Chest

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A 60-year-old woman presented with a history of pain in the back of the chest, with occasional cough, for the last 3 months. She had a history of a radical mastectomy for carcinoma of the right breast 17 years ago. The routine blood counts were within normal limits.

The patient underwent a contrast-enhanced CT scan of the chest [Figure 1A and B] and abdomen. A fine needle aspiration cytology (FNAC), using a 22-gauge spinal needle, was performed under CT guidance, which confirmed the diagnosis.

What is the Diagnosis?

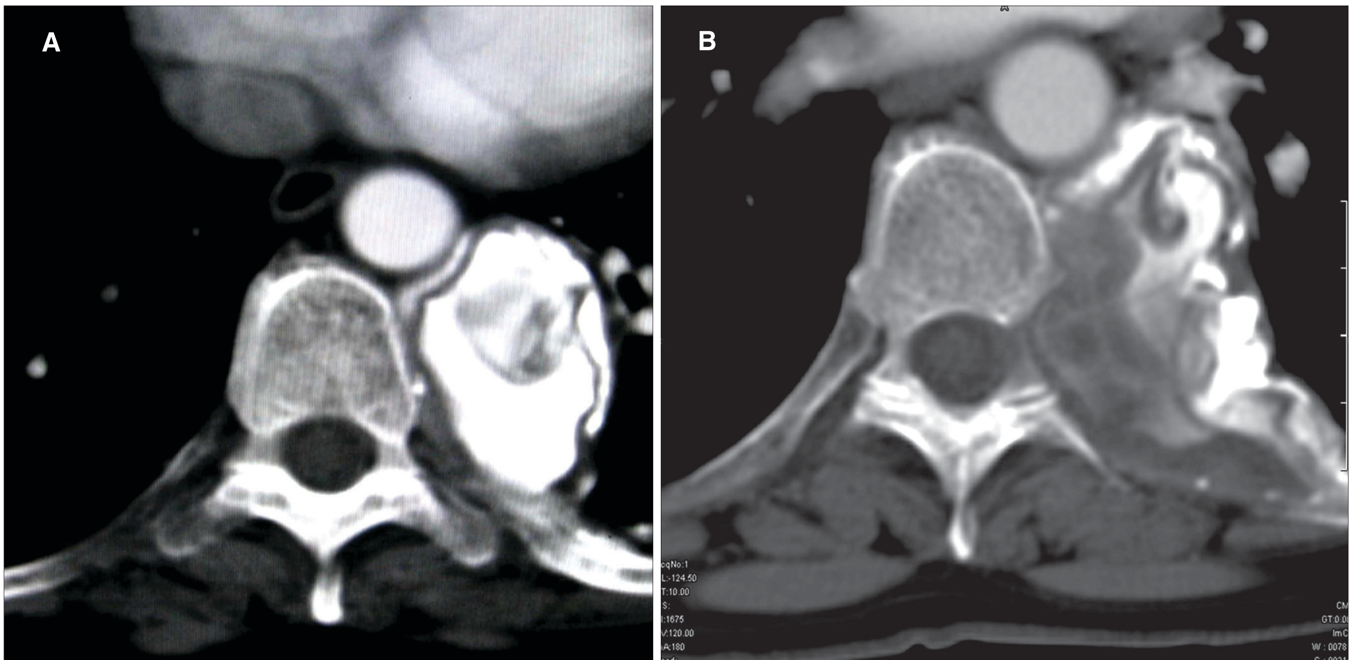

Figure 1 (A, B): Axial contrast-enhanced CT of the chest

Diagnosis: Calcified Left Paravertebral Hydatid Cyst

The contrast-enhanced CT of the chest [Figure 2] shows a 3.5 × 4 × 5 cm, predominantly calcified, well-defined mass in the left paravertebral region, with a noncalcified portion showing a few thin septae representing daughter cysts. Mild erosion of the neighboring 8th rib is seen. The adjacent neural foramen is not widened. The lungs and abdomen were normal on the other images.

The provisional diagnosis of a calcified paravertebral hydatid cyst was offered, with alternative diagnoses of a calcified neurogenic tumour or a calcifying fibrous pseudotumor (CFPT) of the pleura. To rule out a malignant process an FNAC was performed, which confirmed the diagnosis of a hydatid cyst by demonstrating scolicial hooklets and laminated hydatid wall membranes.

