Extracorporeal shock wave lithotripsy allows successful endoscopic removal of a fractured stone basket trapped in the pancreatic duct

Fig. 1 Radiographic images showing: **a** a captured 9-mm pancreaticolith with mechanical lithotripsy being performed during endoscopic retrograde pancreatography (ERCP); **b** the fractured basket that was trapped in the pancreatic duct with the pancreaticolith.

Fig. 2 Radiographic image during repeat endoscopic retrograde cholangiopancreatography (ERCP) after 11 sessions of extracorporeal shockwave lithotripsy (ESWL) showing a forceps reaching the fractured basket to extract it.

Fig. 3 Endoscopic view showing the fractured basket being captured by the forceps and extracted from the major papilla.

Fig. 4 Photograph showing the fractured basket, which was completely removed.

Fig. 5 Endoscopic view showing the impacted pancreaticolith being removed in a basket.

A 51-year-old man with chronic pancreatitis presented with recurrent postprandial epigastric pain. Computed tomography (CT) of the abdomen revealed a 9-mm pancreaticolith in the main pancreatic duct (MPD) of the head portion.

Endoscopic retrograde cholangiopancreatography (ERCP) was performed to remove the pancreaticolith. After the pancreatic duct had been cannulated, sphincterotomy was performed. We attempted to remove the pancreaticolith with a lithotripsy basket (GML-06-26-430; Medi-Globe GmbH, Germany); however, the basket became trapped by the pancreaticolith in the MPD. Mechanical lithotripsy (Stone-Buster; Medi-Globe GmbH, Germany) was tried (Fig. 1 a), but the wire of the basket fractured and the pancreaticolith

became tangled up in the fractured basket (Fig. 1 b). Attempted removal of the fractured basket and pancreaticolith complex failed because they were tightly impacted in the narrow portion of the MPD. To minimize the risk of pancreatitis due to obstruction of the MPD, a 5-Fr plastic stent was inserted through the minor duodenal papilla.

Extracorporeal shock wave lithotripsy (ESWL) to the impacted pancreaticolith was started on the day after the ERCP using a third-generation lithotripter (PiezoLith 3000 plus; ELvation Medical GmbH, Germany) [1]. The repeated ESWL could be focused accurately on the pancreaticolith because it was held tightly together with the fractured basket in the pancreatic duct. After the 11th ESWL

treatment (3000 shocks per session at an intensity of 16 on a scale of 1–20), a further ERCP was attempted.

A guidewire was successfully passed through the impacted basket and stone. After a 6-mm balloon (Hurricane Rx hydrostatic balloon; Boston Scientific, Natick Massachusetts, USA) had been dilated in the narrow portion of the MPD, the fractured basket was removed with a forceps (FB-19N-1; Olympus, Tokyo, Japan) (Figs. 2–4). Following this, the fragmented pancreaticolith was also successfully removed by sweeping with the basket and balloon (Fig. 5).

Endoscopy_UCTN_Code_CPL_1AK_2AH

Competing interests: None

Min Keun Cho, Tae Jun Song, Do Hyun Park, Sang Soo Lee, Dong Wan Seo, Sung Koo Lee, Myung-Hwan Kim

Department of Internal Medicine, University of Ulsan College of Medicine, Asan Medical Center, Seoul, Republic of Korea

Reference

- 1 Thomas M, Howell DA, Carr-Locke D et al. Mechanical lithotripsy of pancreatic and biliary stones: complications and available treatment options collected from expert centers. *Am J Gastroenterol* 2007; 102: 1896–1902

Bibliography

DOI <http://dx.doi.org/10.1055/s-0042-101410>
Endoscopy 2016; 48: E65–E66
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

Corresponding author

Tae Jun Song

Department of Internal Medicine,
University of Ulsan College of Medicine
Asan Medical Center
88, Olympic-Ro 43-Gil
Songpa-gu
Seoul 05505
South Korea
Fax: +82-2-4760824
medi01@naver.com