

# Fellows' Corner

by William A. Mourad and Yaron Perry

## CASE REPORT

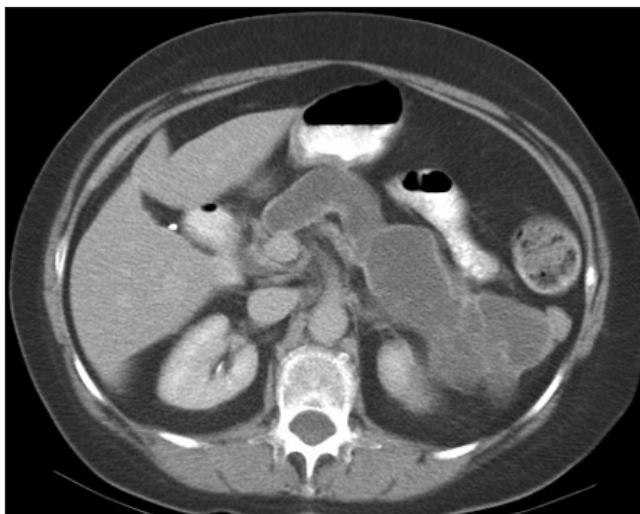
**A** 71-year-old white female presented to her internist's office for evaluation of recurrent episodes of pancreatitis over the past year. Her initial symptoms included right upper quadrant pain and anorexia. Her symptoms were initially felt to be due to either pancreatitis or cholecystitis. Ultrasound of the right upper quadrant showed gallstones, a normal biliary tree and gall bladder, a normal head of the pancreas, and a possible dilated pancreatic duct. No other imaging was done. An outpatient laproscopic cholecystectomy was performed for presumed gallstone pancreatitis. However, in the following year her symptoms did not improve and she was readmitted to the hospital several times with acute pancreatitis of

uncertain etiology. She had no history of alcohol consumption, she was taking no medications thought to cause pancreatitis, and her calcium and triglyceride levels were normal. She had a modest weight loss of 5 lbs over the last year and except for when she developed episodes of acute pancreatitis, she felt well and had no other complaints. Eventually a CT scan of the abdomen was done which can be seen below.

## Questions

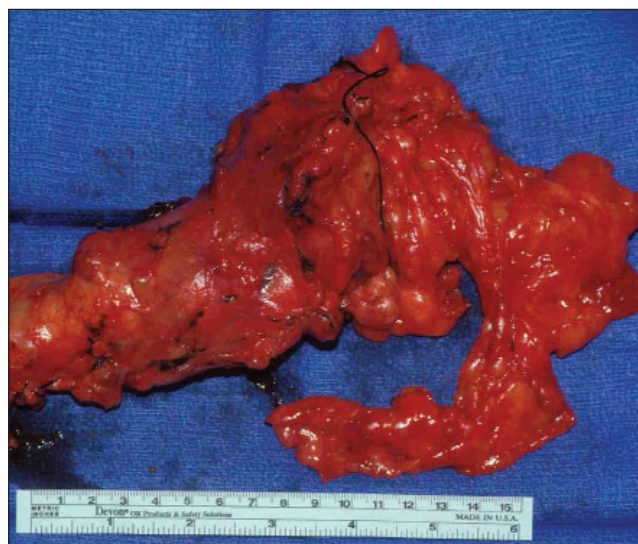
1. What is the differential diagnosis?
2. What techniques can be used to differentiate this disease from other similar appearing lesions?
3. What is the prognosis and the natural history of this disease and what studies can help stage this disease?

*(continued on page 77)*



**Figure 1.** CT showing pancreas with either multiple cysts or a severely dilated main pancreatic duct.

William A. Mourad, M.D., Fellow in Gastroenterology and Yaron Perry, M.D., Resident in General Surgery, Geisinger Health System, Danville, PA.



**Figure 2.** Excised pancreas after distal subtotal pancreatectomy. The main pancreatic duct has almost completely replaced normal pancreatic tissue.

