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ACUTE PANCREATITIS: IMAGING SERIES IN TERTIARY CARE HOSPITAL

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ABSTRACT

Acute pancreatitis (AP) is an acute inflammatory state involving the pancreas and is a potentially life threatening condition. Contrast enhanced computed tomography (CECT) is imaging modality of choice for acute pancreatitis and its complications. We report imaging findings of common and few rare forms of acute pancreatitis like Groove pancreatitis and Emphysematous pancreatitis.

KEYWORDS: Rare forms, Acute pancreatitis, Groove pancreatitis.

INTRODUCTION

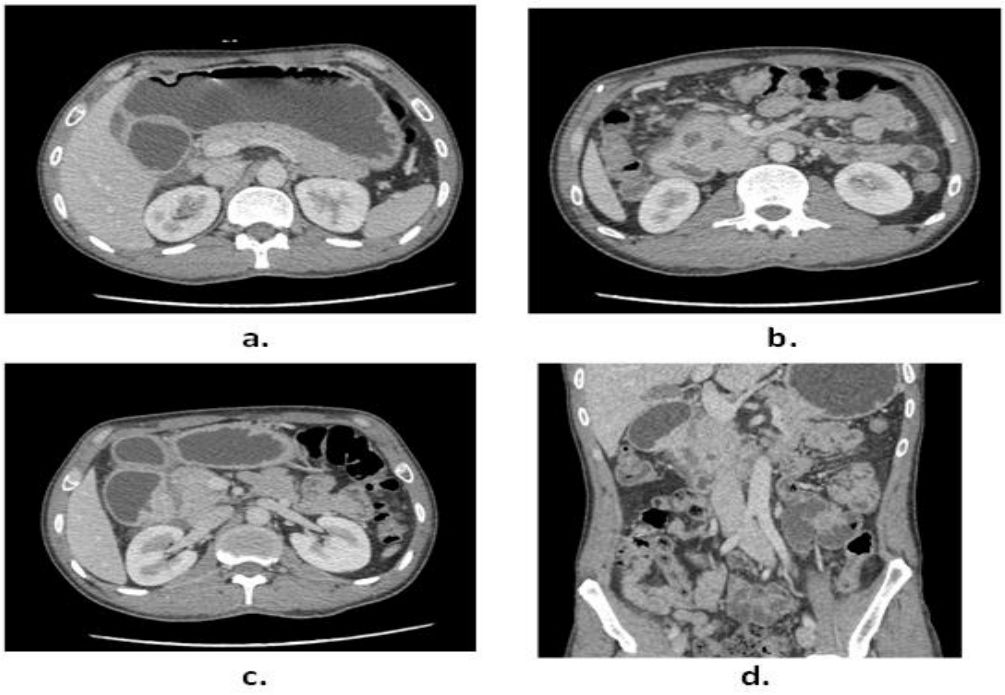
Majority of patients with acute pancreatitis (approximately 80% to 85%) will have the mild form, with a clinical course which has no complications. On the other hand, 15% to 20% will develop a complicated clinical course characterized by organ failure and or local complications.[1] Computed tomography for the assessment of local complications is most useful 48–72 hours after the onset of symptoms rather than at the time of admission. Groove pancreatitis and emphysematous pancreatitis are rare forms of pancreatitis. Radiologists and clinicians should be aware of these forms of acute pancreatitis and rare complications for timely treatment and interventions if required.

Study location: This was a tertiary care teaching hospital based imaging case series done in Department of Radio-diagnosis, Indira Gandhi Medical collage Shimla, Himachal Pradesh ,India.

Case No.1

37 years old male patient presented with complaints of pain abdomen. Patient was chronic alcoholic. Serum amylase and lipase values were less than three times of upper limit of normal. CECT findings were suggestive of groove pancreatitis.

