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Pancreatic Pseudocyst with Intracystic Lithiasis, A Rare Cas Report

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ABSTRACT: Pancreatic pseudocysts are encapsulated collections of enzyme-rich pancreatic fluid surrounded by a fibrous or granulation tissue wall, typically developing at least four weeks after an episode of acute pancreatitis or in the setting of chronic ductal obstruction. The presence of pancreatolithiasis—stones within the pancreatic duct or cyst cavity—adds diagnostic and therapeutic complexity by perpetuating ductal obstruction, increasing intraductal pressure, and promoting inflammation, thereby raising the risk of complications such as infection or hemorrhage.

We report the case of a 52-year-old woman with a history of recurrent acute pancreatitis who presented with persistent upper abdominal pain. Contrast-enhanced computed tomography revealed a large, well-defined pseudocyst located in the pancreatic body, measuring 8 cm in maximal diameter, associated with mild upstream ductal dilatation and no evidence of necrosis.

After resolution of the acute inflammatory phase, the patient underwent laparoscopic cystogastrostomy. Intraoperatively, an intracystic stone was identified and successfully extracted. Adequate internal drainage was achieved without the need for external drainage.

The postoperative course was uneventful. Oral intake was resumed on postoperative day 2, and the patient was discharged on day 5. At 12-month follow-up, she remained asymptomatic, with no radiological recurrence. Histopathological examination confirmed a pseudocyst wall without epithelial lining, consistent with chronic pancreatitis.

KEYWORDS: Pancreatic Pseudocyst, Intracystic Lithiasis, Laparoscopic Cystogastrostomy, Pancreatitis

INTRODUCTION

Pancreatic pseudocysts are well-circumscribed collections of pancreatic fluid enclosed by a fibrous or granulation tissue wall without an epithelial lining. They typically develop at least four weeks after the onset of pancreatitis and do not contain solid necrotic material. The revised Atlanta classification (2012) distinguishes pseudocysts from other pancreatic fluid collections, such as acute peripancreatic fluid collections and walled-off necrosis, thereby clarifying diagnostic and therapeutic approaches [1].

Pseudocysts complicate approximately 2–10% of cases of acute pancreatitis and up to 30% of chronic pancreatitis cases. Symptomatic or persistent pseudocysts are usually larger than 6 cm and persist beyond 4–6 weeks, reducing the likelihood of spontaneous resolution [2]. While many remain asymptomatic, up to one-third may develop complications, including infection, rupture, hemorrhage, or compression of adjacent structures [2,3].

Pancreatolithiasis, observed in 50–90% of patients with chronic pancreatitis, refers to the presence of stones within the pancreatic ductal system or, more rarely, within a pseudocyst. These stones contribute to ductal obstruction, increased intraductal pressure, and persistent inflammation, thereby promoting pseudocyst formation and persistence [4].

Current guidelines recommend endoscopic ultrasound-guided drainage as the first-line treatment when anatomical conditions are favorable. However, in cases with intracystic stones or a high debris content, endoscopic drainage may be less effective or complicated by stent obstruction. In such situations, laparoscopic cystogastrostomy represents a safe and effective minimally invasive alternative, associated with shorter hospital stay and lower morbidity compared to open surgery [5].

This report describes a case of a large infected pancreatic pseudocyst with intracystic lithiasis successfully treated by laparoscopic cystogastrostomy, highlighting the importance of tailored management strategies.

AIM OF THE ARTICLE

To report a case of a large infected pancreatic pseudocyst with intracystic lithiasis managed by laparoscopic cystogastrostomy, and to highlight the role of minimally invasive surgery when endoscopic approaches are limited.

CASE REPORT:

A 52-year-old woman with a history of recurrent severe acute pancreatitis presented with chronic diffuse abdominal pain and recurrent vomiting.

On physical examination, the patient was in moderate general condition, with diffuse abdominal tenderness and no signs of peritonitis. Laboratory findings revealed an inflammatory syndrome with elevated C-reactive protein and leukocytosis. Serum pancreatic enzymes and liver function tests were within normal limits.

