Article published online: 2022-05-06

Acute cholangitis after over-the-scope clip placement involving the duodenal papilla that was rescued by antegrade stenting via the percutaneous transhepatic biliary drainage route

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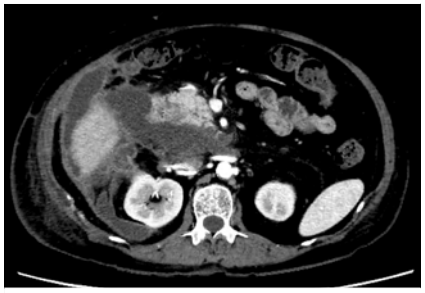
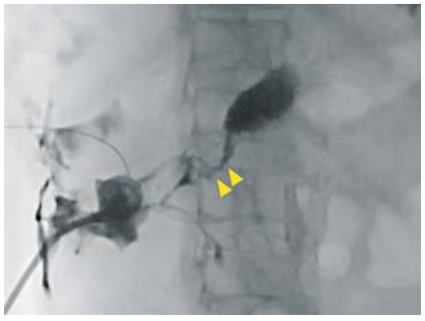
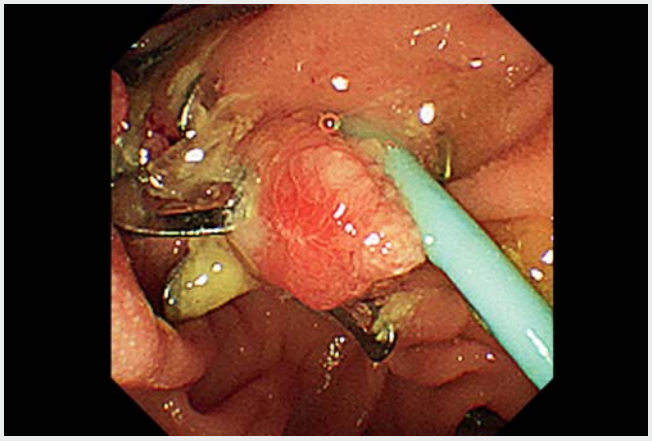


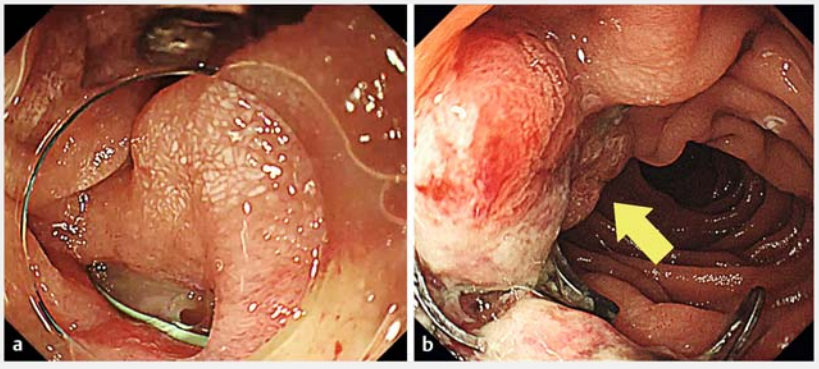
▶ **Fig. 1** Contrast-enhanced computed tomography image showing a large area of walled-off pancreatic necrosis.



▶ **Fig. 2** Radiographic image following injection of contrast via the percutaneous tube showing a fistula (arrow head) between the walled-off pancreatic necrosis and the duodenum.



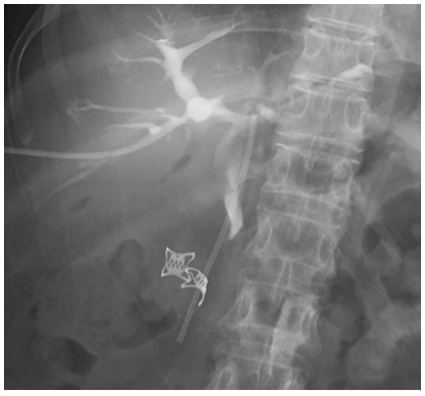
Video 1 Video showing closure of the fistula by over-the-scope clip placement and subsequent successful antegrade stenting via the percutaneous transhepatic biliary drainage route for acute cholangitis caused by the clip placement involving the duodenal papilla.



▶ **Fig. 3** Endoscopic views: **a** before performing fistula closure; **b** after closure of the fistula with over-the-scope (OTS) clips showing the duodenal papilla (arrow) had been caught in the clip.

The over-the-scope (OTS) clip (Ovesco Endoscopy, Tübingen, Germany) has been developed and is widely used for the treatment of gastrointestinal perforations and fistulas [1]. However, when the perforation or fistula is located near the duodenal papilla, the use of OTS clips poses a potential risk of acute obstructive cholangitis or pancreatitis from involvement of the papilla [2]. Herein, we report a case of acute cholangitis after OTS clip placement involving the duodenal papilla, which was rescued by antegrade stenting via the percutaneous transhepatic biliary drainage (PTBD) route.

A 72-year-old woman was transferred from another hospital for the treatment of walled-off pancreatic necrosis (WON) after post-endoscopic retrograde cholangiopancreatography pancreatitis (▶ **Fig. 1**), and percutaneous drainage was performed. Contrast injected via the percutaneous tube 12 days after the procedure revealed a fistula between the WON and the duodenum (▶ **Fig. 2**). Because the infected WON was well controlled, closure of the endoscopic fistula was performed with two OTS clips (▶ **Video 1**). The day following the procedure, the patient developed abdominal pain and fever, and a computed tomography scan showed bile duct obstruction due to the OTS clip. Endoscopy revealed that the duodenal



▶ **Fig. 4** Fluoroscopic view after antegrade stenting via the percutaneous transhepatic biliary drainage route had been successfully performed.

papilla had been caught in the clip, and PTBD was performed (▶ **Fig. 3**). Antegrade stenting via the PTBD route was successfully achieved 14 days later (▶ **Fig. 4**). Subsequently, after repeated biliary stent replacement, the OTS clips spontaneously dislodged. The patient has remained symptom-free after stent removal.

When closing a fistula of the duodenum, it is often difficult to secure a clear visual field owing to the narrow lumen and edematous mucosa surrounding the lesion. The findings from this case suggest that, when a fistula is located near the duodenal papilla, endoscopists should consider prophylactic measures, such as biliary and pancreatic stenting, or placement of a standard endoclip between the fistula and the duodenal papilla [3].

Endoscopy_UCTN_Code_CPL_1AK_2AI

Competing interests

A. Katanuma has received lecture fees from Olympus Co., Tokyo, Japan. The remaining authors declare that they have no conflict of interest.

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Endoscopy 2022; 54: E812–E813
DOI 10.1055/a-1826-2496
ISSN 0013-726X
published online 6.5.2022

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany