

Acute pancreatitis after endoscopic biopsy of the minor duodenal papilla in an individual with pancreas divisum

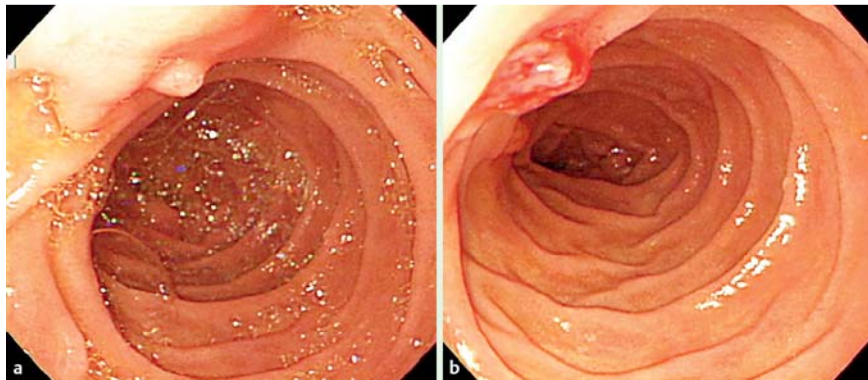


Fig. 1 a Esophagogastroduodenoscopy in a healthy 47-year-old man showed a 4-mm “polyp” in the second portion of duodenum, proximal to the major duodenal papilla. b Appearance after endoscopic biopsy.

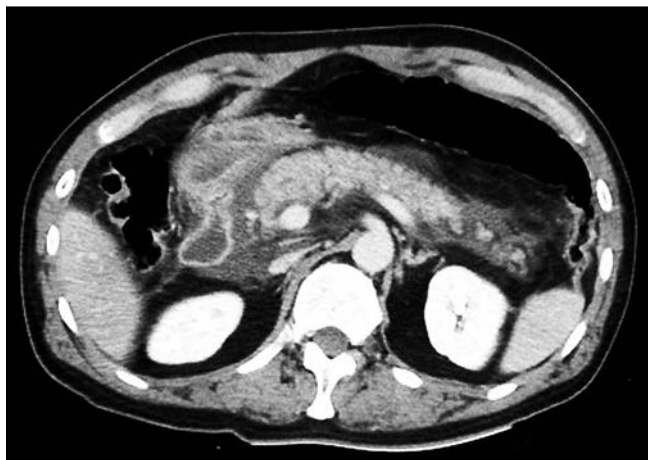


Fig. 2 Abdominal computed tomography (CT) scan showed diffuse pancreatic swelling with a peripancreatic fluid collection.

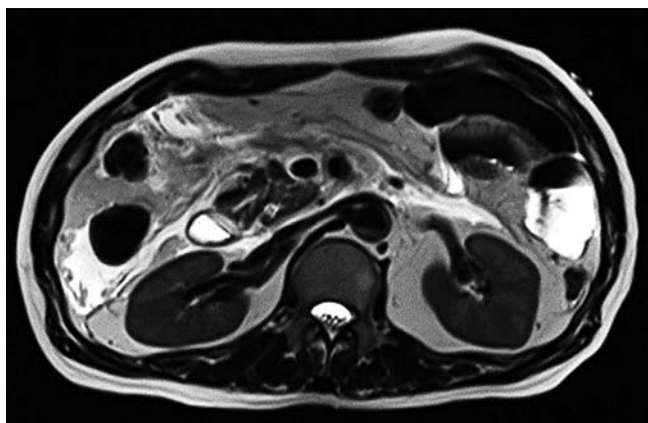


Fig. 3 Transverse view magnetic resonance imaging showed the dorsal pancreatic duct passing in front of the distal bile duct and draining through the minor papilla.

A healthy 47-year-old man underwent esophagogastroduodenoscopy (EGD) for general examination. A small polyp 4 mm in size was seen in the second portion of the duodenum; its location was proximal to the major duodenal papilla (● Fig. 1 a). An endoscopic biopsy was taken (● Fig. 1 b). The biopsy findings showed normal duodenal mucosa.

The patient developed severe epigastric pain 3 hours after the EGD. Serum amylase and lipase levels were markedly increased (8860 U/L and 2640 U/L, respectively), while other serum biochemical levels were within normal ranges. Abdominal computed tomography (CT) scan showed diffuse pancreatic swelling with a peripancreatic fluid collection (● Fig. 2). Magnetic resonance imaging of the pancreas and magnetic resonance cholangiopancreatography showed that the common bile duct and the dorsal pancreatic duct had different duodenal openings and that the dorsal pancreatic duct drained into the minor duodenal papilla with no communication with the common bile duct (● Fig. 3, ● Fig. 4). We therefore diagnosed pancreas divisum. The patient's abdominal pain was improved by intravenous fluid hydration and restriction of food. He was discharged 15 days later.

On the basis of many autopsy studies, pancreas divisum is found in 8% of the normal population [1]. In cases of pancreas divisum, the small ventral duct drains via the major papilla and the large dorsal duct drains via the minor papilla. Most of the pancreatic ductal system drains via the minor papilla. Therefore papillary edema due to endoscopic biopsy may obstruct the pancreatic duct causing acute pancreatitis. Ductal obstruction can easily develop as a result of relative stenosis of the minor papilla in cases of pancreas divisum [2,3]. In the case reported here, the opening of the minor papilla distinctly resembled a polyp. If acute pancreatitis develops after endoscopic biopsy of the minor papilla, the possibility of pancreas divisum should be checked.

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Competing interests: None

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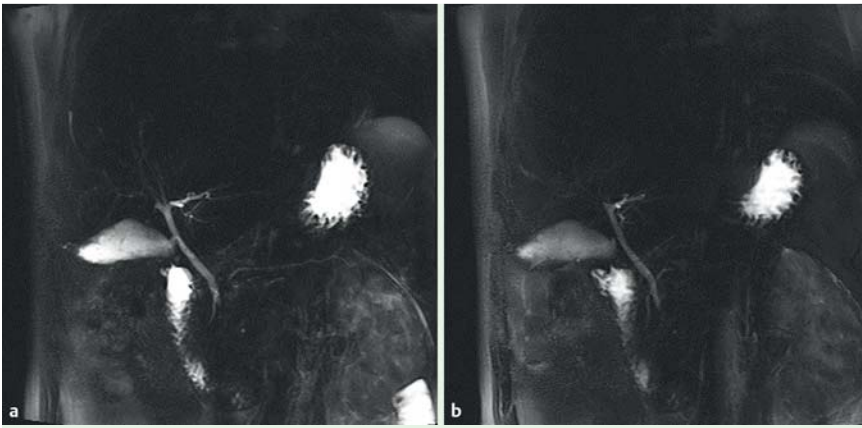


Fig. 4 Coronal magnetic resonance cholangiopancreatography showed the dorsal pancreatic duct superior to the common bile duct and draining independently through the minor papilla, with no communication between the ductal systems.

References

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Bibliography

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