Self-expandable covered metallic stent as a conduit for pancreatic stone extraction

A 50-year-old man was referred for evaluation of alcohol-related chronic relapsing pancreatitis. Initial endoscopic retrograde cholangiopancreatography (ERCP) revealed a dilated pancreatic duct with a stone proximal to a distal stricture. The stricture was dilated to 6 mm using a balloon, and an 8.5-Fr plastic stent was placed to ensure drainage. ERCP 2 months later showed no improvement in the stricture and a 10-Fr stent was placed. Repeat pancreatography 2 months later (▶ Video 1) revealed a persistent distal stricture with a floating ovoid-shaped stone (6 × 10 mm) in the proximally dilated duct (▶ Fig. 1a). The stricture was dilated to 6 mm (▶ Fig. 1b), and an 8 mm × 4 cm fully covered Gore Viabil (Conmed Corp., Utica, New York, USA) self-expandable metallic stent (SEMS) was placed across the stricture. A rat-tooth forceps was passed through the SEMS and the stone was grasped (▶ Fig. 2) under fluoroscopic guidance. The stone and stent were then simultaneously extracted from the duct and removed from the patient (▶ Fig. 3. ▶ Video 1). There were no post-procedural complications.

Ductal hypertension, as a result of obstruction from pancreatic duct stones and strictures in chronic pancreatitis, is believed to be the major cause of pain and recurrent pancreatitis [1]. Treatment options for pancreatolithiasis vary depending on stone location and size [2, 3]. The 2015 European Society of Gastrointestinal Endoscopy recommends the use of ERCP as first-line therapy in patients with a small number of stones with a diameter of <5 mm in the body.
and proximal pancreas. For larger stones, extracorporeal shock wave lithotripsy prior to ERCP is recommended [4]. We present a unique method of pancreatic stone removal using a fully covered SEMS as a conduit for passage of a rat-tooth forceps across a distal stricture to facilitate pancreatic stone extraction.

Competing interests

None

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DOI https://doi.org/10.1055/a-0640-2421
Published online: 2018
Endoscopy
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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Fig. 3 Fluoroscopic image showing simultaneous removal of the pancreatic duct stone and metallic stent.

Video 1 Removal of a pancreatic duct stone with the aid of a self-expandable metallic stent.