



Groove Pancreatitis and Gastric Outlet Obstruction

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Case

A 47-year-old male patient with history of moderate alcohol intake (30–40 gr/day) and without other medical comorbidities was admitted in our hospital because of epigastric pain and vomiting in the last 7 days. Physical examination was unremarkable except for moderate upper abdominal pain. Laboratory exams revealed mild rise of serum lipase (158 UI/l) and normal amylase. Abdominal computed tomography (CT) shows a markedly distension of the stomach and the proximal duodenum with an abrupt narrowing at the junction of the second and third portion of the duodenum (Fig. 1). Upper gastrointestinal endoscopy revealed a congestive and edematous duodenal mucosa with decreased lumen diameter at the inferior duodenal flexure. A complete obstruction at the second portion of the duodenum is noticed with the upper gastrointestinal contrast study (Fig. 2). A magnetic resonance imaging (MRI) is also obtained showing parietal concentric thickening of the second and third portion of the duodenum associated with cystic lesions in the duodenal wall (Fig. 3).

The diagnosis of groove pancreatitis was made based on the clinical and imaging findings. Conservative treatment was decided with fasting, parenteral nutrition, and analgesia. The patient had an uneventful recovery and was discharged 15 days after admission with an adequate oral intake.

Discussion

Groove pancreatitis (GP) is an uncommon type of chronic pancreatitis that involves the pancreatic-duodenal groove, an

area between the common bile duct, the head of pancreas, and the duodenum. Although the pathophysiology of GP is uncertain, alcohol abuse is thought to play a central role by increasing the viscosity of pancreatic secretions. The real incidence of GP is unknown, as it is commonly underdiagnosed due its heterogenous presentation and lack of familiarity with the disease. GP is categorized into a pure form which affects exclusively the groove and a segmental form which extends to the pancreatic head and main pancreatic duct.¹

GP usually affects males with history of chronic alcohol abuse in the fourth or fifth decade of life. The most common symptoms at presentation are chronic and recurrent abdominal



Fig. 1 Abdominal CT scan showing markedly distension of the stomach and first part of the duodenum with circumferential mural thickening involving D2–D3 causing severe luminal narrowing

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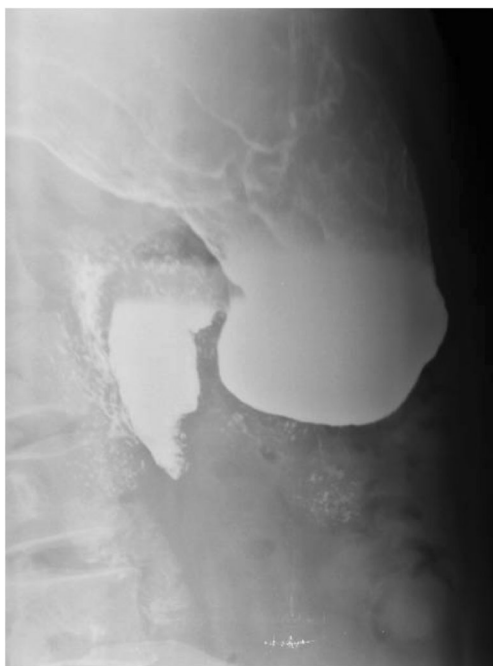


Fig. 2 Upper gastrointestinal contrast study showing a grossly dilated stomach and absence of contrast progression beyond the second part of the duodenum

pain, vomiting, and weight loss. Jaundice, although unusual, may develop if the inflammatory response extends to the common bile duct. Complete duodenal obstruction is a rare complication of GP.¹ Interestingly, in our case, gastric outlet obstruction was the reason for

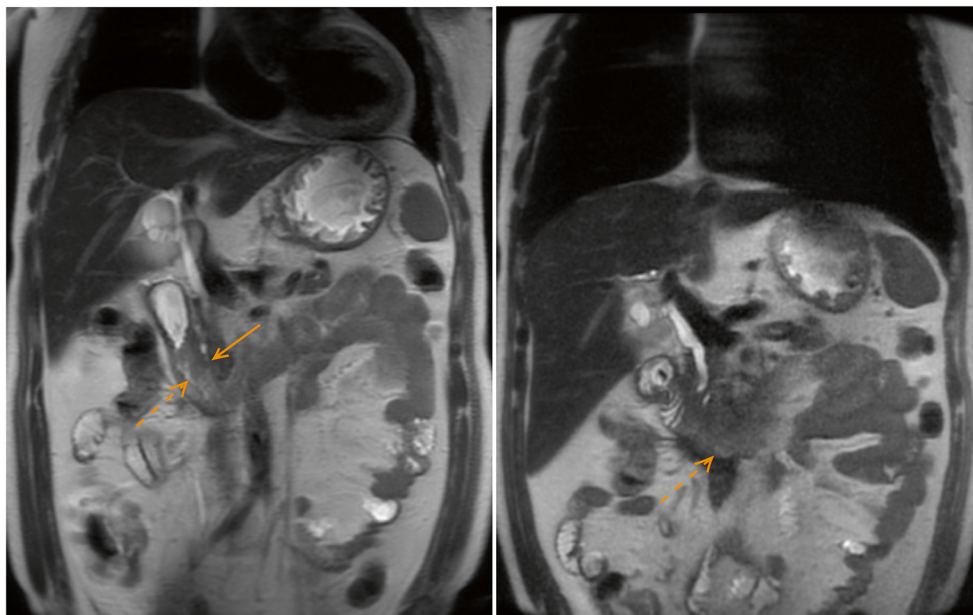
consultation and the main diagnostic finding in imaging studies. Serum lipase and amylase are also often slightly elevated in patients with GP.¹

Diagnostic workup of GP usually includes CT scan, MRI, and endoscopic ultrasound (EUS). Common findings on CT and MRI include hypodense, fibrotic, and sheet-like lesions located in the pancreaticoduodenal groove. A thickened duodenal wall with cystic changes can also be found. Several differential diagnoses should be considered, such as chronic pancreatitis, peptic ulcer disease, duodenal cancer, and adenocarcinoma of the head of the pancreas. An EUS with guided fine needle aspiration biopsy can be used if malignancy is suspected.²

Once GP is diagnosed, there are two main therapeutic options: conservative treatment or surgery. Conservative management includes analgesia and nutrition support therapy, along with alcohol and tobacco abstinence. Surgical treatment is often chosen when there is partial or no response to medical therapy, symptom progression, or high suspicion of malignancy. Despite several surgical procedures have been reported, the duodenopancreatectomy is the most commonly performed operation.³

In conclusion, GP is a rare disease with diagnostic challenges due to its diverse forms of presentation. Albeit uncommon, GP should be considered a potential cause of acute gastric outlet obstruction, especially in patients with history of alcohol abuse. Both conservative and surgical management are valid treatment modalities depending on the clinical presentation of the patient.

Fig. 3 Magnetic resonance imaging revealing concentric thickening of the second and third part of the duodenum (dash line arrows) associated with cystic structures in the duodenal wall (solid line arrow)



Declarations

Ethical Approval The institutional review board (IRB) approved this work.

Conflict of Interest The authors declare no competing interests.

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