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Pancreatic Lesion: Malignancy or Abscess?

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
Literature Search F
Funds Collection G

ABEF 1 Oleg Shulik
AEF 2,3 Yana Cavanagh
ADEF 1 Matthew Grossman

1 Department of Gastroenterology, Saint Joseph Medical Center, Paterson, NJ, U.S.A.
2 Department of Medicine, Trinitas Regional Medical Center, Elizabeth, NJ, U.S.A.
3 Seton Hall School of Health and Medical Sciences, South Orange, NJ, U.S.A.

Corresponding Author: Oleg Shulik, e-mail: olegshulikusa@gmail.com
Conflict of interest: None declared

Patient: Male, 67
Final Diagnosis: Pancreatic abscess
Symptoms: Jaundice • fatigue • anorexia • subjective weight loss
Medication: —
Clinical Procedure: Therapeutic endoscopic ultrasound guided fine needle aspiration • biliary stenting • endoscopic cholangiopancreatography
Specialty: Gastroenterology and Hepatology

Objective: Rare coexistance of disease or pathology

Background: Pancreatic abscesses are rare. They may be seen in patients with pancreatic inflammation or pancreatitis. Patients with pancreatic abscesses may have abdominal pain, fever, chills, and nausea/vomiting or an inability to eat. Presentation with alternate symptomatology is extremely unusual.

Case Report: A 67-year-old Asian male presented with painless, afebrile obstructive jaundice and a CA 19-9 of 1732 IU. He was found to have a 3.1×2.4 cm low-density lesion in the head of the pancreas and the right lobe of the liver, suggesting malignancy. Surgical management was considered, however additional diagnostic workup, including an endoscopic retrograde cholangiopancreatography (ERCP), was performed to complete staging of the presumed mass. A smooth, 3-cm-long, tapering stricture was found it the common bile duct. It was stented from the common hepatic duct to the duodenum. Subsequent endoscopic ultrasound (EUS) evaluation of the pancreatic head lesion revealed a drainable fluid collection that was aspirated and found to contain pyogenic material on pathology. The patient's symptoms resolved, and he was subsequently managed conservatively. A repeat ERCP confirmed complete resolution of the previously visualized cystic lesion. Interestingly, laboratory values showed concomitant normalization of CA 19-9 to 40 IU.

Conclusions: EUS-guided biopsy is not widely regarded as a required step before surgery, in the management of patients with pancreatic masses. It is generally reserved for determination of resectability or staging, and only utilized when clinically indicated. However, this practice may be associated with an inherently significant risk of misdiagnosis and subsequent unnecessary surgery, as illustrated by this case. Malignancy was initially suspected in our patient and surgical resection was recommended. Endoscopic measures were only pursued to complete staging. We propose that EUS-guided biopsy may be a crucial diagnostic step in the management algorithm of pancreatic lesions in selected patients. In addition, we encourage consideration of nonmalignant pancreatic collections in the differential diagnosis of pancreatic masses, especially when present in patients with diabetes mellitus.

MeSH Keywords: Abscess • Endoscopy, Digestive System • Pancreatic Neoplasms

Full-text PDF: http://www.amjcaserep.com/abstract/index/idArt/895621

Background

Pancreatic abscesses are rare and may be seen in patients with pancreatic inflammation or pancreatitis, particularly when complicated by pseudocyst formation; where pancreatic tissue necrosis, liquefaction, and bacterial infiltration may result in the formation of an abscess. Patients with pancreatic abscesses may have abdominal pain, fever, chills, and nausea/vomiting or may present with the inability to eat. Presentation with alternate symptomatology is extremely unusual.

Case Report

We report the case of a 67-year-old Asian male with a history of diabetes mellitus (DM), who presented with new-onset jaundice associated with fatigue and anorexia of 2 weeks' duration. The patient also noted subjective weight loss. He denied fever or chills and had no history of abdominal pain. His vital signs, white blood cell count and lipase levels were within normal limits. Of note, his CA 19-9 was elevated at 1732 IU and his liver function test results suggested obstructive jaundice, with a total bilirubin 17.2 g/dL, direct bilirubin 16.9 g/dL, and elevated transaminase levels. Computed tomography (CT) of the abdomen, with oral and intravenous contrast material, demonstrated intrahepatic and extrahepatic biliary duct dilation, gallbladder distention, chronic cholelithiasis, and a 3.1×2.4 cm low-density lesion in the pancreatic head, concerning for neoplasm (Figure 1). Additionally, there was a subtle low-density lesion in the right lobe of the liver.

