

Uncomplicated Spontaneous Rupture of Pancreatic Pseudocyst: A Case Report

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Pancreatic pseudocysts are a common clinical problem as a sequel of acute pancreatitis, with a prevalence of 6 to 18.5%. About 8% to 70% of cases regress spontaneously. Spontaneous perforation and/or fistulization occurs less than 3% of these cases. These are usually associated with life threatening bleeding requiring emergency attention. We present a case of spontaneous resolution of pancreatic pseudocyst, admitted for symptomatic pseudocyst and planned for cystogastrostomy. However, intraoperatively no cyst was found, post-operative CT- scan showed small but remnant cyst which didn't caused any symptoms and was then the case managed conservatively. Patient recovered well without any major complications and the cyst resolved later when repeat imaging was done on follow up.

Keywords: pancreatitis, pseudocyst pancreas, spontaneous rupture, uncomplicated rupture.

Pancreatic pseudocysts are a common clinical problem after acute pancreatitis, with an estimated prevalence of 6 to 18.5%. In chronic pancreatitis its prevalence is higher, ranging from 20 to 40%.¹ Pancreatic pseudocysts are encapsulated fluid collection having non-epithelized wall, usually appearing after 4-6

weeks following pancreatitis. Pancreatic pseudocysts are caused by pancreatic ductal disruption following increased pancreatic ductal pressure, either due to stenosis, calculi, or protein plugs obstructing the main pancreatic ductal system or as a result of pancreatic necrosis following an attack of acute pancreatitis. It may present as complete

asymptomatic or with serious complication. About 8% to 70% of all pseudocysts regress spontaneously.¹ Spontaneous perforation and/or fistulization occurs in less than 3% of these pseudocysts.² Spontaneous rupture of the pseudocysts can occur into the stomach, duodenum, biliary tract, renal collecting system, colon and bronchial tree.³ These are usually associated with life threatening bleeding requiring emergency treatment. Spontaneous rupture of the pancreatic pseudocyst into the surrounding hollow viscera is rare intitiy and when do occurs, is associated with life-threatening bleeding requiring urgent attention. However, uncomplicated rupture of pseudocyst is an even rarer occurrence.⁴

Case Report

A 22-year-old female admitted to the hospital initially with complain of pain abdomen over right hypogastric region since 3 weeks with history of acute pain initially which subsided gradually on its own. The patient was diagnosed as acute on chronic cholecystitis with cholelithiasis on ultrasonogram of the abdomen and she came for definitive

management to our hospital. She was planned for elective laparoscopic cholecystectomy. However intraoperatively, multiple peritoneal deposits were seen all over the abdomen with dense adhesion over the gall bladder and pericholecystic fluid (**Figure 1**). The deposits looked like saponificataion following pancreatitis. Laparoscopic cholecystectomy was done with biopsy of the deposit and fluid was sent to check amylase level. Post-operatively her Lipase level sent which was 960 U/L (normal range: 0-50 U/L) and her serum Amylase level was >5000 U/L. Postoperative diagnosis of Acute on chronic cholecystitis with cholelithiasis and post-pancreatitis saponification was made and discharged without any post-operative complication. Her histopathology of the peritoneal biopsy showed fat necrosis with calcification possibly secondary to pancreatitis.

Patient again presented after 3 weeks with complain of pain over epigastric region since 10 days which was diffuse. It was associated with postprandial fullness and multiple episodes of vomiting. She had decreased appetite and weakness. On examination she

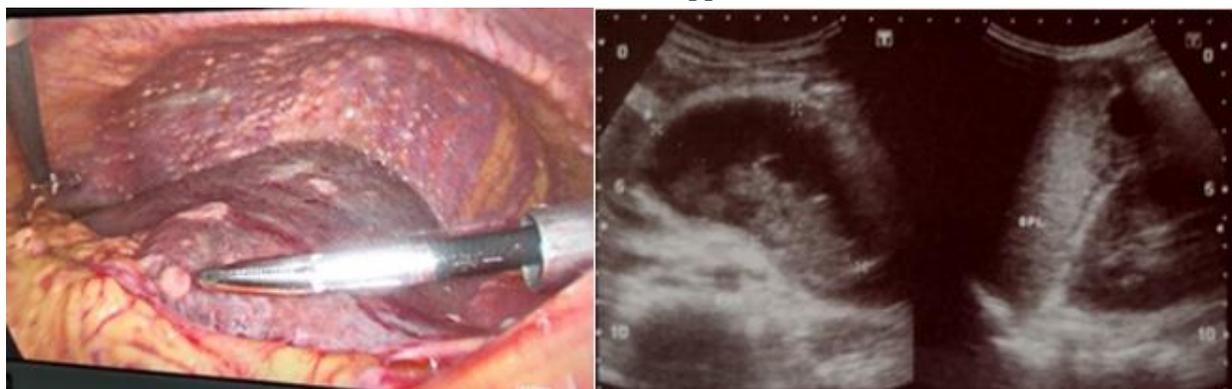


Figure 1: Intraoperative picture showing multiple peritoneal deposits and showing cystic lesion

