

### MUSCULOSKELETAL CASE 13. DIAGNOSIS

#### HEMANGIOMA

The diagnosis was hemangioma involving the erector spinae paravertebral muscle group on the left side. Contrast-enhanced computed tomography (Figs. 1 and 2, see page 409) demonstrated a mass in the left erector spinae muscles which was enhanced markedly with the infusion of contrast medium. Such enhancement is indicative of a hypervascular lesion. The areas of calcification within the mass represent phleboliths, which are typical of hemangiomas. Magnetic resonance imaging (Figs. 3 and 4, page 409) showed the location of the mass to better effect by its inherent ability to visualize lesions in more than 1 plane. The mass was of high signal on both transverse  $T_2$ -weighted imaging (Fig. 3) and gradient echo imaging (Fig. 4). Scattered areas of low signal within the mass were identified, which represent the calcified phleboliths, typical of a soft-tissue hemangioma. The mass was removed surgically, and the patient was well at follow-up with no evidence of recurrence.

Intramuscular hemangiomas are rare benign tumours, making up 0.8% of all hemangiomas.<sup>1</sup> Imaging often suggests the diagnosis, and the presence of phleboliths within the lesion on plain radiographs and CT is diagnostic. MRI typically shows high signal on  $T_2$ -weighted imaging and low or iso-signal characteristics on  $T_1$ -weighted imaging with marked enhancement after the use of intravenous contrast.<sup>2</sup> Ultrasonography<sup>3</sup> and isotope scintigraphy<sup>4</sup> have also been used occasionally to aid in the diagnosis of soft-tissue hemangiomas. The definitive diagnosis is made by histologic study of the surgical or biopsy specimen, or both. Patients

with intramuscular hemangiomas may have soft-tissue complaints, such as pain and swelling, for years. The gross and microscopic appearances of intramuscular hemangiomas are variable. There are 2 broad categories of soft-tissue hemangiomas: capillary hemangioma, characterized by a lobular and solid growth pattern featuring dilated small vessels and a solid proliferation of endothelial cells, and cavernous hemangioma characterized by large, dilated vascular spaces with areas showing interstitial inflammatory changes, fibrosis and smooth-muscle proliferation.<sup>5</sup> In general, wide excision is the treatment of choice to prevent local recurrence, but every patient with intramuscular hemangioma should be treated individually after evaluating the tumour location, accessibility and depth of invasion, the patient's age and cosmetic considerations. Increasingly, hemangiomas are being treated by imaging-guided direct puncture and sclerosis with alcohol or decylsulfate.

#### References

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