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RADIOLOGIC PATHOLOGIC CORRELATION / *Gastrointestinal imaging*

Peritoneal hydatidosis and hepatic hydatid cyst perforation

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Hydatidosis;
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Case report

This is a rare case of secondary late asymptomatic peritoneal hydatidosis revealed by the imaging carried out for post-traumatic rupture of a hepatic hydatid cyst.

A 10-year-old boy, born in Rumania, consulted for generalised hives treated by intravenous corticotherapy (Solumedrol®) and antihistamines (Polaramine®). The next day, he was hospitalised for intense abdominal pain and then reported a recent abdominal trauma (several days before). The abdominal sonography and then the CT-scan detected a cyst enclosing an echogenic membrane of the right liver 8 cm in diameter (Fig. 1), echogenic peritoneal effusion of average abundance and a multivesicular cyst of the right iliac fossa of 7.5 cm (Fig. 2). The diagnosis of hydatidosis was raised. The lab tests detected anaemia (Hb: 10.9 g/dl) and hyperleukocytosis with CRP at 92 mg/l.

The surgeons operated in emergency and then saw a ruptured hydatid cyst on hepatic segment VII with haemoperitoneum and a non-ruptured cyst in the greater omentum extending by a thin opening towards the anterior side of the liver.

They performed a resection of the protruding dome of the cysts and a peritoneal cleansing with isotonic solution with drainage. The macroscopic (Fig. 3) and parasitological (Fig. 4) examination confirmed the diagnosis by detecting multiple intracystic daughter vesicles and the presence of scolex and hooks of *Ecchinococcus granulosus* in the peritoneal fluid.

Treatment with Albendazole® was prescribed for 3 months.

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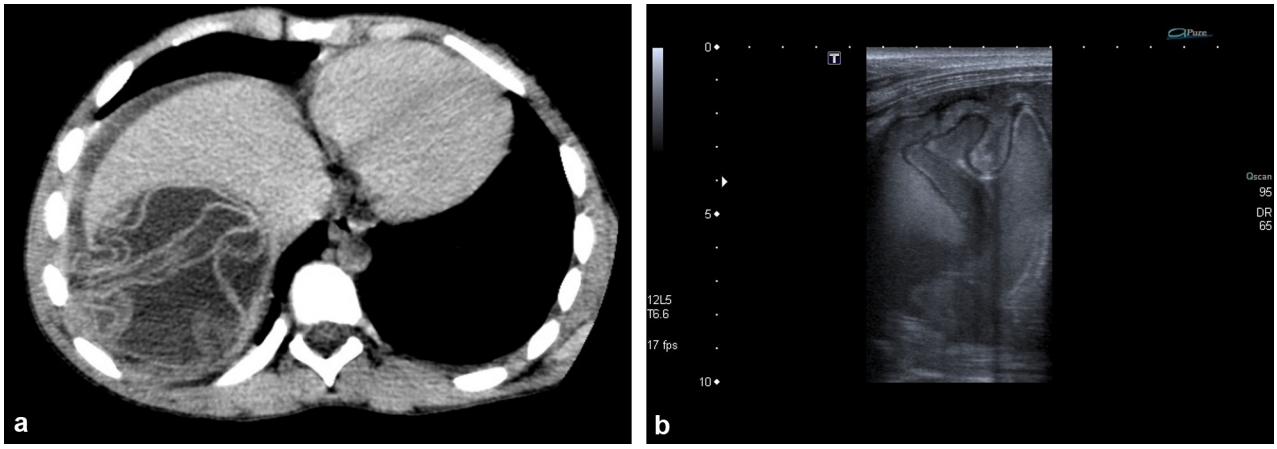

Figure 1. Ruptured hepatic cyst. a: CT examination with star-shaped appearance characteristic of the floating nature of the detached membrane; b: corresponding sonographic appearance with undulating and floating echogenic membrane in the cyst contents.

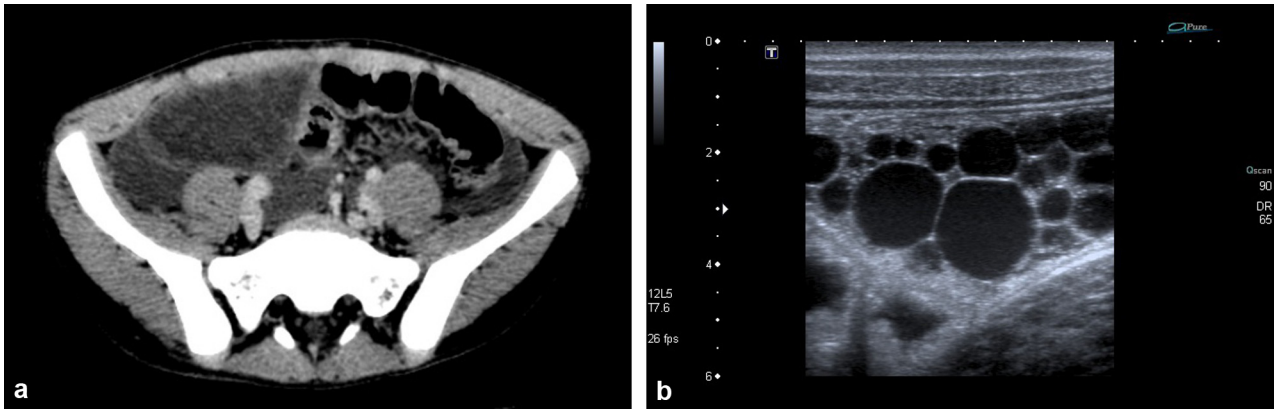

Figure 2. Cyst of the greater omentum. a: CT examination revealing a type 3 peritoneal cyst according to Gharbi's classification with daughter vesicles without enhancement of their wall; b: ''honeycomb'' or ''wheel spoke'' appearance representing the multiple daughter vesicles.

Discussion

Hydatidosis is a severe zoonosis, endemic in the Mediterranean region, Latin America and Oceania. In France, the cases detected are specific to the arrival of immigrants (Maghreb, Eastern Europe...). Human contamination occurs through the ingestion of foods contaminated by dog faeces containing *E. granulosus* eggs. Peritoneal hydatidosis is one of the serious complications of the disease with a frequency ranging from 4.5 to 6.9% according to the series [1]. Often associated with another visceral location, it affects all ages and all segments of the peritoneal cavity.

Figure 3. Macroscopy after surgery. Discus proligerus of the ruptured hepatic cyst in the peritoneal cavity (black arrow). Peritoneal cyst intact with incision of its membrane during the anatomopathology revealing multiple endocystic daughter vesicles (white arrow).

The rare, primitive form occurs by haematogenic contamination [2].

The secondary form (85% of the cases) includes the acute intraperitoneal cystic ruptures and the late forms after preoperative contamination (insufficient protection of the operating fields, ineffective scolicidal solution) or cyst perforation after a low intensity or spontaneous abdominal trauma (favoured by the superficial seat of the cyst, its large size, a thin wall and high intracystic pressure [3]).

The sonography, in first intention, helps confirm the diagnosis and assess the number, location and anatomic relationship of the cysts. The sensitivity is high (between 90 and 100%) allowing for better visualisation of the endocavity vesicles or the partial detachment of the membrane [1]. However, its topographic reliability is lower than that of CT examination that also allows for an optimum analysis of the calcifications and the relationship with the urinary