

Mediastinal Mass in an Adolescent

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A 13-year-old Caucasian girl, previously healthy, was admitted with a three-day fever and cough. She denied thoracic pain, dyspnea, asthenia, or weight loss. Lung auscultation revealed right hemithorax crackles. A chest X-ray showed a right heterogeneous low-density image and a left homogeneous high-density rounded area behind the heart shadow (Fig. 1). Thoracic computerized tomography revealed right acute pneumonia and a giant mediastinal cyst, posterior to the left atrium and ventricle (Fig. 2), with no compression of adjacent structures. The incidental pericardial cyst diagnosis was confirmed with an echocardiogram (4 x 4 cm, located near the posterior atrioventricular sulcus) (Fig. 3). The pulmonary infection was treated with oral amoxicillin and clavulanic acid 100 mg/kg/day for eight days, with the complete resolution of symptoms. At eight months follow-up, the patient remained asymptomatic. Pericardial cysts are uncommon mediastinal lesions, with an estimated incidence of one case per 100,000 in the general population.^{1,2} They are usually located

in the middle mediastinum, and posterior cardiac cysts represent the rarest localization (9% of all cases).¹ We present a case of a giant pericardial cyst in an asymptomatic adolescent. They are usually detected incidentally, mostly in the third or fourth decade of life and rarely in the pediatric age. They are equally common in men and women.¹⁻³ Most are asymptomatic (50%-75%) at the time of diagnosis.¹

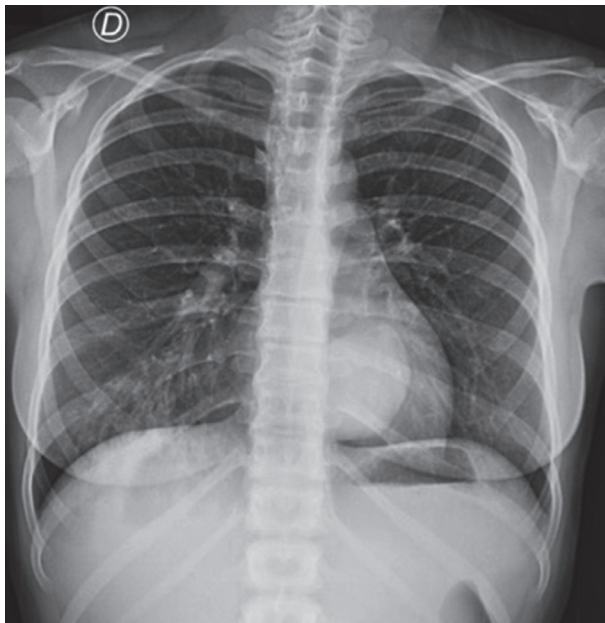


Figure 1. Chest X-ray revealed a retrocardiac high density image.

