A 51 year old Caucasian male had a complicated post-operative period after cholecystectomy for acute cholecystitis. He had MRSA bacteremia, cervical discitis, right ankle septic arthritis and infective endocarditis (IE) with vegetation involving atrial side of posterior mitral valve leaflet. After being treated surgically for discitis and septic arthritis, he was discharged on antibiotics for management of IE.

After 7 weeks, he presented to the ED with acute shortness of breath. TTE showed pericardial effusion with probable rupture of posterior mitral valve leaflet and subvalvular abscess. Subsequently, cardiac CT revealed a large left ventricular pseudoaneurysm extending posteriorly, bounded by the pericardium and encasing the mid portion of the left circumflex artery causing compressive occlusion of this artery during systole. (Figure A-C)

Left ventricular pseudoaneurysm is most commonly associated with myocardial infarction less commonly associated with endocarditis. The pseudoaneurysm of the left ventricle was repaired by an innovative surgical procedure along with replacement of mitral valve. ALAN NEED MORE INFO TECHNICAL The patient was discharged in a stable condition. CT scan at one year postoperatively demonstrated no pseudoaneurysm and no evidence of prosthetic mitral valve endocarditis.

This case presents an intraoperative description of the annular area of concern and associated preoperative imaging. Endocarditis usually manifests itself as valvar problems. A rare complication of endocarditis is left ventricular pseudoaneurysm. Extension of Infective endocarditis beyond the valve annulus is associated with high mortality and the need for cardiac surgery. Periannular extension complicates aortic IE more commonly than mitral or tricuspid IE. Periannular infection is of even greater concern with prosthetic-valve IE, occurring in 56% to 100% of patients. Most periannular infections involving the mitral area are associated with prosthetic mitral valves.

Infected pseudoaneurysms are more likely to continue to expand. There is a risk of rupture and hence the indication to repair. Three different surgical principles are important include removing all the endocarditic material, excluding the pseudoaneurysm, and replacing the mitral valve. Diagnosis of perivalvular extension of IE can be challenging as the clinical parameters are inadequate. Persistent bacteremia or fever, recurrent emboli, heart block, CHF, or a new pathological murmur in a patient with IE who is taking adequate antibiotics may suggest extension. Progression of periannular infection can cause pseudoaneurysm, which may be catastrophic. Even if the hemodynamic impact is tolerated, such lesions will not heal with medical management alone, and they require urgent operative intervention.

Patients at risk for perivalvular extension of IE require prompt evaluation. The size of vegetations is not helpful in predicting the outcome.

TEE and cardiac CT can demonstrate the distinctive flow patterns of pseudoaneurysms and can rule out communications from unruptured abscess cavities.

Drainage of abscess cavities, excision of necrotic tissue, and closure of fistulous tracts often accompanies valve-replacement surgery.

This case emphasizes the importance of identifying left ventricular pseudoaneurysm as a complication of infective endocarditis and the need for prompt surgical management.

REFERENCES
