An unappetizing dog bone: cardiac sarcoidosis presenting with heart block and unusual left ventricular bulging

Nina Ghosh*, Gillian Nesbitt, Anthony Rocca, Jagdish Butany, Yves Provost, and Heather Ross

Toronto General Hospital, University of Toronto, Toronto, Canada

* Corresponding author. Internal Medicine, University of Toronto, Toronto General Hospital, New Clinical Services Building, 11th Floor; Rm 1203, 585 University Avenue Toronto, Ontario, Canada MSG 2N2. Tel: +1 416 786 0195; Fax: +1 416 340 4134. Email: ghoshnina@hotmail.com

A 39-year-old woman presented with syncope to a peripheral hospital where she was found to be bradycardic and hypotensive. A temporary transvenous pacemaker was inserted and the patient was transferred to our hospital. The patient was in complete heart block (Panel A). Cardiac catheterization revealed unusual bulging of the anterior left ventricular wall into the shape of a dog bone during left ventricular systole (Panel B).

A cardiac CT showed an eccentric aneurysm of the anterolateral wall and the presence of a zonal gradient density of the myocardium at the apex with a relative hypodense subendocardial and mid-layer zones (Panel C). These findings were consistent with an infiltrative process. Left ventricle biopsy showed a focal mild endocarditis overlying a non-caseating granulomatous lesion, morphological features most consistent with sarcoidosis (Panel D). Gallium scanning showed increased uptake in the left ventricular apex (Panel E). Treatment with corticosteroids and methotrexate was initiated. A repeat gallium scan after 3 months of treatment showed no evidence of active disease (Panel F).

Cardiac sarcoidosis is a potentially life-threatening disease and should be considered when an otherwise healthy young person presents with cardiac conduction disturbances. When a diagnosis of cardiac sarcoidosis is considered and cardiac MRI is contraindicated due to the presence of a pacemaker, cardiac CT may show non-specific findings of infiltration. The diagnosis is confirmed when, in the correct clinical context, an endomyocardial biopsy shows a non-caseating granuloma. The presence of gallium-avid lesions may predict a greater response to corticosteroid treatment.

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