Infiltrative cardiomyopathies are a subset of restrictive cardiomyopathies best diagnosed through cardiac MRI and often endomyocardial biopsy. They most often include amyloidosis, sarcoidosis and hemochromatosis. Generally, infiltrative cardiomyopathies are progressive diseases that present with clinical symptoms late in their course and are systemic in nature, involving multiple organs. Adipositas cordis, a rare histopathological condition characterized by scattered infiltration of the ventricular myocardium with adipose tissue, is usually discovered on autopsy as a benign process, but it can occasionally present with ventricular arrhythmias resulting in death. Its etiology is unclear, with right-sided disease attributable to five different known genetic mutations but no known mutations for left ventricular disease. Causes of fatality secondary to adipositas cordis also include myocardial infarction and ventricular rupture.

Case
A 29-year-old male presented with sudden ventricular fibrillation cardiac arrest. He had no prior cardiac disease, a past medical history of chronic hepatitis B, pulmonary embolism and testicular lymphoma at age 7. He had undergone radical orchiectomy and treatment with chemotherapy, and had developed subsequent radiation-induced end-stage renal failure requiring kidney transplant. He was at work as a bank teller when he suddenly became unconscious, apneic and pulseless. EMS was called to the scene, and an EKG showed ventricular fibrillation arrest. He required three defibrillatory shocks to achieve ROSC and then was transported to a local hospital, where he was intubated and hypothermia protocol was initiated. After stabilization and extubation, he received a thorough cardiac workup including echocardiogram, angiogram, MRI and endomyocardial biopsy.

The echocardiogram demonstrated a left ventricular ejection fraction of 50% to 55% as well as moderate concentric left ventricular wall thickening consistent with left ventricular hypertrophy. Cardiac angiogram demonstrated no evidence of coronary artery narrowing or disease. On cardiac MRI, hyperenhancement throughout the myocardium consistent with diffuse lipomatous infiltration of the left ventricle was discovered (Figure, A,B). Fat suppression MRI sequences confirmed the diagnosis of adipositas cordis (Figure, C). Cardiac biopsy showed no H&E signs of iron or amyloid deposition. The patient remained hemodynamically stable throughout his admission without further arrhythmias. Follow-up plans for ICD placement, genetic testing and genetic counseling were scheduled at discharge from the hospital. Ultimately, he will be listed for cardiac transplant.

Conclusion
Although extremely rare, this case reiterates the significance of proper cardiac evaluation in atypical cardiac arrest as well as the importance of integrating this condition into the infiltrative cardiomyopathy differential diagnosis. Identification of this infiltrative process allows for proper arrhythmia prophylaxis, patient counseling and a realistic prognostic outlook for a potentially fatal condition.

REFERENCES