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Images in...

A mysterious visitor to the heart

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DESCRIPTION

A 55-year-old man with a history of hypertension was admitted with complaints of progressive breathlessness of 2 months duration. General physical examination was remarkable for an elevated jugular venous pressure and bilateral pedal oedema. His ECG showed normal axis, left ventricular hypertrophy by voltage criteria and associated left atrial enlargement. Echocardiogram (ECHO) revealed multiple, mobile, hyperechoic masses with central lucency in the left ventricle (LV) attached to the apex, septum and free wall. The cyst wall had double echogenic lines separated by a hypoechogenic layer suggestive of hydatid cyst disease (figure 1).[1] In addition, his LV was globally hypokinetic with an ejection fraction (EF) of 25%. CT of the chest with contrast showed non-calcified, hypointense masses surrounded by a high-attenuation wall, in the LV cavity which was consistent with hydatid cyst (figure 2).[1] No hepatic cysts could be demonstrated. ELISA for the detection of anti-*Echinococcus* antibodies (IgG) in serum was negative. Coronary angiogram showed no significant obstructive lesions. Surgical removal of the cysts was planned. Preoperatively he was started on oral albenadazole 400 mg twice a day. Repeat ECHO after 5 days showed significant resolution of the cysts; surgery was deferred. The cysts completely resolved with 1 month of albenadazole therapy alone. His LVEF had improved to 40% at follow-up.

Echinococcosis or hydatid cyst disease is a tissue infestation. Cardiac involvement is extremely rare (0.5–2%).[2] Complications of the same can present as intracardiac mass lesions, with valvular impingement and, as congestive cardiac failure. Most dramatic presentation would be as systemic embolism or cyst rupture with anaphylactic shock.[3] ECHO, CT and MRI are important diagnostic tools.[1] Serology (ELISA) for hydatid antigen is positive in only 40–50% of cardiac hydatid disease and 80% in hepatic involvement. Treatment options include either drug therapy and/or surgery, which have to be weighed against the rare occurrence of embolisation of the cysts from the LV or the sudden rupture with a catastrophic anaphylaxis from the cyst debris.

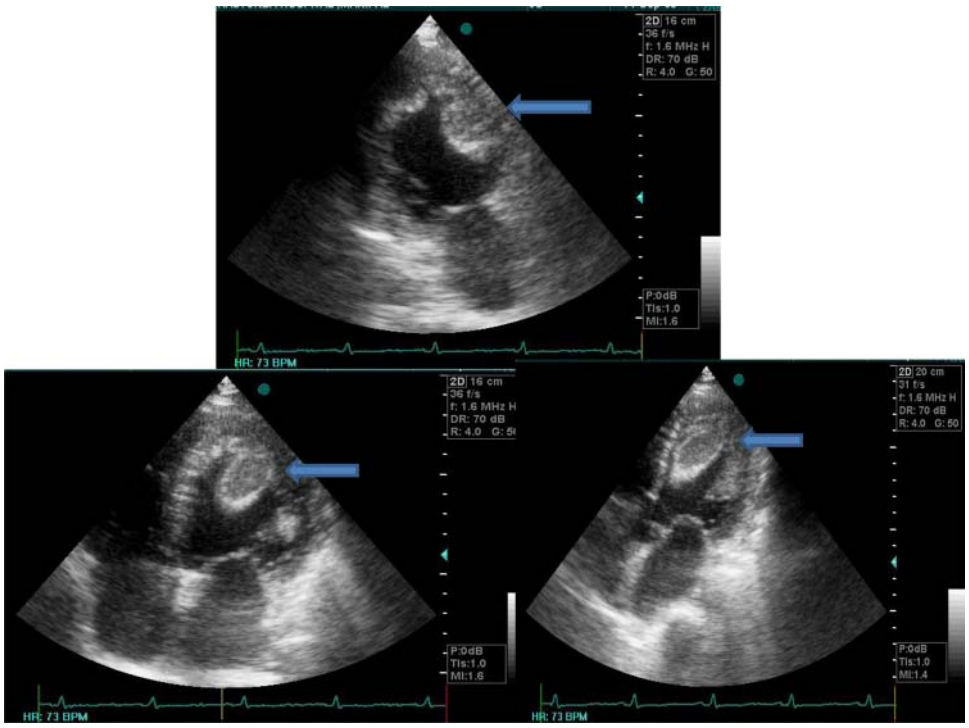

Figure 1 Echocardiogram showing multiple hyperechoic masses with central lucency (arrows) in the left ventricle.

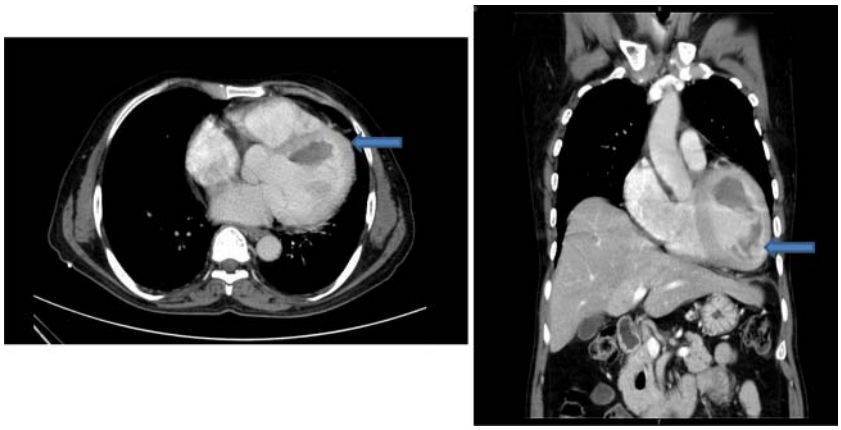

Figure 2 CT of the chest with contrast in transverse and coronal section showing hypoechoic cysts in the left ventricle (arrows).

Definitive treatment involves surgical removal of the cysts along with albenadazole for a period of 4–6 weeks.[4] An alternate regimen would be a 4-week course repeated after 2 weeks of no treatment, to a total of three treatment cycles. Surgery is complicated by extremely friable cysts with the accompanying risk of anaphylaxis. Complete resolution of hydatid cysts with medical therapy alone is very rare, as in our patient who was asymptomatic at 1-year follow-up with no recurrence of the cysts. However, the patient is being monitored with a 3-monthly ECHO, as studies have shown a recurrence of cysts up to 2 years after therapy.[5]

Learning points

- Cardiac hydatid disease is an extremely rare disease and should be a differential diagnosis for mass lesions in developing countries.
- Definitive therapy involves surgical removal of the cysts and a course of albenadazole for a minimum period of 4–6 weeks.
- Resolution of cysts with medical therapy alone as in our patient is rare. However, multiple relapses of cysts are known to occur up to 2 years after initiation of therapy.

Competing interests None.

Patient consent Obtained.

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