CASE REPORT

WIRSUNGOCELE IN A CHILD WITH CHOLELITHIASIS, CHOLEDOCHOLITHIASIS AND RECURRENT ACUTE PANCREATITIS

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ABSTRACT

Wirsungocele is the cystic dilatation of wirsung's duct which can be associated with recurrent acute pancreatitis, necrotizing pancreatitis and chronic pancreatitis. It can also be associated with chronic abdominal pain. We report a case of 05 years old child with history of recurrent episodes of acute pancreatitis that underwent MRCP and ERCP to look for the cause of reccurent acute pancreatitis. MRCP revealed cholelithiasis with choledocholithiasis and cystic dilatation of wirsung's duct; while on ERCP there was choledocholithiasis with sludge in common bile duct. The wirsung's duct was not evaluated on ERCP due to risk of iatrogenic pancreatitis.

Keywords: Wirsungocele, Wirsung duct, dilated wirsung duct, Pancreatic ductal variation.

Introduction

Wirsungocele was first reported as an incidental finding on ERCP described by Abu-Hamda et al. as cystic dilatation of wirsung's duct.[1] Wirsung's duct is the part of ventral duct between the major papilla and dorsal-ventral junction. The main pancreatic duct is the part of the dorsal duct distal to the dorsal-ventral junction whereas, the part of the dorsal duct proximal to the dorsal-ventral fusion point is called the duct of Santorini, or accessory pancreatic duct.[2] Wirsungocele can be an incidental finding or associated with recurrent acute pancreatitis, necrotizing pancreatitis and chronic pancreatitis. It can also be associated with chronic abdominal pain.[3]

Case Presentation

We present here a case of 05 years old female child who presented in Paediatrics outpatient department with complains of sudden generalized abdominal pain which was mild in nature associated with non-bilious vomiting usually after 2-3 hours of meal. She had a history of recurrent pancreatitis. On examination she had soft non distended abdomen which was tender in right hypochondrium. Her lab workup was done which showed raised ALT and GGT levels. Ultrasound examination was done to rule out acute episode of pancreatitis which showed dilated intrahepatic and common bile duct with multiple calculi and echoes within it and possibility of choledochal cyst was given. The Patient, later on, underwent MRCP and ERCP. MRCP examination was performed on 1.5 Tesla GE scanner with slice thickness of 1.6 mm showed a small gallstone in dilated gallbladder with multiple calculi within cystic duct and common bile duct; and focal cystic dilatation of ventral pancreatic duct near major papilla (wirsung duct) representing wirsungocele; rest of pancreatic duct and pancreas was normal. (Fig. 1a,b,c). ERCP showed moderately dilated intrahepatic, common hepatic and common bile ducts with multiple fragmented calculi and sludge within common hepatic and common bile ducts which were removed (Fig. 2). However, there was distal tapering of common bile duct. Pancreatic duct was not evaluated on ERCP due to risk of iatrogenic pancreatitis. On follow up patient had relief in her symptoms and obstructed

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LFTs. However she is kept in close follow-up for further evaluation in case of any further episodes of acute pancreatitis.

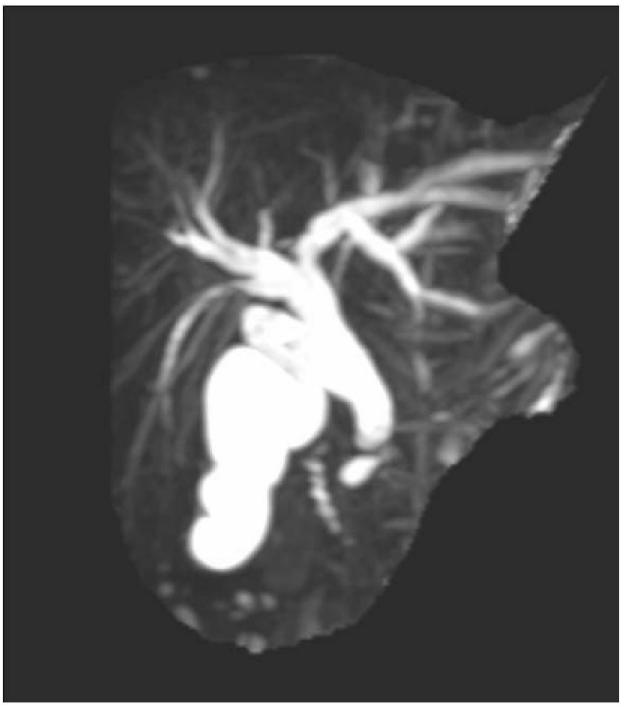

Figure 1a: 3D processed image of MRCP showing cystic dilatation of wirsung's duct representing wirsungocele.

