



CLINICAL IMAGES

Cardiocysticercosis

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Cysticercosis is common in South Africa. Although it can affect any organ, cases reported involving the myocardium are rare and are usually diagnosed postmortem.

A 42-year-old man was referred to the Cardiology Clinic at Nelson Mandela Academic Hospital, Mthatha, for assessment of bradycardia. He felt dizzy on getting up suddenly from a supine position. Epilepsy was diagnosed in 1995 when he presented with seizures, and he had subsequently been on phenytoin treatment. He had painless multiple subcutaneous nodules, especially over the trunk and proximal extremities (Fig. 1). His pulse rate was 41/min and irregular, and his blood



Fig. 1. Multiple subcutaneous nodules.

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pressure 76/124 mmHg. An electrocardiogram (ECG) showed sinus bradycardia with complete heart block (Fig. 2). Chest and soft-tissue radiographs showed extensive calcifications in the muscle and subcutaneous regions. Cardiac ultrasound showed multiple myocardial calcified and active cysts (Fig. 3, A and B). A computed tomography (CT) scan of the brain showed multiple active and calcified lesions. CT scan of chest confirmed the presence of cysts within the myocardium (Fig. 4). Biopsy of the subcutaneous nodules confirmed the diagnosis of cysticercosis.

The patient was initially treated only with prednisolone, and anti-helminthic treatment was deferred fearing pericystic inflammation and aggravation of the conduction abnormalities. Five days later praziquantel 50 mg/kg/day for 14 days was added to the treatment regimen. Repeat ECG after a week of treatment showed sinus rhythm with a heart rate of 70/min (Fig. 5).

Cysticercosis, a parasitic infestation caused by the larval stage of the *Taenia solium*, is estimated to affect approximately 50 million people worldwide and is common in South Africa.¹⁻³ Cysticercosis can affect almost any tissue but most frequently reported are skin, skeletal muscle and the central nervous system.^{4,5} The host inflammatory response depends on the parasite's ability to evade host immunity. Usually both 'healthy' (active) and 'involved' (inactive) cysticerci lack inflammatory response, which is restricted to 'currently degenerating' cysts whose ability to evade host defences is becoming faulty. Involution of cysts implies granulomatous inflammation

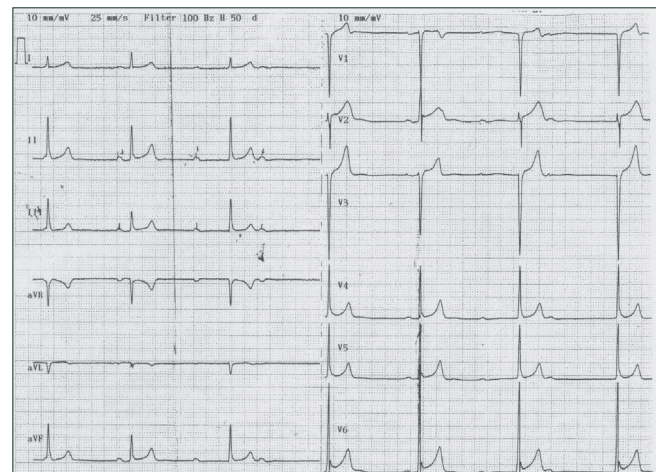


Fig. 2. Sinus bradycardia with complete heart block.

