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Endoscopic ultrasonography successfully diagnosed pancreas divisum and santorinicele

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A santorinicele is a focal cystic dilatation of the dorsal pancreatic duct termination at the minor papilla [1]. It occurs in patients with pancreas divisum and is a rare cause of recurrent pancreatitis [2]. It is generally diagnosed by magnetic resonance cholangiopancreatography (MRCP) [3]. Endoscopic sphincterotomy of the minor papilla was considered the best treatment for pancreas divisum and santorinicele [4]. We describe a case of recurrent pancreatitis caused by pancreas divisum and santorinicele, diagnosed by endoscopic ultrasound (EUS) and successfully treated with cannulation through the DualKnife incision of the minor papilla after repeated cannulations failed (▶ **Video 1**).

A 54-year-old woman was admitted for three episodes of acute pancreatitis within 3 years. She had no hyperlipidemia or drinking habits. EUS indicated sonographic changes consistent with pancreatitis, with a dilated dorsal pancreatic duct and unclear ventral pancreatic duct, without clear communication between them. An anechoic mass (0.4 × 0.3 cm) was detected in the submucosa of the descending duodenum, communicating with the dorsal pancreatic duct. MRCP confirmed pancreas divisum and santorinicele (▶ **Fig. 1**).

She underwent endoscopic retrograde cholangiopancreatography (ERCP). Duodenoscopy showed a swollen minor papilla and cyst-like change (▶ **Fig. 2**). The orifice could not be identified, and repeated cannulations failed. Since EUS showed that the cyst originated from the descending duodenum submucosa and the dorsal pancreatic duct was connected to the cyst, the minor papilla was carefully opened with a DualKnife, exposing the suspicious internal orifice (▶ **Fig. 3**). A 7 F × 8-cm pancreatic stent was inserted (▶ **Fig. 4**) after cannulation, and pancreatic juice was successfully drained (▶ **Fig. 5**). During the 4-week follow-up after ERCP, the patient was asymptomatic, and the pancreatic duct stent was removed.

To our knowledge, this is the first case of pancreas divisum and santorinicele diagnosed by EUS and successfully treated with cannulation through the DualKnife incision of the santorinicele.

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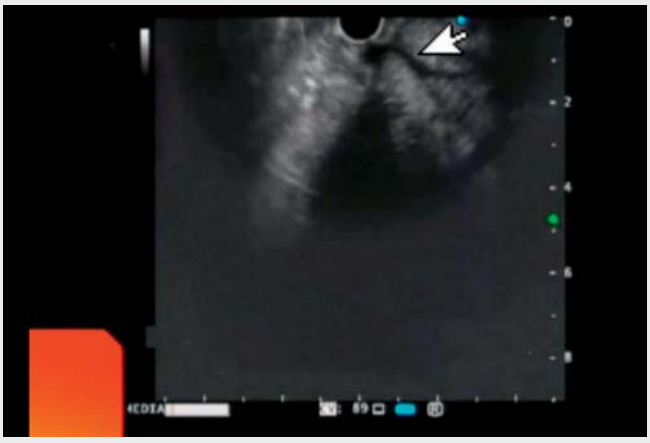
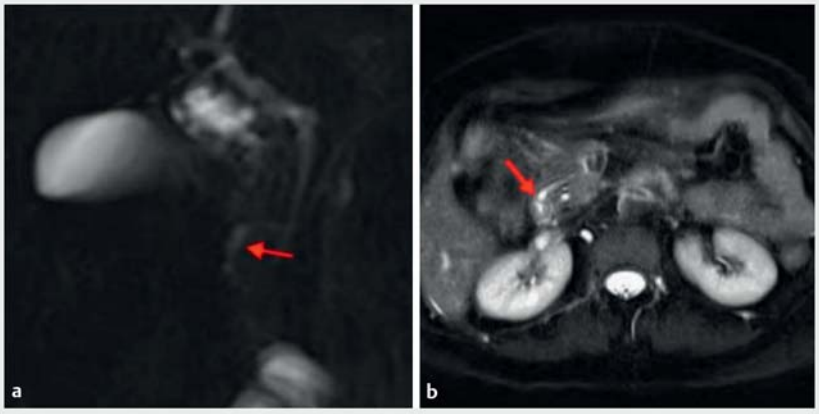


Video 1 Successful treatment of pancreas divisum with santorinicele diagnosed by endoscopic ultrasonography.



