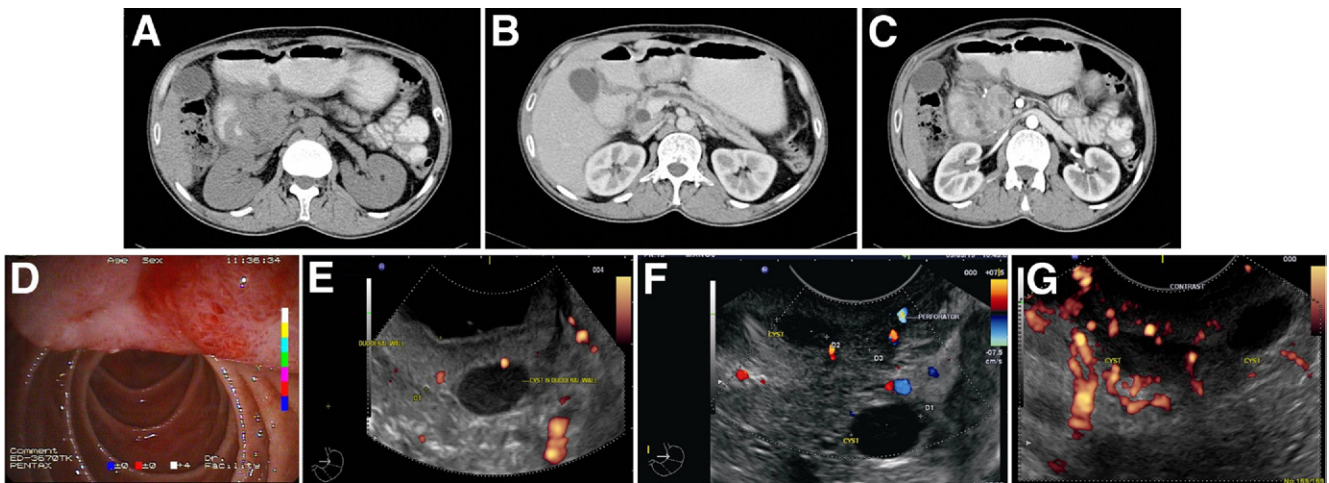


Electronic Clinical Challenges and Images in GI

Endoscopic Ultrasound in an Alcoholic With Pancreatic Pain, Vomiting, and Weight Loss



Question: A 38-year-old man presented with recurrent episodes of epigastric pain radiating to the back for 1.5 years duration, with vomiting and weight loss for the past 4 months. He was a smoker with a significant history of alcohol consumption. General physical examination was unremarkable. Investigations revealed anemia, raised serum amylase and alkaline phosphatase with a normal CA 19-9. Ultrasound abdomen showed a dilated common bile duct (CBD) and main pancreatic duct (MPD). Contrast-enhanced computed tomography (CT) revealed a heterogeneous hyperdense enlargement of the head and uncinate process of the pancreas with duodenal wall thickening, cystic hypodense areas in the region between duodenal second part (D2) and head of pancreas, with dilatation of the MPD and CBD (Figure A–C). Side viewing duodenoscopy (Pentax ED 3670 TK, Tokyo, Japan) showed a reddish, edematous, and polypoid mucosa in D2, with narrowing of the lumen (Figure D). Biopsy of the lesion showed nonspecific inflammation. Endoscopic ultrasonography (EUS; Pentax EG 3870 UTK, Tokyo, Japan) with color Doppler revealed a thickened duodenal wall (6.4–6.5 mm), an enlarged pancreatic head, and multiple cystic anechoic areas (7.2–9.7 mm) along with increased vascularity in the region between duodenal wall and the pancreatic head (Figure E, F). Contrast-enhanced EUS (with power Doppler) was performed using Sonovue

(Bracco, Milan, Italy), which showed increased vascularity in the region of pancreatic head. The duodenal wall cyst showed no vascularity (Figure G). EUS fine-needle aspiration (FNA) from the enlarged head yielded inflammatory changes on cytology.

What is the most likely diagnosis? What is the management?

See the **GASTROENTEROLOGY** web site (www.gastrojournal.org) for more information on submitting your favorite image to **Clinical Challenges and Images in GI**.

MALAY SHARMA
ARAVINDH SOMASUNDARAM
Department of Gastroenterology
Jaswant Rai Speciality Hospital
Meerut, India
EBBY GEORGE SIMON
Department of Gastrointestinal Sciences
Christian Medical College
Vellore, India

Conflicts of interest

The authors disclose no conflicts.

© 2011 by the AGA Institute

0016-5085/\$36.00

doi:10.1053/j.gastro.2010.03.062

Answer to the Clinical Challenges and Images in GI Question: Image 5: Groove Pancreatitis

With the available investigations, a differential diagnosis of groove pancreatitis (GP) was considered. GP is a type of segmental pancreatitis characterized by the formation of fibrous scars in the “groove” between the head of the pancreas, the duodenum, and the CBD.¹ It commonly presents in middle-aged men with history of heavy alcohol consumption. It has been proposed that protein-rich pancreatic juice might promote GP in predisposed patients with some preexisting pancreatic duct irregularities.² Clinical features include abdominal pain and vomiting owing to duodenal stenosis.^{1,2} Obstructive jaundice is an uncommon presentation. Investigations reveal elevated serum amylase with normal tumor markers. Duodenoscopy often reveals an inflamed and polypoid duodenal mucosa with luminal narrowing. Histopathology may show extensive fibrosis with Brunner’s gland hyperplasia. CT may reveal an enlarged enhancing pancreatic head, and a thickened duodenal wall with hypodense cystic spaces. EUS commonly shows a heterogeneous head mass with thickened duodenal wall and anechoic cystic areas. FNA of the lesion may show nonspecific inflammatory changes.² Contrast-enhanced EUS has been found useful in the differentiation pancreatic masses with benign (inflammatory) lesions being hypervascular, as evident in our patient.³ In the presence of the characteristic imaging findings along with nonspecific inflammatory changes on FNA, a diagnosis of GP could be made in this patient. He was managed conservatively, with improvement in symptoms on follow-up over a period of 6 months.

Although GP can be managed conservatively, a majority of patients eventually undergo operative resection, either for suspicion of pancreatic cancer, inconclusive findings, or because of poor symptom control. Hence, GP must be considered in patients who present for EUS evaluation with an infiltrating pancreatic mass adjacent to the duodenal wall, in the presence of characteristic imaging findings.

References

1. Becker V. Bauchspeicheldrüse. In: Doerr W, Seifert G, Ühlinger E, Eds. *Spezielle Pathologische Anatomie*. Berlin, Germany: Springer; 1973:252–445.
2. Shudo R, Yazaki Y, Sakurai S, et al. Groove pancreatitis: report of a case and review of the clinical and radiologic features of groove pancreatitis reported in Japan. *Intern Med* 2002;41:537–542.
3. Sanchez MV, Varadarajulu S, Napoleon B. EUS contrast agents: what is available, how do they work, and are they effective? *Gastrointest Endosc* 2009;69(2 Suppl):S71–77.

For submission instructions, please see the GASTROENTEROLOGY web site (www.gastrojournal.org).