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CASE REPORT

GIANT HYDATID CYSTS OF THE LEFT LUNG: CASE REPORT

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ABSTRACT: INTRODUCTION: Hydatid disease caused by Echinococcus granulosus most commonly involves the lungs and liver. Large hydatid cysts measuring 10 centimeters or more is a special clinical entity called Giant hydatid cyst. Anaphylaxis is a serious complication of ruptured hydatid cyst. **HISTORY:** We present a case of ruptured hydatid cyst of the left lung without anaphylactic shock in a 50 year old lady with history of three years duration. The patient presented with complaints of breathlessness, wheezing and cough with expectoration. There was a past history of hospital admission with similar complaints three years ago. CT scan at present admission showed the classical sign of ruptured hydatid cyst (water lily sign) in the left lung. Pneumonectomy followed by histopathological examination revealed the presence of two hydatid cysts in the upper and lower lobes. Giant hydatid cyst in the lower lobe showed features of rupture. **CONCLUSION:** This case is unusual due to its presentation as multiple unilateral giant viable hydatid cysts. We also wish to highlight that lower lobe cyst had ruptured without the life threatening complication of anaphylactic shock.

KEYWORDS: Pulmonary hydatid cysts, Giant hydatid cyst, Ruptured hydatid cyst.

INTRODUCTION: Echinococcosis is one of the most important zoonotic diseases in the world.[1,2,3] It is endemic in sheep raising countries, notably Australia, New Zealand, South America, and MiddleEast.[1,2,3] It is caused by larval stages of various cestode (tape worm) species of the genus Echinococcus.[1,2] The dog is the optimum definitive host, and man is the intermediate host.[1,2] The lungs are the second most common site (15%) for hydatid cysts after the liver (75%).[4,5] Large hydatid cysts measuring 10cm or more is a special clinical entity called giant hydatid cyst.[4] Anaphylaxis is a life threatening complication of ruptured hydatid cyst.[1,2,3]

CASE HISTORY: We present a case of ruptured hydatid cyst of left lung with-out anaphylactic reaction in a 50-year-old lady, she presented in March 2010 with complaints of chest pain and palpitation of six days duration. CT scan of chest showed two well-defined oval cystic lesions in posterior basal segment of left lower lobe and suggested the possibilities of Bronchogenic cyst or Hydatid cyst. She was discharged with a clinical diagnosis of bronchogenic cyst. Three years later she was re-admitted with complaints of breathlessness, wheezing and cough with expectoration and re-evaluation CT scan of chest showed classical sign of ruptured hydatid cyst (water lily sign) and increase in size of other cyst. Sputum culture and sensitivity showed isolated species of enterococcus. Echinococcus –IgG antibodies was positive (0.38 OD units). X-ray chest [Figure 1] and USG abdomen showed left sided pleural effusion. There was no evidence of endobronchial lesion on Fiber optic bronchoscopy and she underwent left lower lobectomy.

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HISTOPATHOLOGICAL EXAMINATION:

GROSS: Specimen of left lower lobe of the lung weighing 400 grams. Two cysts were identified in the lung parenchyma. The larger one, which was intact measuring 16.5cm in diameter and the other ruptured cyst, was measuring 7cm in diameter. Both the cysts were lined by glistening pearly white membrane of thickness 0.2cm. 200ml of cyst fluid drained from the intact cyst and centrifuged for hydatid sand. [Figure 2]

MICROSCOPIC EXAMINATION: Sections from the both cysts showed outer laminated hyaline membrane the ecto cyst and inner granular germinal layer the endocyst, focally attached to the endocyst are brood capsules containing scolices within. [Figure 3] Cyst fluid drained for hydatid sand shows innumerable scolices with invaginated suckers and hooklets of Echinococcosis granulosus. [Figure 4] Interstitium was widened due to perivascular and peribronchial chronic inflammatory cell infiltrate.

FINAL DIAGNOSIS:

- Ruptured hydatid cyst of left lower lobe of the lung.
- Hydatid sand- numerous scolices with suckers and hooklets.
- Lung- interstitial pneumonia.