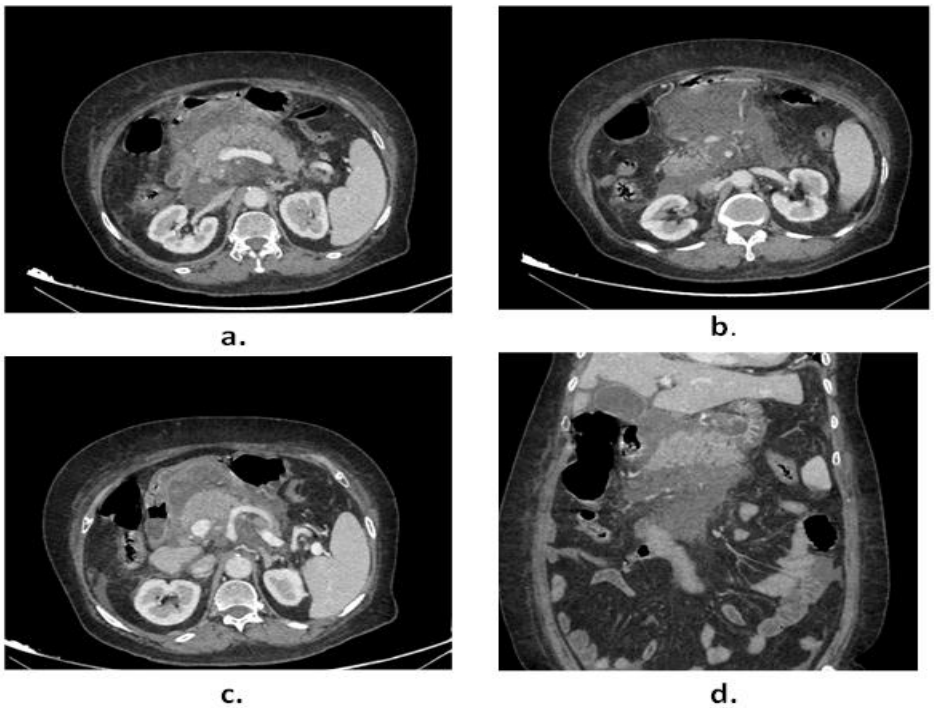
Groove pancreatitis is a rare form of chronic pancreatitis affecting the “Groove” between superior aspect of the pancreatic head, the duodenum and the common bile duct, was first described by Becker in 1973. On imaging it can be segmental or pure form. In pure form, there is ill defined fat stranding and inflammatory changes in the groove or frank soft tissue in the groove. There can be thickening of medial wall of duodenum and small cysts in duodenal wall or in the groove.[2] Segmental form is often obscured by the mass like enlargement of pancreatic head and very commonly confused with pancreatic head mass.



Axial (a -c) and coronal (d) images showing enlarged head of pancreas with hypodense lesions in head suggestive of cysts with thickening of 2nd part of duodenum and stranding in pancreatico-duodenal groove-Groove Pancreatitis.

Case No. 2

56 years old female patient presented with chief complaints of pain epigastrium. Serum amylase and lipase levels were raised i;e more than three fold of upper limit of normal suggestive of acute pancreatitis. CECT findings were suggestive of acute interstitial edematous pancreatitis (AIEP) with Modifijed CT severity index-4/10 suggestive of mild acute pancreatitis as shown below.

