

When a Cyst Isn't Just a Cyst: A Rare Case of a Hydatid Liver Cyst Caused by Echinococcus in the United States

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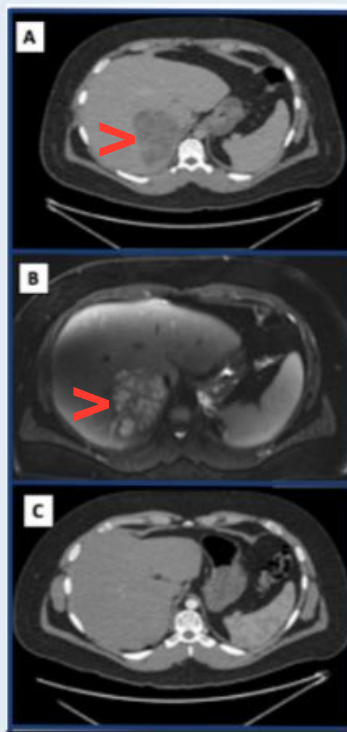
INTRODUCTION

Echinococcus granulosus is a parasite that causes hydatid disease. It is endemic to many countries but is rarely seen in the US, particularly in the Northeast. We present a case of a 22-year-old American male with a hydatid liver cyst due to an *Echinococcus* infection.

CASE DESCRIPTION

- 22-year-old obese male presented to a local hospital for RUQ abdominal pain that radiated throughout his abdomen. No recent diet changes, travel or sick contacts.
- On presentation: leukocytosis, transaminitis, hyperbilirubinemia and an elevated alkaline phosphatase.
- CT abdomen: mild splenomegaly and a new 8.6cm diameter heterogeneous low density poorly enhancing mass in the right hepatic lobe.
- RUQ US: heterogeneous irregularly margined hypoechoic 9.6x9.5x5.7cm soft tissue liver mass.
- Abdominal MRI: 9.3x7.3cm complex, cystic and multilobulated lesion with thick walls and internal septations in the right hepatic lobe.
- He was transferred to our hospital for GI evaluation, where an US guided aspiration of the collection was completed and 5 ccs of purulent aspirate were drained, sent for culture and a hepatic drain was placed.
- No evidence of malignancy in the aspirate.
- He then shared that over a year before his presentation, he served 9 months in Afghanistan with the US military.
- An infectious workup then showed serum positive for echinococcus antibody. Treatment was started with daily oral albendazole for Cystic Echinococcus (CE). Eight and half weeks later his pain had resolved and interval improvement with decreased abscess size was seen on CT.

IMAGES



A. CT abdomen completed at time of presentation demonstrating heterogenous low density and poorly enhancing mass. B. MRI abdomen completed at time of presentation showing complex cystic and multilobulated lesion with thick walls and thick internal septations. C. CT abdomen eight and half weeks after initiation of Albendazole

DISCUSSION

- CE is common in South America, the Middle East, Africa and Asia.
- Most cases of CE in the US are found in immigrants from endemic countries.
- Local transmission has been reported in California, Alaska and the southwest US.
- Our case of an American male with CE highlights the importance of understanding the lifecycle of CE as there is often many years between ingestion of eggs and symptom onset.
- It also demonstrates the importance of obtaining enzyme-linked immunosorbent assay test for Echinococcus, which is 90% sensitive, prior to considering surgery for a cystic liver lesion.
- Rupture of hydatid cysts occurs spontaneously or during surgery and can cause multifocal dissemination leading to fever, urticaria, eosinophilia or anaphylaxis.
- If physicians are familiar with pathology endemic to different countries, patients will be more likely to receive timely, appropriate care.