Myo-pericarditis with concomitant aortitis is uncommon and poses a challenging diagnostic and management dilemma.

Case: A 27 year old male with no medical history presented for evaluation of pleuritic chest pain for 6 weeks. Physical exam was normal with a non-specific baseline electrocardiogram. Lab evaluation showed elevated troponin (0.05 ng/mL) and high sensitivity C-reactive protein (hs-CRP 115 mg/L) and ESR 22 mm/hr.

Decision Making: Initial computed tomography performed for evaluation of pulmonary embolism demonstrated a thickened aorta. Cardiac MRI (CMR) confirmed severely thickened ascending aorta, and findings consistent with myo-pericarditis. Rheumatologic and infectious work-up was negative. He was discharged on Ibuprofen and Colchicine. He was re-hospitalized 2 weeks later with worsening symptoms and increasing hs-CRP. 18F-FDG PET scan, performed to distinguish ongoing pericarditis from progressive aortitis requiring more aggressive therapy, confirmed pericardial inflammation and not extensive aortitis. Initiation of Prednisone and Colchicine resulted in dramatic clinical improvement.

Conclusion: This case highlights the utility of CMR imaging in precisely imaging myo-pericarditis and the value of inflammation imaging with 18F-FDG PET to localize the site of active inflammation and guide therapy. Understanding the expected pericardial reflections on ascending aorta is critical to definitively diagnose pericarditis as opposed to localized aortitis.