Single-operator pancreatoscopy with electro-hydraulic lithotripsy of large pancreatic duct stones in post-Whipple anatomy

A 61-year-old man with chronic, idiopathic pancreatitis previously treated with Whipple surgery was referred for recurrent abdominal pain and dilated main pancreatic duct (MPD) on magnetic resonance imaging. Endoscopic ultrasound (EUS) showed a 9-mm MPD with an abrupt cutoff at the level of the tail, which raised suspicion for a distal stricture and the possibility of a malignancy or main duct intraductal papillary mucinous neoplasm (Fig. 1).

An enteroscopy-assisted endoscopic retrograde pancreatoscopy was attempted in order to ascertain the nature of this abnormality; however, this was unsuccessful owing to the inability to locate the pancreaticojejunostomy. EUS-assisted rendezvous was therefore performed with pancreatogram to confirm the dilated MPD and distal stricture (Video 1). Using a therapeutic gastroscope, pancreatoscopy with a digital single-operator cholangioscope (Spyglass DS; Boston Scientific, Marlborough, Massachusetts, USA) was then undertaken. Unexpectedly, pancreatoscopy revealed several large pancreatic duct stones. The stones were subsequently fragmented using the electrohydraulic lithotripsy (EHL) probe and multiple shockwaves of 50W, followed by balloon sweeps and pancreatic stent insertion (Video 2). The patient did well following the procedure, with significant improvement in pain symptoms and dilution of the distal MPD stricture.

Ductal hypertension from pancreatic duct stones is one of the important etiologies of ongoing pain in patients with chronic pancreatitis [1]. Therefore, the primary goal of treatment when stones are encountered is to reduce the stone burden and ductal pressure. This can be achieved through surgery, extra-corporeal shockwave lithotripsy, or pancreatoscopy with EHL. The latter has been shown to be associated with high technical success, clinical response, and a good safety profile [2]. However, performing pancreatoscopy following pancreatectoduodenectomy has not been well described. The current case demonstrates both the potential technical feasibility, when the pancreaticojejunostomy can be reached with a therapeutic gastroscope, and diagnostic benefits of performing digital pancreatoscopy in patients with significant pancreatic duct abnormalities following Whipple surgery.

Competing interests: Dr. Khashab is a consultant for Boston Scientific.

References

Bibliography
DOI http://dx.doi.org/10.1055/s-0042-112979
Endoscopy 2016; 48: E280
© Georg Thieme Verlag KG Stuttgart · New York
ISSN 0013-726X

Corresponding author
Mouen A. Khashab
Division of Gastroenterology and Hepatology
Johns Hopkins Hospital
1800 Orleans Street, Suite 7125B
Baltimore, MD 21287
United States
Fax: +1-443-683-8335
mkhashab1@jhmi.edu