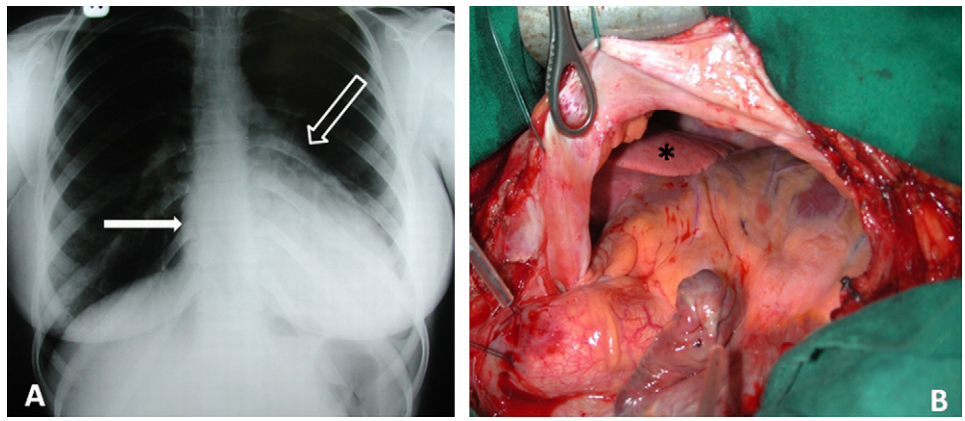

Fig. 1. *(A) Preoperative chest X-ray showing: (1) the leftward displacement of the heart, (2) a linear shape of the left cardiac silhouette (arrow), and (3) a flattened right cardiac silhouette by erasure of its normally lower convexity (solid arrow). (B) Operative surgeon's view after median pericardiotomy showing congenital partial absence of the left pericardium; note the inferior left lower pulmonary lobe (asterisk).*

Pancoast Hydatid Cyst Leading to Horner Syndrome Thoracic Hydatidosis

Sedat Ziyade [a], Omer Soysal [a], Murat Ugurlucan [b,*] and Sener Yediyildiz [a]

[a] *Bezm-i Alem Vakif Gureba Training and Research Hospital, Thoracic Surgery Clinic, Turkey*
[b] *Istanbul University Istanbul Medical Faculty, Department of Cardiovascular Surgery, Turkey*

A 27-year-old male patient presented to the thoracic surgery clinic with intermittant fluctuating mass and pain at the right side of the neck. Physical examination revealed a mobile mass at the right supra-clavicular region and Horner's syndrome. Chest X-ray showed an unusual opacity at the apex of the right lung (Supplementary data, Fig. S1). Ultrasonography indicated erosion of the first rib and a cystic lesion including multiple septations (Supplementary data, Fig. S2). Pathology was further investigated with computed tomography (CT) revealing 13 cm × 8 cm × 7 cm lobulated cystic lesion (Supplementary data, Fig. S3) and magnetic resonance imaging (MRI) indicating a lobulated mass localised to the chest wall at the thoracic inlet protruding from the chest to the neck (Supplementary data, Fig. S4; Fig. 1). Surgical treatment was organised with cautions according to the most probable preoperative diagnosis of hydatid cyst disease. Removal of the lesion through neck incision or thoracotomy was discussed and the decision was through thoracic approach. Additional diagnostic measures such as biopsy or serological tests were not fashioned. Through right thoracotomy, the cyst was sterilised and evacuated (Supplementary data, Fig. S5; Fig. 2). The wall of the cyst was partially excised (Supplementary data, Fig. S6), and the cavity was then plicated and closed.

Echinococcosis accounts for a serious health problem in the endemic areas of the world.[1] Infestation may occur in any part of the body leading to symptoms associated with the affected region; however, thoracic inlet is an atypical region for presentation of the disease.[2] Preoperative diagnosis is mainly based on imaging studies. Results of routine laboratory blood work up are usually non-specific. Since it is a parasitic infestation, expected eosinophilia is present only in 25% and hypogammaglobinaemia is present in 30% of all infected cases. Serological diagnostic techniques indicate inconsistent results. Indirect haemagglutination test and ELISA have a sensitivity range between 40 and 90%, depending on the localisation of the disease in the body. ELISA is more useful for the follow-up of the disease to detect recurrence if any. CT scan has an accuracy of 98% and also helpful to demonstrate the daughter cysts. It may be used for differential diagnosis from amoebic and pyogenic cysts. MRI, like CT shows the cysts; however, the advantage of MRI over CT for the diagnosis has not been demonstrated.[3] MRI is more helpful for the investigation of the relation of hydatid disease with soft tissues.[3,4] Percutaneous fine needle aspiration biopsy for the diagnosis includes the risks of anaphylactic reactions and possible dissemination of the disease. Cautious aspi-

Received 8 November 2007; received in revised form 16 March 2008; accepted 1 April 2008; available online 26 July 2008

* Corresponding author at: Bergstrasse 7a, No. 105, 18057 Rostock, Germany. Tel.: +49 174 380 54 52; fax: +49 381 494 62 14.
E-mail address: muratugurlucan@yahoo.com (M. Ugurlucan).

