

Surgical images: musculoskeletal

Costal hemangioma presenting as rib pain after pneumonia

A 45-year-old man came to a primary centre with brief but progressive right-costal pain that followed heavy coughing secondary to pneumonia. The pain was pleuritic in nature but was also increased by direct palpation. Rest relieved it; acetaminophen had little effect.

He reported right 6th–7th rib fractures a year previously. His other medical conditions included multiple sclerosis (duration 13 yr), high blood pressure, dyslipidemia and sleep apnea syndrome. He also mentioned having had night sweats for 3 months, a recent gain of 20 pounds and shortness of breath upon exertion since his pneumonia. The rest of

his medical history was unremarkable.

Physical examination revealed only pain and swelling above the 7th rib. Initial radiographs revealed an expanding, partially lytic lesion of the axillary arch of the right 7th rib (Fig. 1). Blood tests, thoracic and abdominal CT and a nuclear bone scan were ordered.

Laboratory results reported an elevated sedimentation rate and C-reactive protein level. CT scans revealed soft-tissue involvement of the right rib lesion and cortical breach (Fig. 2); no other lesions were found. He was referred to a tertiary centre with a diagnosis of enchondroma, chondrosarcoma, cystic lesion of

the bone or metastasis of unknown origin. To this differential diagnosis we added lymphoma and hemangioma of the bone, respectively.

An incisional biopsy was taken, with moderate bleeding; the preliminary diagnosis based on the frozen section was osseous hemangioma. After excision of the involved rib, that diagnosis was confirmed in the final pathology report.

Vascular lesions of the bone have a wide range of clinical and radiological presentations. They can be mistaken for other benign and even some malignant bone tumours. Hemangiomas have a peak incidence in the 4th and 5th decades and generally presents in the spine and skull. They rarely cause symptoms, but medullary compression can cause neurological findings.

Calvarial hemangiomas can have a characteristic sunburst-like appearance. They generally present as well-defined lytic lesions with a coarsened trabecular pattern on plain radiographs. On CT images, hemangiomas have a polka-dot or honeycomb appearance due to coarsened trabeculae and intervening low-attenuation fat. MRI demonstrates high signal intensity on both T_1 - and T_2 -weighted images, characteristic of the intralesional fat.

Only 3% of hemangiomas present as rib lesions. In an expendable bone such as the rib, treatment consists of wide local excision of the tumour to prevent recurrence. To date, there seems to be no association between rib fractures and costal hemangioma.

Competing interests: None declared.



FIG. 1. CT scan of the right hemithorax, showing soft-tissue involvement and cortical breach.

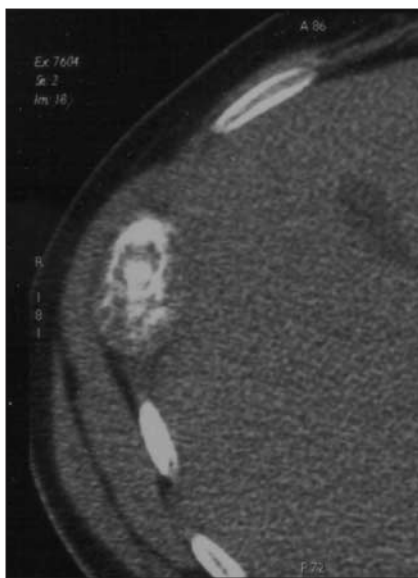


FIG. 2. Anteroposterior radiograph of the right hemithorax, showing an expanding partially lytic lesion of the 7th rib.

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