

IMAGES IN EMERGENCY MEDICINE

Infectious Disease

Man with chest pain, fever, and surprising finding on bedside ultrasound

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1 | PATIENT PRESENTATION

A 38-year-old man with human immunodeficiency virus and a CD4 count of 106 cell/mm³ presented to the emergency department (ED) with 2 days of chest pain and fever. One month earlier, he was diagnosed with disseminated tuberculosis (TB) and initiated TB and antiretroviral therapy. On presentation, his heart rate was 125 beats per minute, temperature 101.5°F, and blood pressure 106/76 mmHg. Bedside echocardiography revealed a large, loculated pericardial effusion (Figure 1 and Video 1).

In the ED, hemodynamics worsened and an emergent pericardiocentesis was performed with removal of 700 mL of serosanguinous fluid, followed by a pericardial window. The patient improved with an extended 12-week steroid taper.

2 | DIAGNOSIS: TUBERCULOSIS–IMMUNE RECONSTITUTION INFLAMMATORY SYNDROME

The temporal relationship with the initiation of TB and antiretroviral therapy, combined with the lack of growth from cultures, suggested a diagnosis of tuberculosis–immune reconstitution inflammatory syndrome (TB-IRIS)—a complication of antiretroviral initiation in patients with active TB. IRIS is thought to result from an exaggerated immune response in the context of a rapidly recovering immune system and abundant infective antigen and can manifest locally or systemically. Pulmonary and lymphatic involvement are the most common sites of clinical manifestation implicated in TB-IRIS.¹ Pericardial effusions have been previously described,² and, as this case demonstrates, can be life threatening.

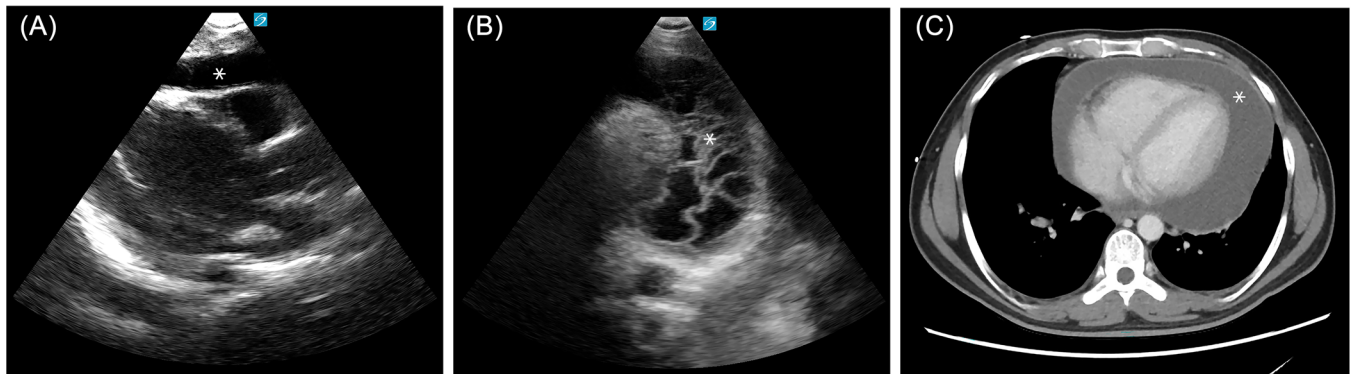
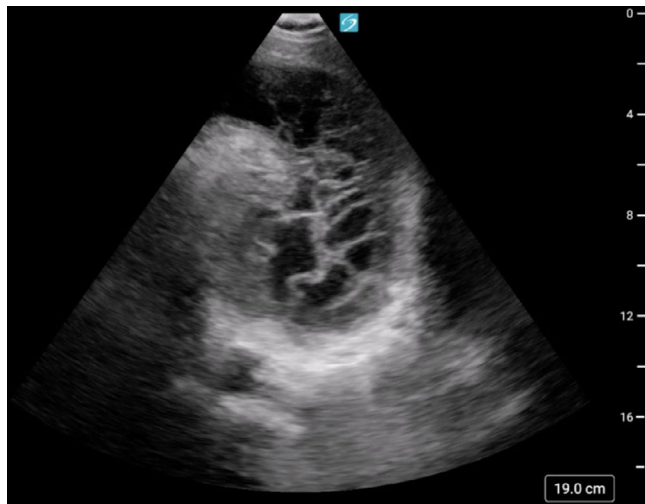


FIGURE 1 Pericardial effusion (asterisks) on bedside echocardiographic parasternal long axis view (panel A), apical view (panel B), and axial computed tomography view (panel C). Panel (B) best shows the loculated nature of the effusion.

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VIDEO 1 Bedside apical echocardiographic view demonstrating loculated pericardial effusion.

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