OBSTRUCTIVE JAUNDICE CAUSED BY INTRABILIARY RUPTURE OF A HYDATIC CYST

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SUMMARY

Echinococcosis is a human parasitic disease, seen mostly in the Mediterranean area, Eastern Europe, Middle East, South America and North Africa. The liver is the most common site of hydatid cyst. Intrahepatic rupture is the most common complication of the liver echinococcosis. A 48-years old female, who had undergone cholecystectomy 10 days ago, arrived at the Emergency Room with jaundice, epigastric and right upper quadrant pain, nausea, vomiting and fever. Laboratory showed leukocytosis with eosinophilia, increased values of the liver test (transaminases, alcalin phosphatase, gamma glutamyl transferase, total and direct bilirubin). Abdominal CT scan revealed a left lobe hydatid liver (segment II) in contact with the left biliary duct and dilatation of the biliary tree. ERCP showed cystic membrane in the common bile duct, so we performed papillotomy and extraction of the hydatic elements from the biliary tract. 5 days after ERCP we removed surgically the hepatic cyst, which had a communication with the left hepatic duct. We performed pericystectomy and suture of the left duct.

Conclusions: Hydatic elements in the biliary tract can be a cause of obstructive jaundice in the endemic area. ERCP may be beneficial, but surgery remains the treatment of choice for treatment of liver hydatid cysts.

Key words: hydatic cyst, echinococcosis, obstructive jaundice, ERCP

RÉSUMÉ

Ictère par obstruction du à un kyste hydatique présentation de cas

L’échinococcose est une maladie parasitaire humaine, rencontrée surtout dans la région Méditerranéenne, l’Europe de l’Est, le Moyen-Orient, l’Amérique du Sud et l’Afrique de Nord. Le foie est le site le plus fréquent du kyste hydatique. La rupture intrahépatique est la plus fréquente complication de l’échinococcose hépatique. Nous présentons le cas d’une femme, 48 ans, qui avait subi une cholecystectomie il y a 10 jours; elle est arrivée à l’hôpital pour ictere, des douleurs dans le quadrant supérieur droit, des vomissements et de la fièvre. Le l’aboratoire a montré une leucocytose avec éosinophilie, augmentation des valeurs des épreuves hépatiques (transaminases, phosphatase alcaline, gamma glutamyl transférase, bilirubine totale et directe). Le scanning abdominal avait révélé un kyste hydatique du lobe gauche hépatique (segment II) associé avec une dilatation de l’arbre biliaire. La CPRE avait découvert des membranes kystiques dans le canal cholédoque; nous avons effectué la papillotomie et l’extraction des éléments hydatiques du tractus biliaire. 5 jours après la CPRE nous avons enlevé chirurgicalement le kyste hépatique, qui a eu une communication avec le canal hépatique gauche. Nous avons effectué la périkystectomie et la suture du conduit à gauche.

Conclusions: La présence des éléments hydatiques dans les voies biliaires peuvent être la cause de l’ictère obstructif dans la zone endémique. CPRE peut être bénéfique, mais la chirurgie reste le traitement de choix pour le traitement des kystes hydatiques du foie.

Mots clés: kyste hydatique, échinococcose, l’ictère obstructif, CPRE

INTRODUCTION

Hydatid disease is a zoonosis caused by infection with Echinococcosis granulosus. It is endemic in many regions of the world, like Mediterranean area, Eastern Europe, Latin America and Middle East. Once the human being has contact with the infected animal, 70% will develop the disease. The liver is the most common affected organ by the disease, but less frequently hydatid cyst can be found in the lungs, brain,
muscles, kidney or spleen.

The hydatic disease stays asymptomatic for a large period of time, until the cyst grows and develops complications like biliary fistula, infection or compression phenomena.

Hydatic hepatic cyst rupture into the biliary tract is a complication of this disease. The rupture is more frequent in the left or right duct and less commonly in the common bile duct. This complication is manifested as obstructive jaundice, abdominal pain, fever and cholangitis.

The communication between the cyst and the bile ducts can be minor or major. Minor communications are small (10-37%) and only cystic fluid or very tiny hydatic elements can migrate, but they don’t cause obstructions. The patients are asymptomatic or they have biliary colic.

In the major communications (3-17%) the cystic elements arrive in the biliary tree causing obstruction, jaundice and cholangitis.

