

Case Report

A case report of portal vein thrombosis and common bile duct compression in the patient having pseudocyst of pancreas and its management by percutaneous trans-hepatic biliary drainage

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ABSTRACT

Pancreatitis is a systemic disease owing to release of inflammatory mediators and digestive enzymes. Acute pancreatitis is sudden inflammation of the pancreas. Alcohol and gallstones are main cause of acute pancreatitis. Chronic pancreatitis is the persistent inflammation and irreversible fibrosis associated with atrophy of pancreatic parenchyma. There are various complications associated with pancreatitis such as strictures, pancreatic necrosis, pseudo-cyst of pancreas, pancreato-cutaneous fistulas, venous thrombosis, arterial aneurysm in various arteries around pancreas etc. Common bile duct (CBD) strictures are a common complication in patients with advanced chronic pancreatitis and have a variable clinical presentation ranging from an incidental finding to overt jaundice and cholangitis. CBD strictures occur as a consequence of recurrent acute inflammatory episodes which may ultimately result in a periductal fibrotic stricture. CBD can be compressed as a result of extrinsic compression by large pseudocyst or aneurysm. The diagnosis is mostly made during investigations for abdominal pain but jaundice may be the initial clinical presentation. The jaundice is typically transient but may be recurrent with a small risk of secondary biliary cirrhosis in longstanding cases. Vascular complications in chronic pancreatitis are rare. Venous thrombosis is the most common complication of pancreatitis affecting venous system. It occurs as consequences of an inflammatory mass in head of pancreas, and splenic vein thrombosis occurs in association with chronic pancreatitis in 4-8% cases. Present case is a case of acute pancreatic collection in head of pancreas with aneurysmal small bleeding causing complete CBD compression and extensive venous thrombosis involving superior mesenteric vein, portal vein, splenic.

Keywords: CBD strictures, Icterus, Pancreatitis, Portal vein thrombosis, Pseudo-cyst of pancreas, PTBD

INTRODUCTION

In present ongoing era there are various causes of pancreatitis, out of which alcohol and gallstones are most common causes. Alcohol is more common in males and gall stones are more common in females. There are various complications associated with pancreatitis such as strictures, pancreatic necrosis, pseudo-cyst of pancreas, pancreato-cutaneous fistulas, venous thrombosis, arterial aneurysm in various arteries around pancreas etc.¹ In presenting case, patient developed pseudocyst of pancreas with portal vein thrombosis which causes

complete CBD obstruction.² There are multiple options available to treat complications of pancreatitis but here as the patient is old and general condition is poor, minimal options are tried for patients benefit and good health.

CASE REPORT

A 50-year-old male patient presented to the emergency department of SMIMER, hospital complaining of abdominal pain for 1 hour and 1 episode of vomiting. On arrival his pulse=100/min, BP=100/70 mmHg, SpO₂ 96% on RA. On per abdomen examination, he had right upper

quadrant pain and a lump in epigastric region which was palpable of approximately 10×5 cm. On inspection there were visible veins on upper abdomen. Patient was conscious and oriented to time place and person. Patient's blood reports were sent and ultrasonography of abdomen was done. Blood reports had raised liver enzymes i.e., total bilirubin=7.3 mg/dl, direct bilirubin=4.6 mg/dl, indirect bilirubin=2.7 mg/dl, SGOT/PT=142/70 mg/dl, ALP=391 U/L. Ultrasonography of abdomen showed a heterogeneous collection near head and body of pancreas probably pseudocyst formation (480 cc). After 3 days, lump increased in the size and clinically icterus was visible on whole body so blood reports were repeated and it should total bilirubin=24.6 mg/dl and also patient had 2 to 3 episodes of fever 101 F. For further evaluation CECT abdomen (Figure 1) with angiography was done and it showed portal and splenic vein thrombosis with aneurysm, portal hypertension, acute oedematous pancreatitis. On 4th day bilirubin went up to 35.6 mg/dl. Then under USG guidance under fluoro PTC gram 8F catheter placed in biliary duct and percutaneous trans-hepatic biliary drainage (PTBD) was done (Figure 2) and it drained bile and which relieved patient's icterus and bilirubin dropped to 17.8 mg/dl on 6th day. The patient became restless with altered sensorium on same day of PTBD insertion, so he inadvertently pulled out PTBD which got broken nearly 3 cm from skin entry but then stent was intact and it was draining bile (Figure 2) and thus stoma bag was kept (Figure 3). Heparin prophylaxis once daily was given for portal vein thrombosis. Now second time PTBD was done after 17 days of 1st PTBD with removal of previous broken stent and angio-embolization of right hepatic artery from left brachial artery was done using colloidal glue to arrest bleeding from right hepatic artery into pancreatic collection. And PTBD improved patients' jaundice and bilirubin. Further biliary stenting done after 18 days, in which proximal end is kept in CBD and distal end in duodenum. Then reports were repeated after 2 days in which bilirubin was 3.0 mg/dl with pseudocyst collection of 90 cc. Patient was well and walking in ward.