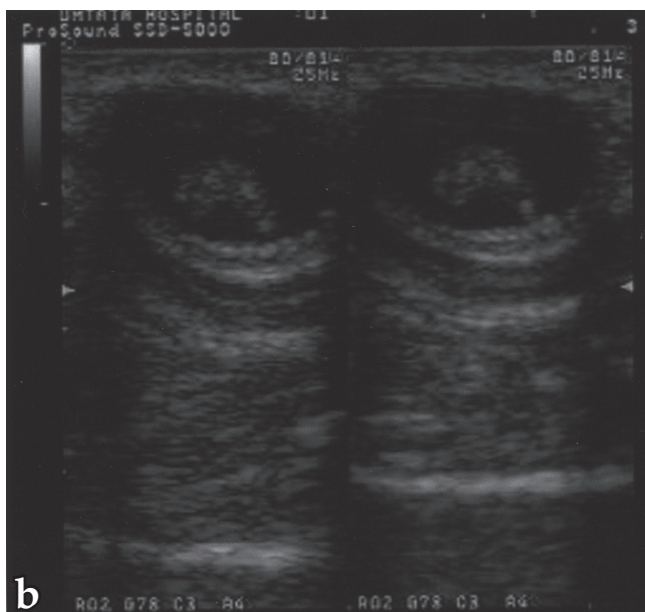
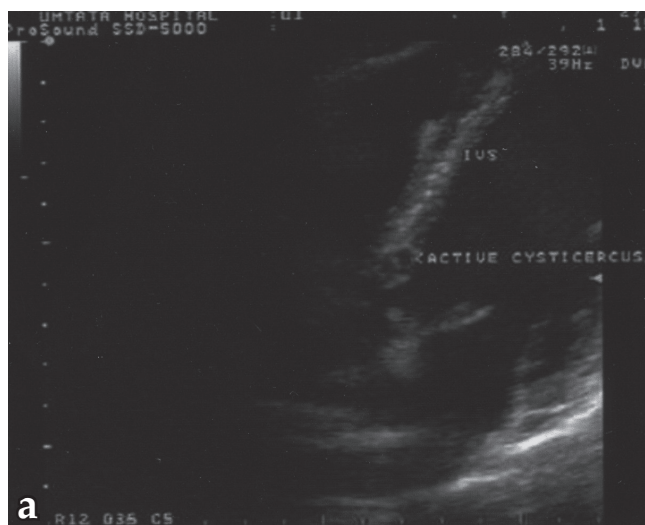


Fig. 3, a and b. Multiple myocardial calcified and active cysts.

and commonly calcification. Clinical presentation depends primarily on the number and location of the cysticerci and the host immune response.⁶

Myocardial cysticercosis is rare⁷⁻⁹ but its diagnosis is easier with modern radiological tools.⁹⁻¹¹ It can present with conduction abnormalities, as in our patient.¹² Antemortem diagnosis of cardiac cysticercosis is rare.^{12,13} Ultrafast CT and cardiac magnetic resonance imaging (MRI) can provide good images of the pathological findings.^{3,9,10} The major differential diagnosis is hydatid cyst, which is usually larger and multilocular. Antihelminthic treatment may result in pericystic inflammatory reaction which might worsen the clinical state.¹⁴

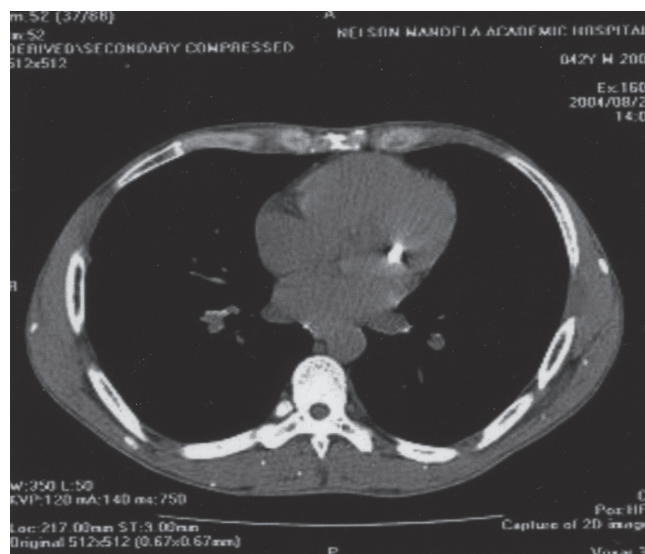


Fig. 4. CT scan of the chest showing active cysts within the myocardium.

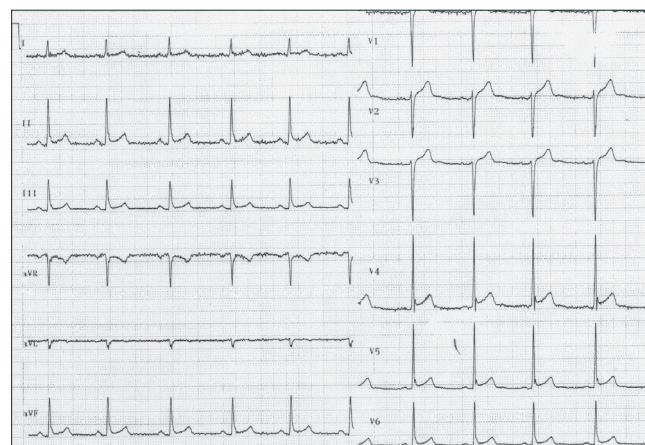


Fig. 5. ECG showing sinus rhythm after treatment.

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