Conflicts of interest

None declared.

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Inoperable isolated cardiac hydatid cyst controlled with albendazole in an older adult with dementia

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Abstract

Hydatid cyst, a human parasitic disease, remains a clinical problem in undeveloped and developing countries. Although liver and lungs are regular sites of infection, rarely other organs such as the heart can be involved. Herein, we report an isolated cardiac hydatid cyst in an 87-year-old man. He had a history of dementia for 5 years and no history for cardiac or pulmonary disease. He presented with exertional dyspnoea which continued up to 6 months. The diagnosis was made by echocardiography and computed tomography (CT). The patient was inoperable and was treated with albendazole 10 mg/kg for 6 months. After a 6-month follow-up, echocardiography revealed reduction in the size of the cyst. We believe this is the first documented case of cardiac hydatid cyst which regressed with only medical treatment in an older adult with dementia.

Keywords: *elderly, hydatid cyst, cardiac, cardiac hydatid cyst, albendazole, older people, parasitic, geriatric, inoperable, dementia*

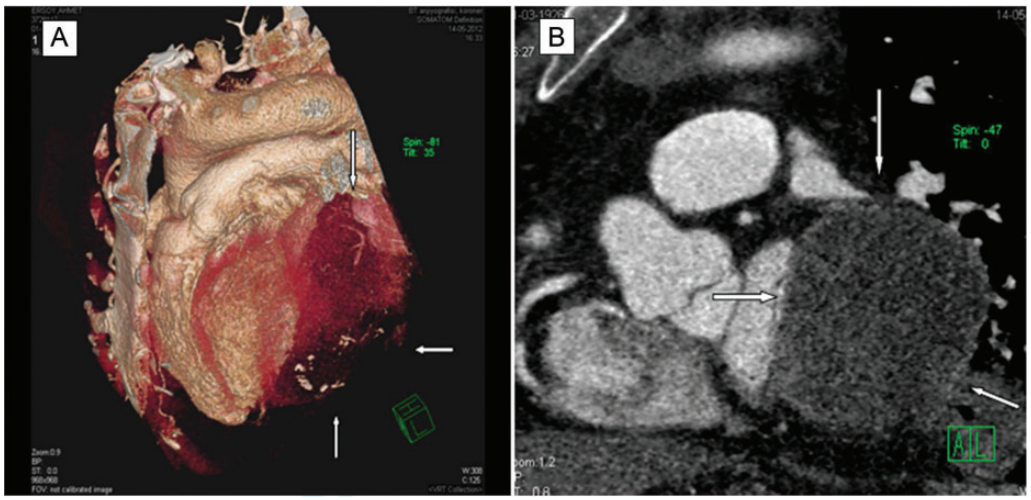

Figure 1. CT angiography scan showing hydatid cyst in the infero-lateral of the left ventricle and left atrium. (A) Three dimensional view and (B) Normal section.

Case report

An 87-year-old man with known 5 years history of dementia and benign prostate hypertrophy presented to our outpatient clinic with progressive dyspnoea on exertion with the duration of 6 months. In physical examination, blood pressure was 130/80 mmHg and his pulse was 80 b.p.m.. The lungs were normal on auscultation and the heart sounds were audible. On the other hand, a faint apical systolic murmur and bilateral ++ positive pretibial oedema were noted. Patient denied the history of any cardiac or respiratory illness. On complete blood count, haemoglobin was 11.2 g/dl, haematocrit was 32.8%, white blood cell count was 6,300/mm^3 and eosinophil ratio was 2.2% (normal range: 0.9–2.9). The results of the liver and kidney function test were within the normal limits. There was opacity on cardiac silhouette on the chest X-ray. An electrocardiogram was normal. Transthoracic echocardiography revealed a cystic mass adjacent to the left ventricle and the left atrium which was compressing the left atrium. Ventricular systolic function was normal but, 1° aortic valve insufficiency and 1°–2° mitral valve regurgitation were noted. Thorax computerised tomography (CT) confirmed a cystic lesion with calcified areas that was compatible with hydatid cyst on the lateral left ventricular wall with a size of 12 × 6.9 × 7.3 cm (Figure 1). The indirect haemagglutination test was 1/1,280 positive for hydatid cyst (normal range 0–1/160). The patient was investigated for a primary focus of hydatid cyst with abdominal ultrasound and there was not any positive sign indicating hydatid cyst. The patient was determined as inoperable because of his clinical status, as he had impaired cardiac function and poor pulmonary function. Albendazole was initiated with a dosage of 10 mg/kg per day. At the end of 6 months, his performance was good in his daily works, his functional capacity was not declined and echocardiography revealed no progression and minimally reduced cyst size (6.7 × 5.0 cm). It was decided to continue the treatment for an additional 3 months period.

Discussion

Echinococcosis remains endemic in Mediterranean and Middle-East regions [1]. Most confronted organ involvement of hydatid cysts are liver (52–77%), lungs (9–44%), spleen (2–3%), kidney (1–2.5%), brain and heart (0.5–2%) [2]. Cardiac hydatid cyst is usually accompanied by other organ involvements [3]. Isolated cardiac involvement is extremely rare. Localisation and dimensions of the cyst determine the symptoms. Patients usually present with dyspnoea, chest pain and palpitations. Arrhythmia, ischaemia, haemodynamic changes, pulmonary or systemic embolisation, pericardial tamponade and rupture with anaphylaxis have all been reported [4, 5]. Echocardiography is the best non-invasive method for the diagnosis of cardiac cystic *echinococcosis*, however, CT and MRI give us detailed information about the cyst and its localisation [6]. In our patient, diagnose was performed by echocardiography and confirmed by CT and serologic tests. Most common therapeutic approach for cardiac hydatid disease is surgical procedures as enucleation, aspiration and cystectomy [7]. However, if surgery is contraindicated or refused by the patient, medical therapy may be an alternative. In patients in the geriatric age group, invasive treatment methods are usually not preferred because of comorbidities and the mortality risk. The definite duration of medical therapy is not clear. World Health Organization guideline for hydatid cyst indicates that minimum 2 years or longer duration of treatment is mandatory according to the patients' follow-up clinical status [8]. In this present case, we describe an inoperable isolated cardiac hydatid cyst successfully treated with albendazole for 6 months.

Key points

- Echinococcosis, a human parasitic disease remains a clinical problem in Mediterranean and Middle-East regions.
- Although liver and lungs are regular sites of infection, rarely are other organs such as the heart involved.
- Albendazole therapy may be useful when surgical procedures cannot be performed.

Conflicts of interest

None declared.

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