

Groove pancreatitis in a young adult male

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Abstract

Groove pancreatitis is a less recognized entity that can present in a clinical manner similar to pancreatitis. Ultrasonography, computed tomography, and magnetic resonance imaging all play an important role in its diagnosis. This case report illustrates the presentation of the same in a young male who recovered spontaneously without treatment.

Keywords

Groove pancreatitis; ultrasonography; computed tomography.

Introduction

Groove pancreatitis is localized chronic pancreatitis affecting the pancreaticoduodenal groove [1]. The clinical history is usually the same as chronic pancreatitis. The patient can present with vague abdominal pain and recurrent episodes of vomiting. The histopathological characteristic feature is fibrosis affecting this region. It must be differentiated from the more serious, adenocarcinoma of the pancreas.

Case Presentation

A thirty-year-old male presented with acute severe, non-radiating epigastric pain with no episodes of vomiting. He had history of alcoholism. Laboratory tests showed serum amylase of 195 U/L (mildly elevated). CA 19-9 and Carcinoembryonic Antigen (CEA) levels were within normal limit.

Plain and contrast enhanced CT of the abdomen was performed which revealed normal size and enhancement of body and tail pancreas. The pancreatic duct and CBD were not dilated. No parenchymal calcifications or intraductal calculi were seen. Gall bladder and liver appeared normal. There were inflammatory changes in form of fat stranding and fluid adjacent to the second part of the duodenum and medial to head & uncinate process of the pancreas. The fat stranding was seen extending to the subhepatic region. No obvious enhancing mass lesion was identified. A follow-up ultrasound one week later showed complete resolution of findings with normal appearance of the pancreaticoduodenal groove.

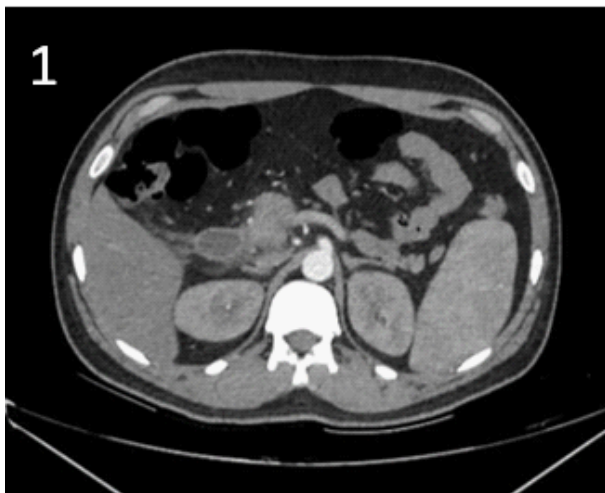


Figure 1: Fluid with fat stranding is seen around the second part of the duodenum on axial contrast enhanced CT image. Minimal fat stranding is seen extending to the sub-hepatic region.



Figure 2: CECT image showing normal appearance of pancreatic body and tail. The pancreatic duct is not dilated. There is no free fluid seen surrounding the body and tail of the pancreas.



Figure 3: Coronal CECT image shows inflammatory changes in the para duodenal region and pancreaticoduodenal groove. Few surrounding small lymph nodes were also seen.

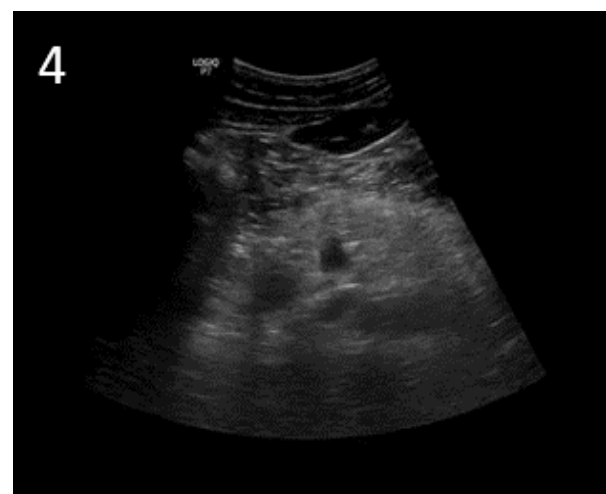


Figure 4: Follow-up abdominal ultrasonography image shows complete resolution of the above findings.

Discussion

The interruption of normal flow of pancreatic juice through the accessory duct of Santorini and the presence of heterotopic pancreatic tissue within the duodenal wall with the history of alcoholism is the etiology for groove or para duodenal pancreatitis. Duodenal wall thickening with intramural cystic foci can be seen in the pancreatic side in this condition. Scar tissue may be found involving the pancreaticoduodenal groove [1].

In contrast, an enhanced CT scan shows soft tissue may be seen between the duodenum and the pancreatic head, with delayed enhancement. Other imaging features include thickening of the duodenal wall and, occasionally, paraduodenal cysts. Fat stranding and fluid in the paraduodenal region reflect inflammatory changes. In the segmental form, there can be a hypodense non-enhancing focal lesion within the upper part of the pancreatic head that is difficult to differentiate from pancreatic carcinoma [2]. MR

imaging features include focal thickening of the second portion of the duodenum; enhancement of the second portion of the duodenum and cystic focus in the expected region of the accessory pancreatic duct [3].

Typical acute edematous pancreatitis, a differential for the above usually involves significant pancreatic parenchyma, does not appear centered in the groove and is typically characterized by peripancreatic fluid and fat stranding extending into the pararenal spaces [4]. Persistent abdominal pain is the most common reason for surgery in para duodenal pancreatitis. Duodenal stenosis with gastric outlet obstruction and failure to exclude malignancy are other indicators for surgery [5].

Conclusion

Knowledge of the classic imaging findings can help the radiologist avoid errors in the diagnosis of such infrequent pathologies. Cystic areas within the fibrotic mass or thickening of the adjacent duodenal wall favor the diagnosis of groove pancreatitis over malignancy, however, this is not always easy by imaging alone.

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Manuscript Information: Received: November 19, 2021; Accepted: February 14, 2022; Published: February 28, 2022

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Dr. DY Patil Medical College, Hospital & Research Center, India.

Citation: Prasad N. Groove pancreatitis in a young adult male. *Open J Clin Med Case Rep*. 2022; 1831.

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