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CASE REPORT

CECT EVALUATION OF AN ISOLATED LONG SEGMENT IVC THROMBUS IN A PATIENT WITH ACUTE ON CHRONIC PANCREATITIS: A CASE REPORT

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ABSTRACT: Isolated Inferior vena cava (IVC) thrombosis is a rare vascular complication of Pancreatitis. Vascular complications associated with Pancreatitis are more commonly seen in peripancreatic vessels like Splenic, portal or mesenteric veins. We report a case of isolated IVC thrombosis in a patient with chronic pancreatitis on acute exacerbation. Awareness of this rare complication will help in early diagnosis & treatment as well as prevent further dreaded complication like pulmonary embolism.

KEYWORDS: CECT, IVC thrombus, pancreatitis.

INTRODUCTION: Systemic hypercoagulability associated with acute & chronic pancreatitis increases the risk of thrombosis in the peripancreatic vessels like splenic, portal or superior mesenteric vein.[1] Isolated IVC thrombosis, however, is a rare complication of Pancreatitis. Here we report a case of chronic pancreatitis with acute exacerbation, complicated by isolated long segment thrombosis in the IVC extending up to the both External Femoral veins along with a pseudocyst in the Pancreatic tail extending up to the sub diaphragmatic area & another small pseudocyst in front of the IVC at the level of Uncinate process.

CASE REPORT: A known alcoholic patient referred to our department for CECT Abdomen. The patient was having acute pain abdomen for approx.15 days. There was history of distension of abdomen & swelling of both lower limbs for approximately 9 days. Serum amylase was 879 U/L & Serum Lipase was 469IU/L, which were raised. Prothrombin time was 39.3 sec (Normal range 10-12sec), Serum total protein 6gm/dl (Normal 6.4-8.2gm/dl), Globulin (Glb) 4.1gm (Normal range, 2.5-3.5gm/dl) Albumin (Alb):1.9gm (Normal range 3.4-5gm/dl), alb/Glb: 0.5(Normal range 1.5-2.5). Platelet count was decreased, 90,000. Hemoglobin was 6.6gm dl. His Lipid & Renal profiles were within normal limit. CECT Abdomen axial image revealed irregularly dilated MPD (Fig: 1A & B yellow arrow) with a pseudocyst (Fig: 1A & B white arrow) in the tail of the Pancreas. A long segment non-enhancing filling defect is seen in the Infra renal IVC (Fig: 2 yellow arrow, thrombosed IVC, black arrow normal Aorta) extending up to the both external iliac veins (Fig: 3 yellow arrow) causing almost complete occlusion along with gross ascites (Fig 2: white stars).

DISCUSSION: Vascular complications of Pancreatitis can be both venous & arterial. Among the venous, thrombosis of the splenic vein is frequent & less commonly portal & superior mesenteric vein involvement is seen. Isolated IVC thrombosis is a very rare complication of both acute & chronic pancreatitis [1,2,3,4]. Hypercoagulable states, malignancy, venous stasis, focal compression & venous filters are the common risk factors for IVC thrombus [5]. The pathophysiology of IVC thrombosis in Pancreatitis include systemic hypercoagulability state along with direct vasculitis, release of

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pancreatic enzymes & inflammatory cytokines into the systemic circulation resulting in endothelial injury & dysfunction.[3] Another mechanism could be pseudocyst communicating with the pancreatic duct, causing erosion of the IVC leading to pancreatic juice entering into the IVC leads to formation of thrombus.[2,3,4]

