

Hepatic hydatid cysts

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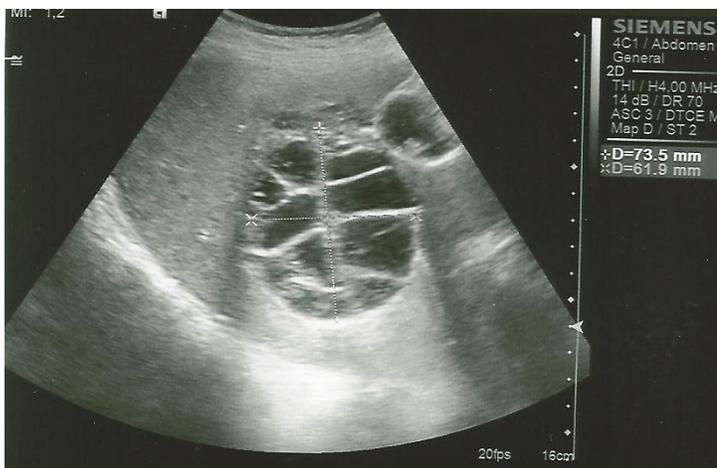
43 years old man presented with recently installed abdominal pain localized in the hypocondrium and epigastrium associated with jaundice and pruritus.

The patient's history included operated bilateral inguinal hernia. Physical examination yielded jaundice, normal aspect of postoperative scars in the inguinal fossae (left and right), pain in the hypocondrium and epigastrium, no guarding, rebound or bruits were found.

Laboratory findings reveal leukocytosis with eosinophilia, hepatic cytolysis (alanine aminotransferase = 219 U/L), hyperbilirubinemia with a higher conjugated bilirubin (total bilirubin=6.01mg/dL, conjugated bilirubin=4.7mg/dL).

Ultrasonography reveals a round transonic image of 7/6cm localized in the IV and VIII segment, with septa that suggests liver hydatid cyst, hyperechoic image of 9mm (hydatid cyst) and a 9mm gallbladder polyp. Computed tomography shows hepatomegaly with a cystic multiseptate image in the IVth segment of 8.5 cm.

Under treatment against pain, proton pump inhibitor, hydration and regime during hospitalization the symptoms disappear. However the hepatic cytolysis worsens with the progressive growth of alanine aminotransferase to values of 916 U/L, hence anti-helminthic treatment is delayed.



Enchinococcal infection caused by the larval form of *Echinococcus granulosus* remains an important health issue worldwide. Hepatic hydatid cyst is the most frequently encountered form (50-93% of the cases) and left untreated these grow and lead to: developing fistulae in adjacent organs, rupture in the peritoneal cavity, produce daughter cysts or dye (rarely)[1]. Clinical manifestations appear after the cyst is larger than 10cm in diameter and only a third of the patients experience symptoms.

Even though biological findings are nonspecific, elevated bilirubin and alkaline phosphatase may appear. Leukocytosis may appear due to infection of the cyst and eosinophilia is present only in a quarter

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of patients [2].

Despite the fact that ultrasonography remains the main pillar in the diagnosis of the disease, computed tomography and serology help improve the accuracy of diagnosing liver hydatidosis. WHO Ultrasound classification of echinococcal cysts helps establish the treatment: 1 (unilocular, anechoic cyst with double line sign), 2 (multiseptate honey comb cyst), 3a (cyst with detached membranes), 3b (cyst with daughter cysts in solid matrix), 4 (heterogenous contents and no daughter cysts) and 5 (solid plus calcified wall). CE4 and 5 are inactive.

On the other hand Gharbi classification also divides in 5 types: type I cysts consist of pure fluid; type II has a fluid collection with a split wall; type III cysts contain daughter cysts (with or without degenerated solid

material); type IV has a heterogeneous echo pattern; and type V has a calcified wall. Therefore our case presents a hepatic hydatid cyst stage CE2 after WHO classification and type III after Gharbi classification.

Uncomplicated and small lesions (under 5cm) CE1,2 and 3 can be treated with oral albendazole (10-15mg/kg/day) and close monitoring. However, large CE1 and CE3 cysts need treatment with both albendazole and PAIR (percutaneous aspiration, introduction of scolicide and reaspiration), performed after initiation of albendazole.

Primary surgical treatment has been replaced with less invasive methods since the relapse rate can reach 20%. In patients with complicated cysts, surgery is the treatment of choice. CE4 and 5 only need to be monitored [1][3].

References:

1. Anand, S, S Rajagopalan, and Raj Mohan. "Management of liver hidatid cysts - Current perspectives." *Medical Journal Armed Forces India* 68 (2012): 304-09.
2. Moro, Pedro L. "Clinical manifestations and diagnosis of echinococcosis." Jan. 2016 <http://www.uptodate.com/>
3. Podolsky, Daniel K., Michael Camilleri, Gregory Fitz, Anthony N. Kalloo, and Fergus Shanahan. *Yamada's Textbook of Gastroenterology*. Sixth ed. Sussex: Wiley Blackwell, 2016. 2636-37.