**SHOULD SARCOIDOSIS BE CONSIDERED A RISK FACTOR FOR DEVELOPMENT OF PREMATURE CORONARY ARTERY DISEASE: A CASE OF 40-YEAR OLD FEMALE WITH CORONARY DISEASE AND SARCOIDOSIS**

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**Introduction**: Sarcoidosis is a multisystemic, granulomatous disorder of unknown etiology. Most commonly involves the lung and the lymph node, although, cardiac involvement has been reported in 25% in autopsies. Despite this, less than 5% of patients present with cardiovascular symptoms. Unlike some rheumatological diseases like lupus and rheumatoid arthritis, sarcoidosis is not widely known as a risk factor for coronary artery disease (CAD).

**Case:** A 40-year old female with a history of pulmonary embolism, deep vein thrombosis, hypertension, sarcoidosis and no other risk factors for CAD presented with atypical chest pain. The patient’s mother had a history of sarcoidosis, without any other risk factors for CAD and was diagnosed with CAD at the age of 43. Vitals signs showed BP 190/96mmHg, HR 101bpm. Physical examinations were unremarkable. Initial troponin was 0.05ng/ml and drug screen was negative. Electrocardiogram showed normal sinus rhythm with T wave inversion in inferior leads. Patient was loaded with aspirin. Six hours later, troponins increased to 4.28ng/ml. The patient had cardiac catheterization which showed 100% occlusion of the right coronary artery (RCA), the obtuse marginal (OM) had a stenosis of 70%, the left anterior descending (LAD) was 80% occluded, and 3 stents were placed in RCA. Echocardiography showed left ventricle ejection fraction 55%, mild left concentric ventricle hypertrophy. The patient remained clinically stable and was discharged.

**Discussion:** A primary issue is this young patient CAD in the setting of limited cardiovascular disease risk factors. Given the inflammatory nature of coronary atherosclerosis, an association between sarcoidosis and CAD would not be a surprising finding. In particular, granulomatous diseases and atherosclerosis have a common connection to the intracellular signaling molecules involved in Th1 immune responses, including TNF, interferon gamma, and multiple interleukins. Emerging research into sarcoidosis and inflammatory diseases has shown key genetic predispositions involving the major histocompatibility complex class II. In a young patient with sarcoidosis and angina symptoms, the possibility of CAD should be investigated.