

Giant pulmonary hydatid cyst mimicking elevated diaphragm: A diagnostic dilemma

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Access this article online	
Quick Response Code:	Website: www.annalsafmed.org
	DOI: 10.4103/1596-3519.93539

Dear Sir,

Giant pulmonary hydatid cyst is a rare clinical entity and can be a diagnostic challenge on chest radiograph. Here we are reporting a case of giant pulmonary hydatid cyst which mimicked as elevated diaphragm on chest radiograph. A 45-year-female patient presented to us with complaints of right-sided chest pain, dry cough, and low-grade fever since 2 months. On vitals examination her blood pressure was 110/76 mmHg, pulse rate 100/min, respiratory rate 22/min, and temperature 38°C. There was no cyanosis, clubbing, or lymphadenopathy. On respiratory system examination, breath sound was decreased and percussion note was dull in right infrascapular and inframammary area. In laboratory investigation, total leucocyte count was 9400 cells with 65% neutrophils, 15% lymphocytes, and 17% eosinophils. The absolute eosinophils count was 1100 cells. Her liver function test and renal function test were normal. Sputum for acid fast bacilli was negative. Chest radiograph postero-anterior view was suggestive of right-sided elevated diaphragm



Figure 1: Chest radiograph postero-anterior view suggestive of right sided elevated diaphragm

[Figure 1]. Ultrasonography of abdomen was normal. Contrast-enhanced computed tomography of thorax revealed a large rounded, well-circumscribed loculated cyst with little remaining lung tissue on right side [Figure 2]. IgG Elisa for echinococcus granulosis was positive. Patient was diagnosed as a case of giant pulmonary hydatid cyst. Patient was treated by surgical resection of cyst.

Hydatid cyst is a parasitic disease caused by larval stage of echinococcus granulosus characterized by cyst formation in liver and lung, rarely in other part of the body. It is endemic in south and Central America, Middle East, sub-Sahara Africa, Russia, China, Australia and New Zealand. Most common organ affected by this disease is liver followed by lung, involvement of other part of the body like spleen, kidney orbit and heart is rare.^[1] Pulmonary hydatid cyst are characteristically solitary, usually affecting single lobe, mostly lower lobe, and more commonly the right side.^[2]

The plain chest radiograph is very helpful in diagnosis of pulmonary hydatid cyst. Non-complicated hydatid cyst is usually asymptomatic and are identified on routine chest radiograph incidentally. Unruptured pulmonary hydatid cyst shows one or more homogenous round or oval masses with smooth borders surrounded by normal lung tissue on chest radiograph.^[3] Water lily sign and crescent sign are pathognomic for ruptured hydatid cyst. Ruptured hydatid can also produce cumbo's sign, serpent sign and monod's sign.^[1]

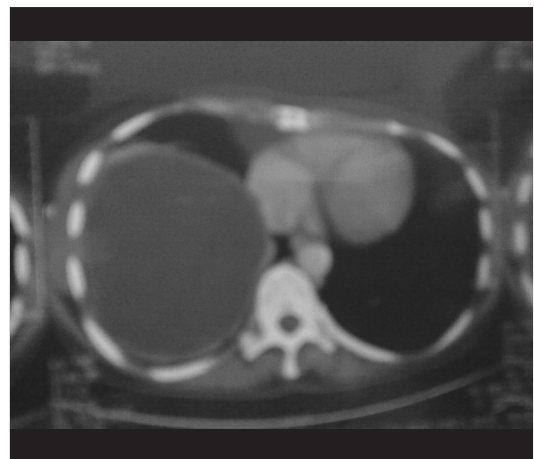


Figure 2: Contrast-enhanced computed tomography of thorax shows a large rounded, well-circumscribed loculated cyst with little remaining lung tissue on right side

Giant pulmonary hydatid cyst in our case mimicked as elevated diaphragm on chest radiograph and causes a diagnostic error on chest radiograph. CT scan can demonstrate the cystic nature of lung lesion and a thin enhancing rim if the cyst is intact. Enzyme-linked immunosorbent assay is positive only in less than 50% cases of pulmonary hydatid cyst. Giant pulmonary hydatid cyst is a rare clinical entity and is defined as more than 10 cm in size.^[4,5] Giant pulmonary hydatid cyst and complicated hydatid cyst are usually symptomatic. Common presenting symptoms of giant pulmonary hydatid cyst are compression symptoms such as dry cough, while ruptured cyst can cause productive cough, chest pain, dyspnoea, and very rarely anaphylactic shock.^[6] The current treatment of the hydatid of lung is complete excision of the cyst including germinative membrane with maximum preservative of normal lung tissue.^[7] Medical treatment (Albendazole 10-15 mg/kg/day for 4 weeks for 2 or more courses with an interval of 2 weeks) can be given in inoperable courses or in case of small cyst.^[8]

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