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Acute on Chronic Pancreatitis Presenting as Buddchiary Syndrome with Extensive Venous Thrombosis - A Rare Complication

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Abstract: ***Pancreatitis is an inflammatory disorder of the pancreas manifests as acute pancreatitis (AP) and chronic pancreatitis (CP). These are associated with significant morbidity and mortality worldwide, particularly when complicated by vascular events. The incidence of vascular complications in chronic Pancreatitis ranges from 7% to 10%, while in acute pancreatitis it varies between 1.2% and 14.5% depending on the disease severity and duration. This is the case of 36 yrs male presented with pain abdomen since one and half month, Abdominal distension since one month, prominent veins over abdomen and back since one month. cect abdomen revealed acute on chronic pancreatitis with pseudocyst and extensive thrombus involving infra hepatic and suprahepatic IVC extending upto right atrium and infra renal IVC thrombus and 2D Echo shows Right atrial clot. Lower limb doppler shows bilateral deep venous thrombosis. Patient treated with percutaneous drainage of the collection and anti coagulation and on follow up now and stable***

Keywords: Pancreatitis, pseudocyst, venous thrombosis, right atrial clot

1. Introduction

Acute pancreatitis is a sudden onset inflammatory process, while chronic pancreatitis is characterized by progressive pancreatic fibrosis and irreversible damage to pancreatic parenchyma and ducts. Both conditions are associated with significant morbidity and mortality worldwide, particularly when complicated by vascular events[1]. Acute pancreatitis may range from mild, self-limiting inflammation to severe necrotizing pancreatitis. Chronic pancreatitis, in contrast, is marked by persistent inflammation, fibrosis, and loss of exocrine and endocrine pancreatic functions, leading to malnutrition, diabetes, and chronic pain[2]. Vascular complications in pancreatitis include venous thromboses such as splenic vein thrombosis, portal vein thrombosis, and superior mesenteric vein thrombosis, as well as arterial events like pseudoaneurysms and arterial thrombosis. Risk factors include necrotizing pancreatitis chronic alcohol use, smoking, advanced age, and comorbid conditions such as diabetes and cirrhosis have also been identified as contributing risk factors[3].

2. Case Report

A 36 years male carpenter by occupation brought with complaints of pain abdomen since 2 months, epigastric pain gradual onset, progressive, dullaching type, radiating all over abdomen associated with abdominal distension localised in epigastric and left upper quadrant and vomitings since one month multiple episodes initially non bilious later bilious, prominent veins over abdomen and back since one month. patient had complaints of pain abdomen one year ago underwent hospitalisation. Chronic alcoholic consumes 60g of alcohol per day since 15 yrs with last intake 45 days ago, chronic smoker for 15 pack years.

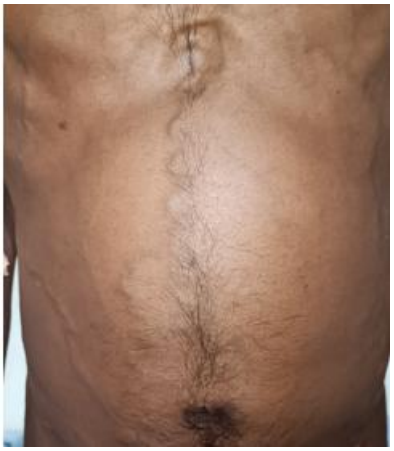

Figure 1

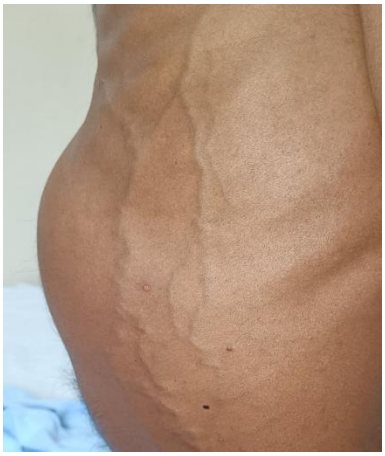

Figure 2

3. Investigations

Hemoglobin	7.7g/dl
wbc	19000/microL
Platlets	4.4 L/microL
Blood urea	41 mg/dl
S. creatinine	1mg/dl
Na/Cl/K	134/4.2/100 meq/l
T. Bilirubin	0.7mg/dl
D. Bilirubin	0.3mg/dl
AST/ALT/ALP	15/10/320 U/L
Total proteins	6.2mg/dl
S. albumin	2.8mg/dl
Amylase	422 U/L
Lipase	458 U/L
PTINR	1.2
APTT	30 Seconds

Total cholesterol/triglycerides	
LDL/HDL/VLDL	
S. Calcium	9.2 mg/dl
S. magnesium	4.2 mg/dl
HIV/HBSAG/HCV	Non reactive
JAK2V617 mutation	negative
Prothrombin II	negative
Factor V leidin mutation	negative
Protein C	60%
Protein S	65%
Anti thrombin III	70%

Ascitic fluid analysis:
Cell count: 20 cells (N: 20%, L: 80 %), SAAG: 1.5 (High SAAG), Protein: 2.6g/dl (High protein), Amylase/Lipase: 44/21 U/L, ADA: 18 U/L

Upper GI Endoscopy:
2 Prominent veins in lower esophagus
Large extrinsic impression in stomach
Mosaic mucosal pattern in fundus and body of stomach

CECT Abdomen and Pelvis:
Pancreas: Atrophic pancreas with dilated main pancreatic duct measuring 3.4mm

Evidence of large peripherally enhancing thick walled (maximum thickness 4.5mm) hypodense collection measuring 16.5 x 10.7 x 19.0cm in lesser sac causing narrowing of D3 segment of duodenum

Evidence of similar peripherally enhancing thick walled collection measuring 79 x 70 x 73mm noted anterior to tail of pancreas, anteriorly abutting greater curvature of stomach-Suggestive of Pseudocyst of pancreas.

