

RUPTURED HYDATID WITH DOUBLE AIR FLUID LEVELS

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ABSTRACT

Hydatid disease is a parasitic infestation caused by *Echinococcus Granulosus* characterized by cystic lesions in the liver and lungs but rarely in other parts of the body. Worldwide, pulmonary hydatid cyst is a significant problem medically, socially, and economically. Liver and lungs are the most frequently involved organs. Surgery is the definitive therapy of pulmonary hydatidosis. Benzimidazoles may be considered in patients with a surgical contraindication.

KEYWORDS : Hydatid Cyst ,Echinococcus, Air fluid levels.

INTRODUCTION

Hydatid disease is a parasitic infestation caused by *Echinococcus Granulosus* characterized by cystic lesions in the liver and lungs but rarely in other parts of the body [1,2]. Hydatid disease also known as Human echinococcosis, is a zoonotic disease of worldwide distribution caused by the larval stage (metacestode) of the parasite belonging to the family *Taeniidae* and genus *Echinococcus*. Four species have been recognized to cause public health concerns. *Echinococcus granulosus* (*E. granulosus*) causes cystic echinococcosis (CE) and is the most common species to cause the human disease. Although *Echinococcus multilocularis* (*E. multilocularis*) is rare, it is the most virulent species and causes alveolar echinococcosis (AE). *Echinococcus vogeli* (*E. vogeli*) and *Echinococcus oligarthrus* (*E. oligarthrus*) cause polycystic echinococcosis. [3]

Case Presentation

20 year old female patient from rural area of sub Himalayan region presented with left sided upper back pain radiating to front of the chest for 1 month which was more on lying down to right side without any history of cough. She had feverish feeling for 1 day but the fever was undocumented. Also she had sudden onset shortness of breath for 1 day. Her treatment history revealed that she had her chest x ray done at local hospital followed by which she underwent pleural tap thrice. She was referred to higher centre due to complaint of sudden onset shortness of breath following tap.

At presentation to the emergency, she had tachypnea with respiratory rate of 25/minute and was not able to maintain saturation at room air (SpO₂ on room air was documented to be 89%. There was no pallor, no cyanosis, no clubbing, no pedal edema and jugular venous pressure was not raised.

Chest examination revealed dull percussion note on left sided infraaxillary area, infrascapular area and mammary area with absent breath sounds on auscultation in the mentioned areas.

CVS examination was within normal limits

On laboratory investigations patient had anemia (Hb 9.8g/dl), leucocytosis (11500/mm³) with 5% eosinophilia. ESR was 55mm/hour. Rest of the biochemistry was normal.

ECG was normal.

Chest X ray revealed double air fluid levels Patient was given moist oxygen therapy and started on IV antibiotics. She was further investigated and CECT Chest was done which showed Lung Hydatid with contained rupture. Abdominal ultrasound did not reveal any hydatid cyst in liver.

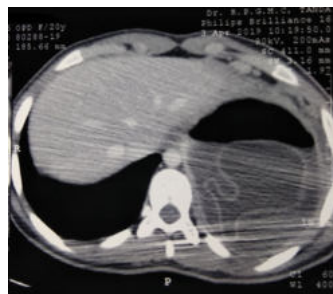
CTVS consultation was taken and patient was planned for surgery. A posterolateral thoracotomy was done and cyst was

evacuated. Albendazole was given at a dose of 15mg/kg/day postoperatively to prevent any recurrence. Patient remained stable during post operative period and was discharged in hemodynamically stable condition.

Patient was kept under regular follow up and 6 month follow up showed complete resolution of symptoms and well expanded left lung.

Figure 1

Ruptured hydatid cyst with two air fluid levels

Figure2

Lung Hydatid with hydatid membranes

DISCUSSION

Hydatidosis is a parasitic infection caused by *Echinococcus granulosus*. The life cycle of this tapeworm involves dogs and other canids as definitive hosts, and domestic and wild ungulates, usually sheep, as intermediate hosts. Human beings are only incidental intermediate hosts. The infection, often acquired in childhood during play with infected dogs, is most common in sheep-raising areas of the world [4].

