Endoscopic Sphincterotomy In Patient With Situs Inversus

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Introduction:

Situs inversus is a rare condition. It may include the transposition of the thoracic viscera or the abdominal viscera, or situs inversus totalis. An endoscopic sphincterotomy (EST) is difficult to perform in these patients.

Case Summary:

A 63-year-old-man a known case of situs inversus ,was admitted to the hospital because of a 1-week history of intermittent left upper abdominal pain accompanied by high temperature and jaundice. Physical signs were: a temperature of 38.5 C and blood pressure 120/80 mmHg.

Jaundice was seen in the sclera and skin. right subcostal incision of previous cholecystectomy.Tenderness was detected in the epigastric area. The liver and spleen could not be palpated. Shifting dullness was negative. Bowel sounds were positive. Past medical history revealed history of open cholecystectomy 3 weeks before his presentation for calculus cholecystitis.

Laboratory findings : Leukocytes of 15.2 $\times 10^9$/L with 88% neutrophils. Serum total bilirubin 130 mmol/l with a direct fraction of 100mmol/l; ALT 157 U/l (040 U/l), AST of 113 U/l (040 U/l), serum alkaline phosphatase 312 U/l (14112 U/l); serum amylase 85 U/l (0200 U/l).

Abdominal ultrasonography and a chest X-ray showed situs inversus , as well as a dilated common bile duct 1.5 cm in diameter and a stone about 1.6 cm in the duct, another stone about 1.5 cm is seen in the left intrahepatic bile duct , gallbladder was removed.

Therefore, this case was diagnosed as post cholecystectomy choledocholithiasis complicated by acute cholangitis. After hospitalization, Intravenous fluids and antibiotics were started immediately.

ERCP done after giving the patient pharyngeal anesthesia and mild sedation, conventional cannulation
with sphicterotome and guidewire was performed (Fig .1). A cholangiogram showed a dilated left intra-heptic bile duct with a stone inside (Fig. 2),dilated common bile duct about 1.3 cm with a stone inside (Fig. 3 and 4).Then, endoscopic sphincterotomy was done
with balloon extraction of sludge and debris and small stone fragments (Fig. 5). Large stones were difficult to be extracted and the patient was referred to surgical department.

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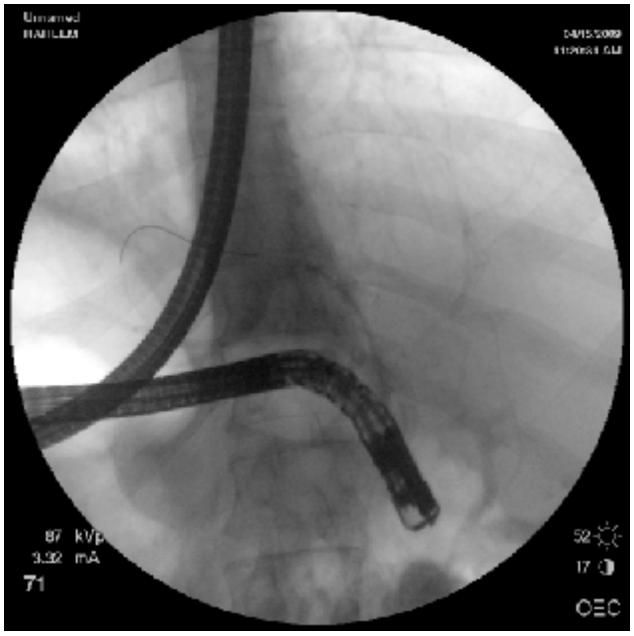