1443-9506/04/$36.00
doi:10.1016/j.hlc.2008.04.002

Heart, Lung and Circulation
2009;18:360–364

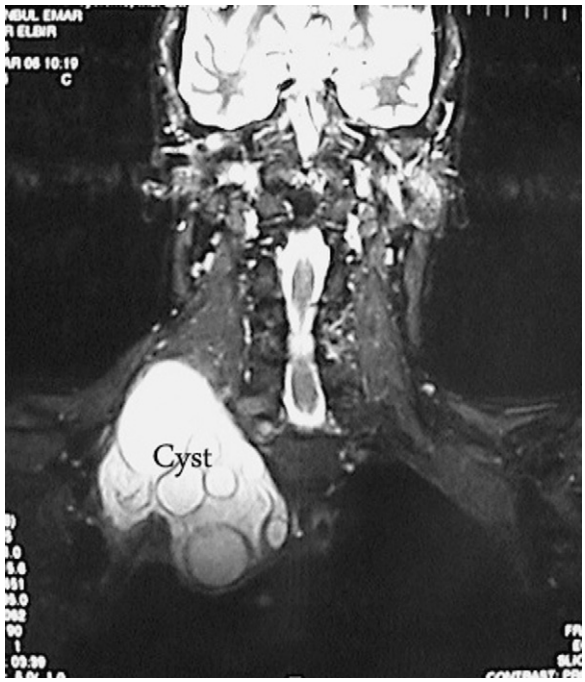

Figure 1. *Magnetic resonance imaging indicating a lobulated mass localised to the chest wall at the thoracic inlet protruding from the chest to the neck.*

ration biopsy can be recommended, especially in patients where a precise pathological diagnosis is crucial, and can be combined with treatment.[5]

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.hlc.2008.04.002.

Reference

1. Ugurlucan M, Sayin OA, Surmen B, Cinar T, Yekeler E, Dursun M, Tireli E, Dayioglu E. Images in cardiovascular medicine. Hydatid cyst of the interventricular septum. Circulation 2006;**113**(June (24)):e869–70.
2. Ozpolat B, Ozeren M, Soyal T, Yucel E. Unusually located intrathoracic extrapulmonary mediastinal hydatid cyst manifesting as Pancoast syndrome. J Thorac Cardiovasc Surg 2005;**129**(March (3)):688–9.
3. Flisser A. Larval cestodes. In: Collier L, Balows A, Sussman M, editors. Topley and Wilson's microbiology and microbial infections. Parasitology, vol. 5, 9th ed. New York, NY: Oxford University Press; 1998. p. 539–60.
4. von Sinner WN. Imaging of cystic echinococcosis. Acta Trop 1997;**67**(September (1–2)):67–89.
5. von Sinner WN, Nyman R, Linjawi T, Ali AM. Fine needle aspiration biopsy of hydatid cysts. Acta Radiol 1995;**36**(March (2)):168–72.

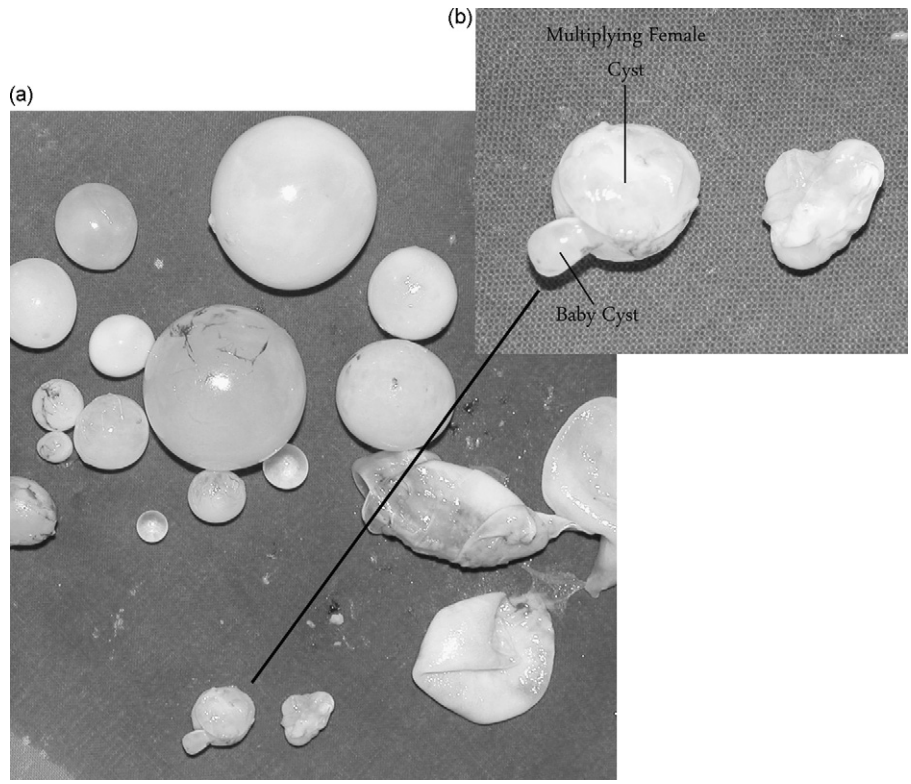

Figure 2. *(a) Evacuation material indicated hydatidosis and (b) a multiplying hydatid cyst.*