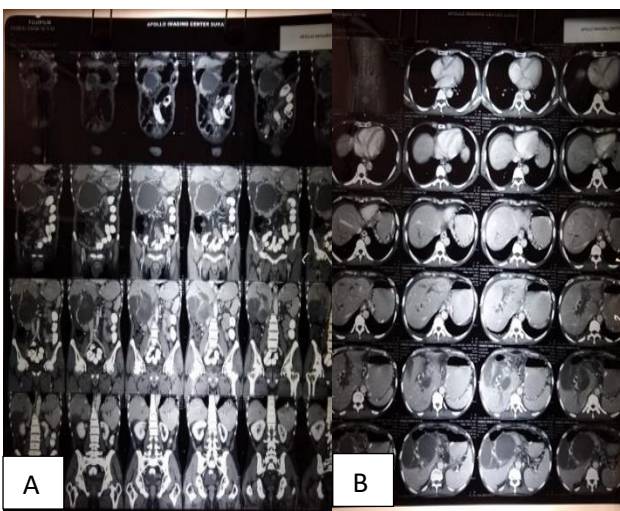


Figure 1: (A, B) CECT abdomen.



Figure 2: Broken PTBD stent.



Figure 3: Stoma bag kept over broken PTBD stent.

DISCUSSION

This case report describes patients who presented to institution with complain of abdominal pain and vomiting and was diagnosed with pseudocyst of pancreas with portal vein thrombosis and complete CBD compression with icterus.¹ CBD obstruction was due to small bleeding veins in wall of pseudo cyst which subsided dramatically after angioembolization. The current treatment options for obstructive jaundice include surgical, interventional therapy and endoscopic therapy.² Percutaneous trans hepatic drainage was done in view to resolve icterus and decrease bilirubin values. PTBD is a percutaneous therapeutic procedure which leads to drainage of obstructed bile duct system. In this patient PTBD resolved icterus by decompression of biliary tree and angioembolization resolved pseudo-cyst by stopping bleeding into it. Surgery is primarily applied in cases of extra hepatic bile duct obstruction.³ Surgery may be used to relieve jaundice in addition to removing lesions and peripheral vascular invasion. In this patient who has a poor general condition and elderly which is not suitable to undergo surgery. Interventional therapy is the preferred treatment for the patients with above conditions. At the time of diagnosis, 90% of patients with obstructive jaundice may benefit from palliative treatment only. The objective of palliation is to relieve jaundice-related

symptoms, preventing cholangitis.⁴ In recent years, with the development of technology and medical materials, PTBD and stenting have exhibited good efficacy, with few complications and reduced associated pain, and are emerging as crucial palliative treatments for obstructive jaundice.⁵ In addition to prolonging patient survival time, PTBD and stenting are able to improve quality of life.



Figure 4: after PTBD removal, PT resolved icterus.

It's a single center, single surgeon performed study so no control groups available for comparison and the result is totally based on the outcomes and performance of the patients in regular follow ups.

CONCLUSION

Portal vein thrombosis and bleeding vessel in pseudo cyst is rare vascular complication of pancreatitis whose management is still not standardized. Conservative management is best option in majority of cases of portal

vein thrombosis, surgical interventions leads to major complication and depends on patients general and comorbid conditions. In present case PTBD and stenting to decompress the biliary system and angio-embolization of bleeding vessel was able to markedly improve hepatic function, without serious complications, and thus represent a potentially safe and feasible management option for such patients.

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