

## **Ventricular Fibrillation as an initial manifestation of cardiac sarcoidosis**

### **Introduction**

Cardiac Sarcoidosis is a rare immunologically driven process which is seen in 2-5% of patients with systemic sarcoidosis.

### **Case Summary**

We present a 31-year-old woman who was brought to the emergency department following a witnessed out of hospital ventricular fibrillation cardiac arrest. Transthoracic echocardiography revealed an ejection fraction of 50%, with multiple wall motion abnormalities. Cardiac catheterization revealed normal coronaries. Cardiac magnetic resonance imaging (CMR) revealed a mildly enlarged left ventricle with reduced ejection fraction and segmental wall motion abnormalities, but without any late gadolinium enhancement. Despite a negative cardiac magnetic resonance imaging, this patient received Fluorodeoxyglucose positron emission tomography scan (FDG-PET CT) that facilitated the diagnosis of CS.

### **Discussion**

Diagnosis of CS is challenging. Given the important role of ventricular tachyarrhythmias as the mechanism of sudden death in patients with CS, evaluation for sarcoidosis should be considered in all patients presenting with ventricular tachyarrhythmias of unknown origin. Patients who have normal CMR but with high suspicion for CS should be evaluated with the FDG-PET as it not only diagnoses the condition but may also detect the active myocardial inflammation in the early phase of the disease process prior to the formation of scar tissue.