

# Pancreatic Pseudocyst - Treatment with Laparoscopic Cystogastrostomy: A Case Report

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## ABSTARCT

**Pseudocyst of pancreas is a common complication of pancreatitis. Alcohol and gall stones are two most common cause of pancreatitis. Accurate diagnosis and timely management is most important. Natural history of pancreatic pseudocyst is extremely variable ranging from complex resolution to the development of chronicity. We reported 35 year male patient with abdominal pain ,abdominal fullness,weight loss. CT demonstrates a 13.1 cmx8.2 cm x 6.6cm pseudo pancreatic cyst. Laparoscopic cystogastrostomy done. Patient recovery was uneventful.**

**Key words:** Pancreatic pseudocyst, Cystogastrostomy, Laparoscopic surgery

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## INTRODUCTION

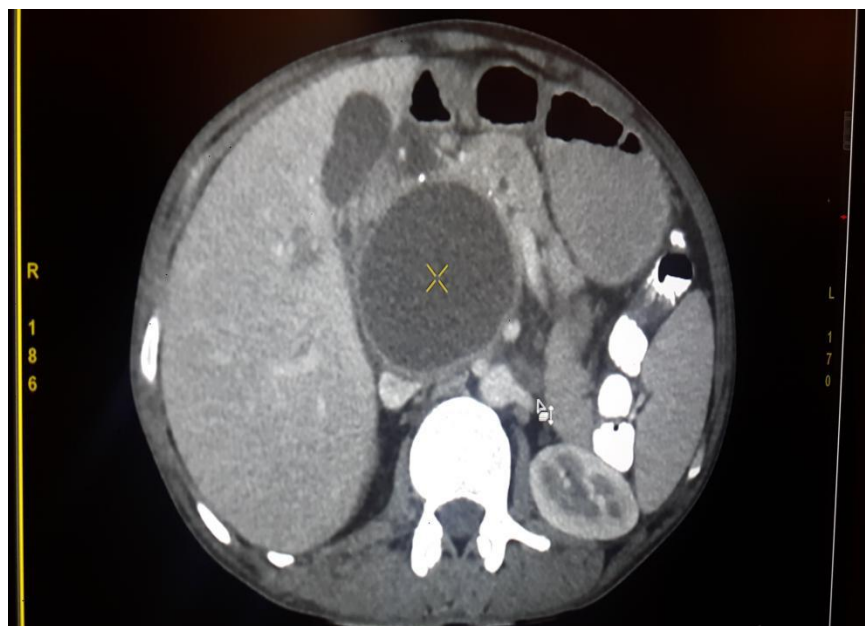
Pancreatic pseudocyst (PS) are localized fluid collection rich in amylase and other pancreatic enzyme surrounded by a wall of fibrous tissue that is not lined by epithelium. Pancreatic pseudocyst has been recognized for over 185 year[1]. PS is a complication of acute or chronic pancreatitis, pancreatic trauma or pancreatic duct obstruction. Alcohol and gall stones are two most common reason of pancreatitis. PS is generally present with abdominal pain, weight loss or continuing fever following an episode of acute pancreatitis.

## CASE REPORT

We present a case of pancreatic pseudocyst . 35 year old male patient admitted with complains of pain in abdomen, epigastric fullness and weight loss. Patient had history of chronic alcoholism and episode of acute pancreatitis 10 week before. On presentation his vitals were –Pulse -78/minute, Blood Pressure 130/90 mmHg, RR-18 /minute, Spo2-100% on room air.

Hemoglobin was 13.8 gm%. TLC-10,300, S Amylase -132 (Normal 80-180) , S. lipase 54 ( Normal 22-51), renal function, serum electrolyte and Liver functions were normal. On abdominal examination fullness and tenderness was present in the epigastrium, no guarding or rebound tenderness. The patient was thoroughly investigated. Abdominal ultrasound and CT scan demonstrated a homogenous cystic mass 13.1cmx8.2cmx6.6cm cm in size . UGIE series showed extraluminal compression along the greater curvature of the upper body of stomach. Pancreatic pseudocyst was diagnosed and drainage was indicated because of its size, symptoms and growth during the last 10 weeks.

