

ERCP with a cap-assisted gastroscope for an intradiverticular ampulla

An 84-year-old woman with a history of Alzheimer's dementia, hypothyroidism, and cholecystectomy presented to the emergency room with ascending cholangitis. She had undergone a percutaneous biopsy of a "liver cyst" 2 days earlier at an outside facility. Magnetic resonance imaging at our hospital showed a lobulated 6-cm cyst in segment 6/7 (► **Fig. 1 a**). Other findings included a dilated common bile duct (12 mm) with choledocholithiasis and a 5-cm diverticulum in the second portion of the duodenum (► **Fig. 1 b**).

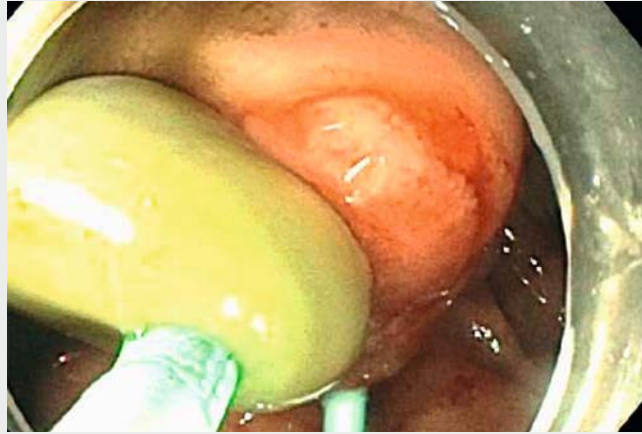
During endoscopic retrograde cholangiopancreatography (ERCP), evaluation of the ampulla with a side-viewing duodenoscope revealed the large diverticulum with the major ampulla located in its rim. The opening of the ampulla pointed in an acute angle toward the diverticular lumen (► **Fig. 2**), thus making cannulation with the duodenoscope extremely difficult. Therefore, the decision was made to perform the procedure using a cap-fitted gastroscope (► **Video 1**).

The patient did not have any complications after the ERCP and was discharged 2 days later. As per the wishes of the pa-

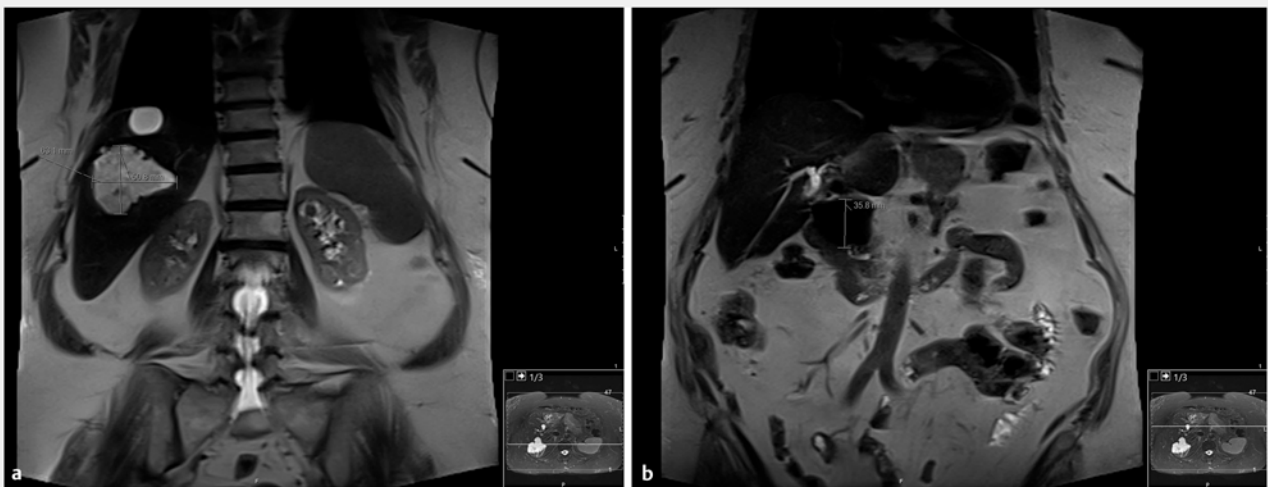
tient's family, no further interventions were performed to establish the histology of the hepatic lesion.

The prevalence of periampullary diverticulum (PAD) has been estimated to be around 65% among elderly patients [1]. They are usually asymptomatic, but can rarely cause biliary obstruction, pancreatitis or perforation. A PAD makes cannu-

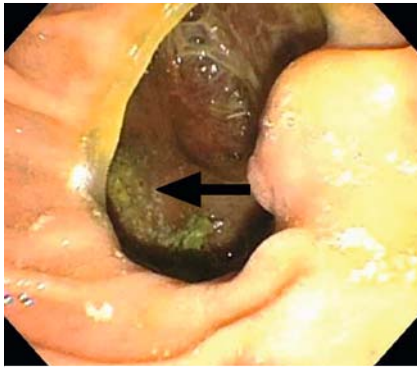
lation during ERCP challenging due to unusual angulation of the ampulla or inability by the endoscopist to locate it. Cannulation techniques described to approach a PAD include: percutaneous and endoscopic ultrasound-guided rendezvous, reversed guidewire, two-devices in one-channel, endoclip-assisted, double endoscope, and cap-assisted cannula-



► **Video 1** Endoscopic retrograde cholangiopancreatography with a cap-fitted gastroscope.



► **Fig. 1** Magnetic resonance imaging. **a** Hepatic cyst. **b** Duodenal diverticulum.



► **Fig. 2** Ampulla pointing (arrow) toward the diverticular lumen. Duodenoscope view.

tion [2]. We prefer the cap-assisted technique because of its relative simplicity. Successful cannulation of the bile duct was achieved in 100% of cases in two recent case series, although in one of them only 50% of the ERCPs were performed entirely through the gastroscope [3, 4].

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Competing interests

None

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