The treatment of the hydatic cyst has different strategies: benzimidazoles administration (Albendazole, Mebendazole) to sterilize the cyst, percutaneous drainage and surgical therapy.

Surgery remains the main treatment of the hydatic disease, especially when it develops complications: inactivation, evacuation of the content, pericystectomy and multiple drainage.

The safety and efficacy of endoscopic retrograde papillosphincterotomy in cases with rupture in the biliary tract is well known and it is associated with surgery for the treatment of complicated hydatic hepatic cyst.

**CASE REPORT**

A 48-years old female, who had undergone laparoscopic cholecystectomy for acute cholecistitis 10 days ago, was admitted to our hospital with a history of 48 hours of jaundice, epigastric and right quadrant pain, nausea, vomiting and fever.

Physical examination showed an mildly jaundiced patient with flushes, febrile (38.5°C). Abdominal examination revealed epigastric and right upper quadrant tenderness and a palpable enlarged liver 2 cm below costal margin.

The laboratory profile of routine blood test revealed moderate leukocytosis 10803/μl (normal 4000-9000/μl) with eosinophilia, increased values of the liver test: TGO = 75U/l (normal <40U/l), TGP = 96U/l (normal <41U/l), alkaline phosphatase = 299U/l (normal 40-129U/l), gamma glutamyl transferase = 388U/l (normal <60U/l), total bilirubin = 3.88 mg/dl (normal <1mg/dl) and direct bilirubin = 3.11mg/dl (normal <0.2mg/dl), amylases = 44U/l (normal <100U/l).

Abdominal computed tomography showed enlarged liver; in the left hepatic lobe (segment II) a 64/57cm cystic tumour with rupture into the left main hepatic duct and dilated biliary tract in the IIrd, IIIrd hepatic segments (Fig. 1, 2).

We started early administration of antibiotics (Cefuroxime), cortisol hemisuccinate and benzimidazoles (Albendazole).

We decided to perform an emergent endoscopic retrograde cholangiopancreatography (ERCP) which revealed hydatic membrane in the common bile duct. All the hydatic elements were removed via a Dormia basket and a sphincterotomy was made (Fig. 3-4,5).

The patient had rapid resolution of the jaundice and abdominal pain, so in the 5th postERCP day we decided to perform surgery. During surgical exploration a voluminous
Hydatid cyst filing the left lobe of the liver was found. The falciform ligament was ligated and the liver normalized. We inactivated the cyst injected hypertonic 3% NaCl solution and after 15 minutes total pericystectomy was performed using electrocoagulation until healthy hepatic parenchyma (Fig. 6). There was a biliary fistula in the residual cavity which was primarily saturated. Postoperative period was uneventful and the patient was discharged in the 8th POD. 6 months follow up of the patient (abdominal ultrasound) revealed no recurrence.

DISCUSSIONS

Hydatid cyst is a zoonotic disease well known and still frequent in some regions (sheep grazing area). The life cycle of Echinococcus involves 2 hosts: one intermediate herbivorous and one definitive carnivore. The humans are accidental intermediate hosts, ingesting viable eggs of the parasite. The liver is the most common affected organ, being the first filter for the hydatid larvae. The hepatic hydatid disease is for a long period of time asymptomatic, or may develop compression sign, pain, hepatomegaly or complications (rupture in the biliary tract or the peritoneal cavity), leading to obstruction, cholangitis or anaphylactic shock. Spontaneous rupture of a hydatid cyst in the biliary tract (5-17%) is associated with obstructive jaundice, cholangitis, upper abdominal pain and fever.

The diagnosis of the hydatid cyst is made using a complete history and examination, blood tests, serological tests and imagistic (ultrasound, computed tomography or magnetic resonance).

ERCP is used for diagnosis and also for treatment of hydatid rupture in the biliary tract: remove the hydatid elements migrated in the common bile duct, overcoming acute conditions like obstructive jaundice and cholangitis. In a study of Galati et al ERCP associated with papillosphincterotomy reduced the risk of postoperative fistulae and infections and decreased the morbidity and mortality associated with the hydatid cyst surgery.

CONCLUSIONS

Hydatid elements in the biliary tract can be a cause of obstructive jaundice in the endemic area. ERCP may be beneficial, but surgery remains the treatment of choice for treatment of liver hydatid cysts.

REFERENCES