Case Report 203

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History

A 19-year-old man was admitted to the hospital with a chief complaint of persistent, progressive pain in the left parasternal region of 12 to 14 months duration. The pain had not been significantly relieved by butazolidine, aspirin or local hydrocortisone injections. The admission diagnosis was Tietze syndrome. The past history was non-contributory.

Physical examination demonstrated tenderness over the region of the left sternoclavicular junction and the first and second sternocostal cartilages. Physical examination was otherwise within normal limits.

A large number of laboratory studies were performed. The only abnormality noted was slight prolongation of the partial thromboplastin time.

A radiological bone survey showed no other lesion.

Several days after admission an aspiration biopsy of the manubrium was performed. The patient had a curettage-excision of the lesion one month later.

Radiological Studies

Fig. 1. A lateral view of the sternum demonstrates an expanding, lytic lesion involving the manubrium. Observe that the cortex is thin but not destroyed. Note also the apparent septations within the lesion.

Fig. 2. An oblique tomogram of the sternum shows the bony septations within the lesion more clearly.
Histological Studies

Diagnosis: Aneurysmal Bone Cyst of Sternum

The differential diagnosis includes giant cell tumor, monostatic fibrous dysplasia, solitary bone cyst (most unlikely), hemangioma, chondromyxoid fibroma, metastatic disease and primary malignant neoplasm (e.g. chondrosarcoma, telangiectatic osteosarcoma, primary lymphoma of bone and Ewing tumor. Plasmacytoma would be a highly likely possibility in an older individual.

Fig. 3A–C

A This photomicrograph (H and E stain × 52) of the lesional tissue shows large, dilated, partially blood-filled spaces surrounded by fibrous tissue walls containing hemorrhagic areas. Bone formation is noted in the lower right portion of the photomicrograph.

B Another photomicrograph of the lesion (H and E stain × 52) again demonstrates irregular vascular spaces and surrounding tissue walls containing hemosiderin pigment as well as signs of recent hemorrhage. Scattered benign giant cells are also observed.

C A higher power view (×117) of a solid area in the lesion shows extensive hemorrhage and several benign multinucleated giant cells. A slender vascular space is noted on the right side.