

Cystic Lesions of the Pancreas: Review Questions

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QUESTIONS

Choose the single best answer for each question.

Questions 1 and 2 refer to the following case study.

A 68-year-old woman who has had mild abdominal pain for 8 years visits her physician for evaluation. The patient has a concomitant history of multivessel coronary artery disease and severe chronic obstructive pulmonary disease. A computed tomography (CT) scan of the abdomen reveals a 6-cm lesion containing many small cysts in the distal body of the pancreas with a central stellate scar. Endoscopic ultrasonography confirms the presence of a complex mass consisting of multiple small cysts, none of which is larger than 2 cm. There is no evidence of local invasion or adenopathy.

1. Which of the following types of lesions does the patient most likely have?
 - A) Intraductal papillary mucinous tumor
 - B) Mucinous cystadenocarcinoma
 - C) Mucinous cystadenoma
 - D) Pancreatic pseudocyst
 - E) Serous cystadenoma
2. Which of the following is the best course of action at this time?
 - A) Distal pancreatectomy with splenectomy
 - B) Distal pancreatectomy without splenectomy
 - C) Endoscopic drainage of the lesion
 - D) Pancreatoduodenectomy (Whipple procedure)
 - E) Observation

3. A 52-year-old woman with a 3-month history of moderate abdominal pain has serum amylase and lipase levels that are twice the upper limit of normal. A CT scan of the abdomen reveals an 8-cm mass in the tail of the pancreas that contains several 2- to 3-cm cysts with irregular septations and does not involve the pancreatic duct. Results of a fine-needle aspiration guided by endoscopic ultrasonography disclose the presence of mucus within the cyst. Which of the following is the most appropriate next step in the treatment of this patient?
 - A) Distal pancreatectomy with splenectomy
 - B) Endoscopic drainage of the lesion
 - C) Pancreatoduodenectomy (Whipple procedure)
 - D) Surgical enucleation of the tumor
 - E) Observation
4. A 23-year-old man has an episode of severe acute pancreatitis associated with gallstones requiring a 10-day hospitalization and nasojejunal feedings. One month after discharge, he is feeling well and returns for a follow-up visit. He has some abdominal fullness but no other symptoms. A CT scan reveals residual inflammation in the pancreas with a 7-cm thin-walled cystic lesion arising from the pancreatic head, partially compressing the patient's duodenum. What type of lesion does the patient most likely have?
 - A) Ampullary cancer
 - B) Duodenal duplication cyst
 - C) Pancreatic adenocarcinoma with cystic transformation
 - D) Pancreatic pseudocyst
 - E) Serous cystadenoma

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5. A 53-year-old man has had 2 episodes of acute pancreatitis without clear cause in 1 year. He undergoes endoscopic retrograde cholangiopancreatography; results indicate a normal bile duct and no stones. His papilla appears to be bulging and extruding mucus into the duodenal lumen, and his pancreatic duct is dilated. A CT scan shows a 3-cm cystic mass in the pancreatic head arising from a side branch of the main pancreatic duct. What type of lesion does the patient most likely have?
- A) Cholangiocarcinoma
 - B) Intraductal papillary mucinous tumor
 - C) Mucinous cystadenocarcinoma
 - D) Pancreatic adenocarcinoma
 - E) Pancreatic pseudocyst

EXPLANATION OF ANSWERS

1. **(E) Serous cystadenoma.** Serous cystadenomas (ie, microcystic adenomas) are benign neoplastic lesions that commonly occur in the sixth and seventh decades of life and tend to occur more often in female than in male patients. Morphologically, these lesions typically appear as a cluster of small cysts with a characteristic central scar. They can arise in any region of the pancreas and are often asymptomatic, but they also can cause symptoms in a minority of patients because of mass effect.
2. **(E) Observation.** Serous cystadenomas have virtually no potential for malignant transformation; thus, observation is appropriate for this patient, given the lesion's classic appearance and her significant medical comorbidities. If there is uncertainty about the diagnosis, resection via distal pancreatectomy (which is always performed with splenectomy) could be considered, whereas a Whipple procedure would be performed for pancreatic head lesions. Endoscopic drainage of the cysts is contraindicated in this patient.
3. **(A) Distal pancreatectomy with splenectomy.** The patient has a cystic mucinous lesion of her pancreas. Differentiating between a benign mucinous cystadenoma (which can undergo malignant transformation) and a malignant mucinous cystadenocarcinoma is difficult, even when good imaging studies are obtained. Surgical resection is warranted, and because the lesion is located in the pancreatic tail, a distal pancreatectomy and splenectomy would again be the procedure of choice. Surgical enucleation alone would be inadequate for a possibly malignant cyst. Endoscopic drainage of the lesion is contraindicated in this patient.
4. **(D) Pancreatic pseudocyst.** The patient most likely has a pancreatic pseudocyst as a sequela of his episode of acute pancreatitis. Ampullary cancers typically present as solid, not cystic, lesions. A duodenal duplication cyst is possible but would unlikely be this large. The patient's male sex and age, respectively, make a serous cystadenoma and pancreatic cancer less likely possibilities.
5. **(B) Intraductal papillary mucinous tumor.** The patient has the classic clinical, endoscopic, and radiographic appearance of an intraductal papillary mucinous tumor, a lesion that can undergo malignant transformation. A cholangiocarcinoma would arise from the bile duct, not the pancreatic duct. A mucinous cystadenocarcinoma would not arise from a side branch of the pancreatic duct. Neither a pancreatic adenocarcinoma nor a pseudocyst would secrete mucus into the pancreatic duct.

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