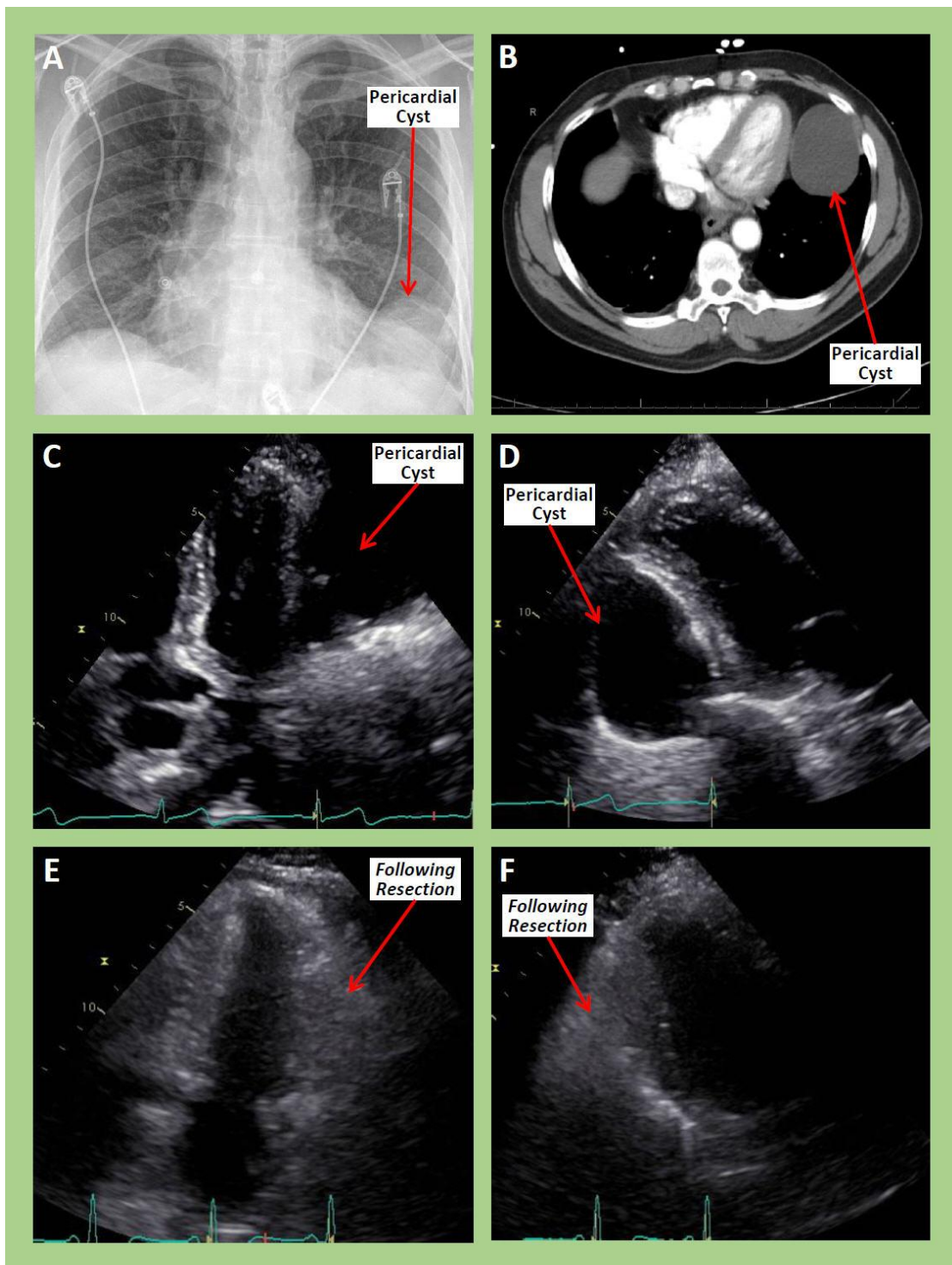


Large Pericardial Cyst: *Impressive & Compressive!*

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Description

The chest roentgenogram in Figure A reveals a left lower lobe rounded shadow adjacent to the left ventricular apex, consistent with pericardial cyst. The axial computed tomographic image of the chest in Figure B better illustrates the pericardial cyst along the inferolateral and apical walls of the left ventricle and establishes its attachment to the pericardium. The 2-dimensional echocardiographic images in the apical 4 chamber view (Figure C) and modified parasternal long axis view (Figure D) demonstrate a large pericardial cyst compressing the inferolateral wall of the left ventricle. Following surgical resection, the compression is relieved as seen on the corresponding 2-D apical (Figure E) and parasternal (Figure F) images.

Discussion

Pericardial cysts are rare occurring in about 1 in 100,000 patients [1]. They are congenital anomalies caused by failure of one or more of the fetal mesenchymal lacunae to combine to form the pericardial coelom during development. The resulting localized weakness in the pericardial sac can either form a diverticulum or become a cyst upon accumulating clear fluid and losing direct communication with the pericardial sac [2].

Pericardial cysts can also occur following trauma [3], inflammatory processes such as spontaneous and post cardiothoracic surgery pericarditis [4], or in patients undergoing long-term hemodialysis [5]. About 75% of pericardial cysts are found in the right cardiophrenic angle, and close to 22% in the left cardiophrenic angle; nearly 8% are seen in the posterior or anterior/superior mediastinum [6].

An isolated pericardial cyst is usually benign [7] and often an incidental finding [8]. Most pericardial cysts (up to 75%) are asymptomatic and are discovered incidentally on routine chest imaging [9]. In symptomatic cases, symptoms are predominantly caused by mass effect, as the cyst can compress surrounding structures, such as the heart [10], the lungs and the superior vena cava [11]. Cardiac compression includes the right ventricle [12], left ventricle [13], left

atrium [14] and right atrium [15]. Compression of the coronary arteries and superior vena cava has also been reported [16].

A broad range of symptoms have been reported and attributed to pericardial cysts [17]. These include chest pain [18], dyspnea [19], cough [20] and palpitations [13]. More serious presentations have been reported including obstructive shock [21], anaphylactic shock [22], cardiac tamponade [23] and respiratory failure [24].

Treatment is usually conservative; serial transthoracic echocardiograms can be performed to monitor for cyst enlargement or changes, especially in asymptomatic patients [25]. In symptomatic patients, open or minimally-invasive surgery might be indicated; percutaneous aspiration and ethanol ablation/sclerosis have also been described, although post-aspiration recurrence of the cyst has been reported to be around 33% [27, 28].

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