Scholars Journal of Medical Case Reports

OPEN ACCESS

Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

Cystic Dilatation of Main Bile Duct: About A Case

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DOI: 10.36347/sjmcr.2021.v09i06.016 | **Received:** 19.04.2021 | **Accepted:** 28.05.2021 | **Published:** 23.06.2021

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Abstract **Case Report**

Cystic dilatation of the bile ducts is a rare congenital malformation. It's due to an abnormality of the bilio-pancreatic junction which may involve the extra and/or intrahepatic bile ducts. According to Todani, there are several types depending on the site, shape and distribution of the malformation. It's evoked in front of the inconstant clinical triad: pain, jaundice and mass. Ultrasound and better sectional imaging confirm the diagnosis. Surgical excision is the treatment of choice to prevent malignant degeneration of the cyst wall and bile ducts.

Keywords: Cystic dilatation - Main bile duct - Diagnosis – Imagery.

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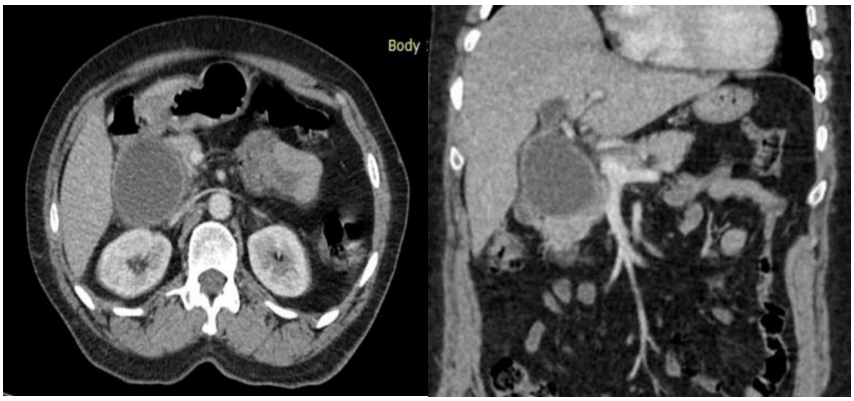
INTRODUCTION

Cystic bile duct defects are rare congenital conditions. According to Todani, they are classified according to the location, extent, and type of dilation of the bile ducts. The biliopancreatic crossroads anomaly plays an essential role in the genesis of this malformation and the degeneration of the bile ducts. Surgical resection is the standard treatment [1].

CASE REPORT

A 60-year-old patient cholecystectomized ten years ago, who has presented chronic intermittent pain in the right hypochondrium. Clinical examination revealed localized tenderness on palpation, without fever, jaundice, or other associated signs. The biological assessment did not reveal any anomalies. Ultrasound showed significant cystic dilation of the main bile duct, without detectable obstacle downstream. An abdominal CT was performed, objectifying a fusiform cystic dilatation of the main bile duct, measuring 7.1x4.9 cm, with slight dilatation upstream of intra-hepatic bile ducts (figure 1). The MRI appreciated better this cystic dilation of the main bile duct and excluding possible lower lithiasis or mass syndrome (figure 2). The patient underwent surgical resection of the main bile duct with hepaticojejunal anastomosis. The post-operative consequences were simples.



A B

Fig-1 (A-B): Axial and coronal sections of injected abdominal CT showing a cystic dilation of the main bile duct, exerting a slight mass effect on the duodenal and pancreatic parenchyma.

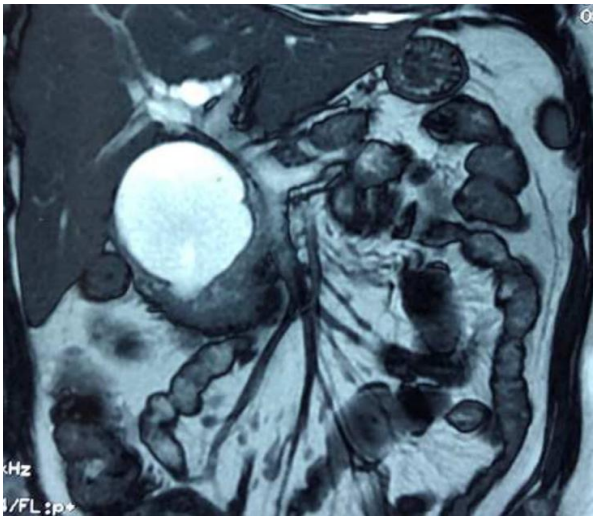


Fig-2: Coronal section in T2-weighted sequence of abdominal MRI showing a fusiform and homogeneous cystic dilation of the main bile duct, with slight dilation upstream of the intrahepatic bile ducts.

DISCUSSION

Congenital cystic dilatation of the main bile duct is a rare abnormality (1 in 100,000 and 150,000), but the most common cause of extrahepatic cholestasis in older children with a clear predominance of women (80% of cases) [2]. This is an abnormality of the junction of the common bile duct and the pancreatic duct with an abnormally long biliopancreatic duct. This junction induces the reflux of pancreatic juice into the bile duct. [3]. Several classifications depend on the type of dilation of the common bile duct, whether or not associated with dilatation of intrahepatic bile ducts. The best known is that of Alonso-Lej, revised by Todani: Type I (80%): Cystic dilation of the main bile duct. Type II (10%): Supra-duodenal diverticulum of the common bile duct. Type III (4%): Choledococele. Type IV (11%). a: dilation of the intra- and extrahepatic bile ducts. b: multiples segmental dilation of the main bile duct. Type V (<1%): Isolated dilation of the intrahepatic bile ducts [2]. The fusiform form is by far the most common, the diverticular form being exceptional.

The classic clinical triad: mass, pain, jaundice is only present in full in 10% of cases. Most often, the diagnosis is made by ultrasound in front of abdominal pain and/or disturbed liver function in children under 10 years old, however, cases are diagnosed prenatal and others in adulthood (20% cases) [4]. Acute pancreatitis is often revealing in children. The other complications (lithiasis of the lower bile duct, outbreak of cholangitis, perforation, biliary cirrhosis) can sometimes be revealing with a risk of secondary degeneration of the cyst wall which increases with age [5]. The diagnosis of choledochal cyst can be easily evoked on ultrasound in front of cystic dilation of the main bile duct, located in the hepatic pedicle in continuity with dilated gallbladder and intrahepatic bile ducts. This cyst can sometimes be the site of a few small stones or echogenic debris. The gallbladder often has a thickened wall and may also contain Sludge or stones. The pancreatic duct can be dilated with sometimes the visibility of its junction with the common bile duct in the head of the pancreas [6].

The differential diagnosis arises in the neonatal period with bile duct atresia in its cystic form. When dilatation is moderate, the main differential diagnosis is primary cholelithiasis of the lower common bile duct. The CT scan and better MRI diagnose the anomaly of the biliopancreatic junction with an abnormally long common duct, exceeding 5 mm in children and 15 mm in the adult [7]. In case of doubt, the opacification of the bile ducts and the high dosage of pancreatic enzymes in the bile can confirm the diagnosis. Complete surgical resection of the cyst and gallbladder with hepaticojejunal anastomosis is the standard treatment given the increased risk of malignant degeneration [1].

Conflict of Interest

The authors declare that they have no conflict with this manuscript.

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