Septic shock secondary to colonic fistula as clinical debut of liver hydatid cyst

Key words: Hydatid. Echinococcosis. Liver cyst. Fistula. Septic shock.

Dear Editor,

Hydatid disease (HD) is a zoonosis produced by Echinococcus worms, which still remains endemic in the region of Castilla y Leon (Spain) (1). Liver hydatid cysts (LHC) are the most common location (50-70%) (2). Up to 60% of them present symptoms due to complication (3,4), either cysts rupture, compressive effect or cyst infection.

In case of free rupture, anaphylactic shock (AS) might occur, whereas septic shock (SS) could appear as an evolved stage of any infectious complication, such as, fistulas into biliary or gastrointestinal tract (3,4). However, the latter are very rare entities (0.5%) (5), and even rarer, fistulas between LHC and colon.

Case report

A 73-year-old woman presenting fever (38.5 ° Celsius), vomiting and abdominal pain located in the right upper quadrant without rigidity or tenderness was admitted at our institution. Laboratory: 24,000 leukocytes/ml (neutrophils 96%, eosinophils 0.1%) without other abnormalities. Ultrasonography: Rounded calcified lesion in right hepatic lobe, suggestive of LHC, without intra-abdominal free fluid. Afterwards, the patient suffered overall worsening followed by steadily decreasing level of consciousness and hypotension. Massive fluid resuscitation was unsuccessful and the diagnosis of SS due to a possible infectious complication of the LHC was established. Dopamine infusion improved blood pressure and imipenem was administered. Computer tomography (CT) showed the LHC in segment VI with an air-fluid level inside (Fig. 1) and increased radiographic density on the hepatic flexure of the colon, suggesting colonic fistula (CF). Emergency laparotomy was decided and radiological diagnosis was confirmed. We performed partial cystectomy, omentoplasty and primary closure of the CF opening. Postoperative period was uneventful.

Discussion

Free rupture of LHC has an incidence of 1-8% (6) and implies drainage of hydatid fluid into abdominal cavity causing peritoneal irritation and, also, immunological response due to the antigen-
ic content (4). As may occur in 12.5% (7) and allergic reactions without AS, such as urticaria, in up to 25% (4). Intra-abdominal hydatid fluid can be accurately demonstrated by ultrasonography with a sensitivity of 93% (7).

On the contrary, infectious complication of LHC may appear in 7.3%, and one out of 10 of them could develop SS (8). Fistulas between gastrointestinal tract and LHC, such as our patient’s CF, are rare conditions –0.5%, (5)– and, thus, an uncommon aetiology of LHC infectious complication. After literature reviewing, there are only 3 cases of CF previously published in Spain (9) and 4 from other countries (10). None of them reported septic shock as clinical debut of this entity.

As a conclusion, LHC complications should be known in order to diagnose and treat them properly, since they can be the first manifestation of HD. It will be necessary to make differential diagnosis between AS and SS when a patient presents shock and LHC has been diagnosed. The absence of skin allergic reaction, diffuse abdominal pain and intra-abdominal fluid in ultrasonography makes AS unlike. On the other hand, SS could be suspected in patients with infectious manifestations, such as fever and leukocytosis.

One extremely rare aetiology of SS secondary to LHC infectious complication is CF, such as the case herein presented.

The clinical case included in this letter was presented as a poster during the XXX National Congress of the Spanish Surgical Association (Asociación Española de Cirujanos, A.E.C.), which took place in Madrid in November 2012.

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