cellular atypia and mitotic bodies were not detected. Immunohistochemical analysis revealed that the cells were strongly positive for CD34 (Fig. 2D); focally positive for factor XIIIa; and negative for S-100 (Fig. 2E), desmin, actin, and CD68. A diagnosis of giant, deep, benign fibrous histiocytoma (BFH), with a palisading pattern, was rendered, with no evidence of recurrence at 15 months after excision.

BFH, which is characterized by several histological subtypes, is among the most-common soft tissue skin tumors. Since Fletcher's¹ description in 1990 of 21 cases of deep BFH (DBFH), several more cases have been reported¹⁻³.

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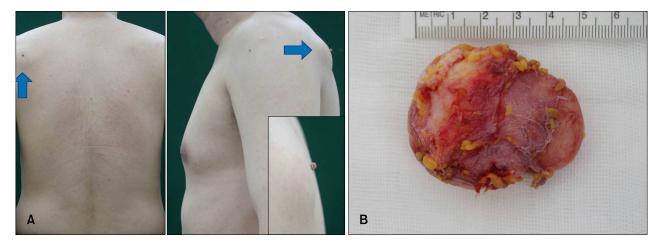


Fig. 1. (A) A skin-colored mass on the back (arrows) with a coincident overlying skin tag (inset: close-up view). (B) The excised $5\times5\times2$ cm well-encapsulated erythematous oval mass.

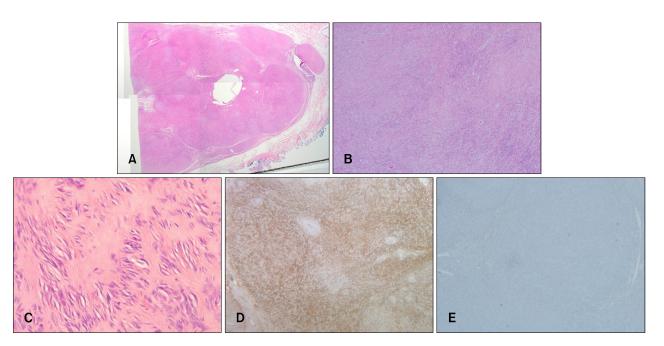


Fig. 2. (A) Scanning view of the histopathological examination of the lesion showing an encapsulated mass located from the lower dermis through the subcutaneous tissue with a central cavity. The tumor was well circumscribed by a fibrous capsule, and no honeycomb pattern was detected in the marginal area. Hemangiopericytoma-like dilated vessels were seen in the periphery of the tumor (H&E, \times 5). (B) Tumor cells arranged in a palisading pattern, similar to that of Verocay bodies, with a focal storiform pattern and partial myxoid change (H&E, \times 40). (C) Spindle-shaped tumor cells with elongated nuclei and an ill-defined cytoplasm. Neither cellular atypia nor mitotic bodies were detected (H&E, \times 400). Immunohistochemical staining showed (D) a strong positivity to CD34 (\times 40) and (E) negativity to S-100 (\times 40).

DBFH, which accounts for $<1\%\sim2\%$ of all BFH cases, is larger and arises lower in the subcutis¹, and confers an increased risk of local recurrence and distant metastasis³. Similar to BFH, giant fibrous histiocytoma (>5 cm), which represents a rare variant of fibrous histiocytoma, is benign, and no local recurrence after surgical excision has been reported to date⁴.

Palisading BFH is a rare variant of BFH, first described by

Schwob and Santa Cruz⁵ in 1986. On histopathological examination, palisading BFH resembles a schwannoma; the lack of neural cells and S-100 negativity could facilitate the differential diagnosis⁵. Although several cases of palisading BFH have been reported^{2,5}, only one case of palisading DBFH has been documented².

In our patient, the tumor cells were strongly positive for CD34; therefore, it is difficult to exclude dermatofibro-

sarcoma protuberance. However, Gleason and Fletcher³ reported that 40% of DBFH cases are positive for CD34. The histopathological findings of a well-circumscribed capsule, low cell density, and a lack of atypical cells and mitotic bodies also suggest a benign nature; therefore, the final diagnosis was an uncommon case of giant DBFH.

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