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## Images in cardiovascular medicine. Cardiac tuberculoma.

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## Cardiac Tuberculoma

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A 43-year-old man with a 6-month history of cough, dyspnea, nocturnal sweats, and weight loss was reviewed in the clinic. Clinical examination revealed cervical lymphadenopathy and indicated constrictive physiology. Initial tests, including chest radiography, sputum examination, QuantiFERON-TB Gold test, and lymph node biopsy, were unyielding. HIV serology was nonreactive.

Cardiac magnetic resonance imaging (Figure 1A and 1B) demonstrated extensive tumor infiltration affecting the endocardium, myocardium, and pericardium. Transesophageal echocardiography-guided endomyocardial biopsy (Figure 2) of the tumor revealed mixed inflammatory cells with a vaguely granulomatous appearance (not shown). A pericardial biopsy via limited thoracotomy confirmed multiple centrally caseating granulomata (Figure 3). Antituberculous therapy was begun with symptom resolution. On follow-up,

the patient was clinically improved. Repeat magnetic resonance imaging (Figure 4A and 4B) performed 8 months after therapy was begun confirmed almost complete disappearance of the left ventricle-encasing mass and a marked reduction in the size of the right atrial mass.

Myocardial tuberculosis, first reported by Maurocordat on autopsy in 1664, is exceedingly rare and often not diagnosed while the patient is alive. Advanced imaging techniques now enable earlier diagnosis and surveillance. Cardiac tuberculoma may regress after antituberculous therapy for 6 to 9 months, and surgery may not be needed.

### Disclosures

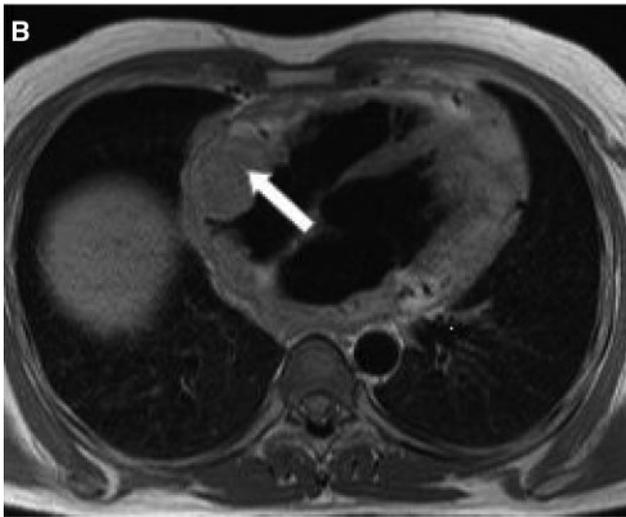
None.

From the Departments of Cardiology (M.J., M.S., G.M., J.D., D.C.) and Cardiothoracic Surgery (J.L.), Glenfield Hospital, Leicester, UK. Correspondence to Mohamed Jeilan, Department of Cardiology, Glenfield Hospital, Groby Rd, Leicester LE3 9QP, UK. E-mail jokumali@hotmail.com (*Circulation*. 2008;117:984-986.)

