To twist or not to twist: a case of ERCP in situs inversus totalis

A 57-year-old woman with history of hypercholesterolemia and situs inversus totalis presented with a chief complaint of epigastric pain and poor appetite for 2 days. The epigastric pain was 7/10 in intensity with no radiation. On physical examination, she had no abdominal scars but there was evidence of hepatosplenomegaly and epigastric tenderness on palpation, although Murphy’s sign was negative; bowel sounds were normal on auscultation. The results of laboratory testing revealed normal aspartate transaminase (AST) and alanine transaminase (ALT) levels, but an elevated total bilirubin of 1.3 mg/dL. The alkaline phosphatase (ALP) level was 112 IU/L (normal 45–115 IU/L) and the γ-glutamyltransferase (GGT) was 195 IU/L (normal 0–42 IU/L). Biliary ultrasound revealed a moderately diluted common bile duct and multiple gall stones. A computed tomography (CT) scan of the abdomen and pelvis confirmed the diagnosis of situs inversus totalis with hepatosplenomegaly (Fig. 1).

The patient underwent endoscopic retrograde cholangiopancreatography (ERCP) for her proven choledocholithiasis. Because of the patient having situs inversus totalis, she was placed in a prone position with the endoscopist on the right side of the table (Fig. 2). During the ERCP, the endoscope was rotated through 180° in the second portion of duodenum to allow for the anatomical anomaly. The ampulla was identified with difficulty; however, wire-guided cannulation was then successfully performed. The first cholangiogram demonstrated filling defects and a sphincterotomy was performed (Fig. 3). After this, four pigment-type stones were removed and a subsequent cholangiogram showed that no filling defects remained.

During conventional ERCP in a patient without anatomical anomalies, the patient is placed in the left lateral decubitus position with the endoscopist on the left side of the table [1]. There have been a few reports of successful cases where modifications of the conventional ERCP technique have been used [2, 3]. These have included alterations in the position of the patient prior to the procedure, during the procedure, and/or alteration in the position of the endoscopist [1, 4]. Our case demonstrates that a skilled endoscopist can successfully carry out ERCP while maintaining a patient with situs inversus in the prone position without using a mirror-image technique or resorting to laparotomy [5].
Competing interests: None

Kumkum Sarkar Patel¹, Jay Nitin Patel¹, Siddharth Mathur², Yitzchak Moshe-nyat³

¹ Department of Internal Medicine, Winthrop-University Hospital, Mineola, New York, USA
² Department of Gastroenterology, Brooklyn Hospital Center, Brooklyn, New York, USA
³ Department of Gastroenterology, Lutheran Medical Center, Brooklyn, New York, USA

References
1 Chowdhury A, Chatterjee BK, Das U et al. ERCP in situs inversus: do we need to turn the other way? Indian J Gastroenterol 1997; 16: 155 – 156
4 Nordback I, Airo I. ERCP and endoscopic papillotomy in complete abdominal situs inversus. Gastrointest Endosc 1988; 34: 150
5 García-Fernández FJ, Infantes JM, Torres Y et al. ERCP in complete situs inversus viscerum using a “mirror image” technique. Endoscopy 2010; 42 (Suppl. 02): E316 – E317

Bibliography
Endoscopy 2014; 46: E304–E305
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

Corresponding author
Kumkum Sarkar Patel, MD, MPH
260 First Street, Apt. B13
Mineola NY 11501 USA
kumkum.sarkar@gmail.com
kspatel@winthrop.org