Atypical Appearance of Hydatid Cyst Liver

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Abstract

Hydatid cyst or Echinococcus is a helminthic disease with worldwide distribution due to close association with sheep, dogs and humans. It can occur almost anywhere in the body. It has a wide variety of clinical and imaging features that vary depending on the stage of disease, complications and tissue affected. In order to reach definitive diagnosis, we need imaging, serology and immunologic studies side by side. Ultrasonography (USG), CT scan and MRI have high specificity and sensitivity in diagnosing hepatic hydatid disease. However, atypical presentation and imaging findings can complicate the diagnosis.

Key Words: Atypical, Echinococcus, Mural, Nodule, Serology.

Introduction

Hepatic hydatid disease has a variety of clinical and radiological presentations. To prevent subsequent acute catastrophic results and the development of recurrences in various organs, it should be kept in mind that complicated hydatid cysts can give unusual Ultrasonography, CT, and MRI findings in addition to typical ones, in endemic areas.1 Therefore, familiarity with atypical radiological appearances of complicated hydatid disease may be valuable in making a correct diagnosis and treatment.

Case Report

We present a case of a young unmarried female, 20 years of age from Rawalpindi, who presented with vague discomfort in right hypochondrium, mild intermittent fever and some loss of appetite. Her pulse was 78/min, Blood pressure 110/80, temperature 98.6°F and respiratory rate 14 /min at the time of presentation. She was fully alert and conscious. Past history and family history was unremarkable. There was no pallor, jaundice or palmar erythema. Keeping in view the findings of CECT(Contrast enhanced computed tomography) abdomen, the diagnosis of atypical hydatid cyst with enhancing mural nodule was made. Biliary cystadenoma/ cystadenocarcinoma was included in differential. USG and CECT scan findings alone were not sufficient to establish the diagnosis so serology was done. Tumor marker carcinoembryonic antigen (CEA) was negative whereas IgA ELISA technique (sensitivity 90%, specificity 98-100%) showed Echinococcus Antibody +ve. This favoured the diagnosis of atypical hydatid cyst with mural nodule. Blood CP showed high leukocyte count with predominant eosinophilia. Urine RE was unremarkable. LFTs showed slightly raised bilirubin. RFTs were in normal range. Treatment started with Tab Flagy 500 mg thrice daily for 30 days to make the cyst sterile and USG was repeated at 15 days’ interval to see for any reduction in the size of hydatid cyst. There was no interval regression, along with adjacent parts of segments V & VI with an isodense small mural nodule attached to its posterior wall. The mural nodule showed enhancement on post-contrast scan. There was no calcification along the cyst wall.

Figure 1. Thin walled cystic lesion with enhancing mural nodule in right lobe of liver

Patient was then scheduled for surgery. Laparotomy was performed via subcostal incision. During surgery the cyst was found adherent with the liver tissue. Post-operative course was uneventful and patient was discharged on 5th post-operative day. The specimen was then sent for histopathology.
which revealed fragmented wall of hydatid cyst, further confirming our diagnosis.

Patient was put on Tab Flagyl after surgery which was continued for 6 months. Patient was followed up by 6 monthly, by USG and IgA ELISA test for recurrence for 1 year. Patient remains disease free till date.

**Discussion**

Hydatid disease of liver is by far one of the commonest findings with worldwide distribution and diversity of features. It is mostly found in liver (75%), lungs (5%); less frequently in brain, heart and bones. The clinical manifestations depend upon size, site and stage of development of disease. It is asymptomatic till complications occur, like rupture leading to anaphylactic shock and formation of secondary cysts. However, patients with uncomplicated cysts are symptom free or have trivial symptoms especially if cysts are small and encapsulated. It has been noted that hydatid cysts grow by 1 cm in diameter in first 6 months and then 2-3 cm per year. The increase in size depends upon surrounding tissue reaction.

Typical radiological findings make diagnosis simple. These include anechoic cyst with or without debris, multi-septated cysts with daughter cysts, cysts with undulating membranes (waterlily sign) and densely calcified mass. Rarely they may represent atypically such as peri-focal edema, non-homogenous contrast enhancement, various unusual manifestations due to rupture or infection, cyst with enhancing mural nodule (as in our case) or in the form of a giant cyst. USG is the first technique and no further imaging is required if appearances are typical. In case of atypical presentation, we need to clinch the diagnosis by use of other imaging modalities like CT scan, MRI and serology which are highly accurate in diagnosing hydatid cyst. Treatment options for hydatid cyst of liver include operative and non-operative methods. When used alone, chemotherapy with antihelminthics have low efficacy due to accessibility of cyst to the drug. Treatment outcome is better when used as an adjunct to surgery to prevent recurrence. Radical surgery is the mainstay of treatment. Indications of surgery are: active cyst, complicated cyst, cyst near vital organs and giant cyst. In our case adherence to surrounding liver tissue and enhancing mural nodule induced us to take up operative treatment so as to avoid complications like rupture into biliary tree, IVC or pleural cavity through diaphragm. Unilocular hydatid cyst with enhancing mural nodule is a unique presentation of hydatid disease liver, so far only a few cases with almost same presentation have been reported.

**References**