Figure 1.biliary cannulation with catheter and guidewire

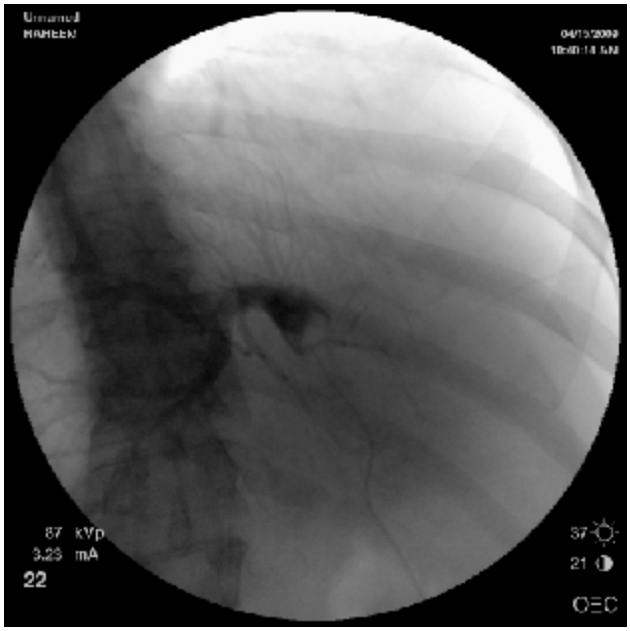

Figure 2.stone in the left intrahepatic bile duct

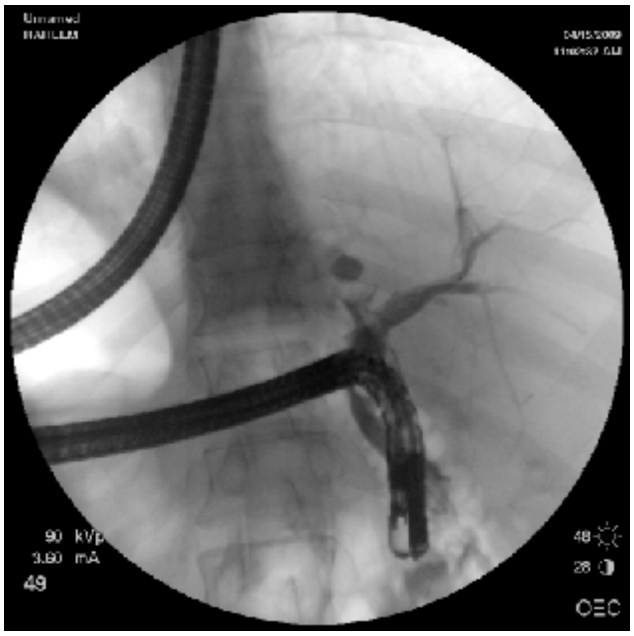

Figure 3.dilated biliary tree with cbd and ihbd stones

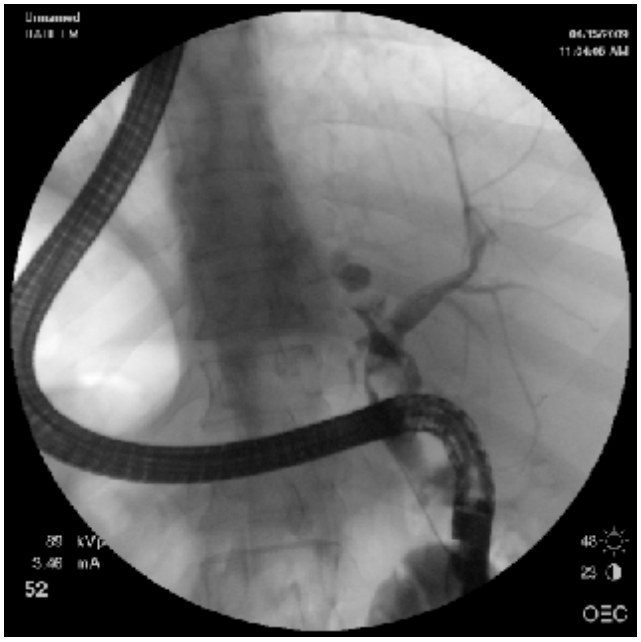

Figure 4.dilated biliary tree with cbd and ihbd stones

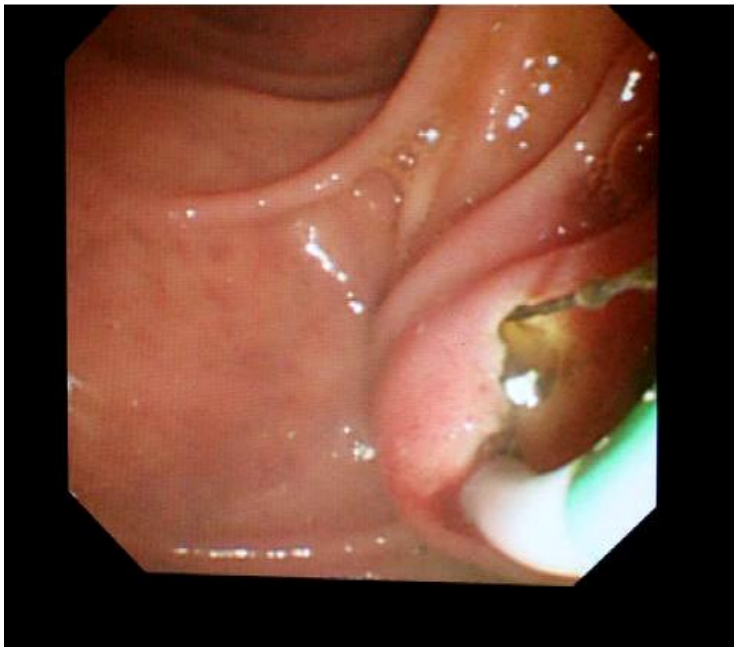

Figure 5.endoscopic Sphincterotomy

Discussion:

Situs inversus is a term used to describe a condition in which organs or organ systems are transposed from their normal sites to locations on the opposite side of the body. The incidence of situs inversus is approximately 1:20 000 and it has a genetic predisposition that is autosomal recessive[1] . According to our knowledge this is the first case of situs inversus for which endoscopic sphincterotomy was done in our center.

Endoscopes are currently designed for people with a normal anatomical system. So some difficulty will be encountered when dealing with cases of situs inversus. When a sphincterotomy is performed in a patient with situs inversus, the change to the bile duct axis made cannulation much more difficult with an ordinary endoscope.

When routine cannulation fails, a needle knife papillotomy has been shown to be a safe procedure for aiding the cannulation and thus allows an EST to be performed.[2]

The leftright reversal makes a bow knife sphincterotomy more difficult .

There was no need for a right lateral decubitus position for ERCP for a patient with situs inversus viscerum.[3,4]

References:

1. Mayo CW, Rice RG. Situs inversus totalis: a statistical review of data on 76 cases with special reference to disease of the biliary tract. *Arch Surg* 1989; 58: 72430.
2. Munch R, Altorfer J. Results and risks of needle papillotomy. *Schweiz Med Wochenschr* 1994; 124: 10703.
3. Lipschutz JH, Canal DF, Hawes RH, Ruffolo TA, Besold MA, Lehman GA. Laparoscopic cholecystectomy and ERCP with sphincterotomy in an elderly patient with situs inversus. *Am J Gastroenterol* 1992; 87: 21820.
4. Nordback I, Airo I. ERCP and endoscopic papillotomy in complete abdominal situs inversus. *Gastrointest Endosc* 1988; 34: 150.