The effectiveness of intraductal ultrasonography for cystic duct cannulation

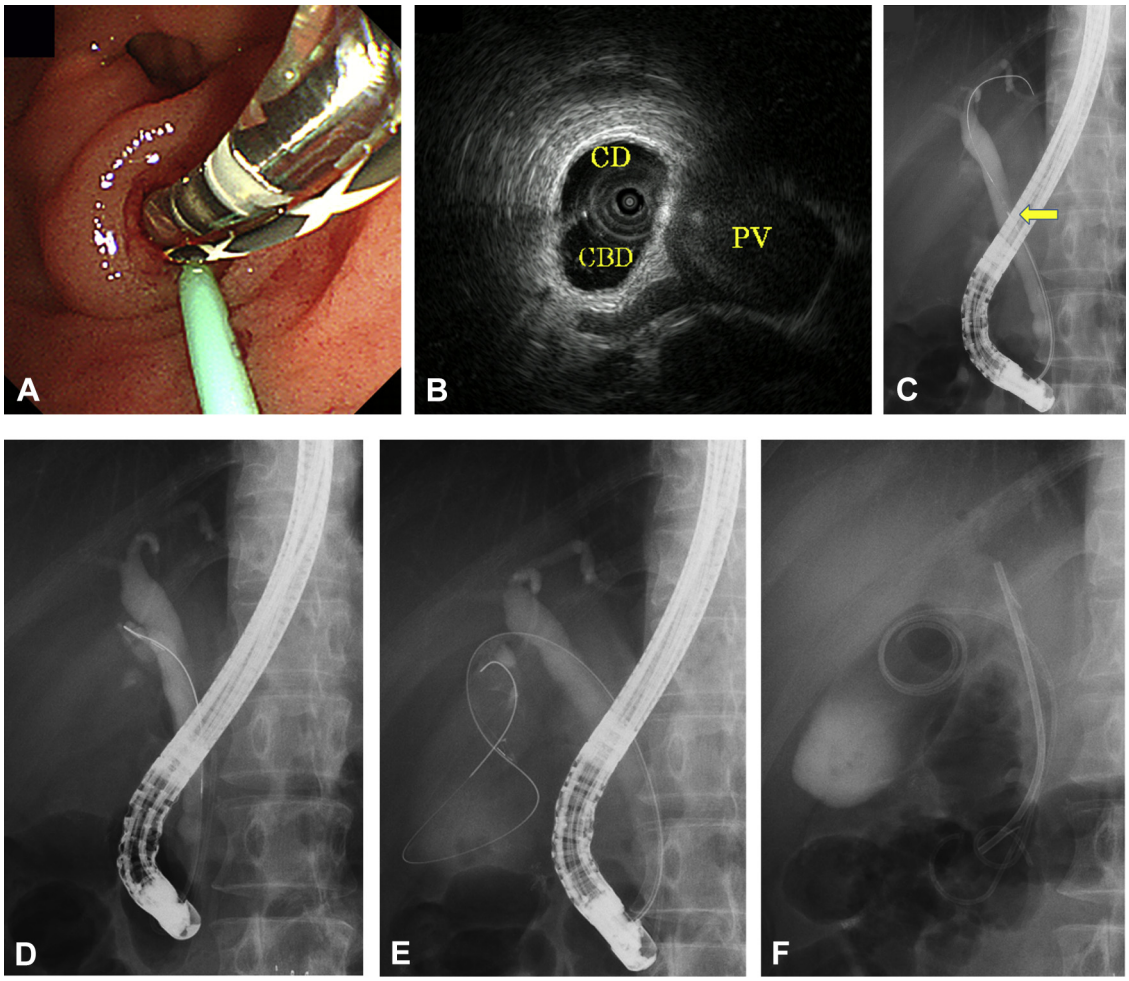

Figure 1. A, Intraductal US was performed before sphincterotomy. **B**, **C**, In the intraductal US image, the cystic duct was 11 to 12 o'clock side from the CBD. At the same time, fluoroscopic image showed the cystic duct orifice (*arrow*) in the middle part of the CBD. **D**, **E**, **F**, Cannulation to the cystic duct was easily achieved, because the cystic duct orifice had already been detected. Endoscopic gallbladder stenting and endoscopic biliary stenting were successfully performed. *CD*, cystic duct; *CBD*, common bile duct; *PV*, portal vein.

A 55-year-old man with angina pectoris and arteriosclerotic obliterans who was receiving dual antiplatelet therapy (aspirin plus cilostazol) was referred to our department because of acute cholecystitis. Because of the risk of bleeding, we first performed ERCP and endoscopic gallbladder stenting instead of an interventional EUS.

ERCP was performed by using a 0.025-inch guidewire and a 30-mm pull-type sphincterotome. First, a 5F, 4-cm prophylactic single-pigtail plastic stent (Advanix; Boston Scientific, Natick, Mass) was placed in the pancreatic duct. Subsequently, we performed intraductal US (IDUS) to detect the orifice of the cystic duct (CD) (Fig. 1A; Video 1, available online at www.VideoGIE.org). An observation of the IDUS was performed from the hilar to the inferior aspects of the bile duct. The portal vein in the IDUS image was rotated to the 3 o'clock position of the common bile duct (CBD). The orifice of the CD was observed on the middle part and the 11 to 12 o'clock

Written transcript of the video audio is available online at www.VideoGIE.org.

position of the CBD, and then was identified in the fluoroscopic image (Fig. 1B and C).

IDUS also revealed a small stone in the inferior bile duct, which was not detected by CT and fluoroscopic imaging. A small incision was made by endoscopic sphincterotomy to place the multiple biliary stents before cannulating to the CD. There was slight oozing from the papilla, which stopped spontaneously without endoscopic hemostasis.

The CD cannulation was easily performed by use of the guidewire technique because of the detected position. Cannulation of the gallbladder was successful. Subsequently, a 5F, 10-cm pigtail stent (CX-T; Gadelius, Tokyo, Japan) was placed in the gallbladder. We also placed a 7F, 7-cm straight stent (Flexima; Boston Scientific) in the CBD to prevent obstruction by choledocholithiasis (Fig. 1D, E, F).

The serum amylase level, which was routinely checked after 2 hours and 24 hours from ERCP, was less than 3 times the normal level. There were no adverse events. IDUS procedure time was approximately 4 minutes, and CD cannulation was easily performed using the IDUS technique. The IDUS technique may save time in seeking the CD orifice.

DISCLOSURE

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