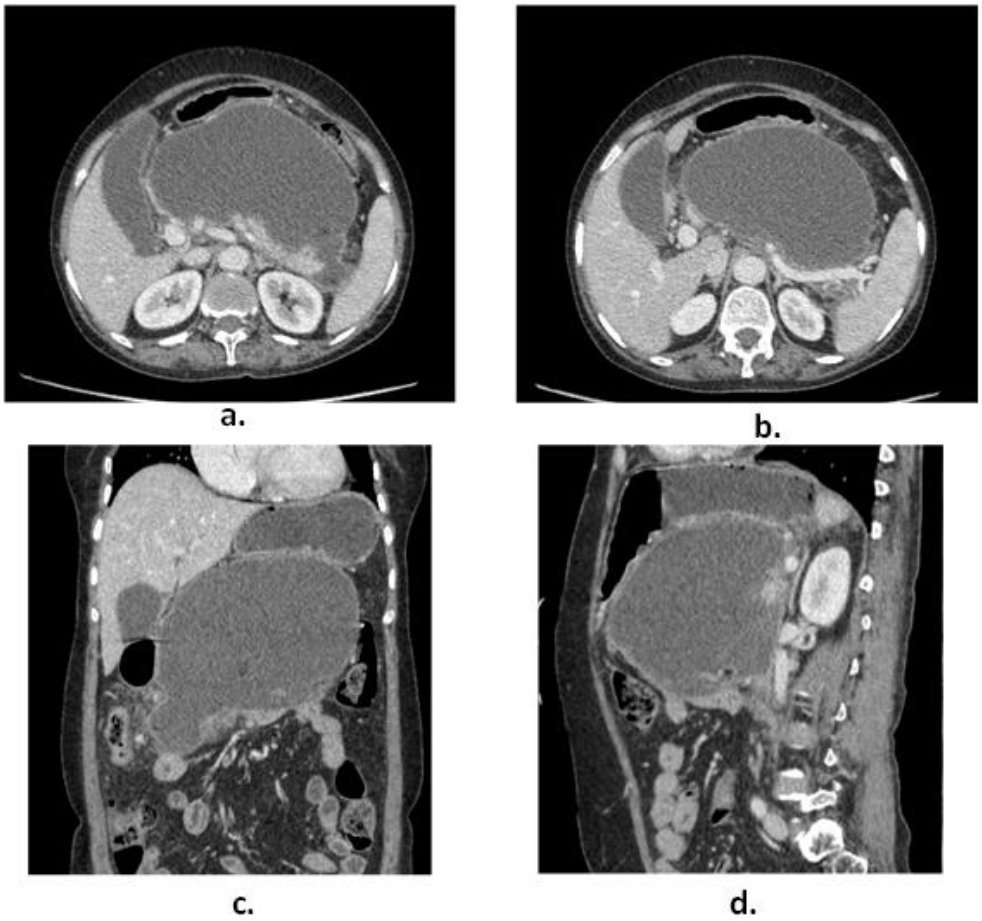


-Axial (a -c) and coronal (d) images showing bulky pancreas with surrounding hypodense collection suggestive of acute peripancreatic fluid collection(APFC)). No necrosis was present .Portal vein and splenic veins were normally opacified. No ascites / pleural effusion was present.

Case No. 3

50 years old female patient presented with first episode of pain abdomen but CECT shows findings of complication of acute pancreatitis in form of pancreatic pseudocyst. This indicated mild first episode of pancreatitis ignored by the patient. Serum amylase and lipase levels were raised at presentation**.**

Pancreatic pseudocyst are fluid filled oval or round collections with relatively thick wall. These develop four weeks after the attack of interstitial pancreatitis. They can be multiple and most commonly located in pancreatic bed. However, they can be found anywhere from groin to the mediastinum.[3]