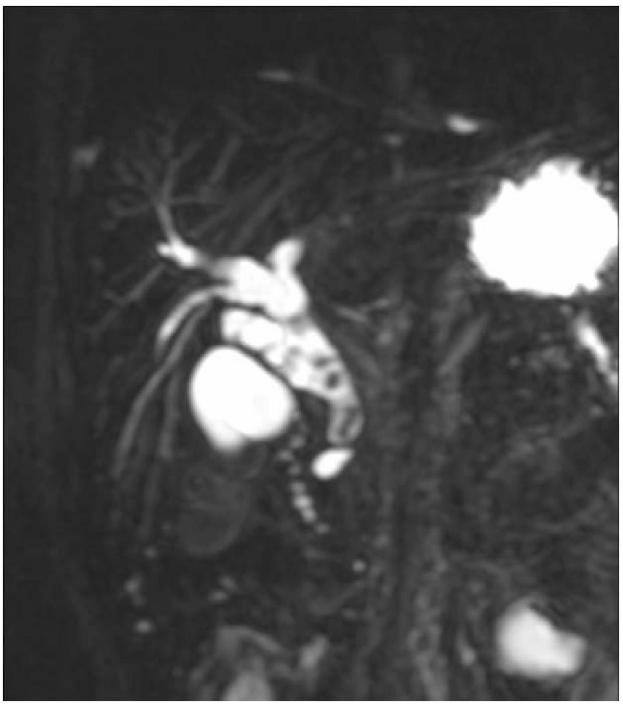

Figure 1b: 3D processed image of MRCP showing multiple filling defects in common bile duct, cystic duct and wirsungocele.

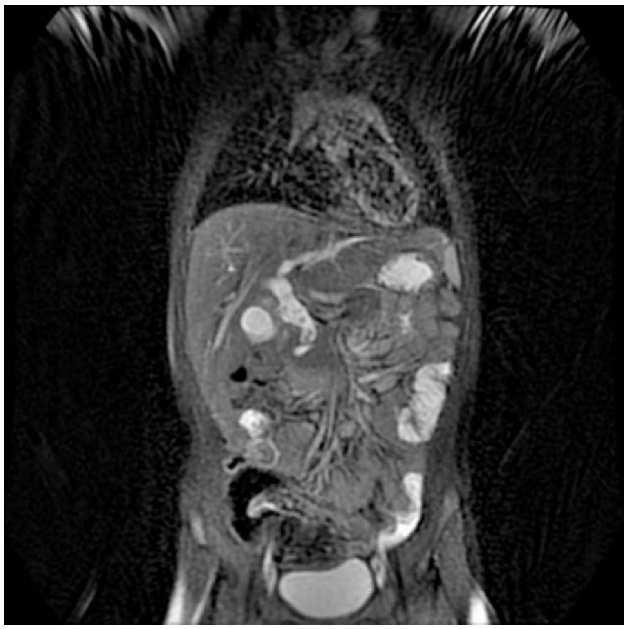

Figure 1c: COR T2 Fat-Sat RTr PROP showing multiple filling defects in common bile duct, cystic duct and wirsungocele.

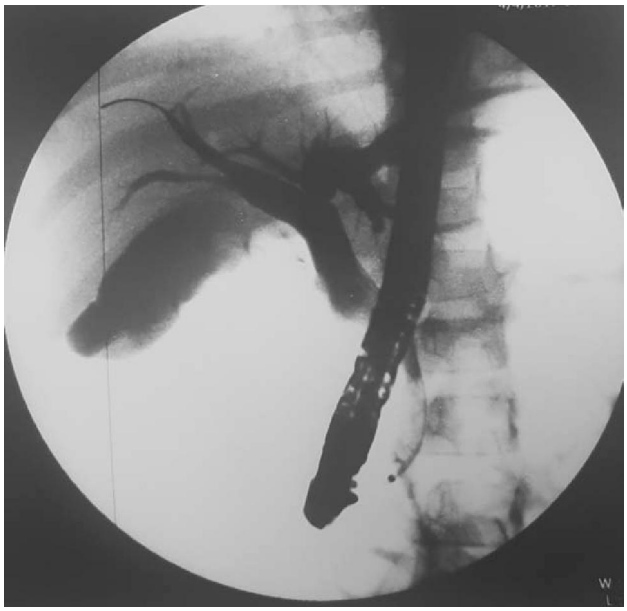

Figure 2: Cholingogram obtained during ERCP showing dilated common hepatic and bile ducts with distal tapering of common bile duct.

Discussion

Pancreas develops between fifth and seventh week of gestation from theunion of dorsal and ventral buds of primitive foregut. The anterior part of head, body and tail of pancreas develop from the dorsal bud and posterior part of head and uncinate process develops

from the ventral bud. Following this union of two buds there is also fusion of pancreatic ductal systems. The part of dorsal duct distal to the union is termed as main pancreatic duct and remaining proximal part as duct of Santorini (which opens in minor papilla). The part of ventral duct between the dorso-ventral union and major papilla is termed as duct of Wirsung.4 Cystic dilatation of wirsung's duct is called wirsungocele which is analogous to similar dilatation of CBD called choledochocele and santorini duct (dorsal pancreatic duct) is called santorinicele. The exact patho-physiology of wirsungocele is not yet known. However some studies have shown association of wirsungocele with increasing age.[5] Initially, wirsungocele was described as an incidental finding on ERCP but later studies have shown it to be associated with recurrent acute pancreatitis.[3] The history of recurrent acute pancreatitis and presence of wirsungocele in our patient also favours the association between wirsungocele and recurrent acute pancreatitis as described in the literature. In one case series, they did biliary and pancreatic sphincterotomy following which patients were symptom-free.[6]

After the review of literature, we have found that; this is the first case of wirsungocele in a child. The youngest case reported in literature is that of 19 year old male reported by Rodrigues GS et al.[7]

Conclusion

Wirsungocele is an uncommon type of pancreatic duct dilatation which can be associated with recurrent acute pancreatitis and chronic pancreatitis and should be kept in mind along with choledochocele in patients where endoscopy reveals prominent bulging papilla and should be looked for using ERCP and/or MRCP.

References

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