Hydatid cyst of common bile duct mimicking type 1 choledochal cyst

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ABSTRACT

A 11 year-old girl presented with pain in the abdomen, an abdominal mass and jaundice. Clinical examination and investigations suggested a diagnosis of a type 1 choledochal cyst. Upon operation, a solitary, unruptured hydatid cyst was found obstructing the common bile duct. Intrinsic obstruction of the extrahepatic bile duct by a solitary hydatid cyst without any hepatic involvement as seen in this unique case, has not been reported until now.

KEY WORDS: Common bile duct, hydatid cyst, jaundice

INTRODUCTION

Parasitic causes of biliary duct obstruction include Fasciola hepatica, Ascariasis and hydatid cysts.1-3 Bile duct obstruction associated with hydatid disease may occur in three ways: 1) obstruction of bile ducts by intrahepatic cysts, 2) rupture of cysts into the bile ducts and subsequent intrinsic obstruction caused by the hydatid material and 3) extrinsic compression of bile ducts by a hydatid cyst with or without accompanying liver cysts.1,2 We report a rare case of an unruptured solitary hydatid cyst inside the common bile duct (CBD) without any hepatic involvement, presenting with obstructive jaundice mimicking a type 1 choledochal cyst.

CASE REPORT

An 11 year-old girl was admitted to the hospital with jaundice, clay-colored stool, itching and dark urine, these symptoms existing since the past five months. There was no previous history of biliary disease or jaundice. On physical examination, she was icteric and the liver was palpable just below the right costal margin. A semi-mobile mass 8 cm x 6 cm was palpated in the right upper quadrant.

Laboratory investigations revealed levels of hemoglobin = 10.6 g/dL, white blood cell count = 7200/ mm³ without eosinophilia; bilirubin = 6.4 g/dL (conjugated: 3.5 and unconjugated: 2.9), alkaline phosphatase = 362 IU/L, aspartate aminotransferase = 111 IU/L, alanine aminotransferase = 115 IU/L, gamma glutamyltranspeptidase = 64 IU/L, blood sugar (postprandial, PP) = 93 mg/dL, urea = 30 mg/dL, creatinine = 0.8 mg/dL, HbsAg-negative, prothrombin time = 16 seconds (control = 14 seconds).

Abdominal ultrasonography (USG) findings were consistent with the diagnosis of type I choledochal cyst with a distended, edematous gall bladder without stones, mild hepatomegaly and dilated intrahepatic bile ducts (intrahepatic biliary radicals, IHBR). The common bile duct was fusiform-shaped and measured 105 mm x 98 mm x 87 mm and showed evidence of a multilayered, linear, echogenic area within it. Computed tomography (CT) showed similar findings [Figure 1]. Thus, USG and CT findings were interpreted as the presence of a type 1 choledochal cyst.

Upon operation, the gall bladder was found to be edematous and distended. The CBD was replaced by a fusiform swelling measuring 9 cm x 8 cm x 8 cm. Palpation of the gall bladder revealed no stones. Cholecystectomy was performed and progressive dissection of the CBD for Roux-en-Y hepaticojejunostomy was undertaken. The tapered lower end of the retroduodenal CBD was dissected, transected and ligated.

The proximal part of the CBD was dissected up to about a cm below the hilum. On transection of the proximal part of the dilated duct, an unruptured solitary cyst was discovered [Figure 2] and a diagnosis of a hydatid cyst was made. A Roux-en-Y hepaticojejunostomy was
De et al.: Hydatid cyst of biliary tract

Hydatid cyst of biliary tract

A choledochal cyst presents with the triad symptoms of intermittent jaundice, abdominal pain and an abdominal mass. These clinical features associated with confirmatory USG and CT results prompted us to make a diagnosis of a type 1 choledochal cyst. However, hydatid cyst is rare and is usually caused by the rupture of hepatic cysts into the biliary tract with resultant obstruction by the contents of the cysts. Extrahepatic biliary obstruction by hydatid cysts without hepatic involvement is the rarest form. Till date, only one pediatric case with an extrinsic compression of the CBD has been reported. A solitary extrahepatic cyst without any hepatic involvement, causing intrinsic obstruction of the CBD is unknown.

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Echinococcosis is an infectious parasitic disease that leads to cystic lesions of various organs and presents with various clinical features and surgical pictures including obstructive jaundice. However, the association of a hydatid cyst and jaundice is unusual, the incidence of which is reported to be 5-17%. An intrahepatic, hydatid cyst causing obstruction and compression of the intrahepatic biliary ducts resulting in jaundice is the usual form. Extrahepatic biliary obstruction by a

DISCUSSION

Echinococcosis is an infectious parasitic disease that leads to cystic lesions of various organs and presents with various clinical features and surgical pictures including obstructive jaundice. However, the association of a hydatid cyst and jaundice is unusual, the incidence of which is reported to be 5-17%. An intrahepatic, hydatid cyst causing obstruction and compression of the intrahepatic biliary ducts resulting in jaundice is the usual form. Extrahepatic biliary obstruction by a

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