(continued from page 72)

## DISCUSSION

In this patient, the differential diagnosis should include pancreatic pseudocysts, intraductal pancreatic mucinous neoplasms (IPMN), and mucinous cystadenoma. The CT shows a diffusely dilated main pancreatic duct (PD) up to 4 cm in diameter. Follow up Endoscopic Ultrasound (EUS) confirmed these findings and was able to obtain cytologic samples through FNA showing thick amounts of mucin and carcinoma in situ. This confirmed the diagnosis of an IPMN. IPMNs usually present in men aged 60–70's, can cause recurrent attacks of pancreatitis, and are considered premalignant lesions with a slow progression to carcinoma. Their radiologic appearance and their presenting symptoms can often mimic the other pancreatic cystic lesions noted above and it is crucial to try to differentiate them as treatment and prognosis differ greatly.

As sensitivity and specificity are somewhat limited, multiple diagnostic modalities are usually needed to identify the type of cystic lesion present and to detect whether carcinoma is present (1). On ERCP or EUS, characteristic findings of IPMN include an ampulla secreting mucous and a dilated main PD with cystic dilation of the side branches. EUS findings suggesting malignancy include magnitude of PD dilation, size of cystic lesions, and large mural nodules (2).

Cystic fluid CEA levels can differentiate mucinous lesions from other cystic lesions and cytologic examination can help detect carcinoma (3). Studies are still being done to find more sensitive minimally invasive approaches to detect cancer, such as analyzing aspirated ductal fluid for DNA mutations (4). Successful surgical resection of these tumors offers a good prognosis and even in cases with carcinoma present the five years survival rate is around 40% (5). The decision to resect IPMNs has to be made in the context of presence of symptoms, presence of carcinoma, and the patient's surgical comorbidities. ■

## References

1. Loftus EV Jr, Olivares-Pakzad BA, Batts KP, et al. Intraductal Papillary mucinous tumors of the pancreas: Clinicopathologic features, outcome and nomenclature. *Gastroenterology*, 1996; 110:1909.
2. Sugiyama M, Atomi Y, Saito M. Intraductal papillary tumors of the pancreas: Evaluation with endoscopic ultrasonography. *Gastrointest Endosc*, 1998; 48:164.
3. Brugge WR, Lewandrowski K, Lee-Lewandrowski E, Centeno BA, Szydlo T, Regan S, del Castillo CF, Warshaw AL. Diagnosis of pancreatic cystic neoplasms: a report of the cooperative pancreatic cyst study. *Gastroenterology*, 2004;126(5):1330-1336.
4. Khalid A, McGrath KM, Zahid M, et al. The role of pancreatic cyst fluid molecular analysis in predicting cyst pathology. *Clin Gastroenterology Hepatology*, 2005;3:967-973.
5. Chari ST, Yadav D, Smyrk TC, et al. Study of recurrence after surgical resection of intraductal papillary mucinous neoplasm of the pancreas. *Gastroenterology*, 2002;123: 1500-1507

*Fellows' Corner is a New Section in Practical Gastroenterology  
open to Trainees and Residents ONLY.*

*Section Editors: C. S. Pitchumoni, M.D. and K. Shiva Kumar, M.D.*

Send in a brief case report. No more than one double-spaced page. One or two illustrations, up to four questions and answers and a three-quarter to one-page discussion of the case. Case to include no more than two authors. A \$100.00 honorarium will be paid per publication.

*Case should be sent to:*  
C. S. Pitchumoni, M.D.  
Chief, Gastroenterology, Hepatology  
and Clinical Nutrition  
St. Peter's University Hospital  
254 Easton Avenue, Box 591  
New Brunswick, NJ 08903

*or*  
K. Shiva Kumar, M.D.  
Ochsner Clinic  
Division of Gastroenterology  
1514 Jefferson Highway  
New Orleans, LA 70121  
E-mail: skumar@ochsner.org

**VISIT OUR WEB SITE AT PRACTICALGASTRO.COM**