

Case report 652

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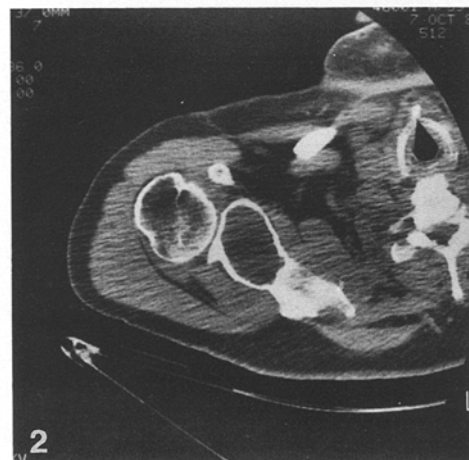
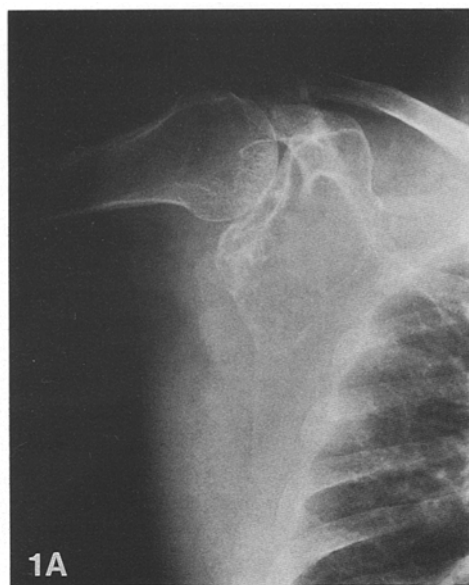


Fig. 1A, B. Plain AP and lateral roentgenograms demonstrate a sharply-defined, expansile, bubbly, radiolucent lesion involving the glenoid

Fig. 2. CT scan shows a well-circumscribed, expansile lesion without soft tissue involvement

Clinical information

A 57-year-old man presented in October 1986 with right shoulder pain following trauma. Physical examination revealed a full range of shoulder motion, without any positive clinical findings. Plain roentgenogram of the right shoulder revealed an expansile, sharply defined, bubbly, radiolucent lesion in the glenoid region of the right scapula (Fig. 1). CT scan demonstrated a well-contained lesion in the glenoid without a soft tissue component (Fig. 2).

Previous medical history was unremarkable. The scapular lesion was regarded as unrelated to the injury and was thought to be an incidental finding. Open biopsy of the scapular lesion was performed.

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Diagnosis: Primary intraosseous low grade myxoid sarcoma of the scapula (myxoid liposarcoma)

The roentgenographic features suggested a nonaggressive lesion. The preoperative radiological differential diagnosis included metastatic bone disease, such as renal cell carcinoma, thyroid carcinoma, and myeloma. Benign conditions such as brown tumor, giant cell tumor, desmoplastic fibroma, aneurysmal bone cyst, and simple unicameral bone cyst were also considered.

An open biopsy and intralesional curettage of the right glenoid was

performed and gelatinous mucoid material removed from the lesion. Histological examination showed myxoid stroma containing spindle and stellate-shaped cells in a mucoid matrix with delicate blood vessels, although the typical plexiform arrangement of myxoid liposarcoma was prominent (Fig. 3A). Alcian blue PAS staining at pH 2.5 was positive without hyaluronidase and negative after treatment with hyaluronidase, suggesting that the mucopolysaccharides were not of cartilaginous origin. Immunohistochemical staining for S100 protein was negative. On high power examination lipoblasts were

rare; however, occasional signet ring lipoblasts could be seen (Fig. 3B). Based upon these histological features a diagnosis of low grade intraosseous myxoid sarcoma, probably myxoid liposarcoma, was suggested. At follow-up after almost 3 years the patient was stable and without significant roentgenographic changes.

Discussion

Primary tumors of the scapula are relatively rare. In single case reports, however, almost every tumor of the skeleton has been reported in the scapula [2-4, 7, 10-12, 14]. Scapular tumors comprise approximately 3% of all tumors in bone. Some 70% of these lesions are malignant, and metastatic carcinoma, myeloma, and secondary lymphoma are more common than primary malignant tumors in the scapula (e.g., osteosarcoma, Ewing's sarcoma, chondrosarcomas) [14]. The most common benign tumors and tumorlike conditions are osteochondroma, which occurs in the wing of the scapula, giant cell tumor, aneurysmal bone cyst, simple bone cyst, eosinophilic granuloma, and intraosseous ganglion. The latter lesion occurs primarily in the glenoid region, as in this case, where the bone is cancellous and contains red marrow.

