Lung Hydatid Cyst

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Case History: A 65-year-old woman presented with complaint of a dry cough, sore throat and mild fever. She was diagnosed with upper airway infection and she had experienced similar attacks in the previous three years.

Figure 1. Chest X-Ray (PA and lateral views) shows large well-defined, well-margined oval shaped homogenous opacity right mid zone which seems to be pleural-based and forming an obtuse angle with right lateral chest wall.

Figure 2. Ultrasound with color Doppler shows a well-defined heterogeneous hypoechoic lesion with internal echogenic serpentine membranes and does not show internal vascularity.
Figure 3. CECT scan shows well-defined thin-walled smooth marginated fluid density lesion in upper and middle lobe of right lung with few foci of air and calcification in its wall. The lesion shows internal hyperdense linear membranes. The lesion is forming an acute angle with the right lateral chest wall and does not show enhancement on post contrast study. There is no Mediastinal adenopathy, pleural effusion or other evidence of infection or malignancy within the lung. A well-defined smooth marginated non-enhancing cystic lesion with peripheral wall calcification and air foci in right lung with no Mediastinal adenopathy or pleural effusion is suggestive of hydatid cyst.

Figure 4. Reformatted coronal CECT scan images show the above-mentioned lesion is well-defined and forming an acute angle with the chest wall and lying in the upper and middle lobe of the right lung with air foci and calcification in its wall. No evidence of adjacent rib destruction and well-marginated non-enhancing fluid density lesion prove cystic lesion is benign.
Figure 5. Lung window axial and reformatted sagittal images show well-defined oval shaped opacity within the right lung with no adjacent consolidation, collapse or septal thickening. Albendazole treatment was started and the patient is now doing well.

**Diagnosis:** Lung hydatid cyst

**Discussion:** Hydatid disease is a worldwide zoonosis produced by the larval stage of the Echinococcus tapeworm. The two main types of hydatid disease are caused by E. granulosus and E. multilocularis. The resulting large cysts in the lung are a special clinical entity called giant hydatid cysts. Small cysts are usually asymptomatic in hydatid disease. Coughing, chest pain and breathlessness are the common presenting symptoms. Diagnosis of an intact echinococcal cyst is usually based on a suspicion resulting from an unexpected finding on routine X-Rays. Radiographically, the cyst appears as a homogeneous spherical opacity with definite edges. CT scanning and ultrasound have added to the diagnosis of hydatid disease of the lung. Serological tests have limited diagnostic value. It is diagnosed by viewing the cystic membrane.

Hydatid cysts are typical, however, if the content is only partially evacuated, a waterline image appears, commonly referred to as the Camelot sign. Rupture of cysts may cause an anaphylactic reaction. When there is complete detachment of endocyst from the pericyst, it gives rise to the sign called “floating water lily.” A new sign called “congealed water lily” has been described, and is seen when the consistency of the fluid in the cyst changes from watery to viscid and the germinal layer within the viscid matrix gives rise to the appearance of curvilinear structure which no longer moves with the change of position of the patient. Progression from simple cyst to floating water lily cyst to congealed water lily cyst has been observed in many patients. “Hydatid sand” is seen in most of the scans which consist of leaked out scoleces, daughter cysts and calcareous corpuscles of Echinococcus tapeworms within primary or daughter hydatid cyst.

**References**


**Links:**

[1] [http://www.diagnosticimaging.com/case-studies](http://www.diagnosticimaging.com/case-studies)
[2] [http://www.diagnosticimaging.com/authors/madan-mohan-gupta-nu](http://www.diagnosticimaging.com/authors/madan-mohan-gupta-nu)
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