Right-sided Chest Pain with Progressive Dyspnea*

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A 45-year-old housewife was referred for evaluation of right-sided chest pain with progressive dyspnea of six months' duration. Three months prior to presentation, she had been treated by her community doctor with 15 days of antibiotic therapy. Thoracentesis at that time yielded sterile fluid with negative cytologic findings. The patient denied any history of fever, sweating, pedal edema, wheezing, or shock. Clinical examination findings were generally normal. Examination of the respiratory system disclosed a leftward shift of the trachea and mediastinum with well-demarcated signs of fluid and air on the right side. Chest radiographs (Fig 1, 2) revealed right-sided hydropneumothorax.

Intercostal drainage was instituted, which gave prompt relief of her symptoms. However, there was no expansion of the lung despite application of low negative pressure for 72 h. Routine examination of blood and urine disclosed normal findings, and the sputum was repeatedly negative for acid-fast bacilli. Fluid from the pleural cavity was sterile, with negative cytologic findings. A diagnostic procedure was performed.

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Diagnosis: Pyopneumothorax due to ruptured solitary pulmonary hydatid cyst

Sputum examination showed multiple daughter hydatid cysts. The Casoni test was positive, and the indirect hemagglutination profile for hydatid cyst was positive at a 1:128 dilution. Ultrasonography revealed a large cyst with multiple daughter cysts in the right lung; the liver, spleen, and kidneys appeared normal. The patient underwent right thoracotomy and pleurectomy, with complete enucleation of the peripherally situated cyst (Fig 3). Histopathologic examination showed that the cyst was a hydatid. The patient’s postoperative hospital stay was uneventful, and she was discharged from the hospital in an asymptomatic state.

The typical presentation of anaphylaxis due to rupture of a hydatid cyst was absent in our patient. Hydatid cysts of the lungs are commonly solitary, well circumscribed, polycyclic, and unruptured and usually occur at lung bases. Sometimes the appearance is so atypical as to present a challenging diagnostic problem. Our case highlights the rarity of the nature of involvement where a clinically and radiologically proven case of hydropneumothorax turned out to be due to a ruptured hydatid cyst of the lung. Earlier reports show cases of hydropneumothorax due to hydatid cysts of the liver rupturing into the pleural cavity. Since the cyst was situated peripherally in our case, it could have produced stretching of the pleura, leading to its rupture.

Roentgenographically, various signs have been associated with ruptured hydatid cysts. Pulmonary meniscus sign, double arch (Cumbo’s) sign, and camalote (water lily) sign are the more important ones; the interposed air crescent and the floating daughter cyst membranes are responsible for these appearances. None of these signs was present in our case.

In the case of anaphylactic reactions, an urgent thoracotomy is indicated to remove pleura and affected lobe after irrigation of the pleural space with formaldehyde. Even in a neglected rupture with pyopneumothorax, as in our case, the same type of operation is indicated, with pleurectomy and decortication. The object of the operation is to remove the cysts found floating in the pleural cavity. Mebendazole and albendazole in high doses have been tried with promising results. Prognosis is generally good with timely intervention.

References