Thoracoscopic resection of a symptomatic pericardial cyst

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A 46-year-old man presented with a 6-month history of atypical thoracic pain at left lateral decubitus. Physical examination was unremarkable. An electrocardiogram showed the sinus rhythm. Chest X-ray demonstrated a large, rounded structure at the left cardiac apex (FIGURE 1A and 1B). Transthoracic echocardiography revealed a pericardial cyst (maximally 74 mm in the transversal plane and 49 mm in the craniocaudal plane) at the anterolateral left cardiac border. At that location, magnetic resonance imaging confirmed the presence of a thin-walled, homogeneous structure with high signal intensity on steady-state free precession and T2-weighted spin echo (FIGURE 1C and 1D) and low signal intensity on T1-weighted spin echo images (FIGURE 1E).

A pericardial cyst consists of a delineated, insulated pericardial portion and is frequently an incidental finding of a thin-walled, echo-free (no flow on color Doppler imaging), usually round or elliptical structure located near the heart (most commonly in the right anterior cardiophrenic angle).

Due to chest pain, it was decided to resect the pericardial cyst in this patient.1 It was punctured and fully resected using the left 4th intercostal space approach. Aqueous fluid was evacuated (FIGURE 1E). Histologically, the pericardial cyst consisted of dense fibrous tissue.

At 18-month follow-up, transthoracic echocardiography showed no evidence of pericardial cyst recurrence. Two years after the surgical intervention, the patient was asymptomatic.

The presented case highlights the value of multimodality imaging in the diagnostic workup and guidance of the thoracoscopic resection of a symptomatic pericardial cyst. A pericardial cyst is easily differentiated from pericarditis. The diagnosis of pericarditis includes new or worsening pericardial effusion, pericarditic chest pain, pericardial rubs, and typical electrocardiographic changes.2 In the case of fever, pericardial empyema should be considered.3

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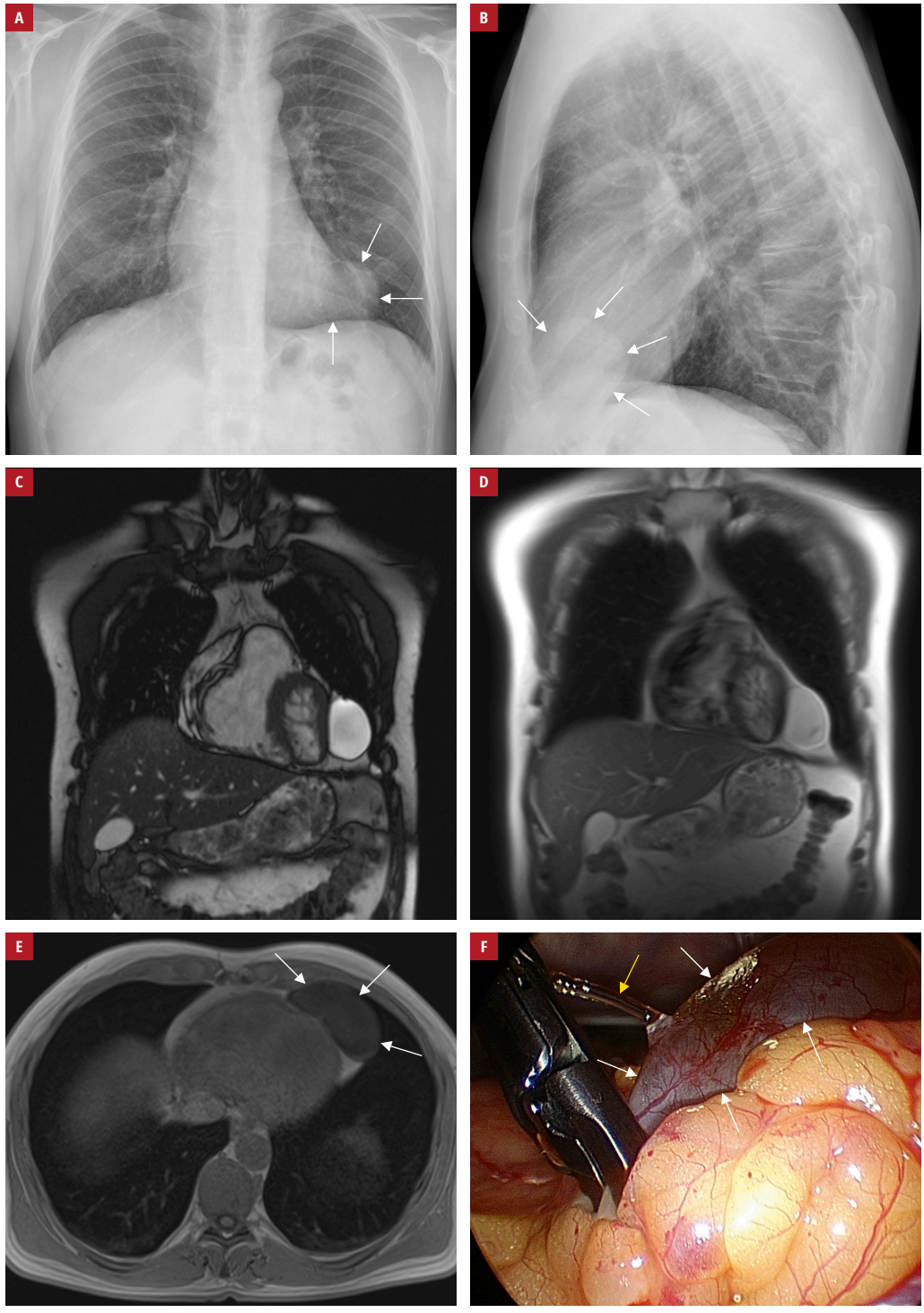

FIGURE 1 Imaging of a patient with a pericardial cyst: **A**, **B** – chest X-ray showing a large, rounded structure at the cardiac apex (arrows); **C**–**E** – magnetic resonance imaging demonstrating a thin-walled, homogeneous structure with high signal intensity on steady-state free precession (**C**) and T2-weighted spin echo (**D**, coronal plane image) and low signal intensity on T1-weighted spin echo images (**E**, axial plane image, arrows); **F** – intraoperative image showing the pericardial cyst (white arrows) and the aqueous fluid (yellow arrow) after puncture