Case Report

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When Vomiting Hides a Biliary Malformation : A Case of Choledochal Cyst in an Infant

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Choledochal cyst, Todani classification, Infant vomiting, Ultrasound, Magnetic resonance imaging.

Introduction
An infant aged one year and four months was taken to the emergency room after vomiting. The patient had no medical or surgical history. The clinical examination was uneventful, and the initial laboratory tests, including liver function tests and inflammatory markers, were within normal range.

Due to the persistence of symptoms, an abdominal ultrasound was conducted. It revealed a cystic formation near the porta hepatis, indicating that the common bile duct had dilated. Magnetic resonance imaging (MRI) was then used to confirm the diagnosis and further characterize the lesion. The MRI revealed a cystic dilatation of the distal common bile duct spanning 28 × 9 × 20 mm (height × anteroposterior × transverse) and placed about 5 mm from the hepatopancreatic ampulla. The lesion showed hyperintensity on T2-weighted images and hypointensity on T1, consistent with Todani's description of a type IB choledochal cyst (Figure 1and 2).

Choledochal cysts are rare congenital biliary tract anomalies that occur more frequently in children, particularly females and people of Asian descent. The Todani classification distinguishes five major types, with type I being the most prevalent. It involves extrahepatic bile duct dilations, with subtypes based on shape and extent. Type II is a saccular diverticulum of the common bile duct. Type III, or choledochocele, is a dilation protruding into the duodenum.Type IV includes multiple cysts : IVA affects both intra- and extrahepatic ducts, IVB only extrahepatic.Type V, or Caroli's disease, involves intrahepatic dilations and may be associated with hepatic fibrosis.

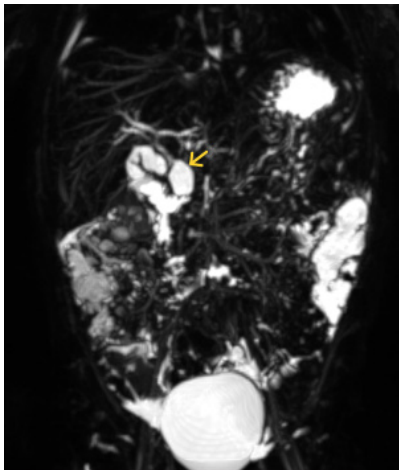

Figure 1: Coronal oblique 3D MR cholangiopancreatography shows a cystic dilatation of the lower common bile duct.(arrow).

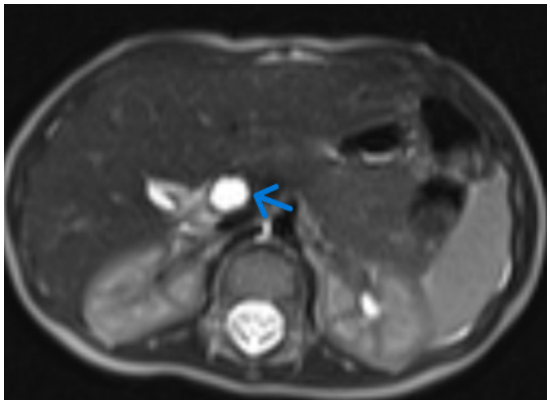

Figure 2: Axial T2 image showing cystic dilatation of the lower common bile duct.

The suspected etiology involves an abnormal pancreaticobiliary junction that permits pancreatic secretions to reflux into the bile duct, resulting in chronic inflammation, duct wall weakness, and progressive dilatation. Clinical presentation is very heterogeneous. The typical trifecta of stomach pain, jaundice, and a palpable right upper quadrant mass is frequently reported, but it is rarely observed in its entirety, particularly in newborns. Instead, nonspecific symptoms like vomiting, failure to thrive, or isolated digestive complaints may take precedence, potentially delaying diagnosis.

Imaging is critical in determining a diagnosis. Ultrasound is the first-line modality, particularly in emergency situations, but MRI with MRCP gives extensive anatomical information to confirm the diagnosis and guide surgical planning. Despite the absence of clear clinical or biological markers, imaging proved critical in diagnosing the cystic biliary abnormality.

Early surgical intervention is critical for avoiding major consequences such as recurrent cholangitis, biliary cirrhosis, pancreatitis, and possibly malignant development into cholangiocarcinoma. Complete cyst removal is followed by biliary-enteric repair, typically via a Roux-en-Y hepaticojejunostomy. Following radiological confirmation, the patient was submitted for surgical examination, with a good prognosis expected after surgery.

This case emphasizes the necessity of including congenital biliary abnormalities in the differential diagnosis of chronic vomiting in newborns, even in the absence of overt hepatobiliary symptoms.

References

1. Todani T, Watanabe Y, Narusue M, et al. Congenital bile duct cysts: classification, operative procedures, and review of thirty-seven cases including cancer arising from choledochal cysts. Am J Surg. 1977 ; 134: 263-269.
2. Soares KC, Arnaoutakis DJ, Kamel I, et al. Choledochal cysts: presentation, clinical differentiation, and management. J Am Coll Surg. 2014 ; 219: 1167-1180.
3. Singham J, Yoshida EM, Scudamore CH. Choledochal cysts: Part 1 of 3: classification and pathogenesis. Can J Surg. 2009; 52: 434-440.