

A well-circumscribed density along the right heart border

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CASE REPORT

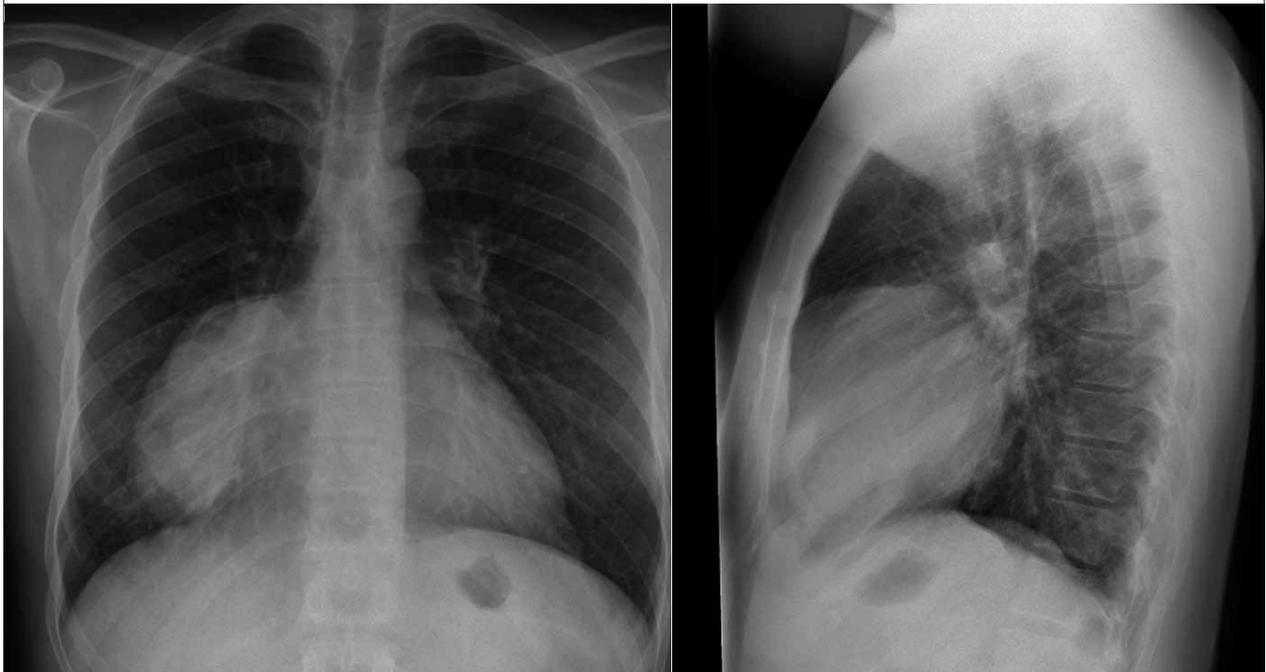
A 25-year-old male was evaluated because of a density along the right heart border, which was accidentally diagnosed during a tuberculosis screening. He was asymptomatic and his medical history was unremarkable. He denied shortness of breath, cough, fever or history of trauma *and his weight was stable*. He had smoked 15 cigarettes daily for 10 years and he had worked in the metal industry for four years. The physical examination was unremarkable and his laboratory tests were normal.

The chest radiograph showed a density along the right heart border (*figure 1*) and further analysis was performed.

WHAT IS YOUR DIAGNOSIS?

See page 199 for the answer to this photo quiz.

Figure 1. Chest radiograph (posteroanterior and lateral) showing a well-circumscribed density along the right heart border



ANSWER TO PHOTO QUIZ (ON PAGE 198)

A WELL-CIRCUMSCRIBED DENSITY ALONG THE RIGHT HEART BORDER

DIAGNOSIS

Pericardial cysts are benign and rare intrathoracic findings with an estimated prevalence of 1:100,000 persons.^{1,2} Pericardial cysts are most frequently located at the right cardiophrenic angle (51 to 70%), less frequently at the left cardiophrenic angle (28 to 38%) and rarely in other mediastinal locations (8 to 11%).^{1,2}

They may be either congenital or acquired.³ The size of these cysts varies from 2 to 28 cm as reported by Braude *et al.* (10 cm in our patient).²

Pericardial cysts are often discovered as an incidental finding on imaging studies obtained in an asymptomatic patient.^{1,2} They are not usually associated with symptoms and follow a benign course but rare complications of pericardial cysts have also been reported and include haemorrhage into cysts with tamponade, cysts rupture, torsion or erosion of the cysts into adjacent structures, such as the right ventricular wall. Obstruction of the right mainstem bronchus has also been reported.^{2,3}

Patel *et al.* believe that echocardiography is a superior noninvasive modality to delineate the exact position of a pericardial cyst and to differentiate a cyst from other potential diagnoses such as a prominent fat pad, ventricular aneurysm, prominent atrial appendage, aortic aneurysm, and solid tumours.¹ The differential diagnosis of a cardiophrenic angle mass also includes lipoma, and Morgagni hernia.⁴ Doppler is particularly helpful in differentiating a pericardial cyst from other vascular structures such as an aneurysm.¹ Echocardiography and a heart MRI confirmed the diagnosis in our patient (*figure 2*). After three years of follow-up, the pericardial cyst in our patient was slightly enlarged and the patient still had no symptoms. The cyst enlargement was the reason why our patient underwent surgical removal of the pericardial cyst. His postoperative recovery was unremarkable.

Figure 2. The heart MRI showed pericardial cysts along the right heart border



Surgical excision of pericardial cysts or percutaneous aspiration is, in general, only recommended in symptomatic patients² although if cysts are large as in our case, cyst removal should be considered because of the possibility of complications such as haemorrhage into the cyst with tamponade.^{1,3}

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