

INCIDENTALLY DIAGNOSED HYDATID CYST - A CASE REPORT

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ABSTRACT

Hydatid disease, caused by the parasite *Echinococcus granulosus*, mostly affects the liver and the lungs with hydatid cysts which consist of three layers: (1) the outer pericyst; (2) the middle laminated membrane; and (3) the inner germinal layer. Pericyst, as the outermost layer of the hydatid cyst, is made by host cells encasing the hydatid cyst. An extremely close interaction exists between this host tissue and the parasite, and any degenerative changes of the pericyst would result in hydatid cyst degeneration or rupture. The pericyst plays an undeniably important role in the development and survival of the hydatid cyst.

KEYWORDS: Anaphylaxis, Echinococcus, Hydatid cyst, Tapeworm.**INTRODUCTION**

Hydatid disease is a worldwide Zoonosis produced by the larval stage of the *Echinococcus* tapeworm. The two main types of hydatid disease are caused by *E granulosus* and *E multilocularis*. The former is commonly seen in the great grazing regions of the world—particularly the Mediterranean region, Africa, South America, the Middle East, Australia, and New Zealand—and is the most frequently encountered type of hydatid disease in humans. The classical findings in hydatid disease are well known; however, findings related to disease complications and unusual anatomic locations are less frequently described in the literature.

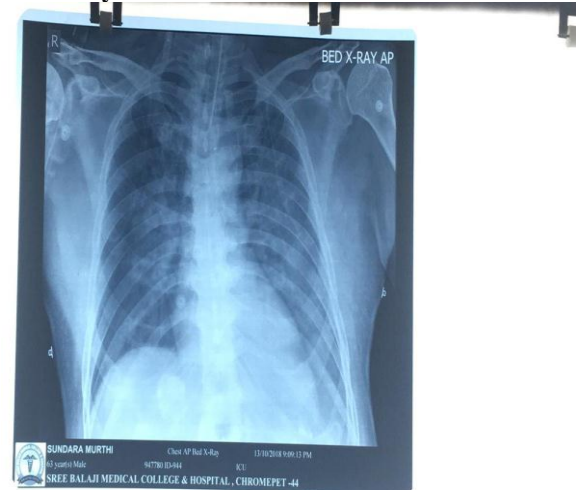
In this article, we present the life cycle of *E granulosus* and its importance in the development of hepatic Echinococcosis. We also discuss and illustrate a variety of radiologic and pathologic findings in over 500 surgically proved cases of hydatid disease seen at our institution over the past 16 years. Many of these cases involved local complications (e.g., intrahepatic complications, exophytic growth, trans diaphragmatic thoracic involvement, perforation into hollow viscera, peritoneal seeding, biliary communication, portal vein involvement, abdominal wall invasion) or involvement of more distant anatomic sites due to haematogenous dissemination (e.g. lung, kidney, spleen, bone, brain).

CASE REPORT

Patient presented to General medicine OP with complaints of breathlessness since last night,

- No History of fever
- No History of chills and rigor

- No History of abdominal pain
- He is a known case of Type II Diabetes mellitus and Hypertension for the past 4 yrs and on treatment.

Chest x-ray**Chest x-ray revealed a cystic lesion in liver.****USG ABD:** Hydatid cyst.**CECT ABD**

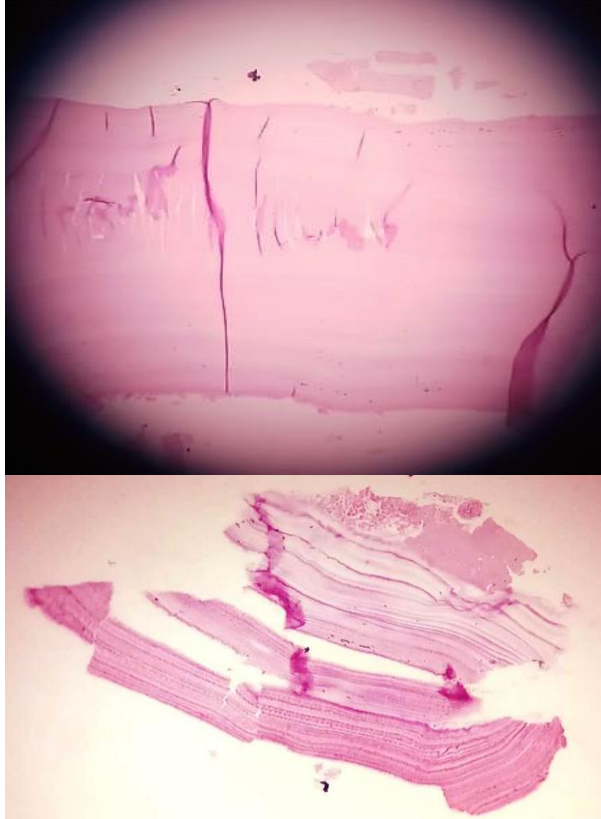
Type II a hydatid cyst in quadrant II of liver. Type III in quadrant VII of liver.

Intra-Op findings

Calcified cyst in left lobe of liver. On opening, multiple daughter cyst were aspirated. Hydatid cyst wall sent for HPE.

Gross

- Received multiple fragments of whitish tissue, few of them – gritty and firm.
- Few – Soft, translucent and jelly like.
- Random bits taken.

