Patients with infective endocarditis have a 25% risk of concomitant pericardial effusion (23% mild to moderate, 2% large or very large). These patients are more likely to be intravenous drug users (IVDU), have right sided valve involvement, embolic events, and peri-annular abscesses than patients without an effusion. Renal failure and younger age are associated with a higher risk of having a pericardial effusion.\(^1\)

A 32-year-old female with a past medical history of IVDU presented to the hospital with acute encephalopathy and was admitted to the medical intensive care unit for infective endocarditis and sepsis. The patient required intubation for airway protection. A large mitral valve vegetation was found on transthoracic echocardiogram and was confirmed with trans-esophageal echo (TEE). Echo also showed a moderate 1 to 2 centimeter pericardial effusion, mild mitral regurgitation, and moderately decreased ejection fraction at 40-45%. Hospital course was also complicated by right lower extremity ischemia secondary to septic emboli requiring emergent embolectomy. Patient was started on broad spectrum antibiotics with vancomycin and piperacillin-tazobactam on admission that were then de-escalated to cefazolin as blood cultures resulted with methicillin sensitive staph aureus and her clinical course improved. Brain imaging showed multiple changes consistent with septic emboli. Cardiothoracic surgery (CTS) was consulted but given the fact the patient was clinically improving with no further embolic phenomena, negative repeat blood cultures and no significant valvular damage was seen it was determined to continue with medical management over surgical intervention after risk and benefit discussion with the family. She was eventually able to be extubated and transferred out to the floor. She quickly decompensated that same day and had pulseless electrical activity arrest. She coded for 25 minutes and was re-intubated. Ultrasound showed pericardial effusion with clinical signs of tamponade and bedside pericardiocentesis was performed with 140 milliliters (ml) of purulent fluid removed. She was taken to the operating room emergently by CTS for a pericardial window with an additional 500 ml of purulent fluid removed. TEE at that time showed no residual effusion. Labs showed severe acidosis, hypoglycemia, hyperkalemia, worsening renal function requiring dialysis. She had significant coagulopathy consistent with disseminated intravascular coagulation. Course further complicated by acute gastrointestinal (GI) bleed and she was found to have massive ischemic injury throughout her entire GI tract. Due to multiorgan failure, poor neurological status, and poor prognosis overall the decision was ultimately made to withdraw care.

Patients with infective endocarditis have a known risk of developing pericardial effusion. This is often underrecognized compared to more classic complications including valvular insufficiency, cardiogenic shock, and septic emboli. A high suspicion of obstructive shock secondary to cardiac tamponade needs to be present for patients who decompensate with endocarditis and a known pericardial effusion. Tamponade can be slow to diagnose given the patients have a known infectious source and evidence of concomitant septic shock.

### REFERENCES
