# Successful treated duodenal stricture after EUS-guided ethanol ablation: a case report

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Pancreatic cystic lesions are increasing with growing use of abdominal imaging. Some lesions require surgical treatment, because of their malignant potential. Currently, endoscopic ultrasound (EUS)-guided cyst ablation instead of surgery is acceptable for treating pancreatic cystic lesions. A 61 year old man was referred to gastroenterology department with pancreatic cyst lesion. Outside computed tomography manifested a 2.4 cm cystic lesion presumed benign branch duct type intraductal papillary mucinous neoplasm in the uncinate process of the pancreas. EUS findings at our hospital indicated 2 cm cystic lesion with absence of mural nodule nor dilated pancreatic duct. Two-year follow-up Magnetic resonance cholangiopancreatography showed an increasing in cystic size to 3.6 cm. We decided to treat this lesion with single worrisome feature (size ＞3cm) with EUS-guided ethanol ablation. After procedure, patient complained of abdominal pain with elevated pancreatic enzyme levels. Patient underwent conservative management including fluid resuscitation and antibiotics for a week, and discharged after symptomatic improvement. Three days after discharge, the patient was admitted to local hospital with dyspepsia and abdominal pain. Patient was treated for necrotizing pancreatitis about 2 weeks additionally. After 6 weeks of ablation, he was re-admitted with vomiting and abdomen pain. CT scan confirmed walled off necrosis around pancreas head accompanying gastric outlet obstruction. EUS-guided drainage of the peripancreatic cystic fluid collection and endoscopic balloon dilatation of duodenal stricture were performed. Four additional endoscopic balloon dilatation sessions were required to alleviate the obstructive symptom due to duodenal stricture and the patient discharged after diet smoothly proceeding. Although EUS-guided ethanol ablation therapy has been proven its feasibility and safety via several studies, severe complication like this case and some possible complications including abdomen pain, pancreatitis, bleeding and venous thrombosis have been reported. Substantial studies are needed to confirm proper indication and risk factor for severe complication of EUS-guided ethanol ablation.



# A case of recurrent acute pancreatitis caused by low lying cystic duct

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**Case report:** A 55-year-old woman presented to the emergency department with sudden onset of right upper quadrant pain. Past medical history Previously she had been admitted to our hospital twice due to idiopathic necrotizing pancreatitis. The patient denied acohol intake and use of medication. A contrast-enhanced CT scan showed diffuse enlargement of the pancreas with extensive peripancreatic fluid collection. Multiple abscesses and multiple parenchymal calcifications were also observed (Figure 1). Transabdominal US showed no abnormalities in the bile duct or gallbladder (Figure 2). Present illness Her initial blood pressure was 130/80 mmHg, heart rate was 72 beats/min, and temperature was 36.0℃. A physical examnination revealed right upper quadrant tenderness without indirect tenderness. Initial laboratory data were as follows: white blood cell count, $6.1 \times 10^3/mm^3$ ; hemoglobin, 12.0 g/dL; platelet count, $249 \times 10^3/mm^3$ blood urea nitrogen, 14.4 mg/dL; creatinine, 0.9 mg/dL; aspartate aminotransferase, 24IU/L, alanine aminotransferase, 16 IU/L; alkaline phosphatase, 92 IU/L; γ-glutamyl transferase, 17 IU/L; total bilirubin, 0.4 mg/dL; amylase, 3349 IU/L, and lipase, 6770 IU/L; C-reative protein, 0.14 md/dL. A CT scan revealed diffuse swelling of the pancreas with peripancreatic fluid collection and slightly incresed multiple parenchymal calcifications. Pancreaticolith with main pancreatic duct dilatation was also observed (Figure 3). Endoscopic retrograde cholangiopancreatography was performed and cystic duct was noted to arise from far distal common bile duct. With the use of catheter (General catheter), bile was aspirated at cystic duct opening and examined for crystal. Then the patients undewent endoscopic sphincterotomy. Polarized microsopy showed birefringent and rhomboidal shape with notched corner crystal in the bile (Figure 5). The patient eventually recovered well after EST and chemical dissolution with urodeoxycholic acid. We recommended cholecystectomy, however, she refued surgery. She has been regulary monitored at an outpatient clinic for the past five years since her discharge, and recurrent acute pancreatitis has not been observedt

Fig. 1. Abdominal CT images at first visit. CT shows insinuated abscess was noted at just superior to neck of the pancreas(a) and multiple calcifications were seen at body and tails(b).

Fig. 2. Diagnostic images at first visit. Abdominal ultrasonography (a) was revealed no gallstone or sludges in gallbladder. ERCP(b) shows no anatomical abnormalities on bile duct except low lying cystic duct.

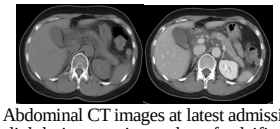

Fig. 3. Abdominal CT images at latest admission. CT shows slightly increase in number of calcification in pancreas and pancreaticolith at ampullar portion with minimal dilatation of main pancreatic duct.

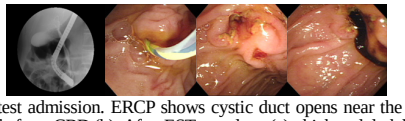

Fig. 4. ERCP images at latest admission. ERCP shows cystic duct opens near the ampulla of Vater (a) and bright-yellowish colored bile from CBD (b). After EST was done (c), thick and dark brown to greenish colored bile was drained from cystic duct (d).

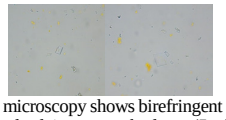

Fig. 5. Bile microscopy shows birefringent and rhomboidal shaped calcium mono hydrate. (5-a,b)