Since the intestinal structures were present behind the stomach, laparoscopic surgery was selected. Instead of percutaneous or endoscopic drainage, laparoscopic cystogastrostomy was performed. Pneumoperitoneum was created using veeres needle and ports were placed. The pseudocyst was exposed by dissecting the lesser curvature of stomach. There was no adhesion between cyst and posterior wall of stomach. A long needle was inserted into the abdominal cavity to aspirate the content of cyst, about 100 ml greenish, turbid fluid was drained. Small 1 cm opening was made close together on the cyst wall and on the lesser curvature of stomach by electrocautery. A large anastomosis was created using endoGIA- autosuture. The opening was closed with endostitch autosuture device. Post operative period was uneventful. On 6 month follow up patient was free of complication.



**Fig. 1:**

## DISCUSSION

Pancreatic pseudocyst are localized fluid collection rich in amylase surrounded by a wall of fibrous tissue that is not lined by epithelium. In the published literature, it is reported that pseudocyst of pancreas can occur at any age from 7 months to 73 years and the leading cause in adults is chronic alcoholic pancreatitis and trauma in children [2].

The pathogenesis of pseudocyst is believed to be due to disruption of the main pancreatic duct or peripheral ductules causing leakage and activation of enzymes, which in turn leads to localized auto-digestion and necrosis of pancreatic parenchyma. It takes about 4 to 6 weeks for the maturation of the wall after an acute attack of pancreatitis [3]. The incidence of pancreatic pseudocyst development in acute pancreatitis is 15% [4].

Most of them are asymptomatic [5,3]. The most common clinical manifestations are abdominal pain, nausea, vomiting, early satiety, and weight loss. Physical examination may reveal abdominal tenderness, epigastric fullness or a mass [6].

Life-threatening complications are reported in 10% of cases of pancreatic pseudocyst and include hemorrhage, infection, obstruction, rupture [7,8]. Duodenal obstruction is the most common manifestation of mechanical obstruction of PS [9].

Ultrasound is the initial investigation, CECT is the investigation of choice for the frontline evaluation of PS [10]. ERCP is indicated in patients with PS and jaundice to differentiate between common bile duct compression by cyst and stricture of the intrapancreatic portion of the common duct caused by fibrotic pancreas. Pancreatic ductal leakage may also be revealed by ERCP.

PS may regress spontaneously, persist with or without symptoms or progress to produce symptoms [11]. Wall thickness of pseudocyst is a major determinant of whether the pseudocyst will resolve spontaneously. In the acute phase, the wall is composed of granulation tissue; then the process of fibrosis increases the wall thickness and the pseudocyst wall becomes conspicuous on CECT images. Once the pseudocyst is visible radiologically, the chances of spontaneous resolution are negligible [12].

The treatment falls into two categories—Observation and Intervention. The most significant factors affecting treatment decisions are pseudocyst maturity, size, and location [13]. Data shows that half of the acute pseudocysts remain asymptomatic, independent of size or duration [14]. Some surgeons follow the 'rule of 6' for surgical treatment of PS: cyst more than 6 cm or duration more than 6 weeks, based on the assumption that 6 weeks is sufficient time for the pseudocyst to resolve spontaneously, pseudocyst wall to mature to be sturdy enough to hold sutures postoperatively.

Asymptomatic cysts are managed conservatively by observation and repeated radiological follow-up by ultrasound or CT scans [15]. Pancreatic pseudocyst with sterile pancreatic necrosis requires conservative treatment with a close watch on

development of septic complication, if septic complication supervenes surgical drainage with necrosectomy is done[16]. Open surgical drainage with necrosectomy is best treatment for pancreatic pseudocyst with infected pancreatic necrosis [16,17,18]

Among the surgical treatment of PS drainage of pseudocyst internally into hollow viscus is established. Jeddika first described pseudocyst gastrostomy in 1921 with pseudocyst duodenostomy and pseudocyst jejunostomy been introduced later. Laparoscopic surgery for pancreatic pseudocyst was introduced by WAY et al [19]. The recurrence rate after endoscopic drainage is low (4%) and complication rate is less than 16%[20].

## CONCLUSION

In patient of pancreatitis development of complication such as pseudocyst may be expected during evaluation. Timely diagnosis and therapeutic measure are necessary for control and to avoid complication. Laparoscopic cyst-gastric anastomosis is the ideal treatment for pancreatic pseudocyst management because it offers continuous drainage, low rate of recurrence and fewer complication

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