

DISIDA SCAN IN DIAGNOSIS OF CHOLEDOCHAL CYST, A CASE REPORT.

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ABSTRACT

The diagnostic requirement of choledochal cyst can be accomplished by many examinations, for examples; Ultrasonography, CT scan, Magnetic resonance cholangiopancreatography (MRCP), endoscopic retrograde cholangiopancreatography (ERCP) In addition, DISIDA scan (99mTc diisopropyl iminodiacetic acid) is a method of choices that yields a precise result. The study is non- invasive, easy performance, time saving and complications-free.

Keywords : choledochal cyst-disida scan

CASE REPORT

A 36-year-old-Thai woman presented with abdominal pain and distension for years. She underwent ultrasonographic study at a private hospital that revealed a cystic mass of 2x 1.8 cm. in size and was suspected to be pancreatitis with pancreatic pseudocyst. She was referred to Sappasithiprasong Hospital and her physician requested for a CT scan of abdomen. A cystic lesion was found at the head of pancreas, 2x2.5 cm. in size (Fig.1), but was hardly discriminated between choledochal cyst and pancreatic pseudocyst.

MRCP = Magnetic Resonance CholangioPancreatography
ERCP = Endoscopic Retrograde CholangioPancreatography

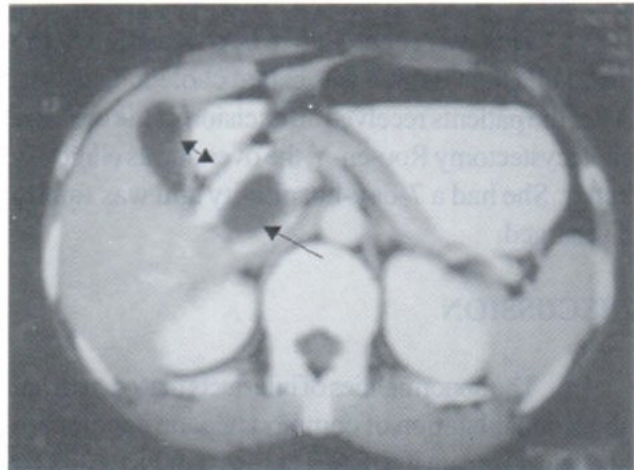


Fig.1 CT of upper abdomen reveal gallbladder (↔) and cyst at head of pancreas (→)

She was then sent for a hepatobiliary scan(DISIDA scan) (Fig.2). The findings had shown that the radiopharmaceuticals were excreted and accumulated at the cystic lesion, compatible with the findings in ultrasonogram and CT scan.

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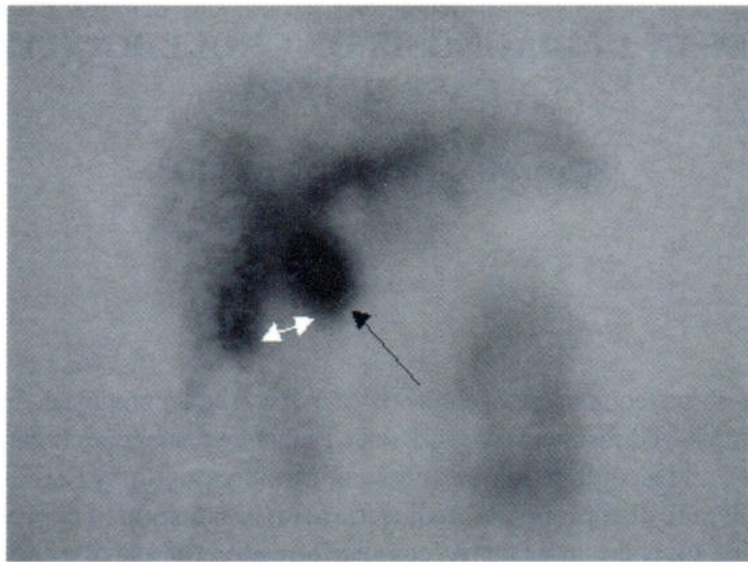


Fig.2 hepatobiliary scan reveal gallbladder (↔) and choledochal cyst (→)

This was concluded to be a dilatation of the distal bile duct, which was called choledochal cyst. After the patients received an excision of the cyst and cholecystectomy Rou-en-Y, the overall was clinically better. She had a 7-day-hospitality and was finally discharged.

