Young male with a large round radio-opacity on chest X-ray

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A 40-year-old man presented to our hospital with history of fever, malaise, and cough for past 3 months. The patient reported of an intermittent, low grade fever, worse during the evening hours, significant malaise, cough associated with minimal, clear, mucoid expectoration, and significant dyspnoea, which used to worsen when he laid down on left side. He had no history of weight loss, loss of appetite, or any chronic illness. He was a non-smoker, shopkeeper by profession and had kept an unvaccinated stray dog as a pet for the past 8 years.

He was referred to our cardiac centre by a local physician who noticed a large, round, well-defined, homogenous opacity in the right mid and lower zone of his chest X-ray (Figure 1A). Examination revealed raised JVP with prominent ‘a’ waves and decreased breath sounds with dull note on percussion over right mid lung field. In view

![Figure 1](image)

(A) Chest X-ray PA view shows a well-defined homogenous round opacity in right mid and lower zone. (B and C) (Supplementary material online, Videos S1 and S2) Echocardiogram shows large well-defined anechoic cystic mass compressing the right atrium with sand drift echoes ‘falling snowflakes sign’ and septa. (D) Computed tomography thorax showed water-attenuation cyst with lamellar wall in midlobe of right lung causing distal lobar collapse. (E) Surgical removal through right anterior thoracotomy incision revealing a 500 x 300 mm cyst, which was excised by marsupialization. (F) Histopathology section using haematoxylin and eosin stain showed endocyst with hooklets.

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of his clinical findings and a possibility of cardiac involvement, a 2D echo and computed tomography thorax were planned.

Transthoracic 2D echocardiogram revealed large well-defined anechoic cystic mass externally compressing the right atrium (Figure 1B and Supplementary material online, Video S1). There were no signs suggestive of pulmonary artery hypertension, or right ventricular dysfunction or pericardial involvement. Follow-up 3D echo revealed anechoic cystic mass with sand drift echoes 'falling snowflakes sign' and septae (Figure 1C and Video S2). Computed tomography thorax showed a large (4.8 cm × 5.2 cm) water-attenuation cyst with lamellar wall in mid-lobe of the right lung causing distal lobar collapse (Figure 1D).

Differential diagnosis of simple mediastinal cysts include bronchogenic cyst, thymic cyst, pericardial cyst, and hydatid cyst but given the characteristic imaging findings of hydatid sand (probably representing developing stage of parasite)2,3 on 3D echocardiography and history of contact with dog, a diagnosis of hydatid cyst was kept and surgical evacuation of the cyst was planned. Prior to surgery extensive evaluation was done to locate any extra-thoracic cysts, however, no other cysts were found.

Surgical removal was performed 1 week after the patient presented to our centre via a right anterior thoracotomy incision, revealing a large, 5 cm × 3 cm cyst (Figure 1E), which was excised by marsupialization. Histopathology section using haematoxylin and eosin stain (Figure 1F) showed endocyst with hooklets, which is a characteristic finding of hydatid cyst. Patient was discharged from hospital and was prescribed oral Albendazole therapy for 3 months. On a 3 and 6 months follow-up, the patient was asymptomatic.

Supplementary material

Supplementary material is available at European Heart Journal - Case Reports online.

Consent: The author/s confirm that written consent for submission and publication of this case report including image(s) and associated text has been obtained from the patient in line with COPE guidance.

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References

1. Patrizia C, Massimo V, Giovanni F, Dario B, Egle C, Salvatore N, et al. Multimodality imaging in cardiac echinococcosis for diagnosis and follow-up of an untreatable cyst. Int J Cardiol 2016;221:468–470.
2. Mirjello A, Pepe G, Zampiello P, Cricona GM, Mendola A, Manfrini A. A male patient with syncope, anaphylaxis and ST-elevation: Hepatic and cardiac echinococcosis presenting with Kounis syndrome. J Emerg Med 2016;51:e73–e77.
3. Yasim A, Ustunsoy H, Gokaslan G, Hafiz E, Arslanoglu Y. Cardiac echinococcosis: a single-centre study with 25 patients. Heart Lung Circ 2016;26:1–7.