CORRESPONDENCE

Technical Factors Related to Endoscopic Retrograde Cholangiopancreatography in Patients with Situs Inversus

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We read with great interest the recent column on difficult endoscopic retrograde cholangiopancreatography (ERCP).[1] Another area of difficult ERCP involves patients with situs inversus. We recently performed an ERCP on a 72-year-old man with a remote history of laparoscopic cholecystectomy who presented with progressively worsening abdominal pain, nausea, chills, and obstructive liver function tests. A magnetic resonance cholangiopancreatography showed abdominal situs inversus, remote cholecystectomy, and dilation of the intrahepatic biliary tree and common bile duct up to 1 cm with multiple filling defects up to 7.6 mm in size (Figure 1). These findings were confirmed on an ERCP (Figure 2) in which the patient was treated with sphincterotomy, stone removal, and stent placement (with subsequent successful removal of a proximally migrated stent).

Situs inversus is a rare, autosomal recessive condition that is often incidentally discovered. It may occur with dextrocardia, levocardia, or situs ambiguous, the latter with either right or left isomerism, along with asplenia or polysplenia, respectively. ERCP in patients with situs inversus has rarely been reported, and there are different techniques that have been described. These include turning the duodenoscope 180° clockwise while in the stomach and again while in the second part of the duodenum.[2] A similar technique involves turning the duodenoscope 180° clockwise in the stomach and using a rotating sphincterotome for cannulation.[3] The above techniques do not alter the normal room setup, in which the patient is prone and the endoscopist is on his or her right. An alternative mirror-image method places the patient in the right lateral decubitus position, with the equipment behind him or her and with all endoscopic maneuvers performed inversely.[4] Another approach entails placing the patient supine with the endoscopist to his or her left.[5] In our experience, ERCP was successfully performed with the patient in the usual prone position, with the endoscopist on the patient's right, using a 180° clockwise rotation as described above.

When faced with a patient with situs inversus and a strong indication for ERCP, knowledge of the above

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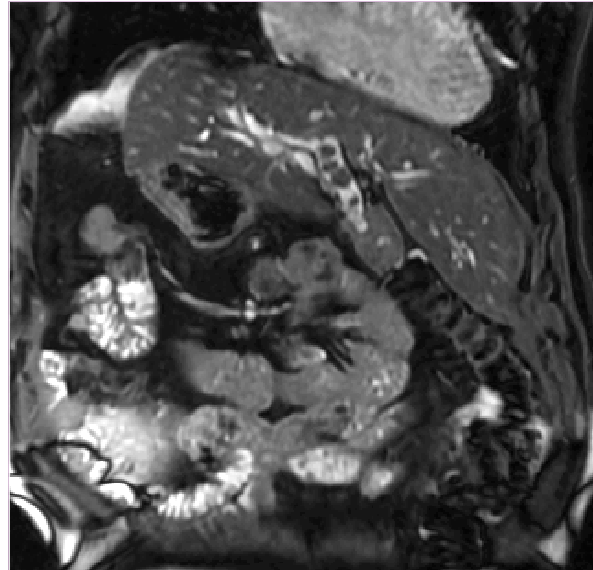

Figure 1. A magnetic resonance cholangiopancreatography showing abdominal situs inversus with levocardia and common bile duct dilation with filling defects.

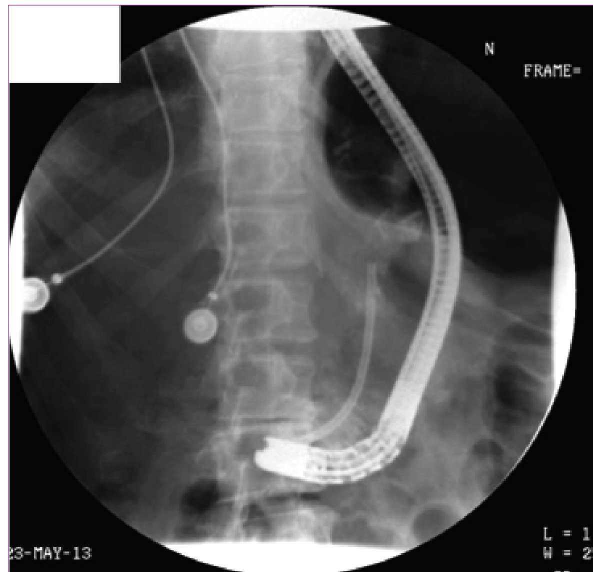

Figure 2. An endoscopic retrograde cholangiopancreatography showing abdominal situs with plastic stent placement.

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techniques coupled with the endoscopist's experience, comfort level, room setup vis à vis the use of monitored anesthesia care, and fluoroscopy equipment should all be considered in choosing an appropriate approach.

References

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