DISCUSSION: Pulmonary hydatid cysts most commonly appear in the lower lobe of the right lung (50%) and are usually solitary.[1,2,4,5] 40% in the left lung and 10% bilaterally.[4,5] Multiple cysts are found in the lung in 20-30% of patients.[4,5] The size of the cyst can reach up to 20cm due to a relatively higher elasticity of the lung tissue as compared with other tissues.[4,5] Anaphylaxis is a life threatening complication of hydatid cyst rupture and needs to be promptly diagnosed.[1,2,3] Computed tomography is the most sensitive means of diagnosing cyst rupture[1,2] and emergency surgery remains the only effective therapy for a ruptured hydatid cyst.[1,2,5,6] The present case was associated with Giant viable hydatid cyst and ruptured hydatid cyst without anaphylactic reaction. Following left lower lobectomy, patient improved well and she is under follow up. Albendazole is indicated for six months to reduce the risk of distant recurrence.[4,5,6,7]

CONCLUSION: This case is unusual due to its presentation as multiple unilateral giant viable hydatid cysts. Anaphylaxis is a common complication of ruptured hydatid cyst. Our case is unique and we would like to highlight that lower lobe cyst had ruptured without the life threatening complication of anaphylactic shock.

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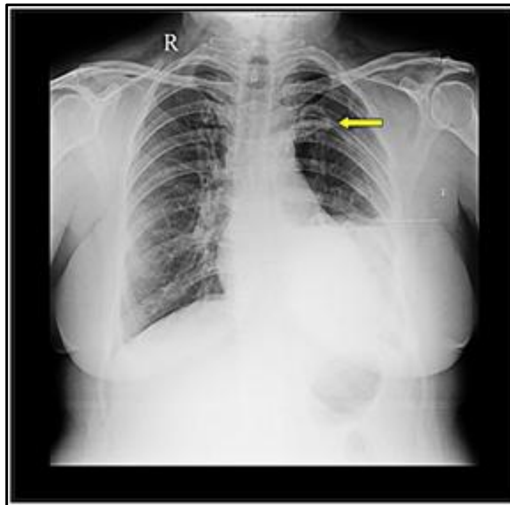

Fig. 1: Chest X-ray showing pleural effusion with intact cyst in the anterior aspect of lower lobe of the lung.

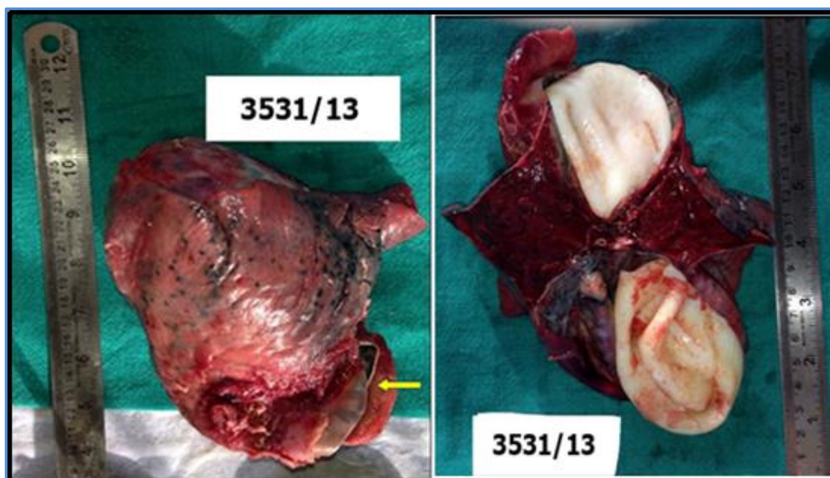

Fig. 2a: Left lobectomy specimen showing ruptured cyst (arrow).
Fig. 2b: Cut surface of the left lobe showing pearly white ectocyst.

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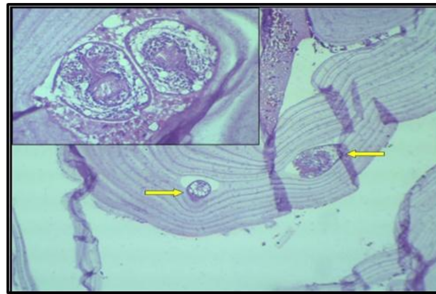

Fig. 3: Germinal endocyst with invaginated scolices [(arrow), H&E-200X]. Inset showing scolices high power view (400X).

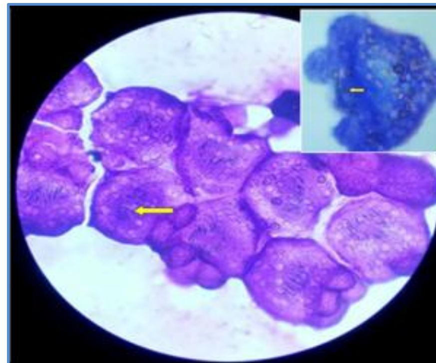

Fig. 4: Hydatid sand with scolices and hooklets [(arrow)MGG-50X]. Inset showing Scolice and hooklets high power view (MGG-400X)

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