Caseous Necrosis of the Mitral Valve
Carlos A. Rojas, MD, Waleed Ahmed, MD, Jason Reingold, MD, Sean Wu, MD, PhD, and Wilfred Mamuya, MD, PhD

Clinical History
A 67-year old woman was transferred to our institution following an episode of polymorphic ventricular tachycardia. Her prior medical history was notable for exertional fatigue, chest pain, shortness of breath and diaphoresis. Her presentation to an outside hospital was remarkable for ECG changes suggestive of myocardial ischemia and a borderline troponin leak. Cardiac catheterization at the outside hospital demonstrated non-obstructive coronary artery disease, and a left atrial mass. A trans-thoracic echocardiogram (TTE) performed on admission to MGH revealed a large, non-mobile echo dense mass on the atrial side of the mitral valve, adjacent to the posterior leaflet. No mitral stenosis and moderate mitral regurgitation were noted. The differential diagnosis included a primary myocardial tumor, myxoma, fibroelastoma, thrombus, vegetation, and caseous necrosis of the mitral valve. An ECG-gated cardiac CT was performed in order to better characterize the mass seen on TTE.

Findings
Cardiac CT demonstrated a large extra-cavitary calcified mass with central areas of lower density attenuation in the posterior atrio-ventricular groove, consistent with caseous necrosis of the mitral valve. Other notable findings included diffuse and predominantly calcified multi-vessel coronary artery disease.

Discussion
Caseous necrosis of the mitral valve is a rare form of mitral annular calcification (MAC) in which there is high atherosclerotic burden with central “caseous” necrosis, which can resemble a tumor. It is observed in up to 0.6% of patients with MAC, and is more commonly seen in the posterior atrio-ventricular groove of the mitral annulus. Although it is generally thought to represent a benign entity, it has occasionally been associated with embolic phenomena, and surgery may be indicated in rare cases. Cardiac CT is diagnostic for this entity, and was an ideal complementary modality that was helpful in narrowing down the differential diagnosis.

REFERENCES
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