Imaging of vascular complications of pancreatitis is best evaluated by Contrast enhanced Computer tomography (CECT) including CT angiography (CTA) & Magnetic resonance Imaging (MRI) for detection, localization, characterization i.e. malignant or benign as well as extension of the thrombus or hemorrhage, along with changes in the pancreas & other complications.[6,7,3,5,8] Malignant thrombus can be differentiated from benign or bland thrombus by the presence of post contrast enhancement in the filing defect, detection of contiguous mass & luminal expansion of the IVC.[9,5] There are some pitfalls of CECT in the imaging of IVC. Prominent pericaval fat above the caudate lobe gives the falls impression of Pseudolipoma due to volume averaging. It can be corrected by reformatted CT images. Admixture artifact which is a flow related artifact can be seen in CECT abdomen in images taken after a delay of 60-70 seconds of contrast administration in the infrarenal IVC due to mixing of contrast enhanced blood from the Renal veins with non-enhanced blood from the lower extremities & thus gives the misdiagnosis of a filling defect. Delayed images at 70-90 seconds will show uniform contrast enhancement.[5,8] MRI can be used as an alternative imaging modality. MRI gives more accurate delineation of thrombus including its age, proximal & distal extents, as well as any associated congenital IVC anomaly. Lack of radiation exposure also makes MRI a preferred imaging modality. Disadvantages includes cost & accessibility [9].Operator dependency & inability to accurately depict vascular anatomy in the presence of overlying bowel gas makes Doppler Ultrasonography (USG) is of limited value in these cases [7]. As in our case as the patient had gross swelling of the abdominal wall as well as both the legs USG reveled only features of pancreatitis with dilated MPD, gross ascites & pseudopancreatic cyst but could not detect IVC filling defect. Only in CECT abdomen we found out long segment filling defect in the infra renal IVC without luminal expansion & enhancement on post contrast study.

CONCLUSION: Hereby we report a case of chronic pancreatitis with acute exacerbation, complicated by isolated long segment thrombosis in the IVC & pseudocyst. Awareness of this rare complication will help in early diagnosis & treatment of it & will prevent further dreaded complication like pulmonary embolism.

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Figure 1A & B: CECT Abdomen axial image showing irregularly dilated MPD (Yellow arrow) with a pseudocyst (White arrow) in the tail of the Pancreas.

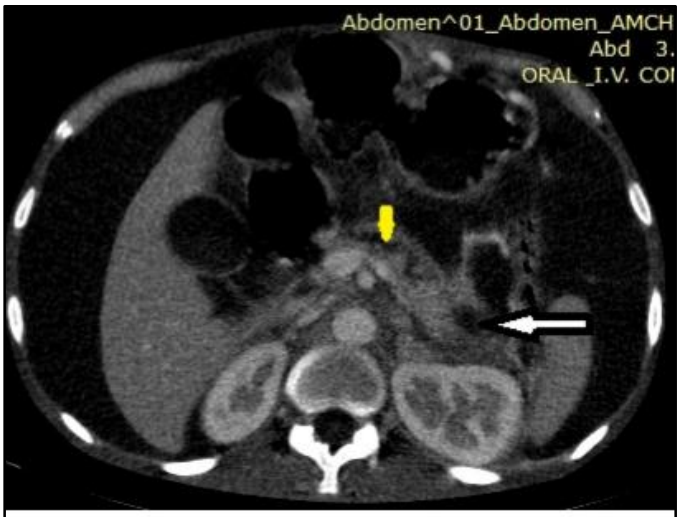

Fig. 1A

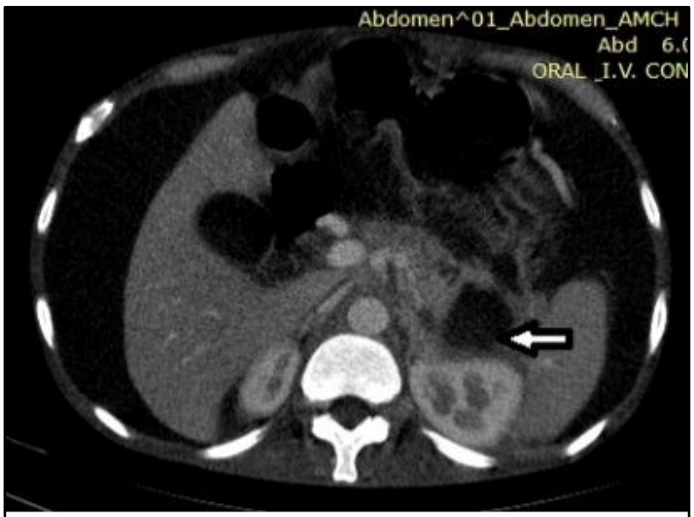

Fig. 1B

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Figure 2: CECT Abdomen axial image showing complete luminal occlusion of IVC (yellow arrow) & normally filled Aorta (black arrow) below the level of Kidneys along with gross ascites (white star).

