

Metastatic pulmonary hydatidosis from a primary hepatic cyst misquandering as metastatic bronchogenic carcinoma: A Case Report

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Citation

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Abstract

Concomitant involvement of liver and lung both by hydatid disease has been termed Hepatopulmonary hydatidosis (HPH disease). It has preponderance for right lung with HPH disease associated with left lung rarely been reported. Here we present such a case in 50-year old women.

INTRODUCTION

Hepatopulmonary hydatidosis is a rare condition that is seen in only 10% of all cases of Hydatid disease [1]. Further the condition has a preponderance for the right lung with Hepatopulmonary hydatidosis associated with left lung disease rarely been reported. Here we present such a case in a 50-year-old female patient.

CASE REPORT

A 50-year-old female patient was referred to us with complaints of chest pain and cough with expectoration of two years' duration. She had taken antibiotics and antitubercular drugs in the past without any clinical improvement. She was non-smoker and nonalcoholic and had no history of diabetes and hypertension. Her family history was also not significant. Her general physical examination revealed pallor and weakness. Her hemoglobin was 10gram percent, total leukocyte count was 11,600 cells/mL, differential count was P71, L19, M2, E8, B0 and E.S.R. (Westergreen) was 80mm/ hour. Her Chest X-ray(fig-1) revealed obliterated right costophrenic angle with slight haziness in left lower zone.

Figure 1

Figure 1: Skiagram chest showing obliterated right costophrenic angle with hazy left lower zone



Her PPD examination showed no induration. CT Scan (fig -2,3) was carried out which revealed a space occupying lesion measuring 5 x 5 x 3 cm with central nonenhancing necrotic areas in the posterior basal and medial basal segments of left lower lobe with a cystic space occupying lesion in the segment 7 of liver measuring 7 x 7 x 6 cm with volume of 147 ml.

Figure 2

Figure 2: CT Scan with a cystic space occupying lesion in the segment 7 of liver with a space occupying lesion in the left lower lobe.



Figure 3

Figure 3: CT Scan revealing a space occupying lesion measuring 5 x 5 x 3 cm with central nonenhancing necrotic areas in the posterior basal and medial basal segments of left lower lobe.



Suspecting malignancy we carried out CT guided Fine Needle Aspiration of the space-occupying lesion present in the lung and from the cystic lesion present in liver. However contrary to our belief, on examination it showed hooklets, scolices and fragments of cyst wall resembling *Echinococcus granulosus*.

Further serology was carried out to confirm the diagnosis. Antibodies to *Echinococcus* were significantly positive (1:18) by indirect haemagglutination test (IHA). Thus patient was diagnosed as a case of Hepatopulmonary hydatidosis.

Patient was advised surgery but she refused and was ultimately started on high dose of oral albendazole therapy. Patient has clinically improved as on albendazole therapy.

DISCUSSION

Hydatid disease may involve any organ of the body. However due to the effect of hepatic and pulmonary capillary sieves in containing the larvae, approximately 65% to 70% cysts occur in the liver followed by 15% to 30% in lungs. The remaining 3% to 5% cysts may be found virtually anywhere but most commonly in the spleen, kidney, brain and bones. Pulmonary echinococcal cysts are usually solitary but may be multiple in 20-30% cases.

Concomitant occurrence of cysts in liver and lung both is rare and is seen in only 10% cases¹. Such an association is referred to as a distinct entity called Hepatopulmonary hydatidosis (HPH disease)². Review of literature reveals that HPH should be regarded as a different entity since the condition differs epidemiologically and clinically from pulmonary hydatidosis, HPH disease is more frequent in female patients over 40 years of age², as seen in our case while pulmonary hydatidosis is more common in younger individuals³. Further pulmonary cysts in HPH show a tendency to be bilateral and multiple and also if surgery is considered operative strategy and approach is different in Hepatopulmonary disease.

Involvement of lung secondary to liver disease usually occurs by direct extension of disease across diaphragm. This occurs most commonly in the right lower lobe². It may result in the formation of either a hepatobronchial fistula or parenchymal abscess with cavitation. Such a fistula is seen in approximately 2% cases⁴. However rarely hepatic cysts may rupture into hepatic veins or inferior vena cava with subsequent embolization of the cyst contents into the lungs^{5,6,7} as it appears in this case where left lower lung was involved with sparing of right lung.

Clinically, patient may be asymptomatic or may present with symptoms due to involvement of liver or lungs or both⁸. As far as diagnosis is considered USG is the investigation of choice for cystic echinococcal lesions. However it does not have much role as far as pulmonary echinococcal cysts are concerned. In such cases chest radiograph helps in detecting the lesions. However CT scan has the advantage of inspecting any organ and hence is an important tool of diagnosis as far as HPH disease is concerned. It may detect smaller cysts located outside the liver, locate cysts precisely,

and sometimes differentiate parasitic from nonparasitic cysts₉. But, the cost of CT scanning is prohibitive factor.

As far as treatment is concerned surgery is considered the first choice of treatment for HPH disease. Usually, radical surgery (total pericystectomy or partial hepatectomy) is indicated for liver cysts while in case of pulmonary cysts extrusion of cysts using Barrett technique, pericystectomy and lobectomy are carried out₄. But since surgery is associated with considerable mortality (up to 2%), morbidity, and recurrence rates (2-25%), one may consider chemotherapy with anthelmintic drugs as an option. Albendazole administered in cycles of four weeks is an effective treatment for cystic Echinococcus₁₀. Even in our case, albendazole chemotherapy led to amelioration of symptoms in the patient.

CONTRIBUTORSHIP UNDERTAKING

Prof.S K Verma MD, Professor and Dr. Sumit Mehra Junior Resident, have compiled this case report with the help of Internet search, Review of literature from various journals and books.

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