A novel technique for the treatment of impacted pancreatic stones after pancreatoduodenectomy using transanastomotic fluoroscopic-guided electrohydraulic lithotripsy

Nowadays the role of endoscopic intervention is becoming more important in patients with obstructive pancreatitis. Although a recent study reported that 90% of patients with obstructing pancreatic stones achieved pancreatic ductal clearance using digital single-operator pancreatoscopy (D-SOP) with electrohydraulic lithotripsy (EHL) or laser lithotripsy [1], endoscopic treatment of obstructive pancreatic stones is still challenging in patients with surgically altered anatomy. Here, we report a novel technique for the treatment of impacted pancreatic stones after pancreatoduodenectomy without using D-SOP.

A 66-year-old man, who underwent pancreatoduodenectomy with Child’s reconstruction 23 years earlier for annular pancreas, was referred for the treatment of obstructive pancreatitis caused by pancreatic stones. Endoscopic removal of the pancreatic stones was attempted using a short-type single-balloon enteroscope (SIF-H290S; Olympus Medical Systems, Tokyo, Japan) with a 3.2-mm working channel. Endoscopic retrograde pancreateography was performed via a stenotic pancreaticeojunal anastomosis to confirm impacted radiopaque pancreatic stones in the main pancreatic duct. Although a 0.025-inch guidewire was able to be advanced beyond the stones, neither a tapered catheter with a tip diameter of 3.3 Fr (SHOREN; Kaneka Medix, Osaka, Japan) nor a 4-mm balloon catheter with a well-tapered tip of 2.75 Fr (REN; Kaneka Medix) was able to pass through the stones.

We therefore opted to treat the stones with fluoroscopic-guided EHL. First, the pancreaticeojunal anastomosis was dilated with an 8-mm balloon catheter (ZARA; Century Medical, Tokyo, Japan). Next, a sheath, which was made by cutting the tip of a 7-Fr biliary dilation catheter (Soehendra; Cook Medical Japan, Tokyo, Japan), was advanced over the guidewire to contact the stones. Then, after withdrawing the guidewire, an EHL probe was inserted through the sheath. Finally, the stones were fragmented with EHL and removed with a wire-guided basket catheter (basket catheter NT; Zeon Medical, Tokyo, Japan) (▶Fig. 1, ▶Fig. 2, Video 1).

Endoscopy_UCTN_Code_TTT_1AR_2AI
Competing interests

The authors declare that they have no conflict of interest.

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Reference


Video 1 Endoscopic treatment of impacted pancreatic stones after pancreateoduodenectomy using transanastomotic fluoroscopic-guided electrohydraulic lithotripsy.

Bibliography

Endoscopy
DOI 10.1055/a-1722-2681
ISSN 0013-726X
published online 2022
© 2022. Thieme. All rights reserved.
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

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