Insights of a Spontaneous Rupture of Pancreatic Pseudocyst into Sub-Capsular Spleen : A Rare Occurrence - Case Report

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ABSTRACT

Introduction: This Case report highlights the radiological features of a unique complication of pancreatitis, presenting as Ruptured Pseudocyst into subcapsular spleen. Although rare, recognizing and addressing these complications can significantly improve patient prognosis and prevent life-threatening systemic issues.

Case report: A man in his fifties arrived at the emergency room complaining of intense stomach discomfort, fever, chills, and rigors. Computed tomography study revealed well defined collection of approximate volume~ 600 to 700 cc surrounding the spleen in the subscapular region with peripheral wall enhancement and few incomplete loculations on post contrast study. Another lesion in the pancreatic tail of size ~ 34 X 16 X 13 mm in antero-posterior, transverse and cranio-caudal diameter respectively was noticed in close contact with splenic hilum.Impression of acute on chronic pancreatitis with inflammatory pancreatic cyst in the tail of the pancreas with possibility of pancreatic cyst rupture into the subcapsular spleen was considered. Percutaneous drainage of the perisplenic subcapsular collection was done. Patient showed good recovery. The biochemical findings showed high levels of amylase and lipase.These findings confirmed that it was the ruptured Pseudocyst in close proximity to tail of pancreas into subcapsular spleen.

Conclusion: In this case, anatomical proximity of pancreatic tail pseudocyst to splenic hilum allowed us to make this diagnosis of ruptured pseudocyst into subcapsular spleen. It is important to recognize and report such complications. By reporting this, patient's prognosis is improved. Also critically grave systemic issues can be prevented.

Keywords: Ruptured Pancreatic Pseudocyst, sub-capsular spleen, subcapsular splenic collection, percutaneous drainage.

INTRODUCTION

The aetiology of pancreatic pseudocyst ranges from acute to chronic pancreatitis. Compared to non-alcohol aetiology, it is more common in alcohol-induced pancreatitis.

The pancreatic pseudocyst is a small, concentrated fluid collection surrounded by a fibrous tissue wall devoid of epithelium that contains amylase and other pancreatic enzymes.[1][2]

The clinical manifestations range from no symptoms to severe systemic complications.

8 to 70% of acute pseudocysts show spontaneous resolution. However, only 3% of chronic pseudocyst show spontaneous resolution [3].

Complications of pseudocyst are massive haemorrhage into the pseudocyst, sepsis , splenic infarctionand splenic vein thrombosis, rupture, portal or splenic vein pseudoaneurysm and portal hypertension secondary to vascular complication[4]. Here we are reporting a rarer complication of ruptured pancreatic pseudocyst into subcapsular spleen.

CASE REPORT

A man in his fifties arrived at the emergency room complaining of intense stomach discomfort, fever, chills, and rigors. He had history of acute pancreatitis with endoscopic stenting of the main pancreatic duct, 2 months back.

On examination, the patient had yellowish discolouration of eyes, guarding rigidity with abdominal distention.

Lab investigations showed raised total leukocyte count with raised serum amylase and lipase levels. The patient was also hepatitis B positive.

Imaging findings showed, well defined collection of approximate volume~ 600 to 700 cc surrounding the spleen in the subscapular region. The collection shows peripheral wall enhancement in post contrast study with few incomplete loculations. The outer margin of the spleen appeared irregular at places. The spleen was however, normal in size and density.

There was also fat stranding along the lesser omentum, greater omentum and in the perisplenic region.

The pancreatic duct showed stent within the main pancreatic duct. Fat stranding was seen around the region of body and the tail of pancreas.

The pancreatic tail showed hypodense lesion of size~ 34 X 16 X 13 mm in antero-posterior, transverse and cranio-caudal diameter respectively. The lesion was in close contact with splenic hilum. The splenic vein was compressed at places. Few collaterals were noted at lesser and greater curvature of the stomach.

The gall bladder was contracted. Air was noted in the gall bladder lumen and the cystic duct.

The common bile duct was dilated with air extending into the left sided intrahepatic biliary radicles (pneumobilia).

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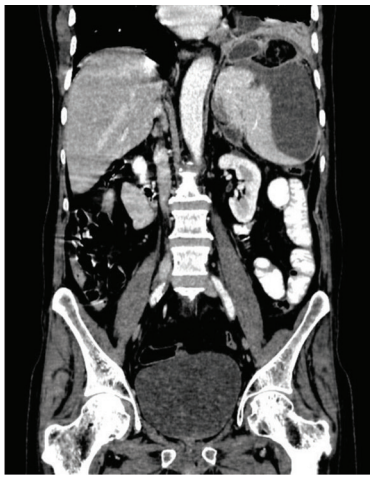

Figure-1: Contrast Coronal CT section shows subcapsular splenic collection.