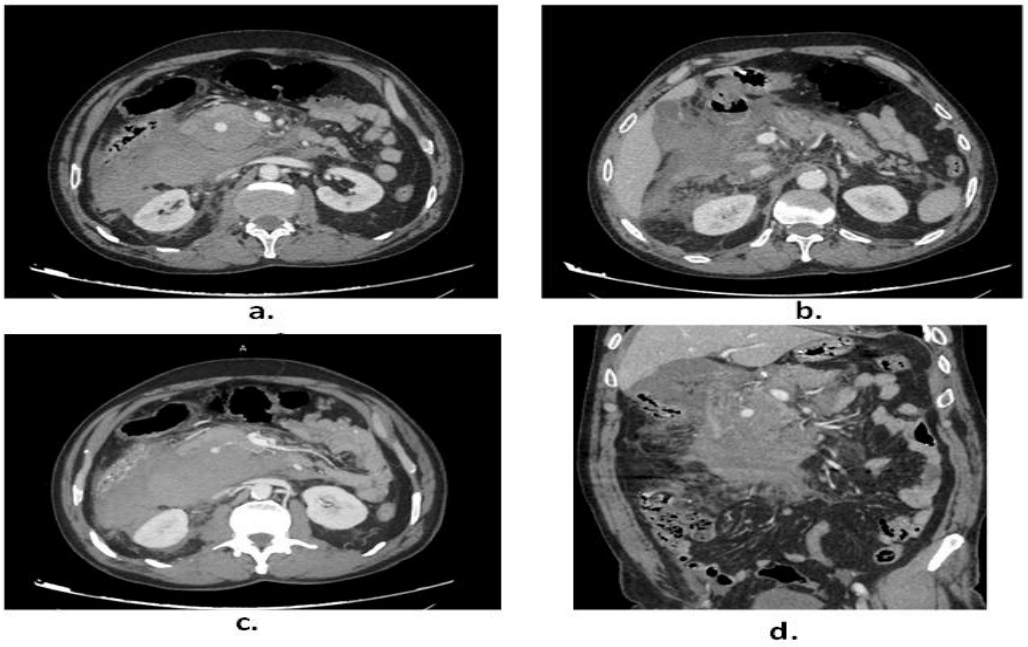


Axial (a,b) , coronal(c) and saggital (d) images showing a large well defined peripherally enhancing hypodense lesion with CT value of 15-20 HU in relation to body and tail of pancreas. No necrotic component seen. Imaging features are suggestive of pancreatic pseudocyst.

Case No. 4

48 years old male presented with severe pain epigastium with raised serum amylase and lipase. Imaging features were suggestive of pseudo aneurysm of gastro-duodenal artery.

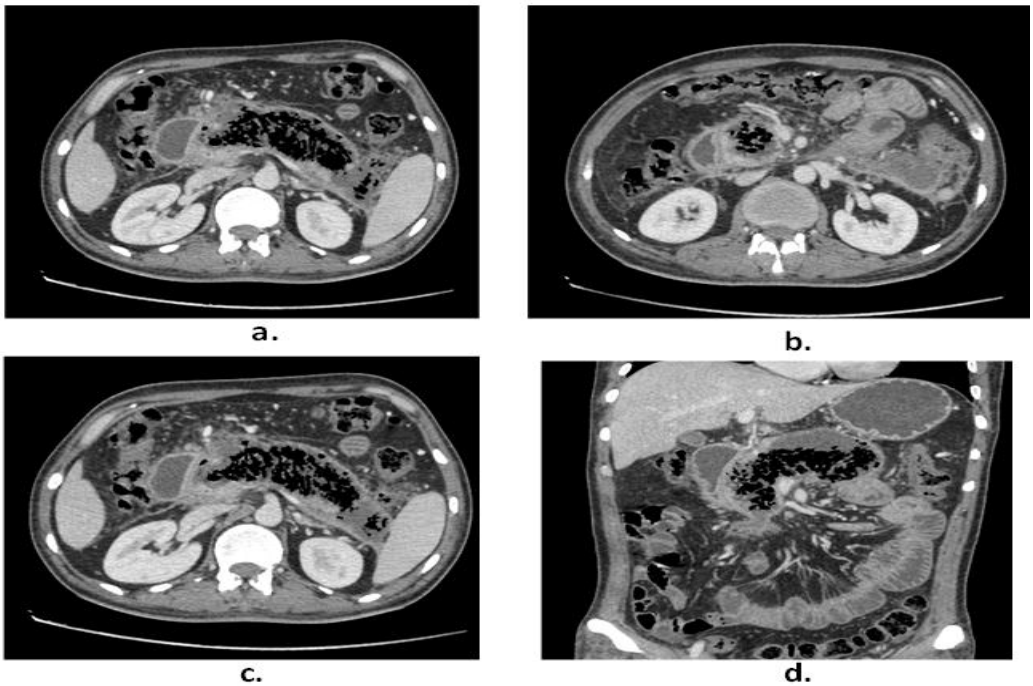
Although rare, direct vascular injuries are the most feared complications as they can cause rapid blood loss and clinical deterioration. Most commonly, these injuries lead to pseudoaneurysm formation, where blood collects in a contained peritoneal space or organ. Less commonly, there occurs arterial rupture into a pancreatic pseudocyst (converting it into a pseudoaneurysm) and rarely, arterial rupture may occur into the gastrointestinal (GI) tract.[4]



