Mechanical lithotripsy is effective for removal of large bile duct stones during endoscopic retrograde cholangiopancreatography (ERCP) but is a complex procedure with a risk of complications [1]. The availability of alternative techniques to extract difficult stones (i.e. endoscopic papillary large balloon dilation [EPLBD] and cholangioscopy-assisted lithotripsy) [2] has resulted in a decline in the use of mechanical lithotripsy. Nevertheless, cholangioscopy-assisted lithotripsy is an advanced technique, not widely available, and is still expensive. Complications of mechanical lithotripsy can be challenging to manage. We describe a method of removing a trapped Dormia basket.

A 78-year-old woman with a history of recurrent cholangitis underwent ERCP for common bile duct stones. Two stones (10×15 mm and 15×20 mm) (Fig. 1) were seen on cholangiogram. After sphincterotomy and 15-mm EPLBD, the smaller stone was extracted using a Fogarty balloon. The larger stone could not be removed, and intra-endoscopic mechanical lithotripsy was attempted (Fig. 2); however, the Dormia wires broke near the handle of the lithotriptor despite being specially designed for mechanical lithotripsy.

The Dormia basket was made of Nitinol with a “crimp” that joins the four wires (Fig. 3a). The trapped basket was pulled closer to the papilla, making it possible to visualize the “crimp.” Argon plasma coagulation (APC2; ERBE, Tübingen, Germany; Forced setting, 80 W) was then used to trim the two wires between the “crimp” and the tip of the basket (Fig. 3b, Video 1); the trapped Dormia was finally retrieved using another small (10 mm) over-the-wire basket (Fig. 4). Plastic stents were inserted near the stone and the patient was referred for cholangioscopy-assisted lithotripsy, which was successful. The use of APC to trim the meshes of self-expandable metal stents has been reported previously [3] and can be considered for “cutting” other endoscopic devices when necessary for their retrieval.

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Competing interests

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Video 1 Application of argon plasma coagulation to trim the wires of a trapped Nitinol Dormia basket for retrieval.

Fig. 4 Removal of the trapped Dormia with another small basket.