

Echinococcosis of the Heart and Ascending Aorta

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A 35-year-old woman with a history of disseminated thoracic echinococcosis treated by resection of an intraventricular septal cyst 11 years earlier in her country of origin presented for the first time to our cardiology outpatient clinic with atypical chest pain and shortness of breath. Transthoracic echocardiography revealed multiple masses in the pericardium (Figure 1); chest x-ray showed widening of the right middle mediastinum (Figure 2). Computed tomography imaging and T2-weighted turbo spin echo were performed and confirmed the infiltration of the pericardium by multiple cysts (Figure 3). In addition, a saccular aortic pseudoaneurysm of the ascending aorta (Figures 4 and 5) was revealed and confirmed by aortography (Figure 6 and Movie I in the online-only Data Supplement). We hypothesized that the pseudoaneurysm developed subsequently to fistulization and rupture of a hydatid cyst into the aorta. Indeed, the patient reported having presented an anaphylactic shock several months earlier while living abroad. Given the potential risk of rupture of the aortic pseudoaneurysm, we referred the patient to redo surgery.

At surgery, hypertonic serum (20% saline) was injected into the cysts before their removal, and minimal cardiac manipulation was performed to avoid cestode dissemination. Repair of the aortic aneurysm was performed with a Dacron

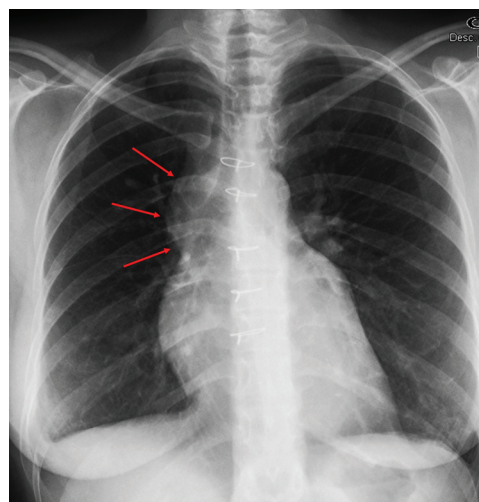


Figure 2. Chest x-ray demonstrating the widening of the right middle mediastinum (red arrows).

prosthesis. Histopathology confirmed that the pseudoaneurysm of the aorta resulted from a hydatid cyst. The patient's subsequent recovery was uneventful under anthelmintics comprising albendazole and biltricide.

Cardiac involvement in patients diagnosed with hydatidosis^{1,2} is uncommon. Thus, evidence-based therapy is lacking even if surgical management seems to be associated with a better outcome of patients.³ In our case, surgery was mandated by the fistulization of a cyst into the aorta, resulting in a pseudoaneurysm threatening to rupture. To the best of our knowledge, such fistulization of a hydatid cyst into the aorta has not yet been described.

Disclosures

None.

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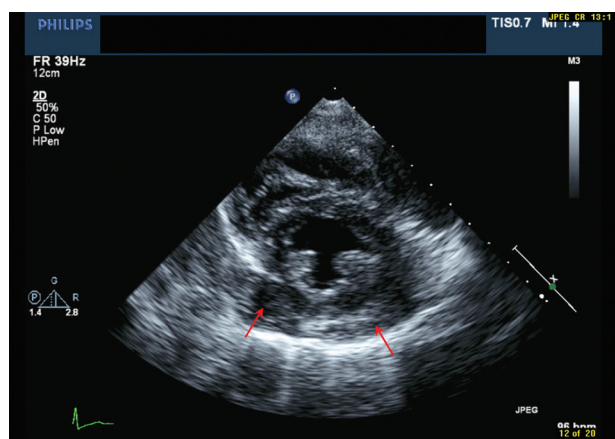


Figure 1. Transthoracic echocardiography in the short-axis view demonstrating the presence of a pericardial cyst in the inferior and posterior basal part of the left ventricle (red arrows).

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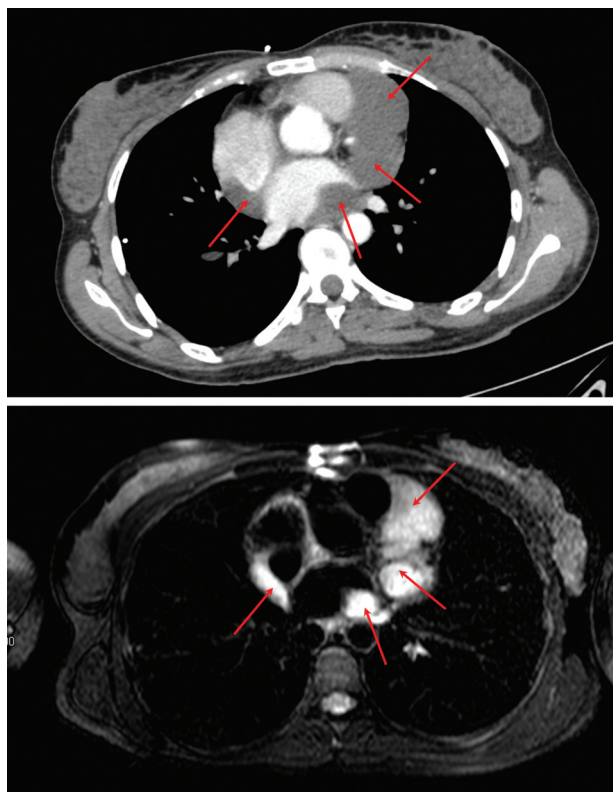


