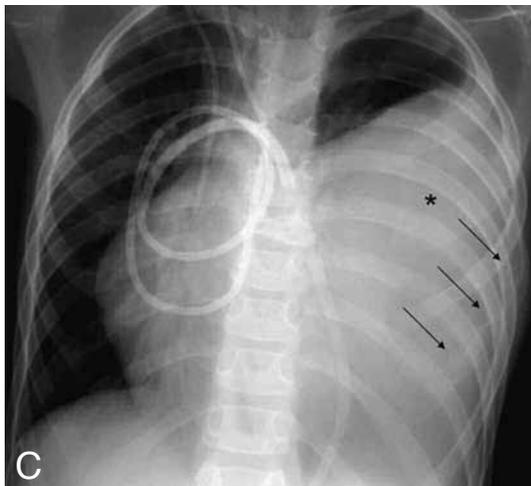
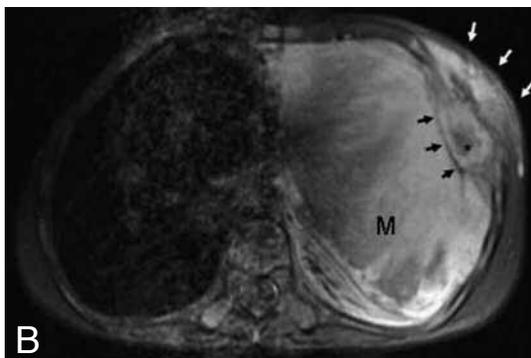
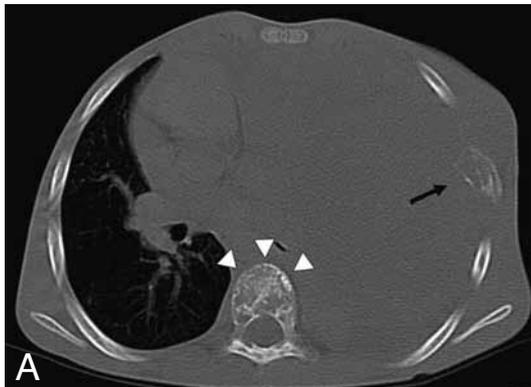


IMAGES IN CLINICAL RADIOLOGY



Ewing's sarcoma of the rib in a child

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A 9-year-old boy was admitted to the emergency department with sudden onset of dyspnea without history of trauma or clinical signs of infection. Clinical examination revealed a painless, asymmetric swelling of the left anterolateral thoracic wall. Chest CT demonstrated expansile, mixed lytic-sclerotic lesions of the 5th rib and the 7th thoracic vertebral body. A large soft tissue mass was seen in the left hemithorax resulting in mediastinal shift and an extrathoracic component was present (Fig. A). MRI showed a large enhancing thoracic soft tissue mass (Fig. B) and a pathological fracture of the 7th thoracic vertebral body. Chest radiograph after central venous line placement illustrates the large size of the mass (Fig. C).

The diagnosis of Ewing's sarcoma of the rib was confirmed histologically.

Comment

Ewing's sarcoma is a rare malignant bone tumor, typically occurring in patients aged 10-25 years. In 7% of cases, the affected site is a rib. At the time of presentation 25% of patients have metastases to the lungs or bones. Radiography shows a small osteolytic bone lesion with a concomitant large soft tissue mass. CT provides information on the extent and pattern of bone destruction and periosteal reaction. The bone lesion is poorly defined and is associated with an aggressive periosteal response that has a lamellated 'onion skin' appearance. The extra-osseous soft tissue mass typically lacks ossification or calcification. MR imaging shows a marked decrease in size and perfusion in response to chemotherapy.

In conclusion, a child presenting with a large thoracic soft tissue opacity concomitant with the presence of a small osteolytic rib lesion on chest radiography warrants dedicated CT and MRI examinations to exclude Ewing's sarcoma of the rib.

Reference

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