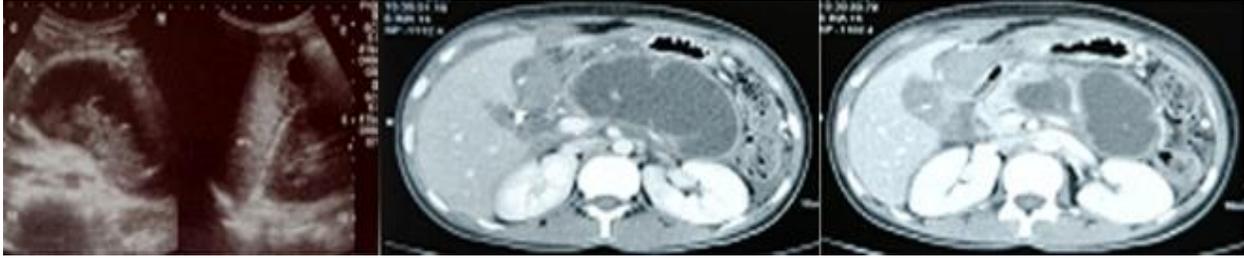


Figure 2: USG Abdomen showing cystic lesion, CECT Abdomen showing pancreatic pseudocyst with thin septation compressing the stomach

looked ill and was mildly dehydrated. Per abdominally tenderness was present over epigastric region with a ~10x10cm diffuse mass which was firm and globular in shape with borders not well defined. Her laboratory reports were within the normal range. Ultrasound of the abdomen showed 9.9x10.4x6.6cm cystic lesion likely pancreatic pseudocyst and also an ill-defined echogenic area over anteromedial part of right lobe of liver (**Figure 2**). CECT abdomen showed well defined cystic lesion with enhancing wall and thin septations in pancreatic body and small cyst with thin internal septum in pancreatic tail and compression of splenic vein by large cyst - likely pseudo-pancreatic cyst and Asymmetric thickening and enhancing wall of body and antrum of stomach with minimal soft tissue stranding in perigastric region in omentum. As the patient had symptomatic pancreatic pseudocyst and was in 7th week following pancreatitis, patient was taken for Laparoscopic Cystogastrostomy. But intraoperatively, there was gross hematoma in the anterior surface of liver and stomach. ~200-300ml of hematoma and ~50-100ml blood in pelvic cavity was present, we tried

multiple punctures over the posterior wall of the stomach but nothing was aspirated. So the case was planned for conversion and exploratory laparotomy was done, all the hematoma was evacuated and pancreatic pseudocyst was searched was not identified.



Figure 3: CECT Abdomen postoperatively

Post-operatively CECT abdomen was repeated which again showed a well-defined, cystic lesion with enhancing wall and thin septations in the pancreatic body compressing the splenic vein likely-pseudopancreatic cyst with diffuse thickening and enhancing wall of body and antrum of stomach with minimal perigastric soft tissue stranding – due to inflammatory changes. However the size of the cyst had decreased substantially and was not

compressing the stomach (**Figure 3**). Postoperatively patient had substantial decrease in symptoms.

Patient improved further without any complication and was discharged on the 10th day of surgical treatment. Patient came for follow up after a week, she was still asymptomatic. On her second follow up after one month there was no any residual cystic lesion on her ultrasound.

Discussion

Overall, complications of pseudocysts occur in 20% to 40% of cases. Complications include mass like effect, compression of peri-pancreatic vessels, stomach or duodenum; infection; hemorrhage; and development of a fistula. However, most of these spontaneous ruptures are associated with bleeding complications needing emergency surgical intervention.⁵ Spontaneous perforation and/or fistulization occurs in less than 3% of these.² Spontaneous rupture of the pancreatic pseudocyst into the surrounding hollow viscera is rare entity and when occurs, is associated with life-threatening bleeding. However, uncomplicated rupture of pseudocyst is an even rarer occurrence.^{4,6}

In our case, the clinical features of rupture like disappearance of pain, mass, vomiting was not seen. The patient was taken for surgery as she was symptomatic due to compressive effects of the mass. Intra-operatively seen blood in the peritoneal cavity might be the consequence of intra cystic hemorrhage.

There are many mechanisms that lead to resolution of a pseudocyst. At times, it regresses after the inflammatory reaction resolves or it can resolve spontaneously with natural drainage to the duodenum through the pancreatic duct. When erosion of a pseudocyst occurs near the gastrointestinal tract and a fistula is formed, the fistula can lead to resolution of the pseudocyst. In some cases, the pseudocyst can resolve as it leaks or ruptures into the abdominal cavity

In conclusion, spontaneous rupture of pseudocyst is a rare event. We had a patient of pseudocyst pancreas following acute pancreatitis which presented with symptoms of gastric outlet obstruction, following which patient has spontaneous rupture without any complications and recovered well.

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