DISCUSSION

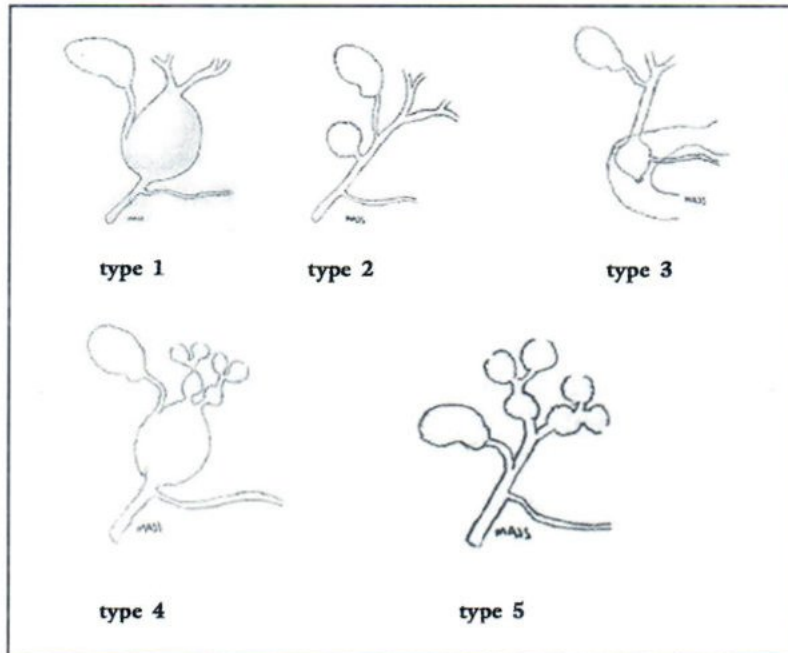
The abnormalities of bile ducts that occur from abnormal dilatation of common hepatic or common bile ducts are rare in USA. There was only 1:100,000-150,000 to 1: 1,000,000-2,000,000 case found,¹ female more than male. The patients had experienced abdominal pain, jaundice and mass lesion at the right upper quadrant of abdomen, which could occurred from pancreatitis and cholangitis. The incidence of cholangiocarcinoma were reported around 16.6-21%.^{2,3} The additional examinations were ultrasonography, CT scan, MRI and ERCP. The primary study remains the ultrasonography^{4,5} because of the time saving, low cost, no- radiation and no- complications. There are some limitations, for examples, too much gas in the bowels that needs the expertise in performing the study, and the difficulty in distinguishing

between choledochal cyst and pancreatic pseudocyst⁶ MRCP finding could have more precisely determined the patient in this report^{7,8}, but it would have been a time consuming and expensive study. As well, the gastroscopy via esophagus, duodenum to the bile duct with contrast enhancement was a sensitive method but the patient had to be prepared, brlove performing the examination, such as NPO. The patient had the risks of choking, the hemorrhage from the opening of bile duct, the perforation of duodenum ,pancreatitis and cholangitis.^{9,10,11,12}

The hepatobiliary scan is a choice to diagnose a choledochal cyst. Mostly, it is performed to see the bile leakage after biliary-hepatectomy, trauma, and neonate biliary atresia.¹³ The study has to be performed by an intravenous administration of some pharmaceuticals labeled with radionuclides, Tc-99m-disida in particular. These radiopharmaceuticals are excreted via biliary system in 20-30 minutes, consequently enoeisable the dilatation of bile ducts. In general, the abnormalities of choledochal cyst can be classified into 5 types according to Tadani Classification in 1977,¹⁴ as illustrated.

Most cases are the abnormality of Type 1 (90-95%)¹. This case report is also of Type 1. The hepatobiliary scan can be sensitive in both Type 1 and

Type 4¹³ The hepatobiliary scan in Type 5 (Caroli disease) can be found to have false negative¹⁵



CONCLUSION

The choledochal cyst is a rare abnormality of the dilatation of bile ducts inside and outside of liver portion. It is found more in female than male. The important clinical findings are right upper quadrant pain, jaundice and mass. The complications are cholangitis, bile stones, liver cirrhosis from prolonged jaundice, and eventually a cholangiocarcinoma thus changed. According to Todani Classification, the Type 1 is the most common. The primary investigation is an ultrasonography due to low price and easy to be performed, performance, but restricted to some other cysts such as pancreatic pseudo cyst, intestinal duplication cyst, liver cyst, etc. The hepatobiliary scan is an alternative of diagnosis which is easy, convenient, low price, no complications and high precision.

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