▶ **Fig. 1** Magnetic resonance cholangiopancreatography showed cystic dilatation at the end of the dorsal pancreatic duct (red arrow).

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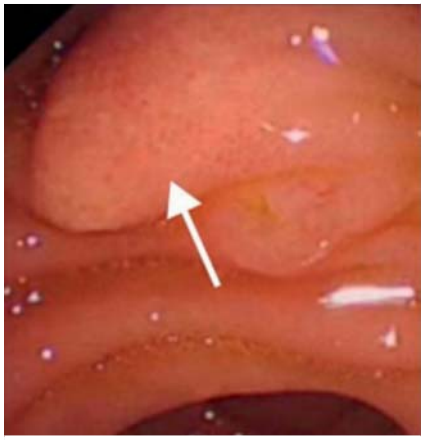
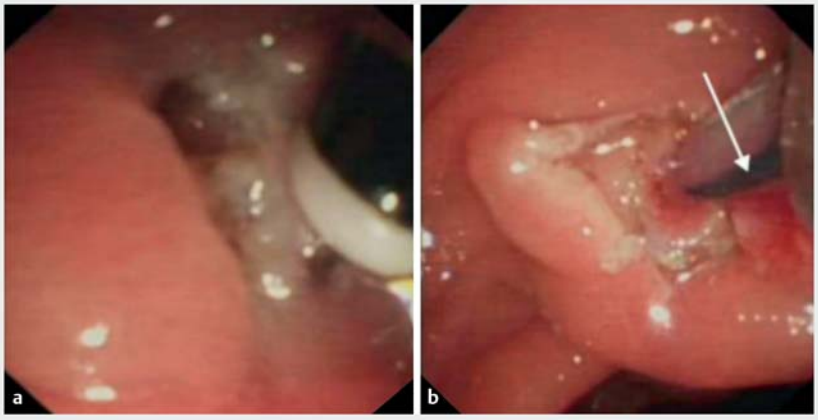
Competing interests

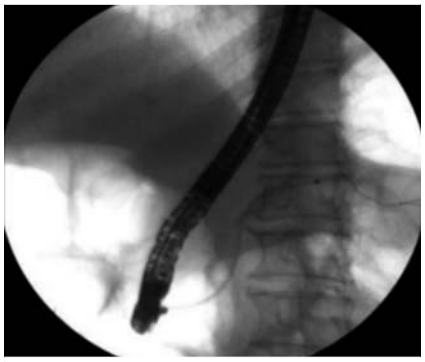
The authors declare that they have no conflict of interest.



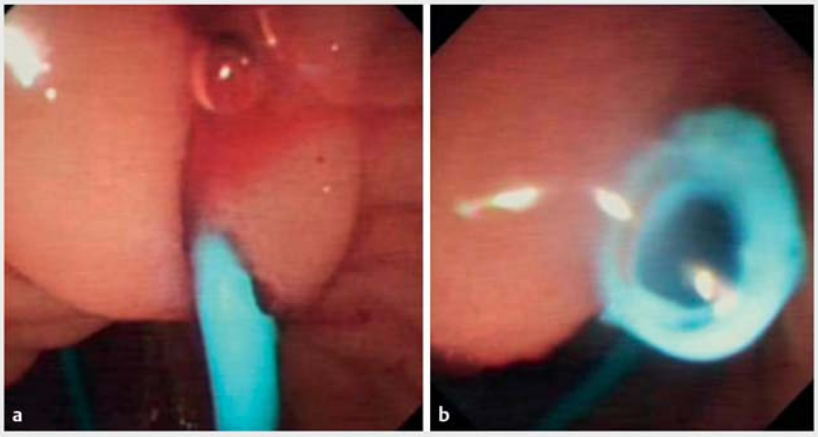
▶ **Fig. 2** Duodenoscopy showed a swollen minor papilla and cyst-like change (white arrow).



▶ **Fig. 3** **a** The minor papilla was opened with a DualKnife. **b** The suspicious internal orifice was successfully found (white arrow).



▶ **Fig. 4** During endoscopic retrograde cholangiopancreatography treatment, a 7 F × 8-cm pancreatic stent was inserted.



▶ **Fig. 5** Cannulation was successful and pancreatic juice was drained.

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