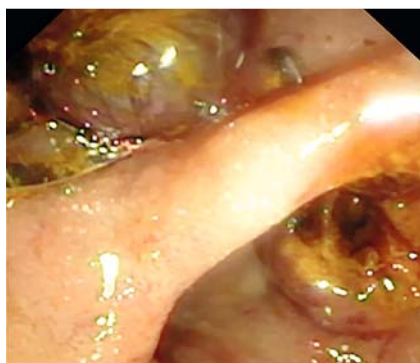
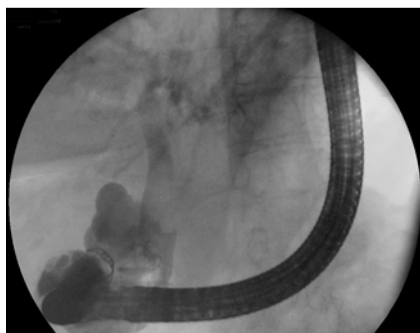


Endoscopic retrograde cholangiography after endoscopic ultrasound-related duodenal perforation: keep calm, use over-the-scope clip, and carry on!

The over-the-scope clip (OTSC) is a useful tool recommended as first-line endoscopic treatment for endoscopic acute iatrogenic perforation [1]. A retrospective study documented that OTSCs can avoid emergency surgical repair, allowing, in some cases, completion of the primary endoscopic procedure. As documented only once in the literature, its use could allow subsequent endoscopic procedures to be performed in the same session, owing to the endurance of the device during pneumatic and mechanical stress [2].



► **Fig. 1** Endoscopic appearance at the end of prolonged pneumatic and mechanical stress during endoscopic retrograde cholangiography.



► **Fig. 2** Radiological image showing no more leakage, even after the prolonged mechanical stress of complete biliary drainage.

Here we report the video case of a 93-year-old woman who was referred to our unit to undergo biliopancreatic endoscopic ultrasound (GF-UCT 180; Olympus Co., Tokyo, Japan) for suspected choledocholithiasis, in the context of acute cholangitis; the patient was not a suitable candidate for surgery (cholecystectomy).

After multiple biliary stones were detected in the common bile duct, a perforation was apparent in the wall of the supero-anterior duodenal bulb. Because of the size of the perforation (about 15 mm), an OTSC (11/6 mm traumatic type; Ovesco Endoscopy GmbH, Tübingen, Germany) was applied using the suction technique to completely seal the defect [3]. As no further leakage was apparent following injection of contrast medium and the patient's clinical condition was stable, endoscopic retrograde cholangiography (ERC; TJF-160 VR; Olympus Co.) with extraction of multiple biliary stones was performed in the same session (► **Video 1**).

All procedures were performed with anesthesiological assistance, using carbon

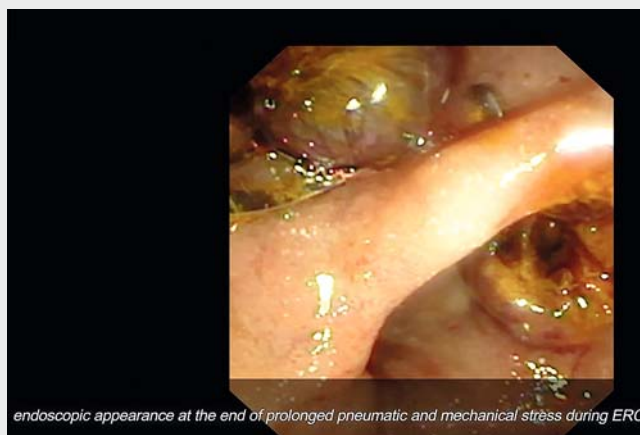
dioxide insufflation. ERC took about 45 minutes for complete biliary drainage (► **Fig. 1**). The subsequent contrast medium (► **Fig. 2**) and computed tomography scan with oral gastrographin confirmed the complete closure, despite the long-lasting pneumatic and mechanical stress. No further complication occurred and the asymptomatic patient was discharged 1 week later.

In conclusion, prompt endoscopic treatment using OTSCs represents an effective approach that can avoid later complications or surgical repair. Furthermore, the use of OTSCs can allow the completion of endoscopic procedure(s) in the same session, as the clips can endure prolonged pneumatic and mechanical stress.

Endoscopy_UCTN_Code_CPL_1AK_2AC

Competing interests

None



► **Video 1** Closure of an endoscopic ultrasound-related duodenal perforation, followed by endoscopic retrograde cholangiography and removal of multiple bile duct stones in the same endoscopy session.

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