

Spontaneous Pancreatico-Cutaneous Fistula: a Rare Case Report and Review

Jaykar R.D.¹, Jadhav S.C.², Agrawal S.G.^{3*}

¹Associate Professor, ²Assistant Professor, ³Resident Doctor

Department of General Surgery, Dr. V.M. Government Medical College, Solapur, Maharashtra, INDIA.

*Corresponding Address:

sumeetonly0@gmail.com

Case Report

Abstract: Background: The frequency of pancreatic fistulas is low. Only 0.4% of patients develop this complication after an acute episode. However, the incidence of these complications increases in patients with other complications after acute pancreatitis—4.5% in patients with pancreatic pseudocysts (4.5%) and 40% in patients with infected necrosis after surgical debridement. Treatment is conservative for most patients.¹ **Case:** We report a case of Spontaneous Pancreatico-cutaneous (Pancreatico-umbilical) Fistula in a 30 year male complaining of pain in abdomen in epigastrium, lump in abdomen and spontaneous discharge of pus from umbilicus followed by disappearance of lump. Patient was known case of Acute Pancreatitis with pseudocyst formation since 4 months. Abdominal ultrasound contrast CT scan abdomen revealed. “Severe acute pancreatitis with focal necrosis in tail region with multiple peripancreatic collection. Multiple organised intra-abdominal infective collection. Organised collection in anterior abdominal wall with sinus tract formation in umbilical region”. Review CT scan abdomen with Fistulogram revealed “Small fistulous tract in midline extending from umbilicus and communicating with peritoneal cavity”. The patient was treated conservatively with higher antibiotics and patient recovered uneventfully and discharged.

Keywords: Spontaneous; Pancreaticocutaneous; Pancreaticocumbilical; Fistula; pseudocyst; acute pancreatitis; focal necrosis

Introduction

A pancreatic fistula (PF) is an abnormal connection between the pancreas and adjacent or distant organs, structures, or spaces. The main cause is leakage of pancreatic secretions from disrupted pancreatic ducts due to pancreatic disease, trauma, or surgery. Pancreatic fistula can be internal or external. Internal fistulas occur most commonly as complication of chronic or acute pancreatitis. External fistulas typically follow surgery or percutaneous pseudocyst drainage. Spontaneous external fistulas are rare phenomenon. The author reports a rare case of low output spontaneous pancreaticocutaneous fistula treated conservatively.

Case Report

A 30 year male presented with complaints of pus discharge from umbilicus since 2 days, pain and lump in epigastrium since 4 to 6 months. Patient was a diagnosed case of Chronic Pancreatitis with pseudocyst formation.

Patient had undergone ERCP guided pancreatic duct stenting for pancreatic duct disruption. Patient was chronic alcoholic since 10 years. Patient was normotensive, non-diabetic, and thin built on general examination. Abdominal examination revealed a lump in epigastric region firm, tender, with smooth surface, poorly defined margins, immobile, roughly measuring 12X10 cm. Evidence of pus discharge from umbilicus was present.



Figure 1: External opening of pancreaticocutaneous fistula over umbilicus

Patient was evaluated with baseline workup hemogram, platelet count, serum creatinine, blood urea level, serum electrolytes, blood sugar, bilirubin, serum proteins, transaminases level were within normal limit. White blood cell count was raised up to 15,300/uL. Serum amylase and fluid amylase levels from umbilical site were raised. Pus from umbilical opening was sent for culture and sensitivity which showed growth of Enterobacter coli sensitive to Imipenem. Ultrasound of abdomen revealed “Acute pancreatitis with infective fluid collection in peripancreatic, pericolic gutter, perihepatic, perisplenic region and pelvis”. Chest X-ray revealed blunting of both costophrenic angles suggestive of bilateral pleural effusion. X-ray fistulogram revealed fistulous tract with contrast seen spilling into the abdominal cavity.

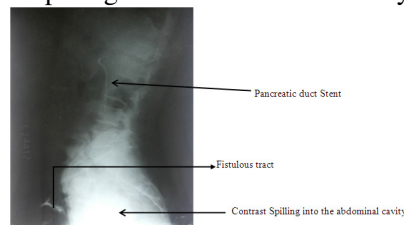


Figure 2: X-ray lateral abdomen with Fistulogram

Contrast CT scan of abdomen revealed “Bulky and heterogeneously enhancing body and tail of pancreas suggestive of Acute pancreatitis. Focal necrosis in tail of

