

Thoracic Teratoma

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Section: Paediatric radiology

Imaging Technique: CT

Case Type: Clinical Cases

Authors: C Brenner, R Hayes

Patient: 14 months, male

Clinical History:

A fourteen month old male presented with a 3 day history of cough and wheeze. A chest radiograph confirmed consolidation and also revealed an underlying lesion with certain features suggestive of the diagnosis. CT thorax confirmed the plain film findings.

Imaging Findings:

A fourteen month old male child was seen by his GP with a 3 day history of cough and wheeze. An initial chest radiograph in his local hospital showed an abnormality in the left mid-zone which was felt to be inflammatory in nature. The child improved on antibiotics and nebulisers but a repeat chest radiograph showed no change. Of note in the past medical history, he had an episode of bronchiolitis at 13 weeks of age at which time his chest radiograph was reported to be normal. In view of the persistent radiographic abnormality, the child was referred for further investigation. On review of the original radiographs (Figure 1a, 1b) a mass of mixed density was noted in the left hemithorax, with associated consolidation. The mass contained some calcium. At this point the diagnosis of a mediastinal teratodermoid was considered, and a CT thorax was performed to determine its extent (Siemens Somatom Plus Spiral scan; post intravenous contrast; slice thickness 5mm; pitch=1.4). This showed the mass to extend from the left heart border to the rib margin in the anteroinferior portion of the left hemithorax. The mass contained soft tissue, fat and an unusual area of calcification resembling a tooth (Figure 2). Adjacent lung tissue was displaced but otherwise normal and there were no further findings. A thoracotomy revealed a well encapsulated tumour of mixed density in the left hemithorax, which was resected without complication. Histology showed a benign cystic teratoma. The child's recovery was uneventful.

Discussion:

Germ cell tumours include dermoids and teratomas. By definition, teratomas contain all three elements of germ cells while dermoids contain ecto- and mesoderm only. The tumours may be benign or malignant. They account for roughly 10% of mediastinal masses, and typically occur in young patients. Clinically, they may be discovered incidentally, or may present with respiratory symptoms. Superior vena cava obstruction can also occur. The anterior mediastinum is the commonest site of extra-gonadal teratomas, although any and all mediastinal compartments may be involved. The tumours contain soft tissue, fat, fluid and calcium in varying proportions and appear as masses of mixed density. The most common appearance is of a mass containing all four elements. The classical appearance is of a tooth-like structure within a mass, as in this case. The diagnosis is generally made with plain radiographs and CT, with ultrasound adding little additional information. MRI may be useful in demonstrating the extent of the tumour, and in detecting pleural and pericardial involvement in cases where the tumour has ruptured

Differential Diagnosis List: Thoracic Teratoma

Final Diagnosis: Thoracic Teratoma

References:

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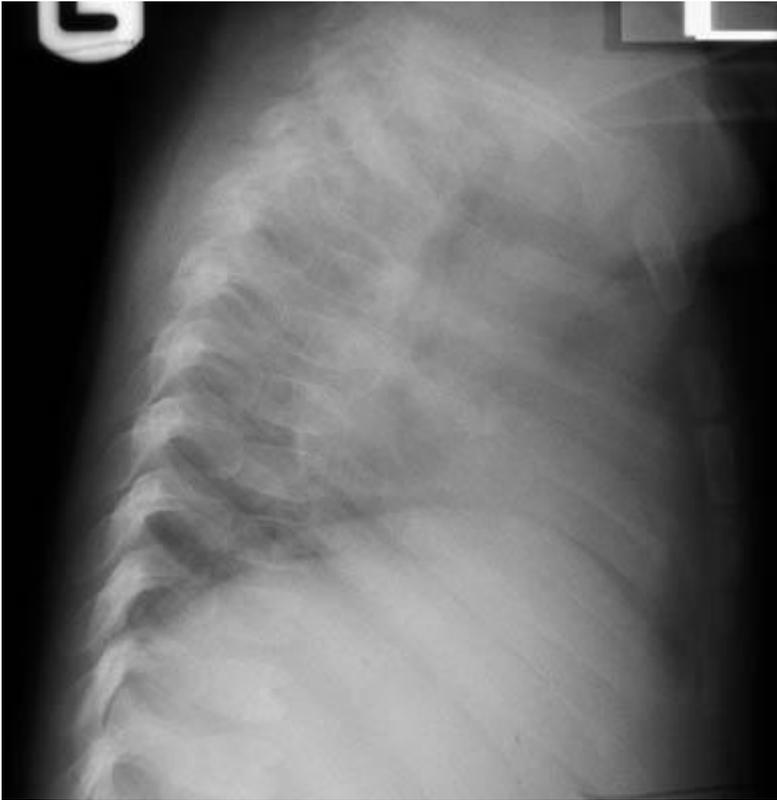
Figure 1

a



Description: Frontal chest radiograph showing a left sided mass with some unusual calcification. The relative lucency of the lesion suggests fat content. **Origin:**

b



Description: Lateral chest radiograph again showing mass of mixed density, including calcification.

Origin:

Figure 2



Description: CT thorax showing mass of mixed density in left hemithorax, containing soft tissue, fat and calcium. The calcified area resembles a tooth. **Origin:**