A rotary papillotome plus adjustment of the monitor position to the foot side helps facilitate ERCP in a patient with situs inversus totalis

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ERCP for patients with situs inversus totalis (SIT) has been difficult because of the inversion of all internal organs. A rotary papillotome has been reported to be a good device for biliary cannulation in patients with SIT. In addition, we arranged the monitors on the patient’s foot side, which enabled us to perform ERCP in the normal patient and operator positions.

CASE

An 87-year-old man with SIT developed cholangitis owing to stones in the common bile duct and received ERCP for biliary drainage (Fig. 1).

The procedure room, which accommodates endoscopic and video equipment, also has fluoroscopy equipment. The patient on the X-ray table turned his face to the right, and prone positioning was adopted in ERCP as usual (Video 1, available online at www.giejournal.org). The main operator stood on the right side of the patient. The deputy operator who assisted in endoscopic operation stood behind the main operator to avoid obstructing the main operator’s view and to have easy view of the monitors. Endoscopic and fluoroscopic monitors are customarily placed on the patient’s head side, but these monitors were placed in parallel on the patient’s foot side (Fig. 2). Because the operator faced the patient’s foot side when the duodenal papilla was viewed in the front, it was appropriate to place the monitors on the patient’s foot side from the beginning and keep the usual operator position (Fig. 3). The body positions of the patient and main operator were the same as usual. There was no need to reposition the patient, and the main operator did not need to move during the ERCP procedure. If one pays attention to the fact that both left/right and clockwise/counterclockwise rotations of the endoscope were reversed, it is easy to insert the endoscope up to the front view of the papilla of Vater without the main operator being in an unnatural position, as mentioned later. The endoscopic treatment equipment was placed at a point that allowed ease of access for both the main and deputy operators.

The endoscope was inserted into the esophagogastric junction by rotating the endoscope clockwise. The endoscope was then advanced as normal through the stomach.

Figure 1. Coronal section of abdominal CT shows situs inversus totalis, in which the major visceral organs are inverted horizontally. A hyperdense stone is seen in the common bile duct (arrowhead).

Figure 2. Layout of equipment and workplace for endoscopic operators in ERCP.
until it reached the pyloric ring. The endoscope was directed upward to the left to enter the upper duodenal angle. The duodenal papilla was viewed in front by pulling the endoscope and reducing the deflection while rotating counterclockwise fluoroscopically. Because the bile duct is located in the 1 to 2 o’clock direction, a TRUE tome (Boston Scientific, Marlborough, Mass, USA) was used from the start for cannulation to take the correct direction. After delivering the TRUE tip into the duodenum, the trajectory of the tip was toward the 12 o’clock direction. The tip was adjusted to the 1 o’clock position by rotating the handle clockwise, resulting in successful wire-guided cannulation of the bile duct (Figs. 4 to 6). Subsequently, cholangiography and endoscopic sphincterotomy were performed, and a bile duct stent was placed.
In our case, ERCP was not performed simply for the removal of a common bile duct stone. The patient developed moderate cholangitis because of the stone, and thus the stent was placed, which was justified by Tokyo Guidelines 2018.6

In the event of difficulty in the placement of the monitors as in our case, an alternative positioning of the patient is the right lateral decubitus position, in which a “mirror image” technique that is necessary for all inverse ERCP procedures is reported,7 although this technique seems to be challenging compared with our method.

A rotary papillotome with reasonable monitor position may help facilitate successful ERCP for patients with SIT.

DISCLOSURE

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Abbreviation: SIT, situs inversus totalis.

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