IDCases 11 (2018) 46–47

Contents lists available at ScienceDirect

IDCases

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Cardio-abdominal echinococcosis: A man with a visible pulsating abdominal mass

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A 35-year-old Moroccan man presented with pain in the upper left abdomen for one day. He had a 13-year history of high-dose albendazole treatment for inoperable cystic cardiac echinococcosis and dilated, but stable cardiomyopathy. Physical examination demonstrated a visible and palpable mass pulsating synchronous with every heartbeat in the left upper abdomen (Supplementary Video 1). Cardiac magnetic resonance imaging with contrast enhancement (Panel A: axial view, Panel B: coronal view of Fig. 1) demonstrated progression of pericardial *Echinococcus granulosus* cysts over a trajectory of 18 cm with breakthrough into the abdominal cavity.

Human infection with the larval stage of the *E. granulosus* tapeworm is common in Mediterranean countries. Cysts are commonly found in the liver and lung, but cardiac involvement is rare (prevalence 0.5–2% of all cases). Moreover, pericardial invasion and/or isolated cardiac involvement are uncommon features, and to our knowledge secondary involvement of the abdominal cavity has not been described yet. As surgery offers the only definitive treatment, this was reconsidered. However, in our patient, cyst evacuation and obliteration were considered too high-risk for spillage, and due to coronary and left ventricular wall invasion severe bleeding risk and tissue loss, respectively, are to be expected. Alternatively, heart transplantation was considered non-feasible due to the multilocularity and extreme degree of the echinococcosis, an expected lengthy transplantation time and vascular connection difficulties, with cyst localization around both atria and large vessels.

After consultations with colleagues from other medical institutions in Europe, a conservative approach was followed with cimetidine and praziquantel added to albendazole. After 9 months, the cysts through his abdominal wall had extremely increased (Supplementary videos 2a and 2b), culminating in spontaneous cyst perforation. 6 months later, he remained clinically stable with a preserved reduction of pericardial cyst load (Supplementary Fig. 1).

Disclosures

All authors state that they have no conflicts of interest.

Funding

None.

Author contribution

SJ and LO wrote the first draft of the manuscript, took photos and made videos. EHGO and RPJB provided imaging pictures and participated in case discussion. JA, JJvH and APWMM participated in patient management and case discussion. CAMS did the final revision of the manuscript, took photos, made videos and primarily managed the pa-

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https://doi.org/10.1016/j.idcr.2017.12.008
Received 21 December 2017; Received in revised form 24 December 2017; Accepted 24 December 2017

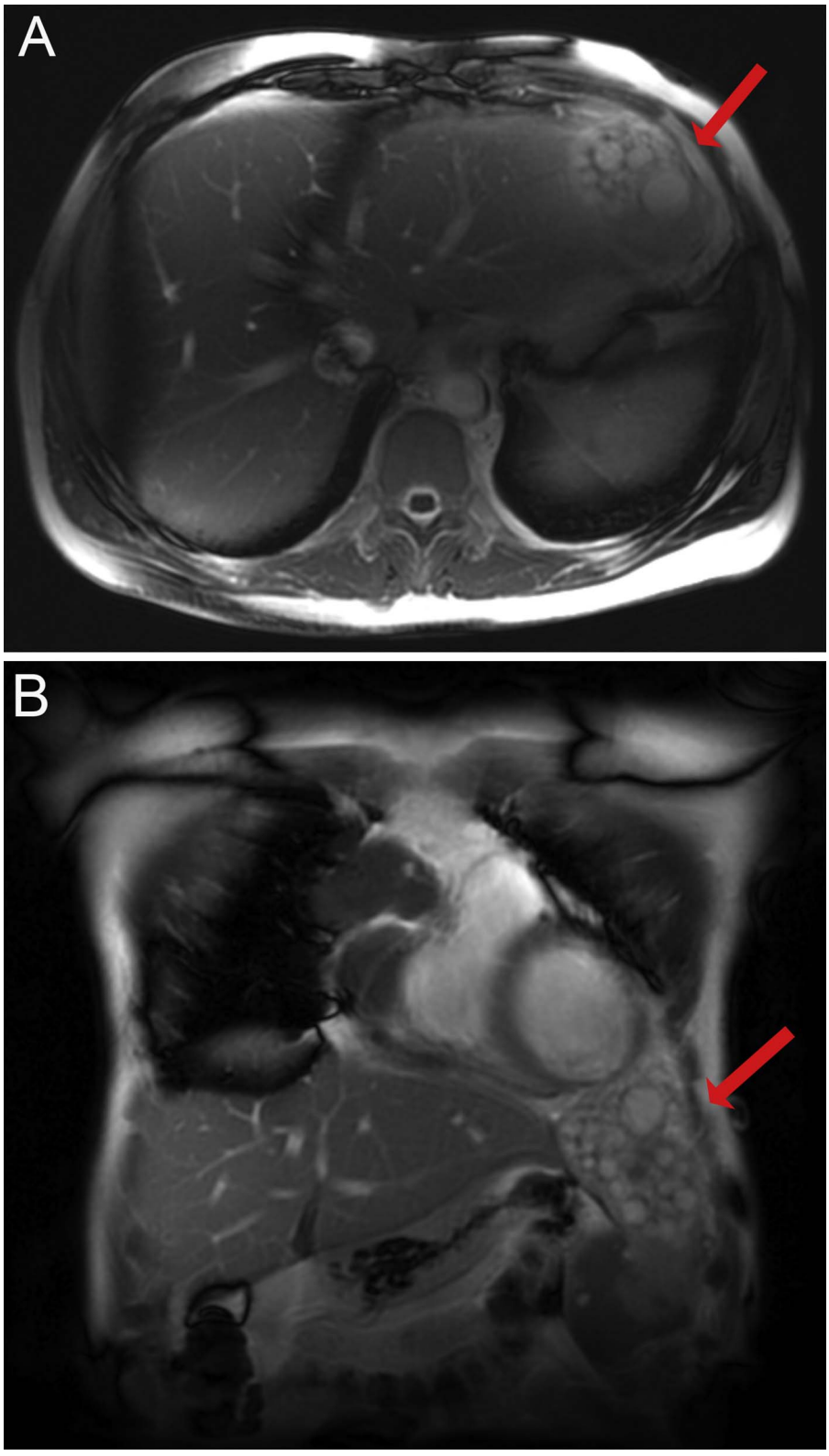

Fig. 1. Magnetic resonance imaging with contrast enhancement with axial view (panel A) and coronal view (panel B) showing massive cystic cardiac echinococcosis.

tient. All authors reviewed and revised the report.

Acknowledgment

We sincerely thank F.P. Mollema for providing both videos 2a and 2b.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at https://doi.org/10.1016/j.idcr.2017.12.008.