

Asymptomatic Pulmonary Hydatid Cyst Manifesting In Post-partum Period

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Abstract

The fact that Hydatid cyst is a parasitosis occurring secondary to *Echinococcus granulosus* has been known since Hippocratic times.

In India, the disease is endemic due to various sociocultural practices. The lung is a known site for the hydatid cyst and when it is present, usually the disease presents subsequent to secondary infections. We report a case of hydatid cyst, localized to the right lower lobe of the lung. Patient was asymptomatic for an unknown duration but became symptomatic after a normal vaginal delivery, which is a rare presentation.

Keywords: pulmonary hydatid cyst, post-partum pulmonary hydatid cyst, hemoptysis.

Introduction :

Hydatid disease is caused by the tapeworm *Echinococcus granulosus* and *E. multilocularis*. Nearly 66% of the cases of hydatid cyst, present with cystic lesion in the liver and 5-15% in lung^{1,2}. Via systemic circulation approximately 10 to 15% may reach other organs including the cardiac chambers, interventricular septum and the pericardium (0.02-2%)^{3,4,5}. Most cases remain asymptomatic, but pulmonary involvement of the disease presents with cough, hemoptysis, chest pain and breathlessness⁸. Chest radiographs and CT scan helped to localize and characterize the lesion.

Case Report :

A 28 year lady presented on 12th post-partum day with the complaints of cough, fever and breathlessness. Breathlessness was insidious in onset and progressive in nature, starting from the day of delivery. Cough is associated with pain bilaterally in the lower thoracic region, with small amount of blood tinged expectoration. Patient and her family members are laborers by occupation and also rear sheep.

On examination, patient had respiratory distress. On auscultation breath sounds were reduced over the right lung with crepitations at the base.

Chest radiograph showed a round partially filled cavitory

lesion in right lower zone. Lateral view confirmed the position of the cyst to be in the posterior aspect of the right lower lobe (Fig 1).

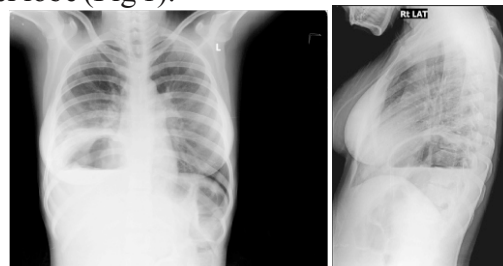


Fig 1: Chest radiograph PA & Lateral view

CT thorax revealed cavitory lesion in the right lower lobe along with basal wavy floating membranes (Fig 2).

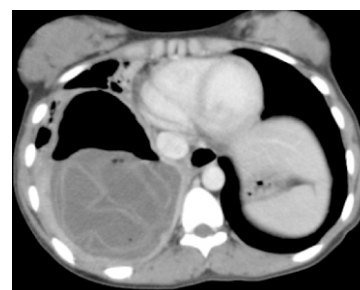


Fig 2: Axial CECT- Mediastinal window at lung base



Fig 3: Intra-operative photograph

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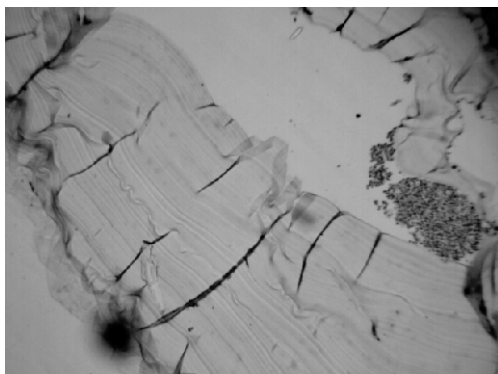


Fig 4 : Eosinophilic laminated cyst wall with neutrophils. H&E LP.

Contrast enhanced CT scan done in the axial plain shows cavitory lesion with multiple floating membranes within cavity in the posterior segment of the right lower lobe (Fig 2).

Patient was started on oral Albendazole at dose of 15 mg/kg/day and was referred to CTV surgeon for surgical intervention. Right lateral thoracotomy was performed and A large hydatid cyst was extracted with multiple collapsed cysts within it. The cyst was large and was communicating with the bronchus on the right side, the right lower lobe was dissected and the cyst was excised. (Fig 3).

Histopathology confirmed the diagnosis of hydatid cyst. Cyst wall was eosinophilic, laminated with focal aggregates of neutrophils suggesting inflammation. Surrounding lung showed features of chronic venous congestion with plenty of alveolar macrophages. (Fig 4)

Patient was discharged with a course of Albendazole at a dose of 15mg/kg/day.

Discussion:

Hydatid disease is caused by the tapeworm *Echinococcus*

granulosus and *Echinococcus multilocularis*. The life cycle involves definitive and intermediate mammalian hosts.

Hemoptysis in adults is most often caused by tuberculosis, bronchiectasis and trauma or bronchogenic carcinoma. Parasitic etiology for massive hemoptysis is very rare⁶. Our patient presenting with massive hemoptysis during the postpartum period is unusual. Massive hemoptysis in our case may be attributed to rupture of the hydatid cyst into the bronchial tree due to bearing down efforts during normal labour. The underlying etiology for hemoptysis may be unknown in 20% of cases, but in cases with pulmonary hydatidosis, the clinical and radiological picture is so unique that it can be easily identified despite its rarity⁶.

Conclusion:

This case report suggests that when post-partum women present with hemoptysis, hydatid disease of the lung, should also be considered alongside other common causes of massive hemoptysis, in endemic areas.

References:

1. Papadimitriou J. Surgical treatment of hydatid disease of the lung. *Surgery* 1969; 66: 488–91.
2. Boussetta K, Siala N, Brini I, Aloui N. Hydatid cyst of the lung in children: 54 cases. *Tunis Med.* 2005; 83(1): 24-7.
3. Beggs I. The radiology of hydatid disease. *AJR* 1985; 639-48
4. Cantoni S, Frola C, Gatto R, Loria F, Terzi MI Hydatid cyst of interventricular septum of heart, MR findings. *AJR* 1993; 161: 753-4
5. Alper H, Yuntun R, Sener NR. Intramural hydatid cysts of pulmonary arteries: CT and MR findings. *Eur J Radiology* 1995; 666-668
6. Bharti S, Bharti B: Hydatid disease of the lung – unusual cause of hemoptysis. *Indian Pediatr* 2002, 39:1062-3.
7. D Chattarjee, *Echinococcus granulosus*, Textbook of parasitology, 12th edition, Calcutta, India, Chatterjee Medical Publishers. 1980: 121-7
8. Antony S. Fauc. *Harrison's Principles of Internal Medicine*, 17th edition: McGraw-Hill, Inc., 2005; 1:1272-7.

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