**FOCAL MYOPERICARDITIS PRESENTING AS ACUTE STEMI**

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**Introduction:** Clinical presentation of myocarditis and pericarditis is variable and often mimics myocardial infarction. Diagnosis is frequently empiric and made on clinical presentation, electrocardiographic (ECG) changes, elevated cardiac enzymes, and lack of epicardial coronary artery disease. We present a young female with chest pain and inferior wall ST-elevation on ECG who was found to have focal myopericarditis.

**Case:** A previously healthy 18-year-old female presented to the ER with crushing mid-sternal chest pain radiating to her back. She had resting dyspnea without change in quality of pain with position or inspiration. She had a normal cardiopulmonary exam. ECG on presentation showed ST-Elevation in the inferior distribution in leads II, III, and aVF. Troponin-I was 1.06 ng/mL on presentation, which peaked to 22.88 ng/mL at 24 hours.

**Decision\making:** A CT-angiography of the chest was negative for aortic dissection or pulmonary embolism. Echocardiogram revealed left ventricular ejection fraction of 55-60% with mild hypokinesis in the inferior wall. Myocardial infarction remained highest on differential diagnosis. Cardiac catheterization revealed normal coronary arteries with hypokinesis in the inferior wall left ventriculogram, consistent with echocardiographic findings. Differential diagnosis at this point, for elevated troponin I levels and ST-elevation on ECG, was coronary vasospasm and myopericarditis. Patient subsequently underwent a cardiac magnetic resonance imaging (CMR), which revealed hypokinesis in the lateral and inferior walls of the left ventricle apex with epicardial and transmural delayed enhancement, consistent with focal myopericarditis.

**Conclusion**: Myopericarditis shows a characteristic pattern of contrast enhancement on CMR, which originates primarily from the epicardium, sparing the subendocardial layer. Positron emission tomography (PET) can also be used to assess for occult inflammation. Indications for endomyocardial biopsy exist, but provide a diagnosis only 20-30% of the time. A high clinical suspicion is important in the diagnosis of myopericarditis. Treatment is supportive for myopericarditis and case-dependent