Therapeutic endoscopic retrograde cholangiopancreatography (ERCP) demonstrated a smooth, 3-cm-long, tapering stricture of the common bile duct (Figure 2). The stricture was consistent with extrinsic compression by a lesion in the head of the pancreas. A biliary stent was extended from the common hepatic duct to the duodenum. Surgical evaluation concluded that the pancreatic lesion showed no evidence of vascular invasion and demonstrated adequate accessibility on imaging. Based on the characteristics of the lesion, our patient was deemed a surgical candidate, and pancreaticoduodenectomy via Whipple procedure was recommended. To complete staging of the mass, endoscopic ultrasound (EUS) with fine-needle aspiration (FNA) was performed.

EUS-guided FNA revealed an easily accessible cystic lesion in the head of the pancreas (Figure 3), which was subsequently aspirated in whole. Pathologic evaluation revealed the presence of inflammatory cells and bacteria; more consistent with a pyogenic fluid collection than with pancreatic malignancy. The patient was subsequently managed conservatively and a repeat CT scan within 1 week showed a significant decrease in the size of the uncinate process lesion, with no significant distention

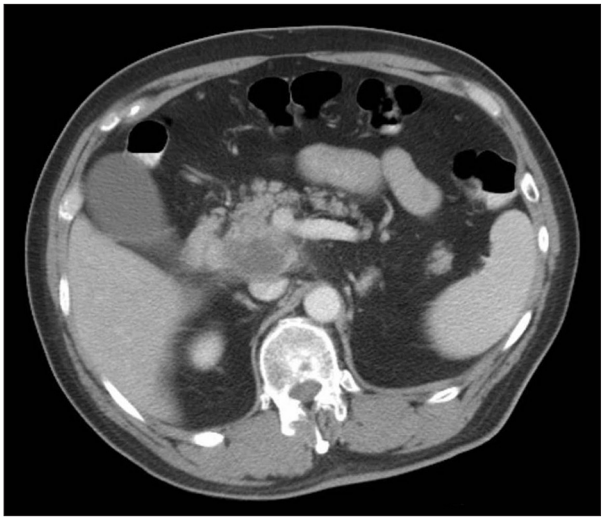

Figure 1. CT of the abdomen with oral and intravenous contrast demonstrating a 3.1×2.4 cm low-density lesion in the head of the pancreas, concerning for a pancreatic head neoplasm.

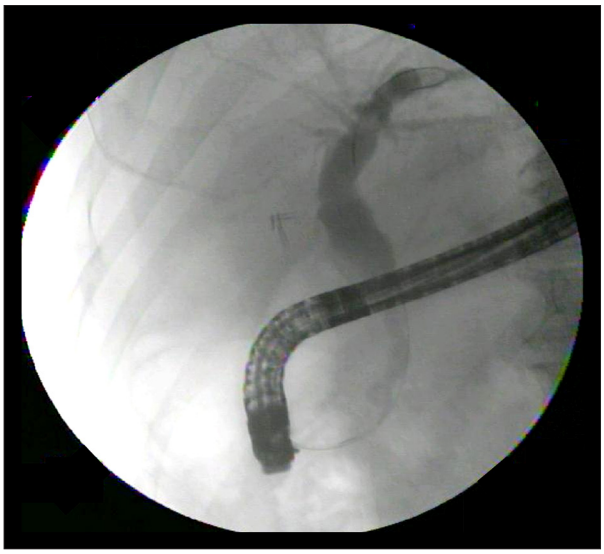

Figure 2. ERCP demonstrating a smooth, 3-cm-long, tapering stricture of the common bile duct.

of the pancreatic duct, as well as diminished distention of the biliary tree and the gallbladder (Figure 4). Repeat EUS/ERCP, 3 weeks after the initial intervention, confirmed complete resolution of the previously visualized cystic mass. Interestingly, laboratory values showed normalization of CA 19-9 to 40 IU.