Contrast-enhanced abdominal CT scan demonstrated a heterogeneous pseudocyst measuring 80 × 50 mm arising from the pancreatic body, with irregular margins and close contact with the posterior gastric wall. Although no active necrosis was observed, imaging findings were suggestive of infection.

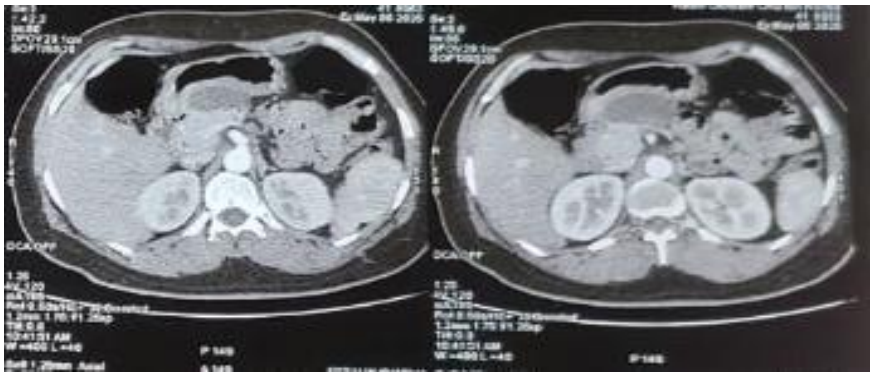

Figure 1: Sagittal CT image showing a heterogeneous pancreatic pseudocyst with irregular contours.

Given the size, symptomatology, and suspicion of infection, surgical drainage was indicated.

The patient underwent laparoscopic cystogastrostomy using four trocars. The posterior gastric wall was opened to access the pseudocyst. Upon puncture, purulent fluid was obtained, confirming infection. An intracystic stone was identified and successfully removed. A wide cystogastric anastomosis was then created to ensure effective drainage. Fluid samples were sent for microbiological analysis. No intraoperative complications occurred.

Figure 2: Intraoperative view of the pancreatic pseudocyst after surgical opening.

Figure 3: Purulent intracystic fluid aspirated into a syringe during laparoscopic cystogastrostomy.

Figure 4: Intracystic stones removed from the pseudocyst, displayed on sterile gauze.

Postoperatively, oral feeding was resumed on day 2, and the patient was discharged on day 5. At 12-month follow-up, she remained asymptomatic, with complete radiological resolution of the pseudocyst.

DISCUSSION

Pancreatic pseudocysts represent the most common cystic lesions of the pancreas, typically occurring as a complication of pancreatitis. Their incidence is estimated at 0.5–1 per 100,000 adults annually [3].

Clinical presentation ranges from asymptomatic cases to severe symptoms such as abdominal pain, nausea, vomiting, anorexia, and weight loss. Complications include infection, rupture, hemorrhage, and compression of adjacent organs [3].

Diagnosis relies primarily on imaging modalities. Contrast-enhanced CT remains the gold standard, while endoscopic ultrasound is particularly useful for assessing cyst content, guiding drainage, and obtaining fluid samples [3].

Management depends on several factors, including size, location, symptoms, and complications:

- Conservative management for small, asymptomatic pseudocysts
- Percutaneous drainage in high-risk surgical patients with infected collections
- Endoscopic drainage as a minimally invasive first-line option
- Surgical drainage for large, symptomatic, or complicated pseudocysts

Laparoscopic cystogastrostomy has emerged as a safe and effective technique, offering excellent outcomes with low morbidity and faster recovery compared to open surgery.

CONCLUSION

Pancreatic pseudocysts remain a challenging complication of pancreatitis, particularly when associated with intracystic lithiasis or infection. Accurate diagnosis and appropriate therapeutic selection are essential for optimal outcomes.

While endoscopic techniques are effective in selected cases, laparoscopic cystogastrostomy provides a reliable and definitive treatment in complex situations. This case highlights the importance of individualized management and demonstrates excellent short- and long-term outcomes with minimally invasive surgery.

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