Microscopically

- Section shows fragments of laminated, hyalinized like membrane tissue admixed with eosinophilic granular material.

IMPRESSION: P/C/W HYDATID CYST.**DISCUSSION**

Cystic Echinococcosis is still a major problem, especially in rural areas. The condition is mostly asymptomatic. Even though mortality due to Echinococcosis is very low, it can produce a very disabling illness. A mortality rate between 0.29% and 0.6% has been reported. In symptomatic cases, the clinical manifestations are highly variable and depend on the following: (a) the organ involved; (b) size and site of the cyst; (c) interactions between expanding cysts and adjacent organs; and (d) complications caused by rupture of the cyst.

Pathogenesis

- Hydatid cyst represents larval form
- Generally acquired during childhood.
- Gradual displacement of vital host tissue, vessels or parts of organs → damage and dysfunction
- The cyst wall is formed by:

Pericyst

- Fibrous tissue laid down by host fibroblasts and new blood vessels.
- merges with surrounding normal tissue.
- Nutrition derived through this layer.
- In old cysts, it may become sclerosed or calcified and parasite may die within it.
- Absent in lung, bone, muscle, sometimes brain

Ectocyst

- Secreted by embryo
- Tough, acellular, laminated, elastic hyaline membrane, 1 mm
- Resembles white of a hardboiled egg
- Protects the cyst from host enzymes, bile & bacteria
- Non- infective

Endocyst

- Germinal layer, living component of the parasite
- Consists of number of nuclei embedded in a protoplasmic mass.
- Gives rise to ectocyst, brood capsules and scolices
- Secretes hydatid fluid.

Pre-operative diagnosis of cystic Echinococcosis is mandatory to prevent anaphylaxis or local recurrence. Ultra Sonogram should be the first imaging choice in abdominal hydatid cysts with sensitivity rates between 93% and 97%. Computerized Tomography should be performed in cases of uncommon locations of the disease. Routine tests like Total Leukocyte count and Haemoglobin percentage should also be done. Moderate eosinophilia 6% or more is usually present. Treatment is essentially surgical. Though liver cysts are common, hydatid cysts in the external aponeurosis are extremely rare. An extremely rare case of hydatid cyst was diagnosed in this area for the first time. However, a number of cases of extra hepatic hydatid disease have been reported from various parts of India, including Andhra Pradesh.



CONCLUSION

E. granulosus can cause cystic lesions anywhere in the body. Thus, cystic echinococcosis has to be thought of as a differential diagnosis in patients presenting with cystic swellings anywhere in the body in endemic areas unless otherwise proved. Appropriate investigations have to be performed in order to arrive at an accurate diagnosis and in order to prescribe a specific treatment, which is essentially surgical.

REFERENCES

1. S.M. Bresson-Hadni, G.A. Manton, D.A. Vuitton **Echinococcosis of the liver** J.B. Rodes, A.T. Blei, M. Reichen, E.D. Rizzetto (Eds.), Textbook of hepatology (3rd ed.), Blackwell Publishing, Oxford, 2007; 1047-1057.
2. Farmer PM, Chatterley S, Spier N. Echinococcal cyst of the liver: diagnosis and surgical management. *Ann Clin Lab Sci.*, 1990; 20: 385–91.
3. D.P. McManus, D.J. Gray, W. Zhang, Y. Yang Diagnosis, treatment, and management of echinococcosis *BMJ*, 2012; 344: e3866.
4. E.N. Foster, G. Hertz Echinococcus of the liver treated with laparoscopic hepatectomy *Perm J*, 2010; 14: 45-46.
5. Popescu, V. Tomulescu, D. Hrehoret, P. Boeti-Sarbu, O. Stanciulea, A. Kosa Laparoscopic liver surgery. Analysis of a series of 61 patients *Rom J Gastroenterol*, 2005; 14: 343-349
6. Young TN, Hsieh TH, Liu YC, et al. Hydatid cysts in the liver. *J Formos Med Assoc*, 1996; 95: 176–9.
7. Farmer PM, Chatterley S, Spier N. Echinococcal cyst of the liver: diagnosis and surgical management. *Ann Clin Lab Sci.*, 1990; 20: 385–91.
8. Pedrosa I, Saiz A, Arrazola F, et al. Hydatid disease: radiologic and pathologic features and complications. *Radiographics*, 2000; 20: 795–817.
9. Erdem LO, Erdem CZ, Karhoguz K, et al. Radiologic aspects of abdominal hydatidosis in children: a study of 31 cases in Turkey. *J Clin Imaging*, 2004; 28: 196–200.
10. H.A. Gharbi, W. Hassine, M.W. Brauner, K. Dupuc hUltrasound examination of the hydatid liver *Radiology*, 1981; 139: 459-463.
11. Seven R, Berber E, Mercan S, Eminoglu L, Budak D. Laparoscopic treatment of hepatic hydatid cysts. *Surgery*, 2000; 128: 36–40.
12. Murtaza B, Gondal ZI, Mehmood A, Shah SS, Abbasi MH, Tmimy MS, et al. Massive splenic hydatid cyst. *JCPSP*, 2005; 15(9): 568-70.
13. Kir. A, Baran. E, Simultaneous operation for hydatid cyst of right lung and liver. *Thorac cardiovasc Surgeon*, 1995; 43: 62-4.