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Title: Pancreatic Endotherapy in management of rare case of Pancretopericardial fistula post chronic pancreatitis – A case report

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ABSTRACT

Acute or chronic pancreatitis has been known to be associated with complications like Pseudocyst, pancreatic necrosis, splenic vein thrombosis, pancreatic ascites and pleural effusion. Rarely do we find presentation of patient with cardiac tamponade and gross pericardial effusion due to pancreaticopericardial fistula. Here we report a case of pancreaticopericardial fistula complicating alcoholic chronic pancreatitis who has been managed successfully by ERCP and stenting. Surgery was avoided which is generally considered as treatment of choice.

Keywords: pancreaticopericardial,fistula,endotherapy,pancreatitis
INTRODUCTION

Acute or chronic pancreatitis has been known to be associated with complications like Pseudocyst, pancreatic necrosis, splenic vein thrombosis, pancreatic ascites and pleural effusion. Cardiac tamponade is a rare complication of chronic pancreatitis and presentation with this complaint is extremely rare.

CASE REPORT

A 38 year young male presented to the emergency department with history of severe breathlessness, chest pain and abdominal pain since 2 days. His symptoms had gradually progressed over 1 month with dyspnea progressing from NYHA class 1 to class 4 [New York heart association classification]. He also complained of chest tightness, abdominal fullness and dull aching abdominal pain. He was admitted in MICU [medical intensive care unit] and was found to be having hypotension, tachycardia, pallor, tachypnea. Examination revealed muffled heart sounds, elevated JVP, normal respiratory examination. Abdominal examination revealed epigastric tenderness and shifting dullness. His hemoglobin was 9.8 gm/dl, TLC 15,000, Serum creatinine 0.7 mg/dl, BUN 8 mg/dl, random sugar 84 mg/dl, T protein 5.6 gm/dl and S albumin 2.9 gm/dl and normal serum electrolytes. Serum bilirubin, SGPT, SGOT, prothrombin time with INR were normal. Bed side X-ray chest revealed water bottle shape heart which was suggestive of pericardial effusion. Urgent pericardiocentesis was performed and 1000 ml fluid was removed. Next day patient again complained of dyspnea, CT thorax revealed gross pericardial effusion with collapse of right atrium and right ventricle. Patient was retapped and percutaneous drain was kept. Ultrasound abdomen showed mild to moderate ascites, heterogenous pancreas with 2×2 cm pseudocyst and prominent pancreatic duct. Gastro medicine opinion was
sought. His past history revealed multiple episodes of severe abdominal pain for
which he was admitted twice, and managed conservatively. Patient was consuming
1-2quarters of country liquor/day. S amylase, ascitic and pericardial fluid amylase
levels and CECT abdomen was advised. Ascitic fluid analysis revealed low SAAG
with high protein, and ascitic and pericardial fluid amylase were high (2500-
3000IU/L). CECT abdomen revealed dilated MPD (main pancreatic duct),
pseudocyst in head region extending upto epigastrium and communicating with
collection under dome of diahphragm and with pericardial effusion.(FIG-2 A,B) ERCP
was performed, pancreaticogram revealed pancreatic dye leaking into posterior
mediastinum and communicating with pericardial cavity thus forming an effusion.
Pancreatic sphincterotomy was done and 5Fr×12 cm stent was deployed bridging
the leak (FIG-1 A,B,C,D). Post procedure NJ was inserted, antibiotics and octreotide
was continued .Post stenting patient improved with gradual disappearance of ascites
and pericardial effusion with no further tapping required. Patient was subsequently
discharged and stent removed after 2months during which repeat pancreatogram
was performed which showed no leak. Patient is in our follow up and is doing well.

DISCUSSION
Pancreatitis either acute or chronic is associated with various complications viz
pseudocyst (5-25%), splenic vein thrombosis (4-5%), splenic artery pseudoanerysm,
(5-20%), common bile duct obstruction (8-10%), duodenal stenosis (4-5%) and
internal and external fistulas. Pleural effusion and ascites as sequelae of post acute
or chronic pancreatitis are common. Pancreatic leak into serosal cavity resulting into
pleural effusion and ascites occurs in 3-5% of patients with chronic pancreatitis and
6-14% of patients with pancreatic pseudocyst[1]. Postulated mechanisms in case of
chronic pancreatitis are either due to pseudocyst communication with the serosal
cavity or due to duct disruption. Pancreaticopleural and pancreaticopericardial fistula
are considered as rare complications of chronic pancreatitis. Mechanism of
pericardial effusion is not clear. Earlier it was believed to be due to pancreatic
enzymes induced chemical pericarditis and pleurisy. Cameron proposed hypothesis
that anterior duct disruption produces effusion and ascites while posterior duct
disruption communicates retroperitoneally with posterior mediastinum to produce
pericardial effusion[2]. Our patient presented with progressive dyspnea and chest pain with intermittent abdominal pain. It was only when the pericardial fluid was tapped and analysed and found to have elevated amylase concentrations, pancreatic origin of the pericardial fluid was suspected.

Initial pericardial tapping, antibiotics, NJ feeding and octreotide followed by surgery in form of lateral pancreaticojejunostomy has been considered the appropriate protocol[3]. Another report described an adult patient who underwent an elective Roux-en-Y pancreatico-jejunostomy without complication and remained symptom-free two years after surgery[4]. In our case we have successfully managed the case with pancreatic endotherapy. To the best of our knowledge there are no published reports of successful endotherapy in pancreaticopericardial fistula. Even in recent case report pancreaticopericardial fistula was not responded to endotherapy[5]. The long term result of such management is not known and needs to be validated. The success of endotherapy depends on passing the guidewire across the leak, absence of tight strictures and deployment of appropriate length stent.

CONCLUSION

Pancreaticopericardial fistula presenting with cardiac tamponade is a rare presentation of alcoholic chronic pancreatitis. Conventionally surgical options in form of lateral pancreatojejunostomy is considered treatment of choice. Our case has been managed successfully by ERCP and pd stenting which could be an effective option thus avoiding surgery.

AUTHOR’S CONTRIBUTIONS

Vikas Pandey Main contributor to conception and design, Drafting the article, Final approval of the version to be published
Nilesh Pandav  - Substantial contributions to conception and design, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Kaivan Shah  – Substantial contributions to conception and design, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Meghraj Ingle  – Substantial contributions to conception and design, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Aniruddha Phadke  – Substantial contributions to conception and design, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Prabha Sawant  Substantial contributions to conception and design, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published.

REFERENCES


FIGURE LEGENDS

Figure 1: Upper panel (A & B) shows pancreatopericardial fistula during ERCP. C. Arrow shows guidewire in the pancreatic duct. D. Arrow pointing towards pancreatic stent bridging the leak

Figure 2: CT scan showing pericardial effusion B. Dilated pancreatic duct suggestive of chronic pancreatitis

FIGURE
Figure 1: Upper panel (A & B) shows pancreatopericardial fistula during ERCP. C. Arrow shows guidewire in the pancreatic duct. D. Arrow pointing towards pancreatic stent bridging the leak.

Figure 2: A CT scan showing pericardial effusion. B. Dilated pancreatic duct suggestive of chronic pancreatitis.