Endoscopic papillary large balloon dilation for pancreatic duct stone: a first report

A 44-year-old woman, who had been a heavy drinker, was admitted to our hospital for treatment of a pancreatic duct stone with chronic pancreatitis. She had a previous history of endoscopic sphincterotomy for bile duct stones. Her laboratory examination showed no abnormalities. Contrast-enhanced computed tomography and magnetic resonance cholangiopancreatography revealed a large pancreatic duct stone with a diameter of 10 mm within the main pancreatic duct (MPD) in the pancreatic head, causing proximal dilation of the MPD (▶ Fig. 1). During endoscopic retrograde cholangiopancreatography, endoscopic papillary large balloon dilation (EPLBD) with a balloon catheter (Giga II EPLBD Balloon catheter; Century Medical, Tokyo, Japan) was performed, and a large pancreatic duct stone was successfully removed without any adverse events (▶ Fig. 2, ▶ Fig. 3, ▶ Video 1).

Pancreatic duct stones are a common complication of chronic pancreatitis. Although extracorporeal shock wave lithotripsy (ESWL) is the most common method of treating pancreatic duct stones, large stones remain a therapeutic challenge. This is the first reported case in which EPLBD was performed in the pancreatic duct and a large pancreatic duct stone was successfully removed without using ESWL. Although further clinical studies with larger samples and long-term follow-up are needed to validate and assess its safety, EPLBD should be one of the standard methods of treating pancreatic duct stones.

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Competing interests

The authors declare that they have no conflict of interest.

▶ Fig. 1 Initial imaging studies showed a large pancreatic duct stone (arrowhead) within the main pancreatic duct (MPD) in the pancreatic head, causing proximal dilation of the MPD. a Contrast-enhanced computed tomography. b Magnetic resonance cholangiopancreatography.

▶ Fig. 2 Endoscopic views. a The ampullary orifice during endoscopic papillary large balloon dilation of the pancreatic duct. b The large pancreatic duct stone was successfully removed using a basket catheter.

▶ Fig. 3 Fluoroscopic view during endoscopic papillary large balloon dilation.
During endoscopic retrograde cholangiopancreatography, endoscopic papillary large balloon dilation with a balloon catheter was performed and a large pancreatic duct stone was successfully removed.

Video 1

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