A Case of Atypical Cutaneous Fibrous Histiocytoma

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Atypical cutaneous fibrous histiocytoma (ACFH) is not well known and only a small number of cases have been reported. Characteristically, ACFH is found on the trunk and limbs of middle-aged women. Although considerable cellular atypia may be present, it occurs focally, the remainder of the tumor representing more classical cutaneous fibrous histiocytoma. A 37-year-old woman presented with a solitary brownish firm nodule on her right forearm. No other abnormalities were found in her personal or family history. Clinically, the tumor simulated a benign fibrous histiocytoma. Histologic examination revealed a poorly delineated intradermal tumor with the usual appearance of benign cutaneous fibrous histiocytoma, but a variable proportion of cells in the tumor were scattered atypical cells or bizarre multinucleated giant cells. We report upon a rare case of ACFH. (Ann Dermatol 14(1) 42-44, 2002).

Key Words : Atypical cutaneous fibrous histiocytoma

Atypical cutaneous fibrous histiocytoma (ACFH), which appear to be a variant of benign cutaneous fibrous histiocytoma, is a little-known but not uncommon pseudomalignancy that must be differentiated from pleomorphic fibroma, atypical fibroxanthoma, and pleomorphic malignant fibrous histiocytoma1. It clinicopathologically consists of a dermal nodule presenting as a dermal fibrous lesion with sparse cellularity but with striking nuclear atypia, pleomorphism, and rare mitotic figures2. We report an additional case of atypical cutaneous fibrous histiocytoma.

CASE REPORT

A 37-year-old woman presented with a solitary nodule on her right forearm. The nodule had developed 1 year previously. Physical examination revealed a brownish, firm, well demarcated nodule of 1cm in diameter (Fig. 1). Histopathologic examination disclosed a poorly-delineated intradermal tumor with overlying epidermal hyperplasia that showed the usual appearance of benign cutaneous fibrous histiocytoma, consisting of a mixture of spindle-shaped or histiocyte-like cells and thick collagen fibers (Fig. 2). A variable proportion of cells in the tumor had scattered atypical cells with irregular large pleomorphic nuclei and atypical bizarre multinucleated giant cells with irregular hyperchromatic nuclei. Mitotic figures were absent (Fig. 3). These cells in the tumor showed positive stain for Masson trichrome and were negative for actin, desmin, S-100, and CD34. The excision was not performed due to patient's refusal. The patient has been observed for 2 years without evidence of enlargement or metastasis.

DISCUSSION

Most benign fibrous histiocytomas (der-

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matofibromas) are easily diagnosed, both clinically and histopathologically, but some benign fibrous histiocytomas show a variable proportion of atypical cells and pleomorphism in the tumor. Levan et al described cases of dermatofibroma with atypical cells as pseudosarcomatous dermatofibroma3. In more recent publications, additional cases were described as atypical (pseudosarcomatous) cutaneous histiocytoma, atypical cutaneous fibrous histiocytoma, atypical sessile dermatofibroma and atypical polypoid dermatofibroma, which all contained monster cells or atypical cells1,4-7. Clinically it has the same features as common benign fibrous histiocytoma, and histologically it shows the usual appearance of a benign fibrous histiocytoma, but a minority of the cells show cellular atypia and pleomorphism without mitosis. These cells are either multinucleated or bizarre giant cells with large hyperchromatic nuclei and atypical cells with large nuclei, and are known as monster cells1. Primary differential diagnosis includes pleomorphic fibroma, atypical fibroxanthoma, and pleomorphic malignant fibrous histiocytoma. Pleomorphic fibroma is the benign tumor that exhibits similar cytologic features to benign fibrous histiocytoma, but presents as an exophytic nodule with CD34 reactivity8. Atypical fibroxanthoma, which principally arises in actinically-damaged skin of the head and neck in the elderly, shows very marked pleomorphism throughout the lesion with prominent abnormal mitosis9, and

