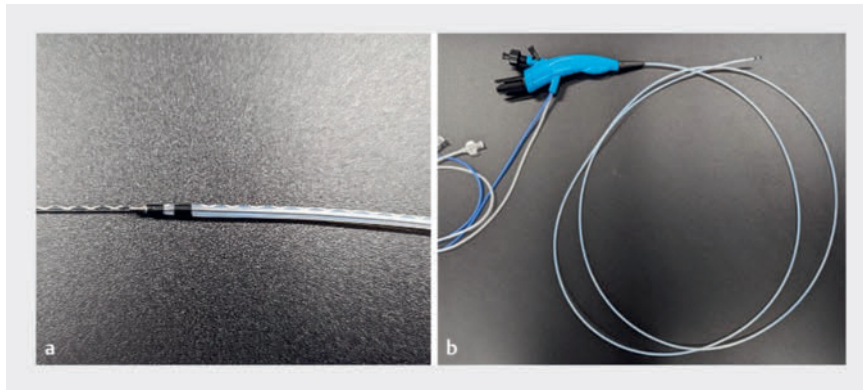
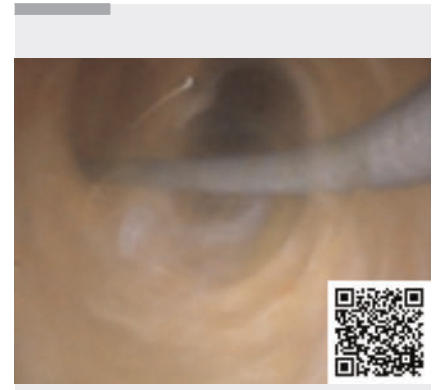


Ultralim catheter-type peroral cholangioscope-assisted endoscopic transpapillary gallbladder drainage for acute cholecystitis

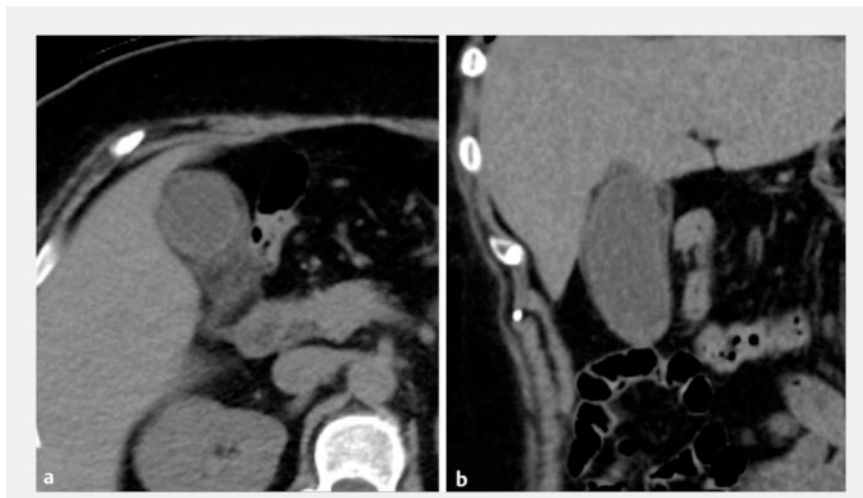
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► **Fig. 1** The ultralim catheter-type peroral cholangioscope device consists of: **a** a catheter-type sheath (outer diameter 2.3 mm); **b** two independent lumens and a high-resolution digital camera.



► **Video 1** Ultralim catheter-type peroral cholangioscope-assisted endoscopic transpapillary gallbladder drainage for acute cholecystitis.



► **Fig. 2** Abdominal computed tomography showing a prominent enlarged gallbladder with edematous wall thickening.

Endoscopic transpapillary gallbladder drainage (ETGBD) is clinically effective for acute cholecystitis but is technically challenging [1, 2]. In addition, the shape and bifurcation of the cystic duct represent a technical limitation and difficulty of this method [2–4]. Recently, an ultralim catheter-type peroral cholangioscope (UC-POCS, DRES Slim Scope; Japan Lifeline Co., Ltd, Tokyo, Japan) has been developed and used clinically [5]. The

UC-POCS consists of a catheter-type sheath (outer diameter 2.3 mm) with two independent lumens and a high-resolution digital camera. The device can be used as a catheter for common bile duct (CBD) cannulation (► **Fig. 1**). Herein, we report a case in which UC-POCS-assisted ETGBD was performed for acute cholecystitis.

A 61-year-old woman with type 2 diabetes mellitus visited our clinic with chills

and right upper quadrant abdominal pain. Abdominal computed tomography showed a prominent enlarged gallbladder with edematous wall thickening and she was diagnosed as having moderate acute cholecystitis (► **Fig. 2**). Urgent cholecystectomy was indicated but had to be abandoned due to concurrent diabetic ketosis. We therefore attempted ETGBD. First, the CBD was successfully cannulated without any difficulty using the novel catheter, but the cystic duct could not be identified on subsequent cholangiography (► **Video 1**). Therefore, the POCS mounted in the catheter was used to look inside the CBD and could identify the bifurcation of the cystic duct. Additional cholangiography showed an impacted stone at this location. The guidewire was manipulated under fluoroscopy and was successfully inserted into the gallbladder. Following the removal of the UC-POCS, ETGBD with a 5-Fr naso-drainage tube was successfully achieved with no adverse events.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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