Discussion

Pancreatic abscesses generally form as complications of pancreatitis [1]. Rarely, isolated pancreatic abscesses can be encountered as a sequela of tuberculosis (TB) [1]. Our patient had no

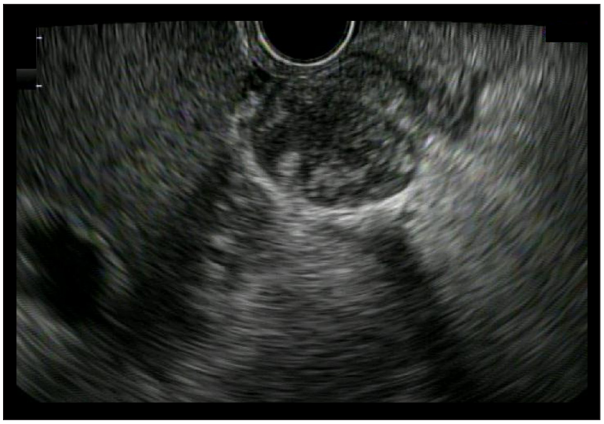

Figure 3. EUS revealing an easily accessible cystic lesion in the head of the pancreas.

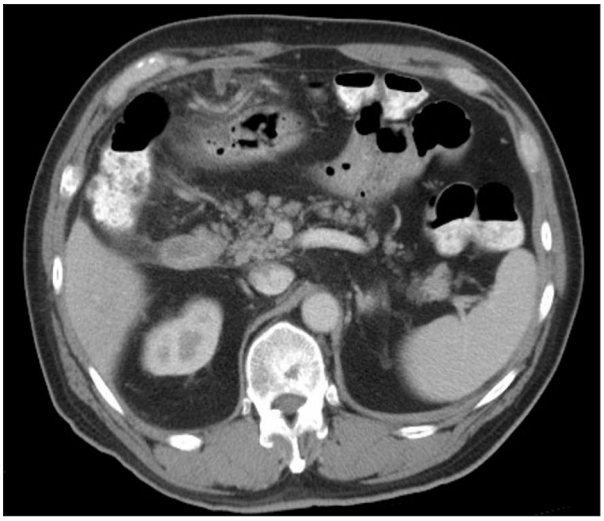

Figure 4. CT scan showing diminished size of the uncinate process lesion with no significant distention of the pancreatic duct.

history of pancreatitis and was not from an area endemic for TB. Additionaly, acid-fast staining of the aspirate was negative for TB. Pancreatic abscesses in other settings are exceedingly unusual. One possible contributing factor for such an atypical clinical scenario may be our patient's history of DM. Patients with DM are particularly prone to developing infections, including abscesses, without additional underlying etiologies [2,3].

Our patient's pancreatic abscess was initially presumed to represent a malignancy. Pancreatic malignancy is a devastating disease with poor survival rates. Even localized disease without lymph node involvement carries a 5-year survival rate of only 25% to 30% [4,5]. Surgery, as the only potentially curative measure, is implemented only in carefully selected patients [5]. If the patient is deemed a surgical candidate, surgery is preferentially pursued following diagnosis.

EUS-guided biopsy before surgery is not a step required by management algorithms in the treatment of pancreatic masses, particularly in patients without signs of systemic spread who have resectable masses that highly suggest malignancy [6,7]. Rather, EUS-guided biopsy is reserved for determination of resectability or staging, and only when clinically indicated. However, these approaches carry a significant risk of initial misdiagnosis and subsequent unnecessary surgery, given the lack of tissue diagnosis confirmation before surgery [7].

Conclusions

Our case illustrates the unusual initial presentation and evaluation of an elderly patient with a pancreatic abscess. Malignancy was suspected based on the patient's painless jaundice, accompanied by elevated CA 19-9 and imaging confirming a cystic mass in the head of the pancreas. EUS was performed for complete staging. Based on ultrasound characteristics, including echotexture and location, aspiration was performed (during the procedure) via a 19-gauge core biopsy needle. A pyogenic fluid collection was confirmed by the presence of inflammatory cells and bacteria in the aspirate. The mass demonstrated a remarkable resolution following the EUS-guided FNA, with accompanying normalization of CA 19-9.

In light of this case, we propose that EUS-guided biopsy or EUS-guided FNA can be a crucial step in the diagnostic algorithm of pancreatic lesions in selected patients. In addition, we encourage consideration of nonmalignant pancreatic fluid collection in the differential diagnosis of pancreatic masses, especially when present in patients with DM.

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