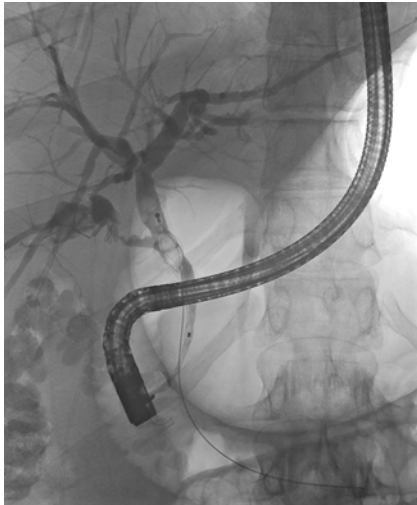


Broken handle cord of impacted biliary basket – rescue by cholangioscopy with laser lithotripsy



► **Fig. 1** Cholangiogram showing the impacted biliary basket with the two entrapped stones while the rest of the wire trails free in the duodenum.



► **Video 1** Cholangioscopy followed by laser lithotripsy of the entrapped stone–basket complex. Once the stones had been successfully crushed, the basket was withdrawn using the forceps accessory.

Endoscopic retrograde cholangiopancreatography (ERCP) is the gold standard procedure for the treatment of bile duct stones, and most stones are successfully removed with accessories such as biliary baskets or extraction balloons. Impaction of a biliary basket is not an uncommon complication of this procedure, being reported in 0.8%–5.9% of cases. Mechanical lithotripsy usually solves the problem by crushing the stone, followed by extraction of the stone fragments. However, on rare occasions, fracture of the basket occurs during mechanical lithotripsy, and this can pose a special management problem, depending on where the breakage occurs [1–3]. We report the successful management of an impacted biliary basket after breakage of the basket handle cord during extra-endoscopic mechanical lithotripsy.

A 35-year-old man, who had undergone early laparoscopic cholecystectomy in a small regional hospital 1 month before, presented with jaundice and upper right quadrant pain on admission. Laboratory tests revealed obstructive jaundice with



► **Fig. 2** **a** Negative occlusion cholangiogram. **b** Normal cholangiogram after retrieval of the duodenoscope.

raised γ -glutamyl transpeptidase (γ GT) and alkaline phosphatase (ALP) and a total bilirubin concentration of 11.11 mg/

dL. Apart from a mildly dilated common bile duct (CBD) with stones, computed tomography of the abdomen revealed no

abnormalities. ERCP was undertaken as part of the treatment plan.

After successful cannulation and sphincterotomy, two small stones were captured with a 20-mm basket but could not be extracted due to the discrepancy between the size of the stones and the small diameter of the distal CBD; in addition, it proved impossible to retrieve the stones from the basket. For this reason, extra-endoscopic mechanical lithotripsy using a Soehendra lithotripter was undertaken, but the handle cord broke 15 cm from the basket and the basket–stone complex remained impacted, with the cord end flapping freely in the lumen of the duodenum (► **Fig. 1**).

The next day the patient underwent ERCP with cholangioscopy and laser lithotripsy, and the stones were crushed within the impacted biliary basket; this was followed by successful extraction of the basket together with the fragments (► **Video 1**). The final occlusion cholangiogram showed the CBD to be cleared (► **Fig. 2**).

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Competing interests

The authors declare that they have no conflict of interest.

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