Figure 3. Contrast-enhanced computed tomography (top) in the axial view demonstrating 4 pericardial cysts (red arrows). Bottom, T2-weighted turbo spin magnetic resonance confirming the liquid nature of the structures by a homogeneous hyperintense signal (red arrows).

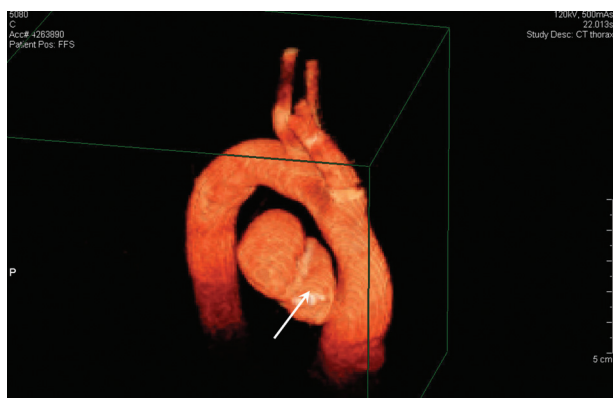


Figure 4. Contrast-enhanced computed tomography of the aorta in volume rendering demonstrating a saccular pseudoaneurysm (measuring 3.6×2.7 cm) at the posterior wall of the ascending aorta (arrow).

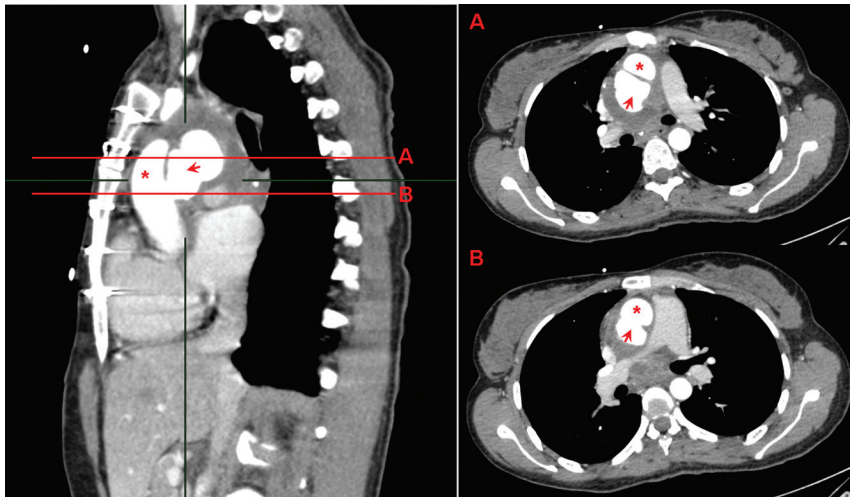


Figure 5. Sagittal and 2 corresponding axial (**A** and **B**) contrast-enhanced computed tomography images of the ascending aortic pseudoaneurysm. **A**, At the largest axial diameter of the pseudoaneurysm. **B**, At the level where the aorta communicates with the cyst, resulting in the formation of the pseudoaneurysm. The arrowhead indicates the pseudoaneurysm. *Ascending aorta.

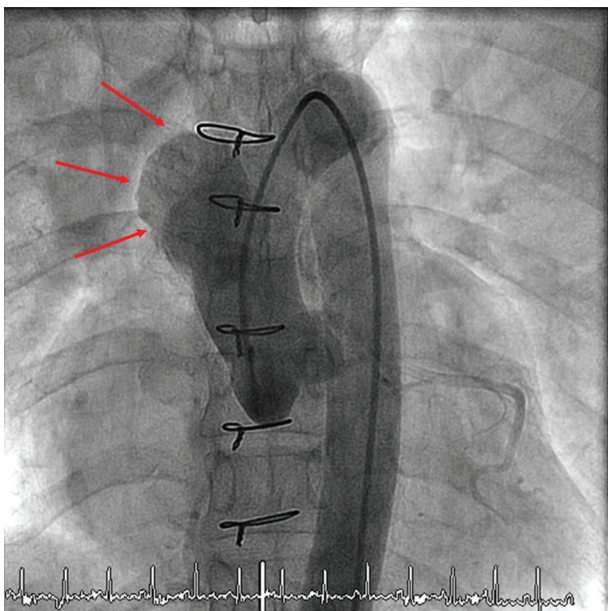


Figure 6. Aortogram of the ascending aorta demonstrating the communication of the cyst (red arrows) with the ascending aorta.