

Recurrent Abdominal Pain in a Young Adult

Clinical Presentation

A 19-year-old male from Columbia presented to the emergency department with acute upper abdominal pain radiating to the back. Over the last 3 years, he had experienced several such episodes. He complained of weight loss of 12 kg in the past year and had recently started passing bulky and frothy stools. Investigations revealed elevated lipase (350 units/L) and blood glucose levels (random blood sugar: 280 mg/dL). Abdominal x-ray and CT scan abdomen was performed for further evaluation (Figs. 1A to C).

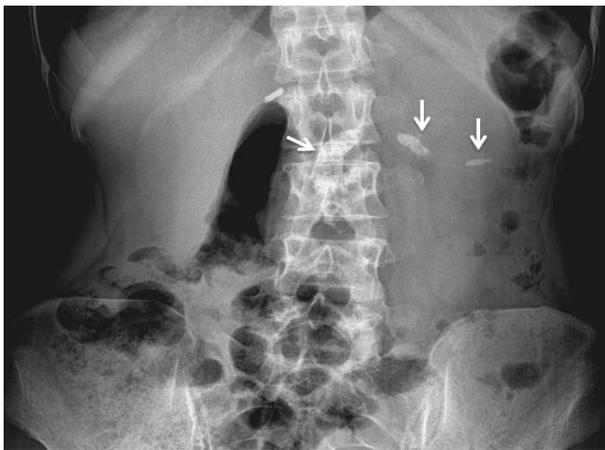


Fig. 1A. Abdominal radiograph.

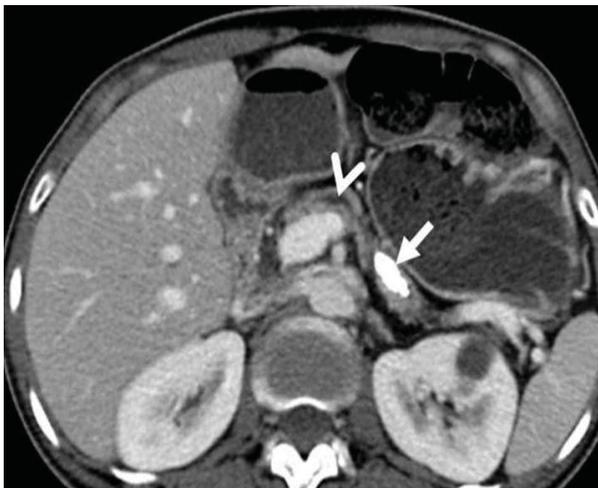


Fig. 1B. Contrast-enhanced axial CT image.

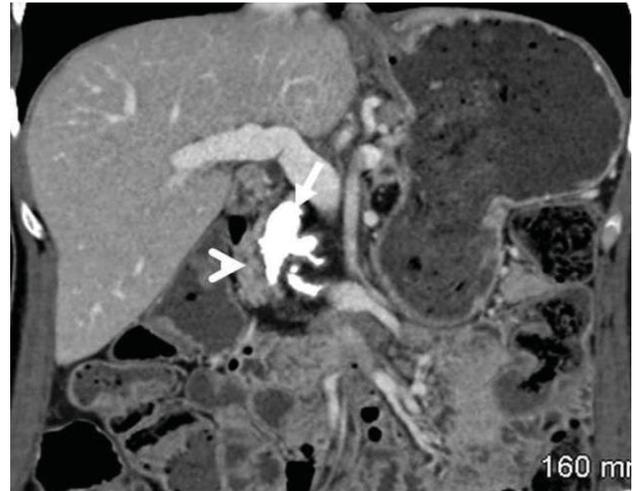


Fig. 1C. Contrast enhanced coronal CT images.

What is the diagnosis?

- (A) Tropical Calcific Pancreatitis
- (B) Multicentric islet cell tumor
- (C) Serous cystadenoma
- (D) Intraductal papillary mucinous neoplasm
- (E) Splenic artery calcification

Radiological Findings

Abdominal x-ray in Figure 1A revealed large intraductal calculi (arrows) in the pancreatic region. Contrast-enhanced CT scan in Figure 1B revealed a large discrete intraductal calculus (arrow) in the pancreatic tail. The main pancreatic duct was dilated (arrowhead) and the pancreas was atrophic. Coronal contrast-enhanced CT in Figure 1C again demonstrated the large branching intraductal calculi (arrow) and the pancreatic atrophy (arrowhead).

Discussion

Tropical pancreatitis is a chronic calcific non-alcoholic pancreatitis prevalent almost exclusively in tropical countries. Some of its distinctive features include young age at onset, association with malnutrition, rapidly progressive course with severe pancreatitis, the presence

Answer: (A)

of large intraductal calculi, and an increased risk of adenocarcinoma. In 1959, Zuidema first described tropical pancreatitis and since then, a number of cases have been reported in Asia, Africa, and South America.¹ The exact etiopathogenetic mechanisms still remain elusive; however, several hypothesis have been proposed including protein energy malnutrition, pancreatic ductal anomalies, food toxicities such as chronic cyanide toxicity from cassava, and possible genetic predisposition (SPINK 1 N34S mutation and CFTR mutation).²

The classic triad of presentation of this chronic relapsing form of pancreatitis is abdominal pain, maldigestion leading to steatorrhea and glucose intolerance or frank diabetes mellitus. The mean age of presentation is 12.5 years and there is a male predilection (male-to-female ratio, 1.6 to 5:1).¹ The majority of patients develop fibrocalculous pancreatic diabetes within a decade of onset. There is a strong association between tropical pancreatitis and adenocarcinoma of the pancreas, which in this case, most frequently occurs in the pancreatic body and tail. The characteristic imaging features include multiple large pancreatic calculi within a dilated pancreatic duct seen in approximately 80% of patients and pancreatic atrophy seen in half of the patients.³ The intraductal calculi in tropical pancreatitis are discrete, dense, and up to 5 cm in size.

The diagnosis is established by the presence of juvenile chronic relapsing pancreatitis in the absence of association with alcohol consumption and biliary tract disease along with the characteristic imaging and clinical findings described above. Management consists largely of supportive treatment for associated pain, diabetes, and steatorrhea.

REFERENCES

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