

Medical Quiz Answers

A1. Figure 1: Abdominal ultrasound. Figure 2: Abdominal CT scan. Both the ultrasound and CT scan show a large, well-defined cyst in the right lobe of the liver filled with fluid.

A2. Liver, lungs and kidney.

A3. Hydatid cyst of the liver.

DISCUSSION

Hydatid disease is caused by infection of a parasite called *Echinococcus granulosus*, which is acquired from animals following ingestion of tapeworm eggs excreted in the feces of infected dogs. Hydatid disease is a major health problem in countries where sheep breeding is a common means of livelihood¹.

Cystic hydatid disease commonly affects the liver (50–70%) and less frequently affects the spleen, bones, kidneys, lungs, and brain. The liver can be the only primary site or part of disseminated hydatidosis. Primary liver hydatid disease might constitute an important differential diagnosis of liver cysts in areas endemic for hydatid disease^{1,2}.

Most of the cases of liver hydatid cyst are asymptomatic for a long time. An asymptomatic hydatid cyst of the liver is only diagnosed incidentally during an abdominal investigation for other pathology².

The clinical presentation of liver hydatid cysts could be liver abscesses, portal hypertension, mass effect on bile ducts and vessels that can induce cholestasis and Budd-Chiari syndrome. The most common symptom is right upper quadrant pain associated with nausea and low-grade fever. The most common signs on clinical examination are an enlarged liver and a palpable mass. A rare presentation of a liver hydatid cyst is peritonitis or anaphylaxis after a cyst rupture into the peritoneum or biliary tract. Most primary liver hydatid disease consists of a single cyst; however, up to 40% of infected people have multiple cysts^{2,4}.

The diagnosis of liver hydatid disease could be made by a combination of case history, clinical examination and ultrasound or CT scan or MRI. Serology tests such as ELISA or immunoblotting can be used in diagnosis with a sensitivity of 80-100% for liver cysts³.

Surgical intervention remains the choice of treatment for large (>5 cm), active, symptomatic or complicated cysts. The surgical intervention aims to evacuate the cyst and resection of the germinal layer of the cyst^{1,4}. Radical surgical interventions include pericystectomy, cystectomy, lobectomy and hepatectomy. These procedures are indicated in complicated liver hydatid cysts. The rate of recurrence is low in radical procedures^{1,4}.

Marsupialization was the most common surgical intervention of uncomplicated hydatid cyst because it is quick and safe but carries high rate of postoperative complications, such as bilomas and bile peritonitis^{1,4}.

Minimal invasive surgery is rapidly developing and proven to be feasible for liver hydatid cyst in several reports⁵.

An alternative management choice of liver hydatid cyst

is by chemotherapy (albendazole) and PAIR technique (puncture-aspiration-injection-respiration). The indications for PAIR technique are non-echoic lesions >5 cm in diameter, multiple cysts, cysts with daughter cysts, infected cysts, surgery is contraindicated, recurrence after surgery, failure of chemotherapy, children over 3 years and pregnant women⁶.

CONCLUSION

Hydatid disease is a common health problem in many endemic countries around the world. The most common affected organ is the liver followed by the lungs, the spleen and other organs.

Diagnosis of hepatic hydatid disease is made by clinical history combined with ultrasonography and CT scan. Management of hepatic hydatid cyst include radical surgery in complicated cases (by open or minimal invasive technique). Chemotherapy and PAIR technique is an alternative to surgery in selected cases.

Potential Conflicts of Interest: None.

Competing Interest: None.

Sponsorship: None.

Acceptance Date: 5 January 2020.

Ethical Approval: Approved by the Department of Pediatrics, Salmaniya Medical Complex, Bahrain.

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