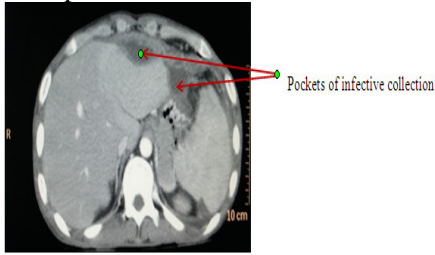


Figure 3a: Contrast enhanced CT abdomen

pancreas. Post ERCP stent in situ. Multiple pockets of non-enhancing infective collection 6X3.8cm in lesser sac and tail region”

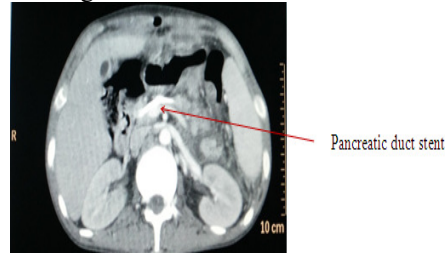


Figure 3b: Contrast enhanced CT abdomen

CT fistulogram revealed “1.8cm fistulous tract in anterior abdominal wall with external opening at umbilicus. Contrast was seen entering peritoneal cavity and outlining bowel wall”

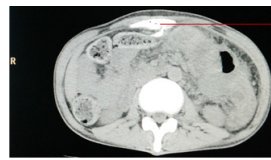


Figure 4a: CT fistulogram

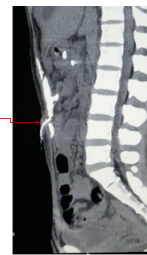
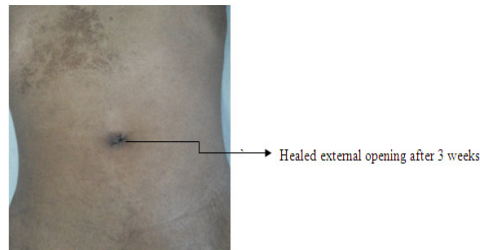


Figure 4b: CT fistulogram

Patient was managed conservatively, nil per oral and naso-gastric tube aspiration of gastric contents, parenteral nutrition, I.V. fluids, electrolyte correction, broad spectrum anti-biotics, analgesics, anti-secretory agents like somatostatin analogue i.e Inj. Octreotide. Gradually over a period of 3 weeks the fistula output reduced to nil, and patient recovered uneventfully. Patient was then discharged with oral pancreatic enzyme supplementation.



Discussion

Pseudocysts occur in up to 10% of patients with acute pancreatitis, and in 20 to 38% of patients with chronic pancreatitis. Pseudocysts may become secondarily infected in which case they become abscesses. Pseudocyst can perforate and cause peritonitis. Erosion of a pancreatic pseudocyst into an adjacent hollow viscus can result in a pancreatic-enteric fistula. The most common site of communication is transverse colon and splenic flexure.² Complications occur in 10% cases of pseudocyst and the four main complications of pseudocyst are infection, rupture or internal fistulation, bleeding and mass effect. Infected pseudocyst can be drained by percutaneous drainage with the risk of persisting external pancreatic fistula, or by internal drainage to the stomach or small bowel. Rupture into the peritoneum leads to pancreatic ascites and can be a

dramatic presentation with acute abdominal pain and rigidity from chemical peritonitis.³ Pancreatic fistula usually follows operative trauma to the gland or may occur as a complication of acute or chronic pancreatitis.⁴ An external pancreatic fistula is, by definition, drainage of pancreatic fluid through an abdominal wound or drain tract persisting for more than 7 days. The most common cause is complication of pancreatic surgery or percutaneous catheter drainage of pseudocysts. Sepsis, electrolyte disturbances, and skin excoriation are common in high output fistulas (more than 200 ml per day). The management is initially conservative, as spontaneous closure can be expected in the majority of cases, especially in low-output fistulas. Imaging by means of fistulogram and CT scan may be useful. Initial therapeutic measures include total parenteral nutrition, electrolyte balance and replacement, skin protection, and

administration of the somatostatin analogue (octreotide). Refractory cases should be subjected to endoscopic retrograde pancreatography (ERP) and surgery. Distal pancreatectomy is reserved for fistulas of the tail. Fistulas originating from the head, neck, or body are usually treated by Roux-en-Y pancreatico-jejunostomy to the fistulous tract itself and some cases require proximal pancreaticoduodenectomy.⁵ Spontaneous closure of an external pancreatic fistula is unlikely when a concomitant downstream obstruction of the pancreatic duct inhibits downstream flow. Early endoscopic retrograde pancreatography (ERP) and stent insertion may enhance fistula closure in these patients.⁶

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