Ischemic fasciitis in a debilitated older man

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ABSTRACT

We present the rare case of ischemic fasciitis in an elderly man with a history of Parkinson's disease. The patient presented with multiple subcutaneous masses on his lower back, ranging in size from 3 to 8 cm. Histopathologic evaluation showed areas of deep dermal and subcutaneous fibrinoid necrosis with granulation tissue-like vessels as well as reactive fibroblasts. The histopathologic presentation as well as the clinical presentation confirmed ischemic fasciitis as the etiology. Ischemic fasciitis, also called atypical decubital fibroplasia, is a rare entity characterized by a reactive, nonneoplastic proliferation of atypical fibroblasts. Though a benign pseudosarcoma, it is often confused with a sarcoma due to their similar clinical and histological presentation. Recognition of this distinct benign entity is essential to avoid misdiagnosis.

KEYWORDS Atypical decubital fibroplasia; ischemic fasciitis; pseudosarcoma

CASE DESCRIPTION

A 90-year-old white man with a history of Parkinson's disease presented with enlarging tender masses on his lower back for several months. The patient's wife noted that the lesions seemed to be smaller in the morning and enlarged in size as the day progressed. The lesion size also fluctuated day to day. Examination revealed multiple subcutaneous, relatively firm, fixed, irregular, deep-seated masses with small areas of fluctuance on the lower back (*Figure 1*). The masses were approximately 3 to 8 cm. The overlying skin was erythematous with a few small eroded areas.

Prior to biopsy, magnetic resonance imaging of the lower back was obtained, which revealed no masses, fluid collections, or other acute processes. A 6-mm punch biopsy revealed deep dermal and subcutaneous necrosis, edema, hemorrhage, granulation tissue-like vessels, fibrin deposition, fibrosis, and reactive fibroblasts with acute and chronic mixed inflammation (*Figure 2*). Gram stains and fungal stains were negative. The reactive changes were most consistent with ischemic fasciitis (atypical decubital fibroplasia).

DISCUSSION

Ischemic fasciitis, also called atypical decubital fibroplasia, is a rare entity characterized by a reactive, nonneoplastic

proliferation of atypical fibroblasts. It classically presents as a painless subcutaneous mass overlying bony prominences.¹ First reported in 1992 by Montgomery et al,² it is thought to be due to pressure-induced injury with subsequent aberrant wound healing. This pathogenesis explains its predilection for locations overlying bony prominences as well as its historic and classic presentation in the elderly with prolonged immobility and those with debilitations.^{2,3} A recent report of 44 cases noted the median age of ischemic fasciitis as 74 years (range 23 to 96) with a median size of the subcutaneous mass of 4.7 cm (range 1.3 to 10).³ Ischemic fasciitis has a predilection for the limb girdles, sacrum, greater trochanters, buttocks, and shoulders. The lesion occurs in the subcutaneous tissue, sometimes involving the deep dermis, muscle, and tendons as well.³

Though ischemic fasciitis is a benign pseudosarcoma, it is often confused with a sarcoma due to the similar clinical and histological presentation. Similar to sarcomas, the lesions of ischemic fasciitis can increase in size, and both are characterized by the proliferation of atypical fibroblasts. Ischemic fasciitis displays the hallmark histological appearance of central fibrinoid necrosis surrounded by granulation tissue with a periphery of proliferating fibroblasts, myofibroblasts, reactive vascularity, and chronic inflammatory cells. The presence of necrotic fat, myxoid

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Figure 1. Ischemic fasciitis involving the lower back. Multiple subcutaneous, relatively firm, fixed, irregular, deep-seated masses with small areas of fluctuance.

Figure 2. H&E 4x: Deep dermal and subcutaneous necrosis, edema, hemorrhage, granulation tissue-like vessels, fibrin deposition, fibrosis, and reactive fibroblasts.

degeneration, red blood cell extravasation, and deposition of hemosiderin also helps to differentiate this reactive lesion from that of a sarcoma.³ Biopsy of the lesion confirms the diagnosis. Local excision is most often curative.¹ Although ischemic fasciitis is a benign entity, it is important to be familiar with this entity to prevent misdiagnosis and overtreatment.

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