ERCP in Situs Inversus can be Performed in Usual Left Lateral Position

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ABSTRACT

Situs inversus totalis is a congenital anomaly associated with various visceral abnormalities. We here present a case of a 75-year-old male with situs inversus totalis who was admitted to our department with choledocholithiasis. Patient’s chest X ray showed dextrocardia and magnetic resonance cholangiopancreatography (MRCP) showed situs inversus with dilated common bile duct (CBD) with stones. Patient underwent Endoscopic retrograde cholangiopancreatography (ERCP) with successful extraction of CBD stones. ERCP was performed with patient in the left lateral decubitus and the endoscopist on the left of the table. In conclusion, ERCP can be safely performed in usual position with minor modifications of maneuvers and endoscope tip movement.

Key Words: Situs inversus totalis – Choledocholithiasis - Endoscopic retrograde cholangiopancreatography

Introduction

Situs inversus viscerum (SIT) is a rare condition [1]. It may include the transposition of the thoracic viscera or the abdominal viscera, or situs inversus totalis. Endoscopic procedures are difficult in patients with situs inversus owing to left-right reversal of viscera. Conventionally, reversal of the position of the endoscopist in relation to the patient is advocated to overcome the anatomical difficulty.

We report a case with situs inversus who had choledocholithiasis and ERCP was performed with modification of maneuvers with the patient in the left lateral decubitus and the endoscopist on the left of the table.

Case Report

A 75-year-old male presented with chief complaints of intermittent left upper abdominal pain, yellowish discolouration of eyes since one month. The intensity of symptoms increased, accompanied by mild temperature, nausea and vomiting before hospitalisation. Physical signs were: temperature 39.5°C, blood pressure 120/80 mmHg, icterus, abdominal tenderness in left hypochondrium, non palpable liver and spleen, and no ascites.

Laboratory findings:
Total leukocyte count was 10.4 x 10³/L with haemoglobin of 15.1 gm/dl. Liver biochemistries were: total bilirubin 0.9 mg/dl with a direct fraction of 0.4 mg/dl; AST of 14.8 U/L; alkaline phosphatase 82.6 U/L. Chest X ray revealed dextrocardia. Abdominal sonography and magnetic resonance cholangiopancreatography (MRCP) showed situs inversus with two small calculi 3-4 mm diameter in middle third of common bile duct (CBD) (Figures 1 and 2); the CBD diameter was 4-5 mm with a large gall bladder calculi of 15 mm. Pancreatic duct was normal.

Procedure

Endoscopic retrograde cholangiopancreatography (ERCP) was performed under general anaesthesia with the patient in left lateral decubitus position and then to semi prone position, with endoscopist standing on left side of
because of the reversal. With the help of a guide wire, cannulation finally succeeded albeit with difficulty. A cholangiogram showed a dilated common bile duct of 7-8 mm and two stones of about 10 mm and 7 mm respectively located in the mid part of the duct, while the intra-hepatic bile ducts were dilated and gallbladder showed calculi. A deeper biliary cannulation was achieved. After orienting the wire to the 1 o’clock position of the papillary orifice, a wide sphincterotomy was performed using Olympus clever cut sphincterotome (Figure 4). Then, using CRE balloon of size 12-13.5-15; CBD was dilated upto 14mm, and stone extraction balloon was inserted in CBD under fluoroscopic control. Multiple sweeps were made and stones were extracted (Figure 5). Later 7 Fr 7cm double pigtail stent was deployed in left hepatic duct.

Discussion

Situs inversus viscerum 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 totalis is approximately 1:20 000 [1], and it is a genetic predisposition with inheritance of autosomal recessive mode. More than one genetic mutation including gene mutations which cause ciliopathy and cystic renal diseases were implicated in etiopathogenesis [2]. Sit is associated with various gastrointestinal abnormalities, intestinal malrotation, and also acute appendicitis. Liver transplantation has been successfully performed in a patient with juvenile biliary atresia and SIT [3-5]. At ERCP to avoid the technical difficulty arising out of anatomical right left reversal, it has been recommended that the endoscopist stand on the right side of the bed and patient take a right lateral decubitus position [6]. Performing a technically demanding procedure from an unaccustomed position is often uncom-
comfortable and may hamper performance. We believe ERCP can be safely performed in usual position with minor modifications of maneuvers and endoscope tip movement.

References


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