Axial (a,b) , MIP (c) and coronal (d) post contrast image shows enhancing focus with surrounding hyperdense content suggestive of ruptured pseudo aneurysm with surrounding hematoma. There is also presence of peri-pancreatic fluid collection with mesenteric inflammation. Case of acute pancreatitis with pseudo aneurysm of gastro-duodenal artery.

Case No. 5

Serum amylase and lipase of 38 years old patient alcoholic male with pain abdomen were 1120 U/L and 1210 U/L respectively. Imaging findings were of emphysematous pancreatitis. Emphysematous pancreatitis is a rare variant of severe acute pancreatitis characterized by gas formation within and around the pancreas. There are only scattered case reports in the literature about emphysematous pancreatitis, most of them dealing with radiological features. In a study by Mendez et al[5], 2% of patients had intrapancreatic air.



-Axial(a -c) and coronal (d) post contrast CT images showing non enhancing areas with extensive air foci with destruction of pancreatic parenchyma, involving whole of the pancreas with hypodense collection near the tail of pancreas- Emphysematous pancreatitis. Modified CT severity – 8/10 - severe pancreatitis.

DISCUSSION

Acute pancreatitis is divided into interstitial and necrotizing pancreatitis depending upon the presence or absence of pancreatic necrosis.[6] Fluid collection are classified as acute peri-pancreatic fluid collection (APFC) and acute necrotic collection (ANC). After four weeks, these fluid collections are named as pseudocyst and walled off necrosis respectively. Groove pancreatitis and emphysematous pancreatitis are rare forms of pancreatitis. Among there groove pancreatitis is very difficult to diagnose whereas emphysematous pancreatitis has a very grave prognosis often requiring necrosectomy. Direct vascular injuries are the most feared complications as they can cause rapid blood loss and clinical deterioration.

CONCLUSION

Considering the above imaging case series, we conclude that in addition to common imaging types, acute pancreatitis may present as rare forms such as groove pancreatitis and emphysematous pancreatitis. The diagnosis of groove pancreatitis is often challenging. Emphysematous pancreatitis is rare and often very severe, requiring intervention. So CECT is absolutely mandatory for correct early diagnosis and thereby reducing mortality and morbidity.

Conflicts of interest

None.

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None.

BIBLIOGRAPHY

1. Frossard JL, Steer ML, Pastor CM. Acute pancreatitis. Lancet, 2008; 371(9607): 143–52.
2. Itoh S, Yamakawa K, Shimamoto K et al. CT findings in groove pancreatitis: correlation with histopathological findings. J comput Assist Tomogr, 1994; 18: 911-915.
3. Karantanas AH, Sandris V, Tsikrika A et al. Extension of pancreatic pseudocysts into the neck: CT and MRI imaging findings. AJR Am J Roentgenol, 2004 3; 180(3): 843-5.
4. Sharma PK, Madan K, Garg PK. Hemorrhage in acute pancreatitis: should gastrointestinal bleeding be considered an organ failure? Pancreas, 2008; 36: 141-145.
5. Mendez G Jr ,Isikoff MB. Significance of intra-pancreatic gas demonstrated by CT: a review of nine cases.AJR Am J Roentgenol, 1979; 132: 59-62.
6. Theoni RF, The revised Atlanta classification of acute pancreatitis: Its importance for the radiologist and its effect on treatment. RSNA, 2012; 262(3): 751-764.