The “tapping-a-screw method” for endoscopic removal of an incarcerated pancreatic duct stone using a novel screw-shaped dilator with a 0.018-inch guidewire

Endoscopic intervention is an established treatment in patients with obstructive pancreatitis; however, dealing with impacted pancreatic duct stones remains challenging. Although electrohydraulic or laser lithotripsy under digital single-operator pancreatoscopy (D-SOP) is one of the feasible approaches [1], some special techniques are required in cases where D-SOP is not applicable [2, 3]. Herein, we report a method to accomplish endoscopic removal of an incarcerated pancreatic duct stone using a novel stiff screw-shaped dilator with a 0.018-inch guidewire.

A 70-year-old man with chronic pancreatitis underwent endoscopic pancreatic duct drainage for obstructive pancreatitis caused by an impacted pancreatic duct stone. However, the attempt failed because a tapered catheter could not pass through the stone. Therefore, we performed a method that we have called the “tapping-a-screw method” using a novel 7-Fr screw-shaped dilator (Tornus ES for 0.018 inch; Olympus Medical Systems, Tokyo, Japan) for endoscopic removal of the incarcerated pancreatic duct stone. A 0.018-inch guidewire (Fielder 18; Olympus Medical Systems) was advanced beyond the stone, and the Tornus ES was advanced over the guidewire to contact the stone. Next, by turning its grip clockwise, the Tornus ES was passed through the stone without difficulty. After withdrawing it counterclockwise, the dislodged stone was successfully extracted using a mechanical lithotripter (LithoCrush V; Olympus Medical Systems) without any complications (Fig. 1, Fig. 2, Video 1).

Competing interests

The authors declare that they have no conflict of interest.

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Video 1  The “tapping-a-screw method” for endoscopic removal of an incarcerated pancreatic duct stone using a novel screw-shaped dilator with a 0.018-inch guidewire.

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