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Case report

CHOLEDOCHOCELE WITH RECURRENT PANCREATITIS - CASE REPORT

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Abstract: Choledochal cysts are an uncommon anomaly of unknown etiology of the bilious system. This anomaly, characterized by cystic dilatations on intrahepatic or extrahepatic bile ducts, can be seen at any age from birth. Most rare congenital bile duct cysts choledochocele (type III) is usually diagnosed in adults. Since the congenital choledochal cyst has not a unique clinical finding, the basic criteria for diagnosis are based on imaging findings. This article presents a case of choledochocele accompanying recurrent pancreatitis in a 19-year-old male patient.

Key words: magnetic resonance cholangiopancreaticography, choledochocele, bilier duct.

INTRODUCTION

Congenital cystic lesions of the biliary tract affect the intrahepatic and extrahepatic bile ducts. Choledochal cysts are rare abnormalities manifested by cystic dilatation of the extrahepatic and/or intrahepatic biliary tree.

The clinical presentation of choledochal cysts occur before 10 years age in 80% of patients, usually the result of complications are cholangitis and pancreatitis (1).

Most rare congenital bile duct cyst, choledochocele (type III) is usually diagnosed in adults. Since the congenital choledochal cysts have not unique clinical finding, the basic criteria for diagnosis are based on imaging findings.

The first imaging modality in patients with suspected biliary system pathology is ultrasonography (US). It is an easily accessible noninvasive method. Sensitivity varies according to the practitioner, the presence of intraabdominal gas and the localization of the disease.

Magnetic Resonance cholangiopancreotography (MRCP) is a non-invasive method which can be preferred in the diagnosis of biliary tract pathologies with its features such as no ionizing radiation, no risk of complications, no need for patient preparation, feasibility during pancreatitis and cholangitis attack, and the ability to obtain images in different plans.

CASE REPORT

A 19-year-old male patient presented to the clinic with complaints of recurrent abdominal pain. The patient was diagnosed with choledochal cyst in 1999 and was followed up because of recurrent pancreatitis episodes in gastroenterology clinic. In laboratory analysis: WBC 8800 IU/L, HB: 14,5 U/L, platellets: 206000, glucose: 107 mg/dl, total bilirubin: 1,3, Direct bilirubin: 0,29, AST: 58 U/L, ALT: 19 U/L, LDH: 767 U/L, CK-MB: 84 U/L, Amylase: 146 U/L, Lipase: 157 U/L, CRP: 28.4 mg/L .Computed tomography (CT) of the

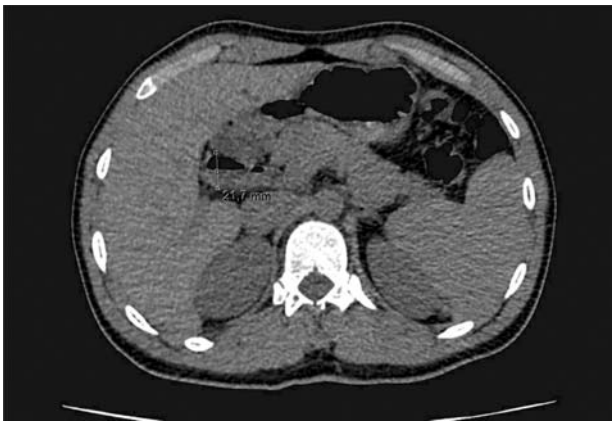

Figure 1*. In non contrast enhanced CT: common bile duct is dilated, measuring 22 mmin diameter*

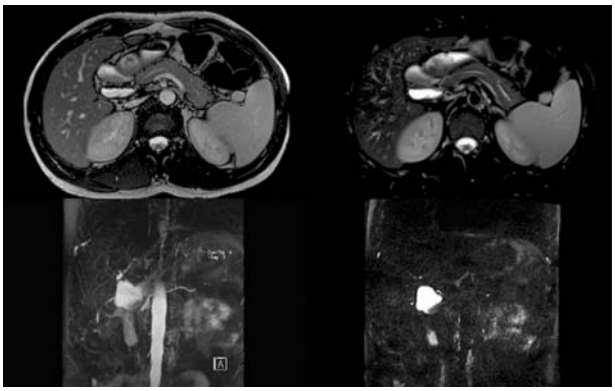

Figure 2. *In MRCP, the right intrahepatic main bile duct was normal width, the left main bile duct and intrahepatic bile ducts are evident, the diameter of the choledochus was increased in the middle segment andmeasured in the widest area as 33 x 15 mm compatible with choledochocele*

abdomen revealed that the common bile duct was dilated (22 mm in diameter) (Figure 1). Further MRCP was performed to the patient. In MRCP, the right intrahepatic main bile duct was in normal dimension, the left main bile duct and intrahepatic bile ducts were evident, the diameter of the choledochus was increased in the middle segment and measured in the widest area as 33 x 15 mm compatible with choledochocele (Figure 2). The gall bladder was operated and not observed. He had no hystory of choledochocele surgical treatment.

DISCUSSION

Biliary tract variations are very common. Knowing these variations reduces the risk of bile duct injury caused by laparoscopic cholecystectomy, percutaneous or endoscopic interventions.Aberrant right hepatic duct connected to the common hepatic duct or to the cystic duct, long cystic duct parallel to the common hepatic duct, cystic duct connected medially to the common hepatic duct, short cystic ductand a cystic duct connected to the distal third of the common hepatic duct are the anatomical variations associated with increased bile duct injury (2, 3, 4, 5).

