


CARDIOVASCULAR FLASHLIGHT

Tuberculous pericarditis with constrictive physiology

Morten Kraen*, Markus Muller, and Per Björkman

Department of Cardiology, University of Lund Sweden, Sdr. Forstadsstorg, Malmo 20502, Skane, Sweden

* Corresponding author. Tel: +46 40 339997, Fax: +46 40 336209, Email: morten.kraen@skane.se

A previously healthy 28-year-old man presented with 1 week's history of chest pain, low-grade fever, and progressive dyspnoea. Minimal electrocardiographic changes were found; however, cardiac ultrasound revealed moderate amounts of pericardial fluid, inferolateral hypokinesia, and a left ventricular ejection fraction of 40% (Panel 1, arrow points to pericardial effusion). Computed tomographic thorax showed mediastinal lymphadenopathy and discrete left upper lobe infiltrates (Panel 2, arrow points to left upper lobe infiltrates). Pericardial drainage was performed, with initial negative diagnostic results.

Tuberculin skin test and an interferon-γ release assay for tuberculosis were both positive, and therapy for presumptive tuberculous pericarditis was initiated, including prednisolone. The diagnosis was later confirmed by positive cultures for Mycobacterium tuberculosis from sputum and pericardial fluid. Further testing showed resistance to several first-line tuberculosis drugs.

At this time, the patient had developed signs of increased central venous pressure and tachycardia without recurrent pericardial effusion. Cardiac magnetic resonance imaging showed signs of constriction with a diastolic septal shift (Panel 3, arrow points to diastolic shift of the septum). The visceral and parietal layers of the pericardium were markedly thickened (measuring 5–10 mm) and showed late gadolinium enhancement (Panels 4 and 5, arrow points to the visceral and parietal layers of the pericardium).

Antituberculous therapy was modified, and the dose of steroids has been gradually tapered. Hitherto, the patient's cardiac condition has been stable without overt signs of heart failure and with increased exercise capacity, so pericardial surgery has been postponed.

Multidrug-resistant tuberculosis with constrictive pericarditis is exceedingly rare. A multidisciplinary imaging approach was helpful in determining the extent of cardiac involvement and will be used to assess the therapeutic outcome of this potentially reversible condition.