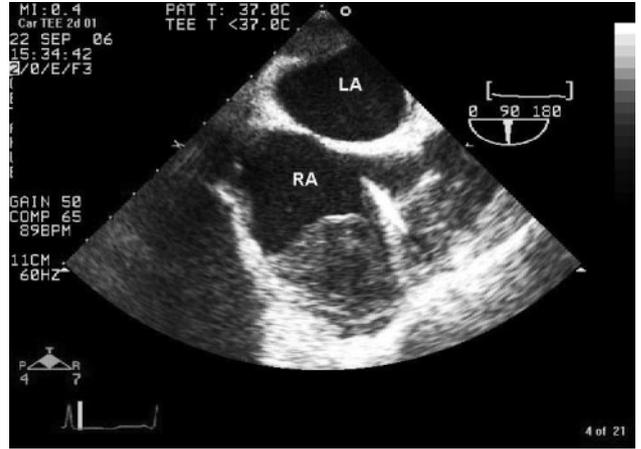
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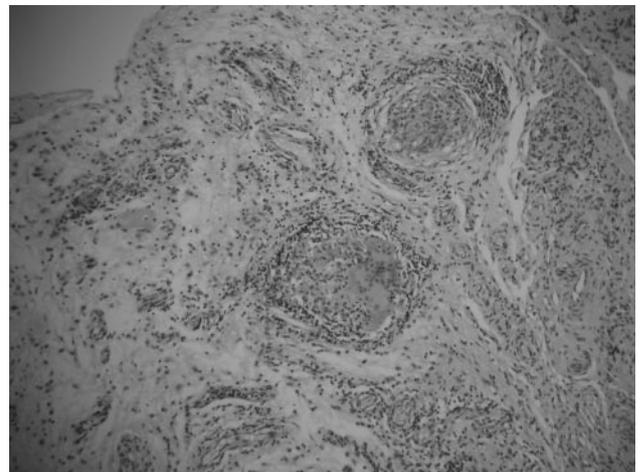
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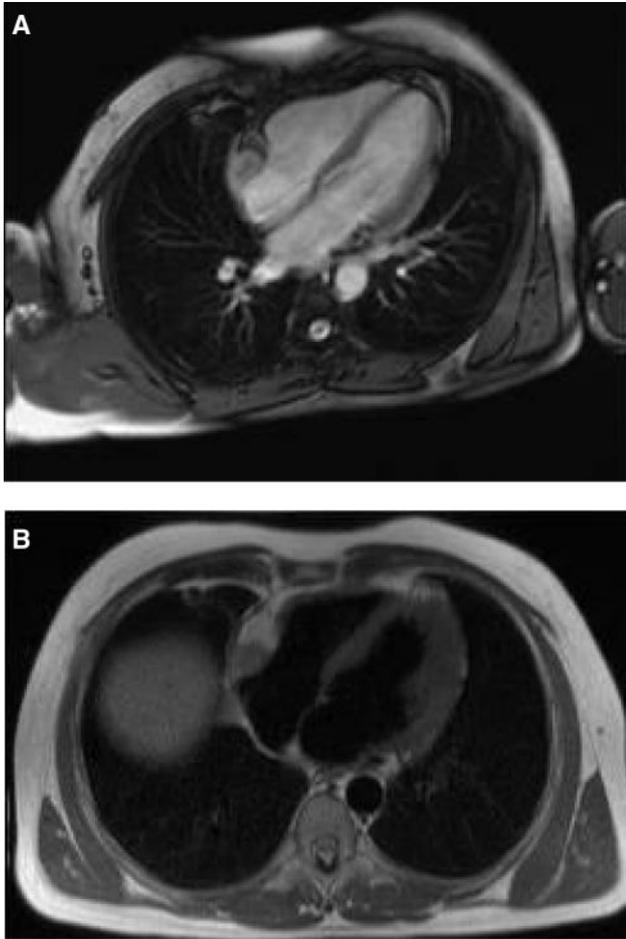
**Figure 1.** Bright-blood (A) and black-blood (B) magnetic resonance images at the midventricular level. Note the tumor invasion of the lateral left ventricular wall, multiple nodular areas at the apex, and a large right atrium mass (arrow). This mass has a cross-sectional area of 9 cm<sup>2</sup>. The heart is literally “boxed in” and almost completely encased by tumor, with dense pericardial thickening (up to 8 mm) giving rise to constrictive physiology as seen on cine magnetic resonance imaging.



**Figure 2.** Transesophageal echocardiography bicaval view. Note the middensity mass in the right atrium. Biopsy forceps are seen within the mass.



**Figure 3.** Photomicrograph of the pericardial biopsy. Note the granulomatous inflammation and lymphocytic infiltrate, with central necrosis (caseation) surrounded by multinucleate Langhans’ giant cells.



**Figure 4.** Bright-blood (A) and black-blood (B) magnetic resonance images at the midventricular level (8 months after initiation of antituberculous therapy). The soft tissue masses along the right and left ventricular free walls have almost completely disappeared. The right atrial mass is markedly reduced in area and is much less impressive; it now measures 5.9 cm<sup>2</sup>. Likewise, the pericardial thickening has virtually disappeared.

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