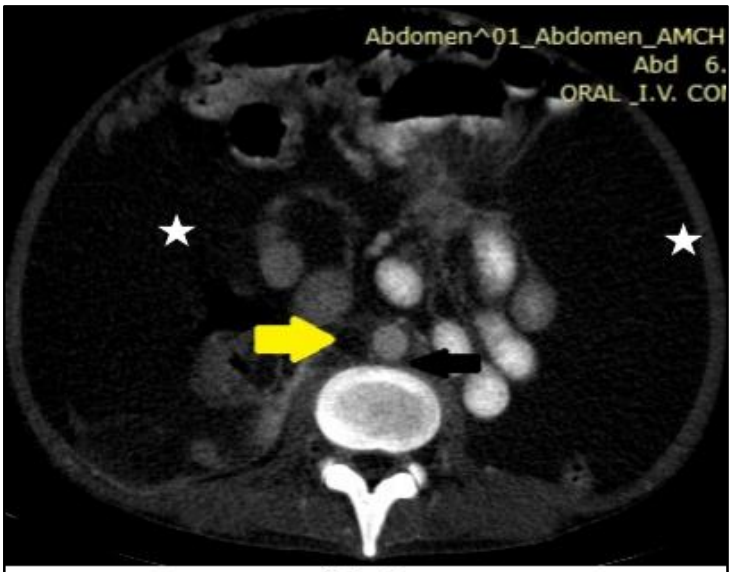

Fig. 2

Figure 3: CECT Abdomen axial image showing complete luminal occlusion of External Iliac Vein on right & partial occlusion on left (yellow arrow) & normally filled External Iliac arteries (white arrow).

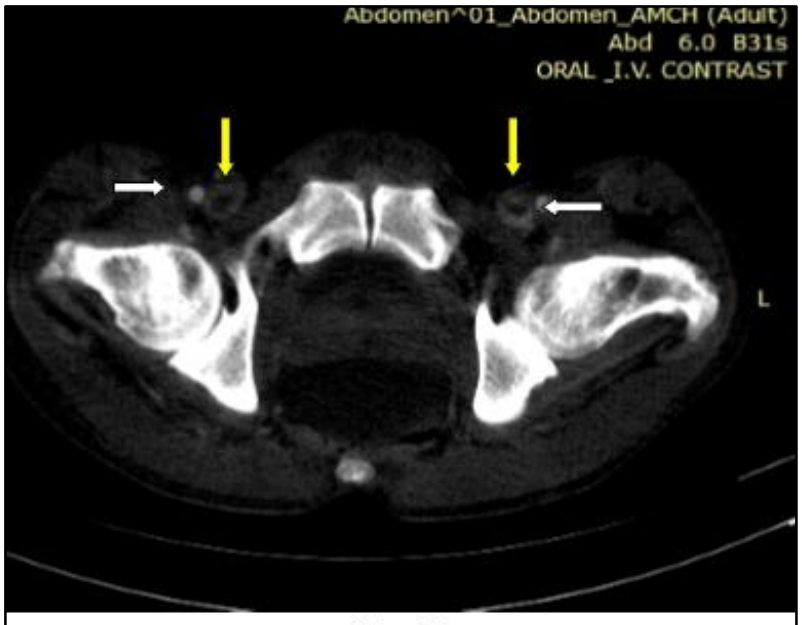

Fig. 3

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