In flat bones, such as the scapula and ilium, simple bone cysts have been described in older age groups [4, 7, 12]. Review of the literature revealed few case reports of sarcoma arising in a pre-existing bone cyst. In these cases, the cyst was an old lesion and the sarcoma a recent development [8].

Liposarcomas arising in bone are extremely rare. Most of the reported cases were in long bones with the tibia being the most common site [6, 9, 13, 15]. Two criteria must be met to make a diagnosis of primary liposarcoma of bone. First, the lesion must originate in bone. Second, the typical histological features of liposarcoma must be present [1, 5]. In this case, the two conditions for diagnosis of primary liposarcoma of bone were met.

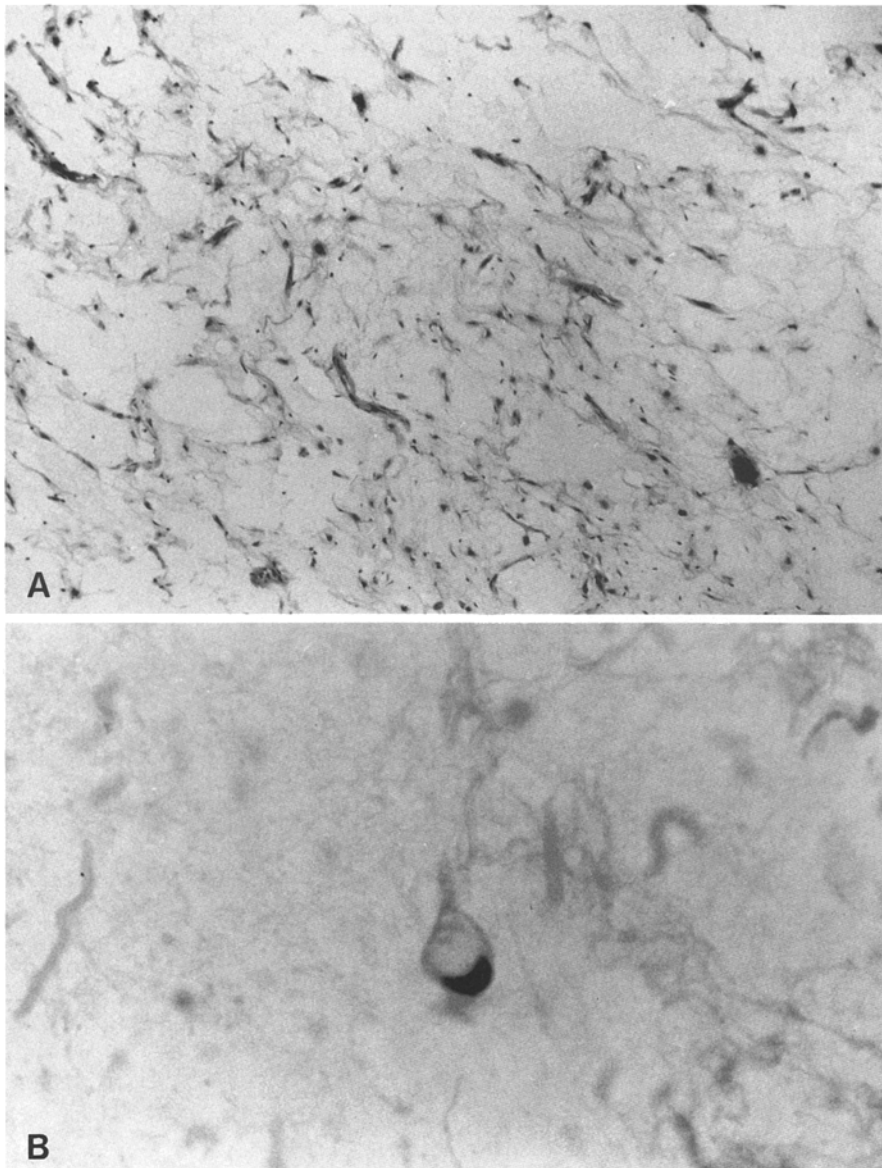


Fig. 3. **A** Low power photomicrograph shows myxoid stroma containing spindle and stellate-shaped cells. Delicate blood vessels are seen (H & E, $\times 60$). **B** High power photomicrograph demonstrates occasional signet ring lipoblasts (H & E, $\times 500$)

In *summary*, a case of primary liposarcoma of bone involving the glenoid region of the right scapula in a 57-year-old man is presented. The diagnosis was confirmed by open biopsy. The differential diagnoses have been considered. To the best of our knowledge, this may be the first reported case of primary liposarcoma of bone in the scapula.

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