Elective endoscopic gallbladder treatment in patient with recurrent gallbladder colic and high surgical risk

An 80-year-old woman presented with a 1-year history of recurrent right upper quadrant colicky pain. Her medical history included abdominal surgery, ischemic stroke with impaired mobility, and obesity (body mass index > 30.1 kg/cm²). Transabdominal ultrasound showed distended gallbladder with thickened walls and two large stones (4 cm and 3 cm). Endoscopic ultrasound-guided gallbladder drainage (EUS-GBD) followed by intracholecystic lithotripsy was offered as a minimally invasive treatment alternative to surgery and scheduled for 2 weeks later.

EUS examination confirmed gallbladder wall thickening and two large stones (▶ Video 1). Transduodenal EUS-GBD using a 15 × 10 mm AXIOS stent (Boston Scientific, Marlborough, Massachusetts, USA) mounted onto a cautery device was successfully performed (▶ Fig. 1).

After 48 hours, the central stent was dilated up to 15 mm and the gallbladder lumen accessed with a gastroscope. After adequate water irrigation, holmium laser lithotripsy with variable pulse power and frequencies was performed [1], and fragmented stones were flushed out or removed using a Dormia basket or Roth net until complete gallbladder clearance was achieved (▶ Fig. 2). No adverse events occurred and the patient was discharged.

Outpatient cholecystoscopy 2 weeks later revealed complete gallbladder clearance. The stent was removed using a grasping forceps (▶ Fig. 3) and exchanged for two double-pigtail stents (7 Fr, 4 cm), which were left in place (▶ Fig. 4).

Elective endoscopic gallbladder treatment has been described previously in five relatively young patients with a mean age of 50 years and giant gall-
stones, who rejected surgery and desired gallbladder preservation [2]. With an aging population, the number of elderly frail individuals at high surgical risk and gallstone disease requiring surgical intervention is expected to increase [3], and elective endoscopic gallbladder treatment may be a valid alternative treatment option in such patients.

**Competing interests**

Dr. Larghi is a consultant for Boston Scientific Corp. and Pentax Medical. He has also received research support from Medtronic. All other authors declare that they have no conflict of interest.

**References**