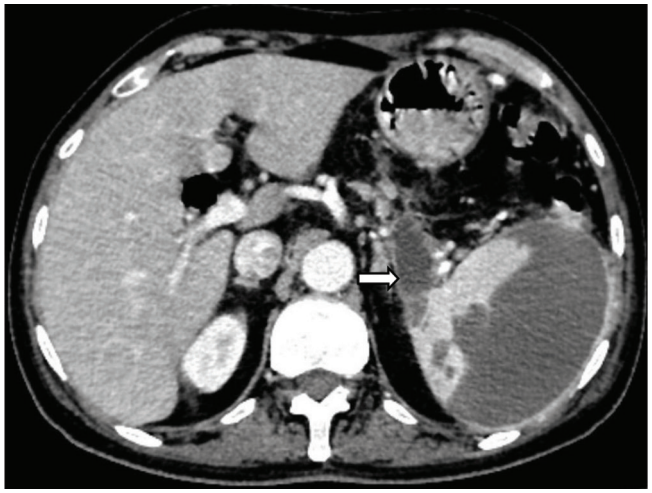

Figure-2: Contrast Axial CT section shows peudocyst (Arrow) in tail of pancreas in close proximity to hilum of spleen and subcapsular splenic collection.

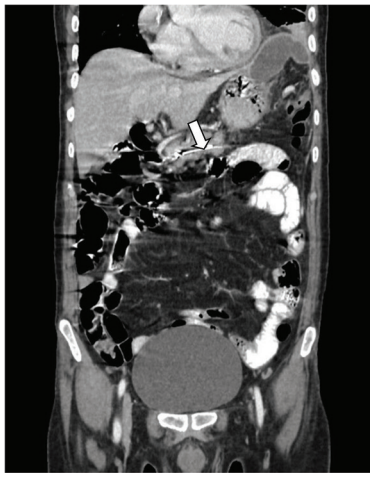

Figure-3: Coronal CT section shows MPD stent in situ(Arrow).

The findings were concluded as acute on chronic pancreatitis with inflammatory pancreatic cyst in the tail of the pancreas with possibility of pancreatic cyst rupture into the subcapsular spleen with mild compression of splenic vein and collaterals along lesser and greater curvature.

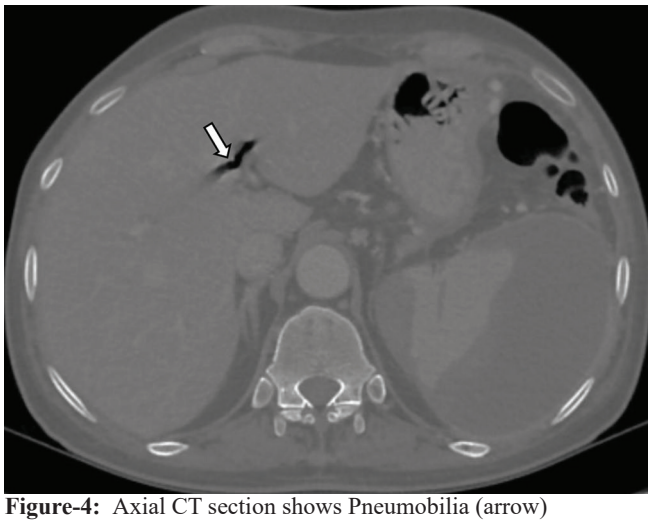

Figure-4: Axial CT section shows Pneumobilia (arrow)

Percutaneous drainage of the perisplenic subcapsular collection was done. The biochemical findings showed high levels of amylase and lipase, confirming the suspicion of pseudocyst rupture into the sub-capsular spleen.

DISCUSSION

The main strength of our work is the rapid diagnosis and rapid treatment permitting fast recovery of patient. The main weakness of our work is the short follow up period.

Splenic complications are reported in patients who had pancreatic tail necrosis[7] . Due to the closeness in anatomical location of the pancreatic tail and splenic hilum, pancreatitis may cause difficulties in the splenic parenchyma. Theoretical explanations for it include the extension of the pseudocyst upto the spleen, rupture of splenic hilar arteries, and splenic parenchyma erosion induced by pancreatic enzyme leaking [8] Usually, the pseudocyst show spontaneous drainage into adjacent portal vein, splenic vein or a hollow organ. Seldom it can rupture into the peritoneum and cause peritonitis[5].

Less than 5% of the pseudopancreatic cysts show spontaneous rupture. Depending on the organ involved, Discomfort is one of the indicators of a digestive system rupture, disappearance of the mass, vomiting, diarrhoea, and melaena [6].

The surgical treatment is drainage of the cyst to the GI tract, through a cystojejunostomy, cystogastrostomy, or cystoduodenostomy[1].

However, a ruptured cyst requires drainage either via percutaneous route of peritoneal toilette.

Splenic and perisplenic complications are less encountered with 2.2% in previously noted cases [7].Rupture into subcapsular location of spleen exclusively has not been reported yet. Though Subcapsular hematomas has been reported. Spontaneous rupture into subcapsular spleen is confirmed by percutaneous drainage and biochemical findings.

CONCLUSION

Spontaneous pancreatic pseudocyst rupture exclusively into subcapsular spleen is a rare occurrence. Whenever pseudocyst is in the region of tail of pancreas with subcapsular collection

in spleen ,this diagnosis should be kept in mind. As this can prevent grave consequences and help to improve patients prognosis.

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