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Successful closure of a cholecystocolonic fistula due to cholecystitis using a clipping system

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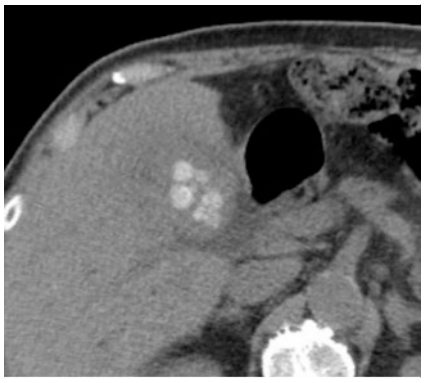
Video 1 Successful closure of a cholecystocolonic fistula due to cholecystitis using an over-the-scope clip system. Source for over-the-scope clip system: Ovesco Endoscopy AG.

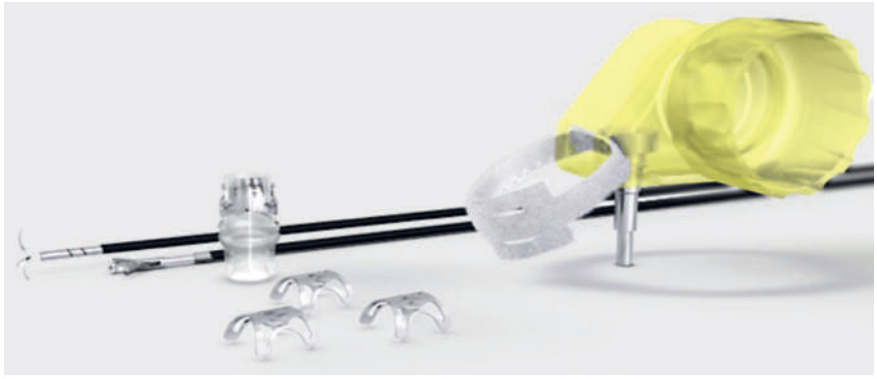
Idiopathic biliary fistula is an abnormal connection that spontaneously occurs between the biliary system and surrounding organs [1]. The standard treatment is surgery, including cholecystectomy and fistula closure [2]. However, with aging of the population, some patients are unfit for surgery. Recent reports have described the efficacy of the over-the-scope (OTS) clip system (OTSC; Ovesco Endoscopy AG, Tübingen, Germany) [3–5]. We report a case in which the OTS clip system was successfully used to close a cholecystocolonic fistula.

The patient was a 92-year-old man who presented with abdominal pain. Computed tomography revealed diffuse thickening of the gallbladder wall and the presence of gallstones and common bile duct stones (▶ **Fig. 1**). Endoscopic retrograde cholangiography revealed stones in the common bile duct, which were removed using a basket catheter. A hydrophilic guidewire was then used to probe the cystic duct, and a catheter was placed in the gallbladder. Cholecystography showed multiple stones within the gallbladder and extravasation of contrast medium outside the gallbladder, so gallbladder perforation was suspected (▶ **Fig. 2**).



▶ **Fig. 1** Computed tomography showed gallstones and common bile duct stones.

▶ **Fig. 2** Cholecystography showed leakage into the hepatic flexure of the colon.



▶ **Fig. 3** Over-the-scope clip system (Ovesco Endoscopy AG, Tübingen, Germany). Source: Ovesco Endoscopy AG.

To prevent leakage of infected bile into the peritoneal cavity, percutaneous transhepatic gallbladder drainage was performed. Repeat cholecystography revealed leakage into the hepatic flexure of the colon, leading to a diagnosis of cholecystocolonic fistula. Surgery was considered but deemed too invasive given the patient's age and overall condition. Therefore, endoscopic fistula closure was planned.

▶ **Fig. 4** Deployment of the over-the-scope clip.

A colonoscope was advanced to the hepatic flexure, and the fistula was identified based on cholecystography and endoscopic findings (▶ **Video 1**). The scope was withdrawn and then reinserted with the cap for the OTS clip system attached (▶ **Fig. 3**). The colonic mucosa with the fistula was suctioned into the cap. After confirming no leakage into the colon via cholecystography, the fistula was clipped (▶ **Fig. 4**). After the procedure, follow-up cholecystography confirmed closure of the cholecystocolonic fistula.

Endoscopy_UCTN_Code_TTT_1AO_2AI

Conflict of Interest

The authors declare that they have no conflict of interest.

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Endoscopy 2024; 56: E1050–E1051
DOI 10.1055/a-2462-0618
ISSN 0013-726X

Georg Thieme Verlag KG, Oswald-Hesse-Str. 50, 70469 Stuttgart, Germany