Rapidly Growing, Asymptomatic, Subcutaneous Nodules

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REPORT OF A CASE

A healthy 70-year-old man presented with a three-month history of two slowly growing, asymptomatic, subcutaneous nodules located on the right upper arm and the volar aspect of the left forearm (Fig 1). On physical examination, the nodules measured 1.5 cm and 1 cm in diameter, respectively, and were quite firm. The skin overlying them was freely movable, but the nodules were not mobile in the subcutaneous tissue. They did not appear to be fixed to underlying muscle or tendon as they did not move with limb movement.

Excisional biopsy was performed and histopathologic features are shown in Figs 2 and 3.

What is your diagnosis?

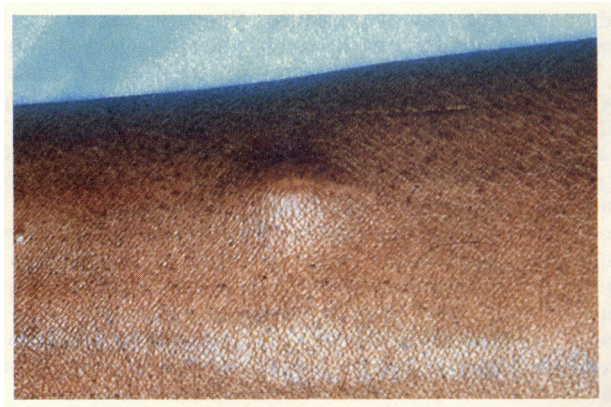

Figure 1.

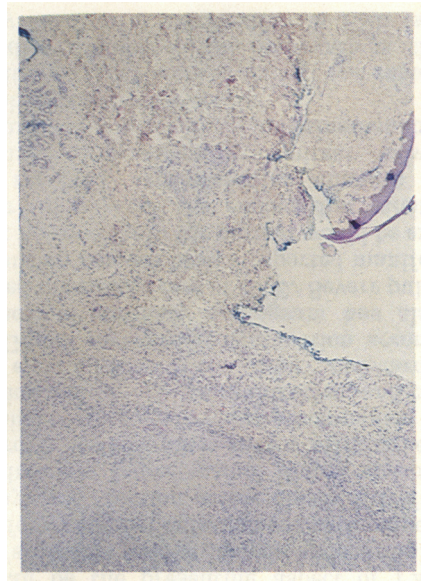

Figure 2.

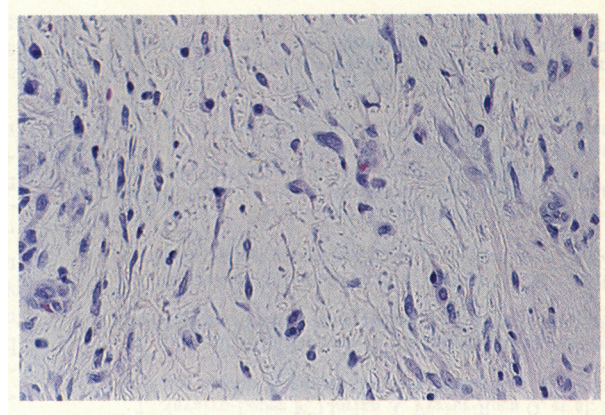

Figure 3.

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DIAGNOSIS: Nodular (pseudosarcomatous) fasciitis.

HISTOPATHOLOGIC FINDINGS

Histopathologic examination revealed a poorly circumscribed inflammatory nodule located in the subcutaneous fat. It was composed of a spectrum of cells ranging from fibroblasts to large plump cells with amphophilic cytoplasm. These latter cells had vesicular nuclei with prominent nucleoli. Occasional normal-appearing mitoses were seen. In addition, there were patchy lymphoid aggregates and small blood vessels. The stroma was collagenous and in regions had undergone myxomatous change. Stains for mucin, reticulin fibers, and iron were normal.

Although not seen in this example, nodular fasciitis is also characterized by growth along thin fibrous septa of the subcutaneous fat, which gives the lesion a serrated appearance. Erythrocytes are present not only within vessels but also within slitlike spaces and free in the stroma. Small spindle-shaped giant cells with centrally placed nuclei are seen in about 50% of cases.[1] Electron microscopy has shown that the fibroblastic cells in lesions of nodular fasciitis are myofibroblasts.[2]

DISCUSSION

Nodular fasciitis (pseudosarcomatous fasciitis) was first described by Kornwaler et al[3] in 1955. It is a relatively common tumor as evidenced by the fact that many series of patients may be found in the literature, including one report of 134 cases.[4] Usually solitary, the lesions are rapidly growing subcutaneous nodules that reach their maximum size in several weeks and then slowly regress. Most remain smaller than 2 cm in diameter.[1,2,4]

Persons younger than age 50 years are most commonly affected and sites of predilection are the arm, leg, and face, although lesions have been reported in all age groups (17 months to 74 years) and on all body areas.[2,4] Once excised, even if excision is incomplete, lesions do not recur. In 18 cases of supposedly recurrent nodular fasciitis reported by Bernstein and Lattes,[4] review of original biopsy specimens and of specimens from reexcisions showed the original diagnosis to be incorrect in all cases. Lesions that had recurred were reclassified as malignant fibrous histiocytoma, fibromatosis, fibrosarcoma, benign fibrous histiocytoma, leiomyoblastoma, neurilemmoma, lymphangiosarcoma, neurofibroma, and epithelioid sarcoma.[4]

Thus, recurrence is an indication that the original diagnosis of nodular fasciitis may be in error and that a reevaluation of both patient and histopathologic diagnosis should be undertaken to rule out a potentially aggressive neoplasm.

References

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2. Wirman JA: Nodular fasciitis, a lesion of myofibroblasts. *Cancer* 1976;38:2378-2389.
3. Kornwaler BE, Keasby L, Kaplan L: Subcutaneous pseudosarcomatous fibromatosis (fasciitis). *Am J Clin Pathol* 1955;25:241-252.
4. Bernstein KE, Lattes R: Nodular (pseudosarcomatous) fasciitis, a nonrecurrent lesion: Clinicopathologic study of 134 cases. *Cancer* 1982;49:1668-1678.