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Introduction
• Purulent pericarditis is a localized purulent infection in the pericardial space.
• Before the era of antibiotics, purulent pericarditis was related to complications of pneumococcal pneumonia. Now more frequently associated with thoracic surgeries, immunocompromised hosts and nosocomial blood infections.\(^1\)
• This case is an unusual presentation of acute methicillin-resistant staphylococcus aureus (MRSA) purulent pericarditis with a course complicated by cardiac tamponade, opiate withdrawal, and a right ventricle (RV) laceration.

Case Presentation
History of Present Illness
• Patient is a 30-year-old M active intravenous drug use (IDU) with a recent history of MRSA bacteremia, endocarditis, parasternal abscess s/p I&D, and sternal osteomyelitis with inadequate treatment duration presenting to the emergency room with 3 days of worsening pleuritic chest pain and dyspnea.

Physical Exam
• Physical exam notable for tachycardia, low grade fever, and decreased breath sounds. No peri-sternal tenderness.

Initial Diagnostic Workup
• Chest radiograph with ground glass concerning for septic emboli
• Computerized tomography (CT) of the chest showed nodules, anterior sternal thickening, but no evidence of osteomyelitis.
• Preliminary blood cultures pending
• IV vancomycin treatment was started for presumptive recurrent tricuspid valve (TV) endocarditis with septic emboli.

Hospital Course
• Patient remained tachycardic with pleuritic pain in the setting of active heroin withdrawal.
• Two days after admission, preliminary blood cultures continued to have no growth, he became hypotensive with an up trending leukocytosis, prompting further evaluation.
• Electrocardiogram (EKG) with marked diffuse ST elevations consistent with pericarditis.
• Transthoracic echocardiogram remarkable for a large fibrinous pericardial effusion.

Further Complications
• Pericardiocentesis was attempted and the catheter was placed in the RV, which led to a RV repair, subtotal phrenic to phrenic pericardiectomy and mediastinal washout.
• During the surgery frank pus was visualized in the pericardial sac.
• Pericardial fluid and tissue cultures were positive for MRSA.
• His blood cultures remained negative. The patient did well in the postoperative setting and his mediastinitis was treated with IV vancomycin for a total of 4 weeks.

Learning Points
• Patients with purulent pericarditis generally have non-specific symptoms, so diagnosis relies on high clinical suspicion and a pericardiocentesis for pericardial fluid analysis.
• The most common organism responsible for purulent pericarditis is Staphylococcus aureus.\(^2\)
• Mortality rate approaches 20-30%\(^3\) making early treatment with targeted antibiotics and aggressive pericardial drainage paramount in improving patient outcomes.
• Clinicians should be aware of their cognitive biases during clinical decision making, as it can be crucial for diagnosing conditions like purulent pericarditis.

References