The most frequent locations of hydatid cysts in humans are the liver 65% and lungs 25% [5,6]. Pulmonary hydatid disease affects the right lung in around 60% of cases, 30% exhibit multiple pulmonary cysts, 20% bilateral cysts and 60% are located in lower lobes. Pulmonary cysts typically increase in diameter at 1-5 cm/yr. Most lung cysts are incidentally

diagnosed on chest radiographs. Occasionally, patients present with cough, hemoptysis, or chest pain [7].

Anaphylactic shock is a rare presentation (seen in cases of rupture to the pleural cavity). The diagnosis is easy in endemic areas. The patient is usually in good general health in cases of non-complicated cysts and chest X-ray will show a well-circumscribed dense homogenous opacity. A water-lily radiological sign is a diagnostic feature for a cyst associated with communication with small bronchioles and with a detached laminated membrane [8].

Hydatid cysts of the lung are usually treated medically (albendazole with a dose of 10 mg per kg of body weight for three courses of 28 days each, with a rest of 2 weeks in between). [9] medical treatment alone can be sufficient for small pulmonary hydatid cysts. [10] Larger cysts usually need surgical intervention in addition to albendazole (either pre-operative or pre- and post-operative). The appropriate surgical intervention in a large but non-complicated hydatid cyst is parenchyma-preserving surgery and includes cystotomy or cystotomy with capitonage, in addition to meticulous suturing of the communicating bronchioles [11].

REFERENCES

1. Kavukcu S, Kilic D, Tokat AO, Kutlay H, Cangir AK, Enon S, Okten I, Ozdemir N, Gungor A, Akal M, Akay H. Parenchyma-preserving surgery in the management of pulmonary hydatid cysts. *J Invest Surg.* 2006;19:61-68. doi: 10.1080/08941930500444586.
2. Saffoleas M, Misiakos EP, Dosios T, Manti C, Lambrou P, Skalkas G. Surgical treatment for lung hydatid disease. *World J Surg.* 1999;23:1181-1185. doi: 10.1007/s002689900643.
3. Mandal S, Mandal MD. Human cystic echinococcosis: Epidemiologic, zoonotic, clinical, diagnostic and therapeutic aspects. *Asian Pac J Trop Med* 2012;5:253-60
4. Miralles A, Bracamonte L, Pavie A, Bors V, Rabago G, Gandjbakhch I, et al. Cardiac echinococcosis. Surgical treatment and results. *J Thorac Cardiovasc Surg.* 1994;107(1):184-190
5. Dighiero J, Canabal EJ, Aguirre CV, Hazan J, Horjales JO. Echinococcosis disease of the heart. *Circulation.* 1958;17(1):127-132.
6. Heyat J, Mokhtari H, Hajaliloo J, Shakibi G. Surgical treatment of echinococcal cyst of the heart. Report of a case and review of the world literature. *J Thorac Cardiovasc Surg.* 1971;61(5):755-764.
7. Morar R, Feldman C. Pulmonary echinococcosis. *Eur Respir J.* 2003;21(6):1069-1077.
8. Beggs I. The radiology of hydatid disease. *AJR Am J Roentgenol.* 1985;145:639-648.
9. Ellaban A, Elzayat S, Elmuzaien M, Nasher A, Homesh N, Alabsi M. The effect of preoperative albendazole in the treatment of liver hydatid cysts. *Egyptian Journal of Medical Laboratory Sciences.* 1994;15:309-319.
10. Galanakis E, Besis S, Pappa C, Nicolopoulos P, Lapatsanis P. Treatment of complicated pulmonary echinococcosis with albendazole in childhood. *Scand J Infect Dis.* 1997;29:638-640. doi: 10.3109/00365549709035913.
11. Ayles HM, Corbett EL, Taylor I, Cowie AGG, Bligh J, Walmsley K, Bryceson ADM. A combined medical and surgical approach to hydatid disease: 12 years' experience at the Hospital for Tropical Disease, London. *Ann R Coll Surg Engl.* 2002;84:100-105.