

An Unusual Post-traumatic Case of Extrahepatic Bile Duct Compression

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Abstract

Jaundice and cholestatic disease by external bile duct compression may be caused by several conditions, including pancreatic masses, portal cavernoma, Ormond's disease, metastases from gallbladder cancer, neurinomas, and hydronephrotic kidney.

We report a case of bile duct compression in a 56-year-old man with a known small (28 mm) right renal cyst and crossed, fused renal ectopia. The patient had a history of recent abdominal trauma due to a motorcycle accident and recurrent septic-type fever and jaundice. He also reported a weight loss of 5 kg in the last two months.

Abdominal ultrasonography showed intra- and extra-hepatic bile duct dilatation, and computed tomography scan showed hydronephrosis, dilatation of intra- and extra-hepatic biliary tract, and a right renal complex cyst of more than 9 cm. One can hypothesize a relationship between the abdominal trauma and the increase in size of the renal cyst, which, moreover, had changed its original shape.

The patient underwent cefuroxime and metronidazole therapy, with complete recovery from the cholangitis within one week. The treatment of choice would have been surgical excision or, alternatively, an image-guided percutaneous aspiration of the cyst, in order to avoid further episodes of cholangitis. Unfortunately, the patient refused either surgical or more conservative treatment and was lost to follow-up.

Key Words: Bile duct compression, abdominal trauma, renal cysts.

Case Report

A 56-YEAR-OLD MAN, a motorcycle driver, was admitted to our department with pruritus, jaundice and septic-type fever, and temperature peaks between 38°C and 39.7°C at 12-hour intervals. He had had a motorcycle collision two months before. The computed tomography (CT) scan performed at the time of the accident showed a crossed, fused renal ectopia with a right kidney cyst of 28 mm in size, and no evidence of abdominal hemorrhage, bile duct compression or dilatation of the intra-hepatic biliary tract (Fig. 1). The routine laboratory data were normal.

On clinical examination the patient reported a weight loss of 5 kg in the previous two months. Laboratory data revealed leukocytosis (12,500 per microliter), moderate anemia, and an increase of serum bilirubin (39 µmol/L), aspartate aminotransferase (102 U/L), alanine aminotransferase (97 U/L), and alkaline phosphatase (161 U/L). Blood and urinary cultures were negatives. Electrocardio-

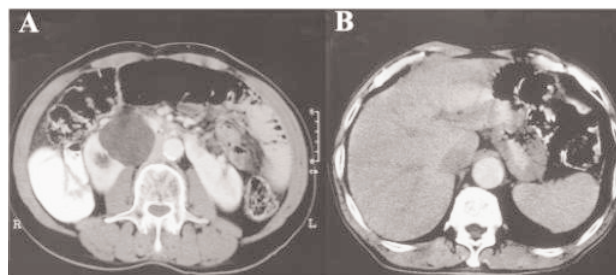


Fig. 1. Contrast axial CT scan in patients with crossed, fused renal ectopia showing a right kidney cyst of 28 mm. No signs of intra-abdominal hemorrhage, choledochus compression or dilatation of the intra-hepatic biliary tract are evident.

gram and chest X-ray were normal. Abdominal ultrasonography confirmed the crossed, fused renal ectopia with right renal hydronephrosis, and showed a dishomogeneous renal cyst of 92 mm, causing compression and dilatation (17 mm) of the choledochus (Fig. 2). CT scan confirmed hydronephrosis, dilatation of intra- and extra-hepatic biliary tract, and a right renal complex cyst (Fig. 3). These data suggested a diagnosis of cholangitis due to an external compression of the choledochus. One can hypothesize a relationship between the abdominal trauma and the increase in size of the renal cyst, which, moreover, had changed its original shape and structure.

The patient underwent cefuroxime (1.5 g every 8 h) and metronidazole (0.5 g every 8 h) therapy, with complete recovery within one week. He refused either surgical or more conservative treatment, and was discharged with our advice to take prophylactic antibiotic therapy when necessary.

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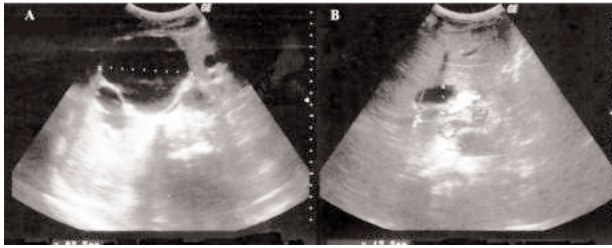


Fig. 2. Abdominal ultrasonography showing the crossed, fused renal ectopia with right renal hydronephrosis, and a dishomogeneous renal cyst of 92 mm causing compression and dilatation (17 mm) of the choledochus.

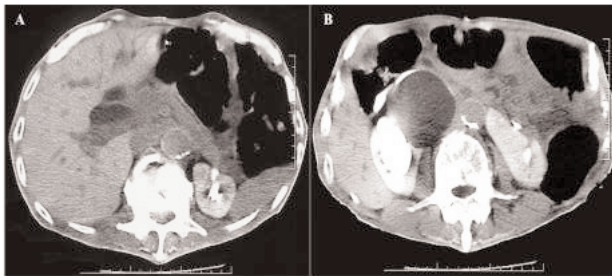


Fig. 3. Axial CT scan. Hydronephrosis, dilatation of intra- and extrahepatic biliary tract, and a right renal pseudocyst are confirmed.

Discussion

External compression of the biliary tract can be due to several conditions involving both the pancreas and the common bile duct, including portal cavernoma, Ormond's disease, metastases from gallbladder cancer, neurinomas, and hydronephrotic kidney (1–7). Several unusual cases of benign extrinsic compression of the common bile duct have been reported, including hydronephrotic kidney, direct compression by a duodenal diverticulum, abdominal aortic aneurysm, and portal vein thrombosis (3, 8–11). Several cases of both congenital and secondary biliary tract dilatation in patients with autosomal dominant or recessive polycystic kidney disease have been reported, although biliary tract obstruction is rare in children (12–15). The intrahepatic tract dilatation is never due to mechanical compression on the choledochus by renal cysts, but rather by a malformation of the biliary tract itself, associated with polycystic disease of the kidney. No biliary tract compression and jaundice caused by post-traumatic renal pseudocyst have been described.

Patients with renal cysts should usually undergo percutaneous aspiration and ethanol sclerotherapy, or anterograde or retrograde endoscopic procedures, which represent minimally invasive techniques as alternatives to open and laparoscopic surgery (16, 17). Percutaneous transparenchymal endocystolysis, as a first-line therapy, has also been suggested (18).

In conclusion, in the presence of bile duct compression, jaundice and septic-type fever due to the (probably post-traumatic) increase in size of a preexistent renal cyst, the treatment of choice should be surgical excision or, alternatively, an image-guided percutaneous aspiration of the cyst.

This strategy could have been useful in order to prevent further episodes of cholangitis in our patient. Unfortunately, despite our suggestions, he refused any treatment and was lost to follow-up.

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