Duodenal gastrointestinal stromal tumor with extrahepatic portal vein aneurysm: difficult to diagnose from pancreatic tumor: a case report.

Introduction:
Duodenal gastrointestinal stromal tumors (GISTs) are uncommon. Tumor arising from the second part of duodenum can be wrongly diagnosed as pancreatic mass. We report our experience with a case where coexisting duodenal GIST and extrahepatic portal vein aneurysm was difficult to distinguish from pancreatic tumor.

Case Report:
A 55-year-old woman was referred to our hospital because a physical check-up suggested that she might have gallbladder polyps. An abdominal computed tomography scan showed a pancreatic mass and an extrahepatic portal vein aneurysm.

Blood pressure 110/62 mmHg, Pulse rate 70 bpm
A flat and soft abdomen without pain and no palpable masses

Case Findings:
A 26mm tumor protruding to the right from the pancreas head
A 30mm tumor with calcification in the outline and part of interior region was found in the main papilla.

<Endoscopic ultrasonography (EUS)>  
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Since thrombus formation was observed in the portal vein aneurysm after the surgery, we started oral administration of an anticoagulant.
The patient shows good postoperative course without recurrence, and is under observation as an out patient.
In the CT obtained at 6 months postoperatively, the portal vein was found to be thrombosed and showed a tendency toward diminution.

Discussion:
• The incidence of gastrointestinal tract GIST is the highest in the stomach (52%), then the small intestine (25%), the colon (11%), and the esophagus (5%); the GIST of duodenal primary is relatively rare, accounting for only 4.5% of total GIST.
• CT, MRI, FDG-PET and upper gastrointestinal endoscopy are usually used for the diagnosis of duodenal GIST. However, it may develop to be buried in pancreatic parenchyma at the pancreas head and is often preoperatively diagnosed as pancreatic head tumor as in our case.
• Recently, there were some case reports in which duodenal GIST was diagnosed preoperatively with endoscopic ultrasound-guided fine needle aspiration (EUS-FNA). With EUS-FNA, the sample collection rate of the duodenal submucosal tumor is 33.3% with the diagnosis rate of about 50%.
• We also performed EUS-FNA preoperatively, which, however, did not lead to diagnosis.
• Surgical resection is the first choice for the treatment. The guideline recommends partial resection that considers the preservation of organ functions on the premise that surgically safe margin is secured without damaging the coating.
• In our case, the tumor was located on the contralateral side of the papilla of Vater; therefore, we could have selected the reduction procedure if we had had a chance of duodenal GIST preoperatively.
• In the surgical treatment of duodenal GIST, treatments aiming at the preservation of organ function with no impairment of its curvature seemed to be important.

<Portal vein aneurysm>
• A portal vein aneurysm is a rare condition defined as that in which the maximum diameter of portal vein expanding in a partially capsular or spindle shape exceeds 2 cm.
• Since it is often asymptomatic, follow-up monitoring is a common measure. We also refrained from resection considering the risk accompanying the resection and reconstruction for portal aneurysm.
• Thrombus formation was found in the postoperative portal aneurysm that required oral administration of an anticoagulant, whereas the portal aneurysm showed a tendency toward diminution in 6 months postoperatively. Careful consideration is necessary for the adaptation of surgical treatment to the portal aneurysm, taking into account the risk of complications.