A 60-year-old woman was referred to our hospital for work-up of a mass in the pancreas with main pancreatic duct (MPD) dilatation. She had no symptoms, but had a history of abnormal glucose tolerance for 2 years. A contrast-enhanced computed tomography (CT) scan showed a low density mass with scattered contrast enhancement in the pancreatic head and dilatation of the distal MPD (Figs. 1). Endoscopic ultrasonography (EUS) revealed a multilocular cyst with microcysts in the area, which was compressing the MPD and causing the MPD dilatation (Fig. 2). The lesion was eventually diagnosed as a serous cystadenoma and was observed with regular imaging tests.

Over a period of 4 years, the MPD dilatation and atrophy of the pancreatic body and tail gradually progressed (Fig. 3) and her glucose tolerance tests worsened. Because pancreaticoduodenectomy was judged to be too invasive, endoscopic ultrasonography-guided pancreaticoduodenostomy (EUS-PDS) using a lumen-apposing metal stent (LAMS) was scheduled, with her written informed consent, as a minimally invasive alternative.

After inserting an echoendoscope to the bulb of the duodenum, we saw remarkable MPD dilatation, with the appearance of a cyst measuring 4.2 × 4.8 cm at the pancreatic head, adjacent to the duodenum; a safe puncture route was confirmed. Thereafter, a skilled endoscopist punctured the MPD with cautery assistance and a LAMS was placed within 80 seconds and without adverse events (Video 1). CT images 2 months after the procedure confirmed decompression of the MPD had been achieved (Fig. 4) and this was sustained without adverse events 3 months after endoscopic removal of the LAMS (Fig. 5).

EUS-guided pancreatic duct drainage, including by EUS-PDS, is one of the methods of endoscopic pancreatic duct drainage and has been used for MPD dilatation due to pancreatitis, pancreatic fistulas, or postoperative anastomotic strictures [1–4]. This is the first case reported with a serous cystadenoma and cystic MPD dilatation for which EUS-PDS was feasible and available. This therapy is minimally invasive and could provide a new option for patients with MPD dilatation before pancreatic resection.
Competing interests

The authors declare that they have no conflict of interest.

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Video 1 Endoscopic ultrasonography-guided pancreaticoduodenostomy using a lumen-apposing metal stent for the treatment of cystic main pancreatic duct dilatation.

Fig. 4 Contrast-enhanced computed tomography image 2 months after the procedure showing decompression of the main pancreatic duct.

Fig. 5 Magnetic resonance image 3 months after endoscopic removal of the lumen-apposing metal stent showing the sustained decompression of the main pancreatic duct (arrow).