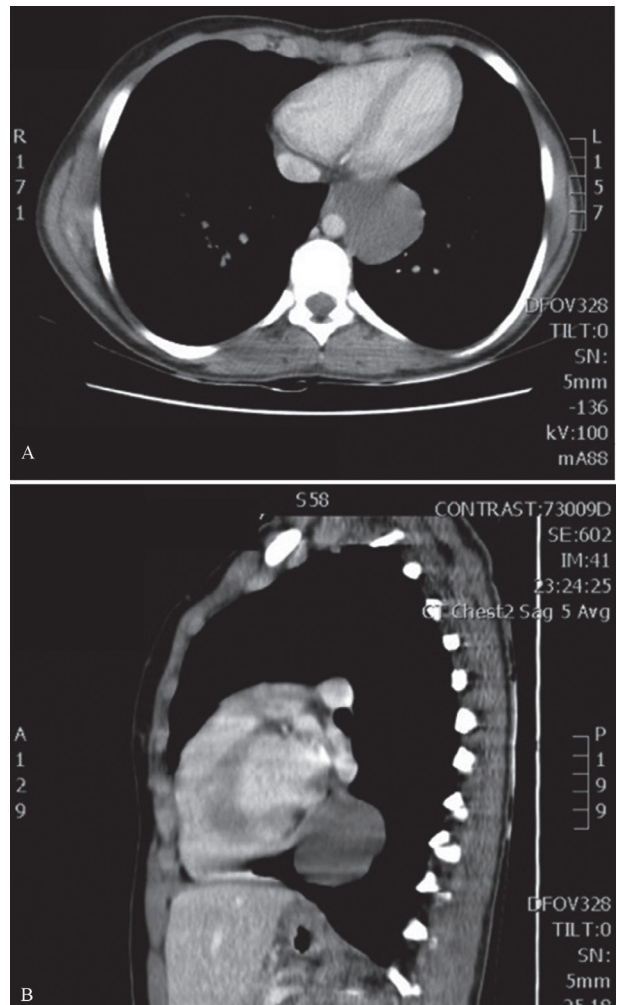


Figure 2. Thoracic computerized tomography revealed a giant middle mediastinal mass, without the compression of adjacent structures. A: Coronal view. B: Sagittal view.

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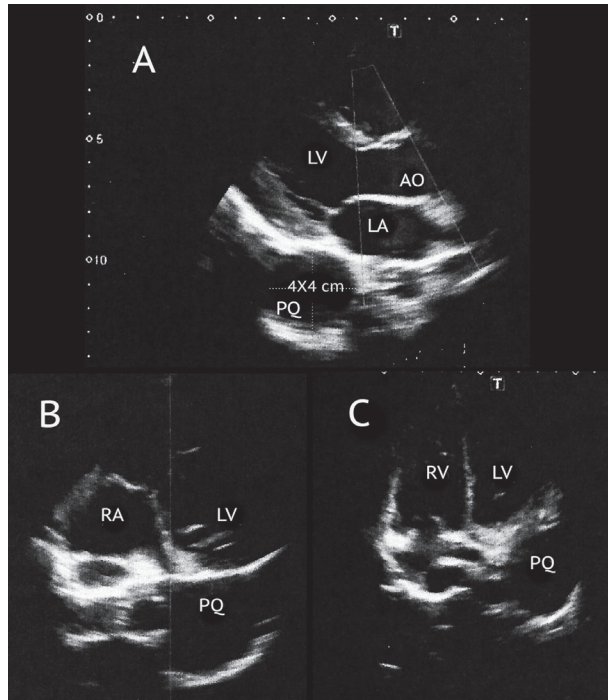
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Differential diagnoses include hydatid cyst, pericardial diverticulum, mediastinal teratoma, and ventricular aneurysm. Follow-up is important due to their growing potential. Although rare, complications include cardiac tamponade, obstruction of a bronchus, spontaneous rupture with hemorrhagic shock, and sudden death.^{1,4}



AO - aorta; LA - left atrium; LV - left ventricle; PQ - pericardial cyst; RA - right atrium; RV - right ventricle.

Figure 3. Transthoracic echocardiogram displayed a normal heart structure and function, with a non-pulsatile rounded extra-cardiac cystic mass, most probably a pericardial cyst. A: Axial-long plane of the left ventricle. Posterior to the left atrioventricular sulcus a rounded extra-cardiac image of the cyst (PQ) could be identified, adjacent to the pericardium. B: Axial-short plane of the left ventricle. Posterior cystic image (PQ). C: Apical four chamber posterior plane. Cystic image (PQ) posterior to the left atrium.

Conservative strategies, percutaneous aspiration, or surgery may be considered in management. In this case, as the patient persisted asymptomatic without cyst dimension changes, it was decided to have an expectant conservative management with regular follow-up.

Keywords: Adolescent; Incidental Findings; Mediastinal Cyst/diagnostic imaging

WHAT THIS REPORT ADDS

- A pericardial cyst is a rare disease in the pediatric age and is usually asymptomatic.
- This case is presented to highlight the fact that the diagnosis of a pericardial cyst should be kept in mind even though it is very rare in children.
- It can cause anxiety for the patient and their family. The follow-up is easy and must be taken because of the growing potential.

Conflicts of Interest

The authors declare that there were no conflicts of interest in conducting this work.

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Consent for publication

Consent for publication was obtained.

Confidentiality of data

The authors declare that they have followed the protocols of their work centre on the publication of patient data.

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