Pulmonary Hydatid Cyst Mimicking a Lung Cancer

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A 54-year-old, previously healthy, male smoker was admitted with a 3-month history of cough and hemoptysis. The physical examination results were normal. Chest radiography revealed a right upper lobe (RUL) consolidation. Laboratory examinations showed an elevated erythrocyte sedimentation rate and C-reactive protein level. The result of the sputum smear examination for acid-fast bacilli was negative. Computed tomography (CT) of the chest showed a cavitating mass in the RUL with moderate enhancement after administration of contrast. After bronchoscopic extraction of the hydatid cyst, CT of the chest (C and D) showed a marked reduction of the lesion with a persistent residual cavity.

Figure 1. CT of the chest (A) shows a cavitating mass in the right upper lobe (B) that was markedly enhanced after administration of contrast. After bronchoscopic extraction of the hydatid cyst, CT of the chest (C and D) showed a marked reduction of the lesion with a persistent residual cavity.

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administration of contrast (Figs. 1A and B). Abdominal ultrasound and CT scan did not detect any liver lesions.

Bronchoscopy revealed a whitish gelatinous material protruding from the RUL bronchus that disintegrated during a biopsy attempt (Fig. 2). The distal portion of the material was grasped gently by the biopsy forceps and the RUL was pulled out, causing coughing and expulsion of a large transparent membranous structure (Figs. 3A and B). The histological examination of the structure revealed laminated membrane that appeared as fragments of a cellular eosinophilic material with delicate parallel striations that is surrounded by inflammatory cells (hematoxylin and eosin staining; magnification, ×40) (Fig. 4). Immediate bronchoscopic control showed total removal of the material and cleaning of the RUL bronchus (see the Supplementary Video).

The diagnosis of pulmonary hydatid cyst was made and antiparasitic treatment with albendazole was initiated and continued for 3 months. CT control, performed 1 month later, showed a marked reduction of the lesion with a persistent residual cavity (Figs. 1C and D). There was no recurrence after a 2-year follow-up period.
Hydatid disease is a widespread zoonotic parasitic disease caused by the larval stage of *Echinococcus*. Humans can accidently act as intermediate hosts, with a hydatid cyst developing mainly in the liver and the lungs. Clinical presentations of pulmonary hydatid cysts are variable. Nonruptured pulmonary hydatid cysts are frequently found incidentally; however, in a ruptured cyst, symptoms such as productive cough, expectoration of cystic contents, cough, hemoptysis, and chest pain are frequent.

In endemic zones such as Mediterranean countries, diagnosis of the disease on the basis of radiological findings is generally easy, especially if a coexisting liver cyst is found. In complicated forms, the clinical and radiological findings are atypical and may mimic those of a lung tumor. In such cases, bronchoscopic visualization with a biopsy can help to establish the diagnosis. Bronchoscopy usually shows a whitish endobronchial lesion that can rarely be confused with necrotic bronchial carcinoma. In exceptional cases, bronchoscopy can be contributive to treatment. Usual treatments include surgical removal of the cyst and chemotherapy with benzimidazoles.

### Supplementary Data

Note: To access the supplementary material accompanying this article, visit the online version of the *Journal of Thoracic Oncology* at [www.jto.org](http://www.jto.org) and at [http://dx.doi.org/10.1016/j.jtho.2015.12.112](http://dx.doi.org/10.1016/j.jtho.2015.12.112).

### References