Mediastinal involvement by echinococcosis is rare and only around 100 cases have been described.[1] Mediastinal hydatids are cystic lesions and are usually only incidental findings. These cysts may be oval, spherical, tubular, or dumbbell-shaped and may show intraspinal extension. Calcification in pulmonary hydatid cysts is very rare, but mediastinal hydatids tend to calcify more often than

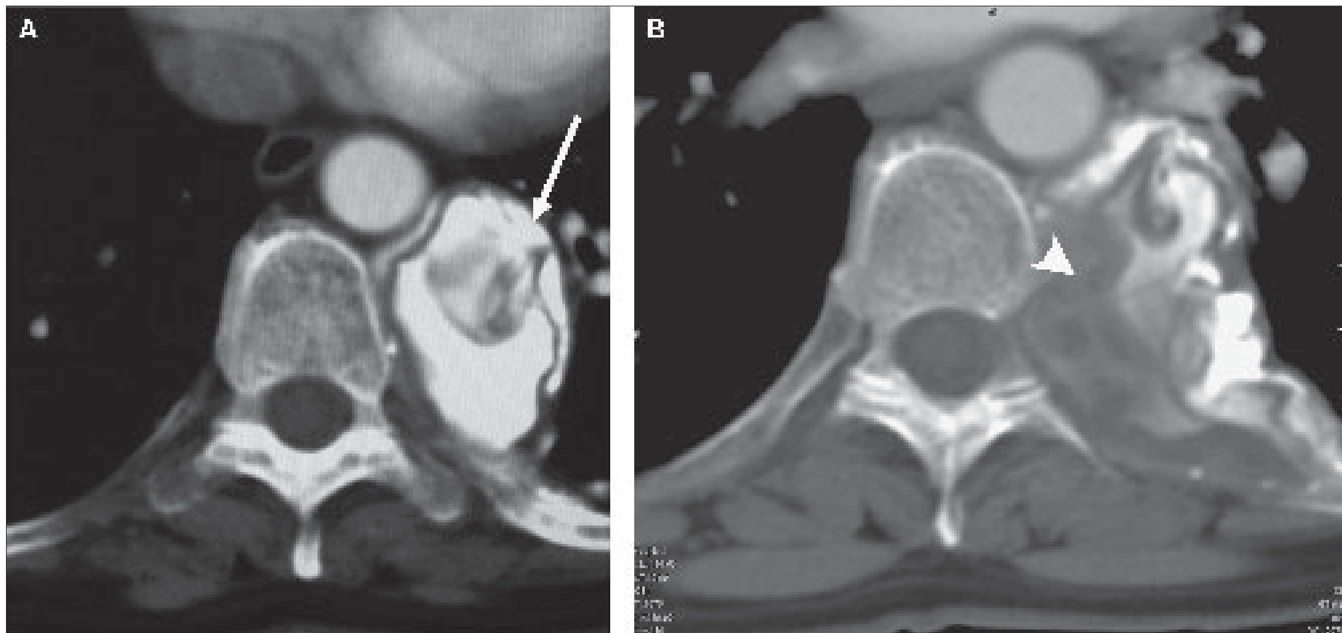

Figure 2 (A, B): Axial contrast-enhanced CT of the chest showing a predominantly calcified mass in the left paravertebral region (arrow in A) with a noncalcified portion showing a few thin septae (arrowheads in B) representing daughter cysts

intrapulmonary lesions.[2] Benzarti *et al*. has reported a similar case of a calcified paravertebral hydatid cyst.[2]

Thameur *et al*. found mediastinal hydatid cysts in 8 of 1619 cases of intrathoracic hydatid cysts (0.5%).[3] The most common location of a mediastinal hydatid is in the thymus.[3,4]

Rakower and Milwidsky[5] recorded more than 23,000 patients with hydatid disease in various large series; only 25 cases (0.1%) were reported in the mediastinum and the paravertebral sulcus. Mediastinal hydatids are usually symptomatic; the symptoms being due to compression of adjacent organs such as the esophagus, heart, trachea, and the great vessels. Intraspinal extension may cause neurologic symptoms due to cord compression.[6] This patient's symptoms were probably due to compression of the adjacent intercostal nerves.

When calcification is present in a hydatid cyst, it can be curvilinear, lamellated, or diffuse, the curvilinear form being more common.[2] In the presence of diffuse calcifications, other calcified masses such as osteochondroma, neurogenic tumors, fibrous dysplasia, calcified hematoma or abscess, CFPT of pleura, and Castleman's disease are important differential diagnoses.[7]

Hydatids are diagnosed on the basis of the clinical, radiological, and laboratory findings, though FNAC or surgical pathology is often required for confirmation. FNAC has generally not been recommended as a diagnostic procedure since it has been believed that it could cause an anaphylactic reaction and possible dissemination of infection.[8] However studies have now shown that FNAC is a safe diagnostic procedure in the evaluation of suspected hydatid disease.[9] In our case, FNAC clinched the diagnosis by showing hydatid hooklets, with no untoward complications.

Primary treatment of mediastinal hydatids is complete surgical resection.[5] Preoperative medical treatment should be considered in order to sterilize the cyst and to decrease the tension in the cyst, thus reducing the chances of spillage and resultant anaphylaxis.[10] Postoperative medical treatment reduces the chances of recurrence.

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