

Endoscopic ultrasound-guided fine needle aspiration and endoscopic biliary drainage following closure of a duodenal perforation with an over-the-scope clip

Endoscopic ultrasound (EUS)-guided fine needle aspiration (FNA) followed by endoscopic retrograde cholangiopancreatography (ERCP) are complementary procedures in the evaluation of obstructive jaundice with a median procedure length of 25 minutes [1]. Duodenal perforation can occur during EUS [2], but we have previously reported that ERCP can still be performed following successful closure of the perforation with clips [3].

A 76-year-old woman who was jaundiced was scheduled for combined EUS-FNA and endoscopic biliary drainage (EBD). The EUS showed a hypoechoic mass at the level of the neck of the pancreas with dilatation of the duct of Wirsung and the bile ducts, and evidence of vascular infiltration. The greater omentum was visualized during the EUS procedure (● Fig. 1), because of a perforation at the level of the proximal duodenal flexure. We therefore used a standard gastroscope and switched to carbon dioxide insufflation to close the perforation. This was achieved by first aspirating the greater omentum and then releasing an over-the-scope clip (OTSC; 11/6t, Ovesco Endoscopy GmbH, Tübingen, Germany). Contrast medium was injected to ensure that a watertight closure had been achieved (● Fig. 2a).

The procedure was then restarted and transgastric EUS-FNA of the lesion was carried out (● Fig. 2b) followed by ERCP with insertion of a plastic biliary stent (● Fig. 2c,d). Following the procedure, the patient was then kept fasted and on analgesic medication. A computed tomography (CT) scan 6 hours later showed some free air in the peritoneal cavity, but there was no free liquid detected.

On the day after the procedure, a significant improvement was noted in the liver function tests. The patient recommenced feeding after 48 hours and was discharged 72 hours after the procedure. Histologic examination confirmed the presence of an adenocarcinoma of the pancreas, and

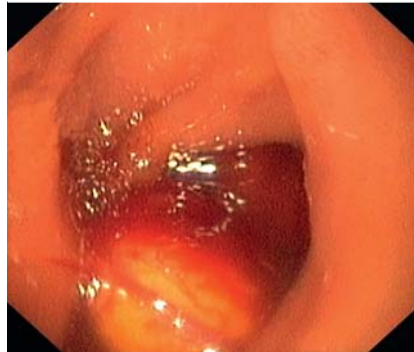


Fig. 1 Endoscopic view in a 76-year-old woman with jaundice who was undergoing endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) showing a duodenal perforation as evidenced by visualization of the greater omentum.

the patient was subsequently started on chemotherapy.

Here we report, to our knowledge, the first case in which both an EUS-FNA and an ERCP were performed after a duodenal perforation had been treated with an OTSC. We have shown that extending the length of the endoscopic procedure in order to perform both procedures was feasible and did not compromise patient safety.

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Competing interests: None

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Bibliography

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● Fig. 2a–d See following page.

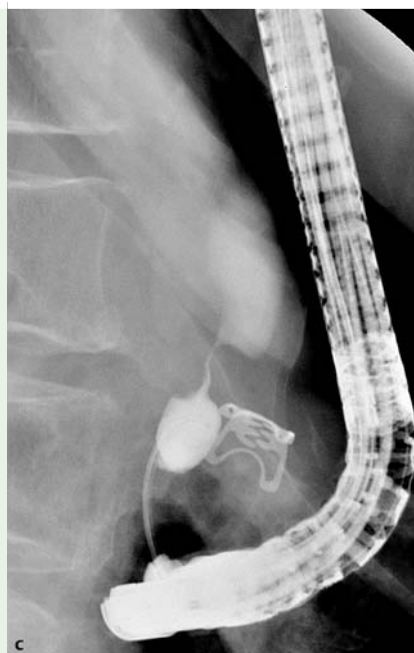


Fig. 2 Radiographic images showing: **a** by injection of contrast medium, the water-tight closure of the perforation that was achieved by application of an over-the-scope clip (OTSC); **b** endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) being performed; **c** stenosis of the common bile duct due to pancreatic cancer; **d** the plastic biliary stent that was successfully placed to achieve biliary drainage.

