## Constrictive pericarditis as rare manifestation of systemic sarcoidosis: a case report

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**Introduction:** Sarcoidosis is a multisystem granulomatous disease of unknown etiology. Cardiac involvement is present in 20-30% of all patients<sup>1</sup>. In cardiac sarcoidosis myocardium and endocardium are typically affected, while pericardial involvement and supraventricular arrhythmias are less common <sup>1-3</sup>.

Case report: 55-year-old female patient was diagnosed in June 2022 with mediastinal and hilar lymphadenopathy as an incidental finding during evaluation for dyspnea and episode of paroxysmal supraventricular tachycardia. Radiological findings, bronchoscopy and further workup confirmed the diagnosis of sarcoidosis. Quantiferon test was negative and was done to ruled out tuberculosis. Echocardiography verified the hyperechogenic calcified pericardium with "septal bounce" sign and constrictive hemodynamics (Figure 1). In the June 2023, a CT coronary angiography was performed, which revealed an almost completely thickened (up to 15 mm) and diffusely calcified pericardium, sparing the posterior contour of both atria and the apex of both ventricles, which compresses the ventricles with a clear disturbance of the diastolic function of the heart (Figure 2). There was no pericar-

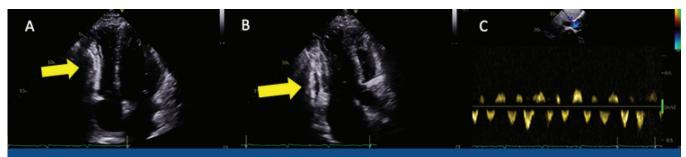


FIGURE 1. A. The four-chamber view of the heart showed calcified pericardium with a septal bounce phenomenon B. Three chamber view of the heart showed calcified pericardium. C. Doppler ultrasound showed reverse flow in the hepatic veins.

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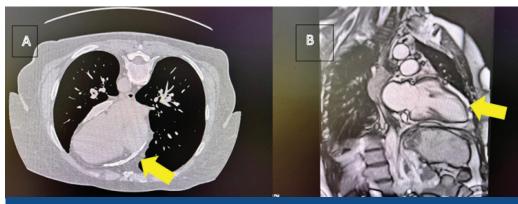


FIGURE 2. A. CT coronary angiography showed an almost completely thickened (up to 15 mm) and diffusely calcified pericardium. B. Magnetic resonance of the heart showed signs of constrictive pericarditis, with potential pericardial sarcoidosis.

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dial effusion or coronary artery calcification. Due to heart failure, a right-sided heart catheterization was performed, confirming the ventricular interdependence phenomenon and the diagnosis of constrictive pericarditis. Magnetic resonance of the heart did not prove a clear signs of myocardial sarcoidosis, but showed signs of constrictive pericarditis, with potential pericardial sarcoidosis (**Figure 2**). Metabolically active lymph nodes of the neck, mediastinum, lung hilum, axilla, retroperitoneum and inguinal were observed with a subsequent PET-CT. There were no focal or diffuse pathological accumulation of activity along the calcified pericardium. Based on the performed diagnostic workup, an elective partial pericardiectomy was indicated.

**Conclusion:** We report a rare case of systemic sarcoidosis, presented with constrictive pericarditis and paroxysmal supraventricular tachycardia. The most likely etiology of constrictive pericarditis is pericardial sarcoidosis. Determining the etiology of constrictive pericarditis is challenging, indicating in some cases partial or total pericardiectomy.

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