In patients suffering with recurrent pancreatitis, cholangitis, choledocholithiasis or intermittent abdominal pain, jaundice and nausea; congenital anomalies of biliary tract should be considered in the differential diagnosis (5, 6).

Congenital biliary cystic disease is the cystic or fusiform dilatation of intra or extrahepatic biliary tract including choledochal cyst, choledochocele, choledochal diverticulum and Caroli disease. 80% of the lesions are observed in infancy and childhood. The classic triad of symptoms are right upper quadrant pain, abdominal mass and jaundice and are present in one third of patients. The most common complications of cysts are choledocholithiasis, cholelithiasis, cancer development, pancreatitis, cholangitis and cyst rupture. In our patient, there was recurrent pancreatitis. Excision of cysts eliminates cancer risk, but the possibility of developing cancer from intrahepatic bile ducts requires long-term follow-up (3, 7).

Todani classification system divides cystic lesions into 5 main categories. Type IA is cystic dilatation of the main bile duct, Type IB is the focal segmental dilatation, usually distal to the main bile duct and Type IC is the fusiform dilatation of the main bile duct and the main hepatic channel. Type II is the real diverticul of the extrahepatic channel. Type III is the choledococele. Type IVA is dilatation of intra and extrahepatic ducts (segmental cysts) and Type 4B is the dilatation of multiple segments of extrahepatic channels only. Type V is the Caroli disease (3).

CT, which is the second most frequent after US, is one of tht major diagnostic methods used in the diagnosis of hepatobiliary diseases and is becoming more important with the introduction of multislice devices. CT is performed in cases where US findings are not certain, when the mass is suspectable, distal of the common bile duct cannot be seen due to gas, and segmental obstruction is present (8). It is possible to perform mass characterization because it allows visualization in different phases (arterial, portal, venous) after intravenous contrast medium (9). CT is the first method in the diagnosis of gallbladder tumors. CT has an important role in diagnosing diseases and monitoring the complications that may cause serious complications such as cholecystitis and pancreatitis as well as space occupying lesions.The two most important disadvantages of CT are ionizing radiation exposure and hypersensitivity reactions that may develop with iodinated contrast agents (10).

MRCP was first emerged as a noninvasive method in the imaging of biliary tract in 1991 and it allows direct imaging of the biliary system without requiring contrast.The principle of MRCP is based on the increase in contrast between stationary or slow moving fluids (bile) and background soft tissues (liver, pancreas, abdominal fat) using heavy T2 A weighted sequences (11). In T2A weighted images, stationary fluids exhibit higher signal intensity, whereas the soft tissues in the background have low signal intensity (11, 12).

Radiological imaging methods have great importance in the evaluation of biliary tract. US is the first choice method because it is easily applicable and accessible in diseases of the pancreatic and biliary system. However, there are some limitations. The sensitivity depends on the operator. US can show the presence of dilatation in biliary tract but it may be insufficient

to reveal its cause.Therefore, additional examinations are needed (13, 14).

In these examinations, it was determined that effectivity of MRCP was close to ERCP examination which is accepted as the gold standard for visualization of biliary tract. The fact that ERCP is an invasive method, has a mortality rate of 0.2-1%, a morbidity risk of 1-7%, the need for experienced operators limits its use for diagnostic purposes.MRCP is a reliable and noninvasive method in the treatment of pancreatic and biliary system diseases. It does not require contrast media, allows multiplanar and cross-sectional imaging.Therefore, MRCP is a preferred method especially in complicated cases (13, 15, 16).

CONCLUSION

Intraoperative cholangiography and endoscopic retrograde cholangiopancreatography (ERCP) are important diagnostic methods for bile duct patholgies. However, due to the fact that clinical findings are not unique, choledococele suspicion rarely arises and ultrasonography (US) may be inadequate for diagnosis. ERCP is accepted as the gold standart method in diagnosis. However, since it is invasive, MRCP is preferred instead asnon-invasive, non-ionizing and easily applicable method. In such a group of patients in whom pancreatitis may occur as a complication, it was thought that the first-line MRCP could be used instead of ERCP, which would further increase the risk of complications, and that it could show a similar diagnostic success.

DECLARATION OF INTEREST

The authors declare that there are no conflicts of interest.

Sažetak

HOLEDOHOCELA SA REKURENTNIM PANKREATITISOM - PRIKAZ SLUČAJA

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Ciste holedoha su neobične anomalije nepoznate etiologije bilijarnog sistema. Ova anomalija, koju karakteriše cistična dilatacija intrahepatičkih ili ekstrahepatičnih žučnih puteva, se može naći u bilo kojoj životnoj dobi. Najređa kongenitalna cista žučnih vodova, holedohocela (tip III) se obićno dijagnostikuje kod odraslih. S obzirom da kongenitalna cista holedohusa nema jedinstvenu kliničku manifestaciju, osnovni kriterijum za dijagnozu se zasniva na dijagnostičkim procedurama. Ovaj rad prezentuje prikaz slučaja holedohocele udružene sa rekurentnim pankreatitisom kod 19-godišnjem muškarca.

Ključne reči: magnetna rezonanca holangiopankreatografija, holedohocela, žučni kanal.

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