IVC: Evidence of ill defined non enhancing hypodense (with few hyperdense calcific foci within) filling defect with thin streak of peripheral contrast opacification measuring 67 (CC) x 24 (T) x 40mm (AP) noted extending from hepatic IVC to right atrium with luminal expansion-Suggestive of acute near total thrombotic occlusion of intrahepatic & suprahepatic IVC.

IVC: Reduced caliber/reduced contrast opacification of infrarenal IVC, bilateral external iliac veins, common iliac veins with few calcific foci-Chronic thrombosis with partial recanalization
Gross ascites

Impression:
- Acute on chronic pancreatitis with pseudocyst of pancreas.
- Acute near total thrombotic occlusion of intrahepatic & suprahepatic IVC.
- Chronic thrombosis with partial recanalization of infrarenal IVC, bilateral external iliac and common iliac veins.

Gross ascites.

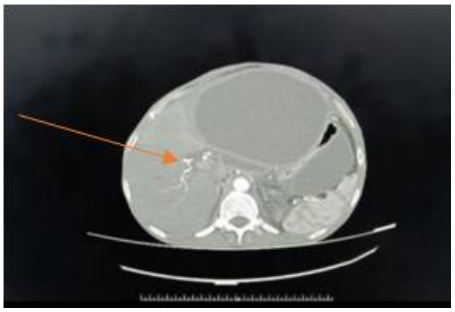

Figure 3

2DECHO:
Normal LV systolic and diastolic function, No RWMA
Right Atrial Clot measuring 2.7cm*2.7cm
MildTR/Mild PAH

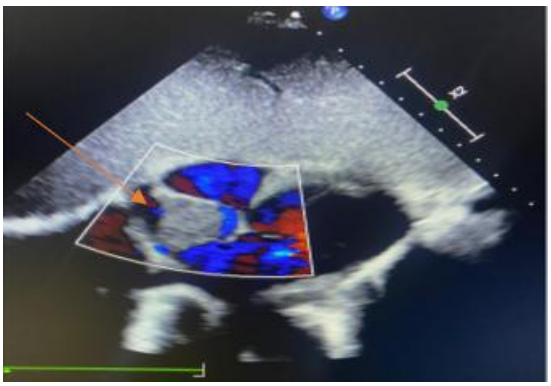

Figure 4

Bilateral Lower limb venous doppler:
Chronic thrombus with partial recanalization of bilateral common femoral vein, Superficial femoral vein, Popliteal vein.

Course at the hospital:
During hospital stay patient treated with IV fluids, Antibiotics, Anti coagulants, Diuretics and Percutanous drainage of the collection was done and patient discharged in stable condition with anticoagulants and diuretics and asked to follow up at psychiatry for alcohol abstinence. Patient came for follow up with symptomatic relief presemt and o fresh complaints.

4. Discussion

Vascular complications represent some of the most life-threatening manifestations of both acute and chronic pancreatitis. These include venous thromboses such as splenic vein thrombosis, portal vein thrombosis, and superior mesenteric vein thrombosis, as well as arterial events like pseudoaneurysms and arterial thrombosis. The incidence of vascular complications in Chronic pancreatitis ranges from 7% to 10%, while in Acute pancreatitis. It varies between 1.2% and 14.5% depending on the disease severity and duration[4].

Splenic vein thrombosis is the most commonly reported venous event, affecting up to 14% of patients with pancreatitis, followed by portal and mesenteric vein thrombosis[5]. On the arterial side, splenic artery pseudoaneurysms are the most frequent, comprising 30% to 50% of arterial events, and can rupture catastrophically if undiagnosed or untreated[6].

Mechanisms of Thrombosis include**,** Pancreatic inflammation can trigger a systemic prothrombotic state by releasing pancreatic enzymes and inflammatory mediators, causing endothelial injury and vascular stasis. Direct compression by pancreatic pseudocysts or local inflammation can impede venous outflow, particularly in the portal and hepatic venous systems. Chronic inflammation may exhaust plasma anticoagulant proteins increasing the risk of thrombosis[7].

Extensive thrombosis involving Intra hepatic and Suprahepatic IVC and RA clot and lower limb DVT is extremely rare. Only few case reports shows acute pancreatitis causing DVT of both lower limbs causing pulmonary thromboembolism[8].

5. Conclusion

Acute or chronic pancreatitis can rarely present with extensive venous and intracardiac thrombosis, such as Budd-Chiari syndrome and right atrial clot, even in the absence of genetic thrombophilia. Prompt recognition and aggressive management are vital for favorable outcomes.

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