

Ruptured giant thoracic hydatid cyst presenting with respiratory symptoms

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Associate Editor: Jennifer Ann Wi

Key message

Pulmonary hydatid disease remains a global public health issue. Symptoms often result from cyst rupture, causing fever, cough, and hemoptysis. Radiographs may show homogeneous masses, air-fluid levels, or the pathognomonic “water lily” sign. Surgical removal is the primary treatment, with early diagnosis crucial to prevent acute hypersensitivity reactions and death.

KEYWORDS

cyst rupture, hydatid cyst, pulmonary echinococcosis, surgical removal

CLINICAL IMAGE

A 22-year-old college student presented with progressive dyspnea, chest pain, fever, cough, and hemoptysis. Imaging revealed a giant cystic lesion and “water lily” sign within the left hemithorax (Figure 1), raising suspicion for hydatid cyst due to the patient’s origin from an endemic region, Iran. Based on this suspicion, the patient was referred for surgical intervention. A posterolateral thoracotomy was performed,

revealing a giant hydatid cyst. The cyst was completely aspirated, and the cavity was cleaned (Figure 2). Two chest tubes were inserted, and the thoracotomy incision was closed.

Echinococcus granulosus remains a significant global public health problem, with the lungs involved in 20%–40% of cases. Iran is classified as a hyperendemic region for hydatid cysts, with a higher prevalence in rural areas due to unsanitary practices associated with livestock slaughtering.¹ However, our patient was an urban resident who denied

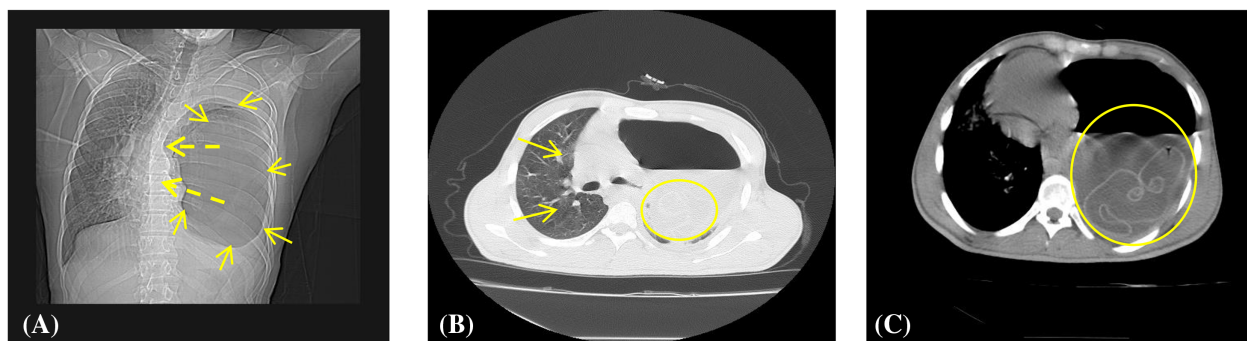


FIGURE 1 (A) Giant cystic lesion in left lung (arrows) with mediastinal, heart, and tracheal shift to right (dashed arrows); (B) Giant cystic lesion in left lung with serpent sign (yellow circle) and scattered ground glass opacities (arrows) in right lung; (C) Daughter cyst perforation with serpent sign and pathognomonic “water lily” sign (yellow circle).

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FIGURE 2 (A) Gross appearance of huge hydatid membrane after retraction; (B) Lung cavity after membrane retraction; (C) Intraoperative photograph showing gross appearance of the huge hydatid membrane.

contact with dogs or farm animals. This raised the possibility of alternative modes of transmission, such as unwashed vegetables. Therefore, a thorough history, physical examination, and appropriate imaging studies, are crucial for accurate diagnosis.

Pulmonary echinococcosis is often an incidental finding on chest imaging. However, in symptomatic individuals, clinical manifestations most commonly result from cyst rupture. Rupture of a hydatid cyst into a bronchus can cause fever and cough.²

On chest radiographs, uncomplicated hydatid cysts typically appear as homogeneous oval or round masses. If a cyst ruptures into a large airway, it may show an air-fluid level. A completely collapsed hydatid cyst can exhibit a “water lily” sign, which is pathognomonic.

Surgical removal of the cyst is the primary approach, followed by 1 month of albendazole pharmacotherapy postoperatively to prevent recurrent disease.³

AUTHOR CONTRIBUTIONS

All authors were involved in the preparation of the manuscript.

ACKNOWLEDGMENTS

We would like to express our gratitude to the patient and all the staff who kindly provided assistance and care to the patient.

CONFLICT OF INTEREST STATEMENT

None declared.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author, [N.K], upon reasonable request.

ETHICS STATEMENT

The authors declare that appropriate written informed consent was obtained for the publication of this manuscript and accompanying images.

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How to cite this article: Ershadi R, Amini H, Roostaei G, Kazemizadeh H, Mollamohammadi L, Khoshnam Rad N. Ruptured giant thoracic hydatid cyst presenting with respiratory symptoms. *Respirology Case Reports.* 2024;12(4):e01345. <https://doi.org/10.1002/rcr2.1345>