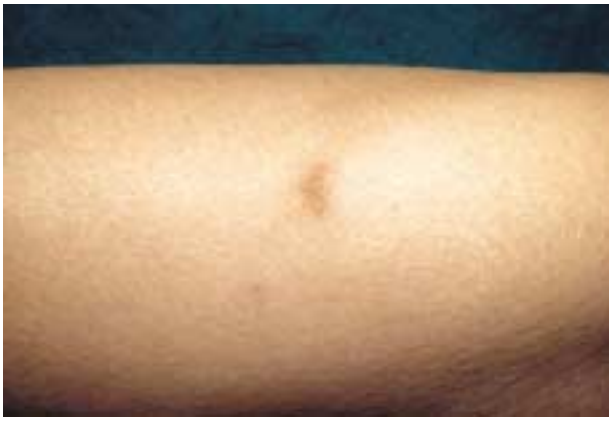

Fig. 1. Round-brownish nodule on right forearm.

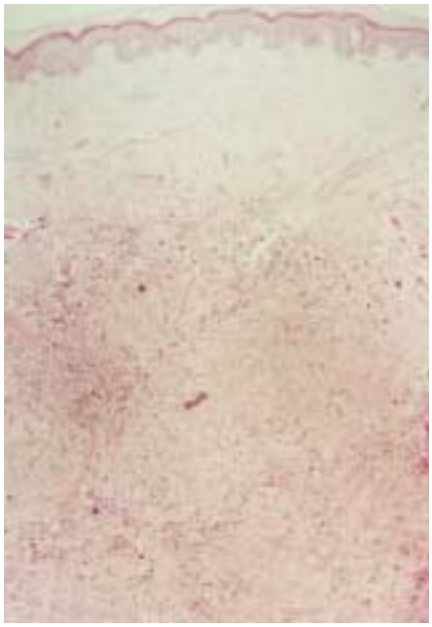

Fig. 2. Atypical benign fibrous histiocytoma shows usual appearance of benign fibrous histiocytoma (H&E stain, ×40).

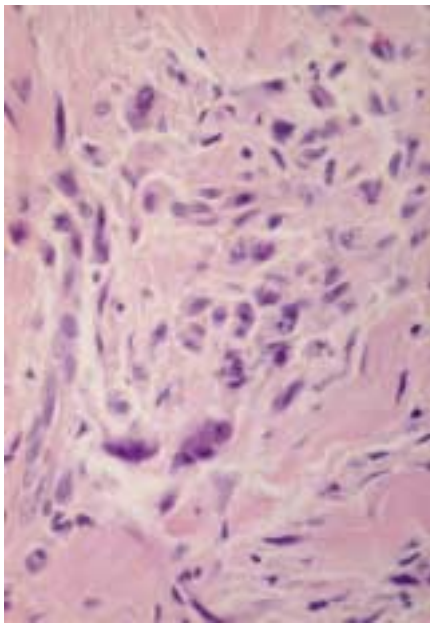

Fig. 3. Atypical cells or monster cells have large hyperchromatic nuclei with prominent nucleoli. Some cells have abundant vacuolated cytoplasm. A few atypical giant cells have multinucleated and pleomorphic nuclei(H&E stain, ×400).

pleomorphic malignant fibrous histiocytoma is rare in the skin, usually occurring in striated muscles and shows more widespread pleomorphism, abnormal mitotic activity, and frequently necrosis10,11. Marrogi et al reported that 47% of benign fibrous histiocytomas recurred after initial excision; therefore, complete excision and regular postoperative surveillance are recommended11. In Korean literature, two cases of atypical dermatofibroma have been reported. Clinically, our case is more similar to the shape of the typical dermatofibroma than previous cases which showed sessile or polypoid form6,7. We wish to emphasize that some dermatofibroma may also exhibit such cellular atypia and be confused with sarcoma, but which clinical and biological behavior is benign.

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