

Successful Treatment of Mediastinal Pancreatic Pseudocyst by Pancreatic Head Resection

Tibor Belágyi¹, Ákos Issekutz¹, Ágnes Paukovics², Gabriella Kecskés³, Attila Oláh¹

Departments of ¹Surgery and ²Radiology, ³Intensive Care Unit,
Petz Aladár Teaching County Hospital. Győr, Hungary

ABSTRACT

Context A mediastinal pseudocyst is an unusual and rare complication of acute and chronic pancreatitis.

Case report The authors report the case of a 41-year-old male patient with a documented history of chronic pancreatitis who developed a pancreaticomediastinal fistula with mediastinal pseudocyst, which was successfully treated by pancreatic head resection (Frey).

Conclusion Though the choice of treatment is still controversial, the main goal of surgical treatment is to ensure the adequate flow of pancreatic juice from the pseudocyst and the pancreas.

INTRODUCTION

Thoracic complications of acute and chronic pancreatitis are uncommon and include pancreaticopleural/mediastinal fistulae, pleural effusion, mediastinal pseudocysts and even pericardial effusion. The origin of these phenomena is usually a leak of the pancreatic duct or a pseudocyst posterior to the retroperitoneum; therefore, pancreatic secretions may flow to the thorax through the aortic or esophageal hiatus, the foramen of Morgagni, the inferior vena cava hiatus or by direct penetration through the diaphragm. The history of acute or chronic pancreatitis and the leading symptoms affecting the chest and

lungs [1, 2] should alert us to a possible pancreatic origin. Although numerous radiological and endoscopic diagnostic tools can lead to proper diagnosis, authentic demonstration of a pancreaticopleural/mediastinal fistula is seldom successful. Various effective therapeutic interventions including radiological and endoscopic drainage techniques, surgical internal or external drainage and resections have been described. The management of mediastinal pseudocysts is controversial and depends on the etiology, ductal anatomy, size and location of the pseudocyst.

CASE REPORT

The authors report the case of a 41-year-old male patient with a documented history of chronic alcohol consumption and previous episodes of acute exacerbations of chronic pancreatitis. Seventeen month earlier, following an acute exacerbation, he had developed chronic right side pleural fluid effusion and had undergone a thoracotomy and drainage procedure without the verification of its pancreatic origin.

He was admitted to our department after another acute exacerbation predominantly with chest and pulmonary complaints, pain, cough and dyspnea. There was no major pathological deviation of exocrine and endocrine function in the pancreas.

Chest X-ray presented only a widened mediastinum so chest and abdominal

computer tomography (CT) was performed. CT revealed a calcified pancreatic head with a dilated pancreatic common duct, significant stenosis of the duct at the site of the body and a consecutive pseudocyst 5 cm in diameter posterior to it. CT also demonstrated a pseudocyst 5 cm in diameter in the mediastinum. Endoscopic retrograde cholangiopancreatography (ERCP) did not demonstrate any relationship between the two pseudocysts, so magnetic resonance cholangiopancreatography (MRCP) was performed which confirmed the pathologic changes described by CT and ERCP and revealed a fistula between the abdominal and mediastinal pseudocysts through the esophageal hiatus of the diaphragm.

We decided on surgical intervention and performed a Frey operation. The calcified pancreatic head was resected and the common pancreatic duct was cut beyond the pseudocyst of the body of the pancreas. Intraoperative frozen sections were made from the head and the resected stenotic part of the duct both confirming chronic pancreatitis. By cannulating the pseudocyst of the body, we could access the fistula and the mediastinal pseudocyst as well. Finally, a pancreaticojejunostomy was performed, thus achieving internal drainage of both cysts. The postoperative period was uneventful and the patient was discharged ten days after surgery. Fourteen months later, he is doing well without any complaints, has gained fifteen kilograms and has returned to work.

CONCLUSION

While thoracic complications of acute or chronic pancreatitis are uncommon, potentially life-threatening chest and pulmonary symptoms should always raise the suspicion of its pancreatic origin. Should this be suspected, a wide range of diagnostic tools is available to confirm or rule out this suspicion [1, 3]. In chronic pancreatitis and mediastinal pseudocyst surgery, providing adequate flow of the pancreatic juice from the pseudocyst and from the pancreas [1] is an effective and safe optional method of choice with acceptably low morbidity and mortality.

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Keywords Pancreatic Pseudocyst; Pancreaticojejunostomy; Pancreatitis

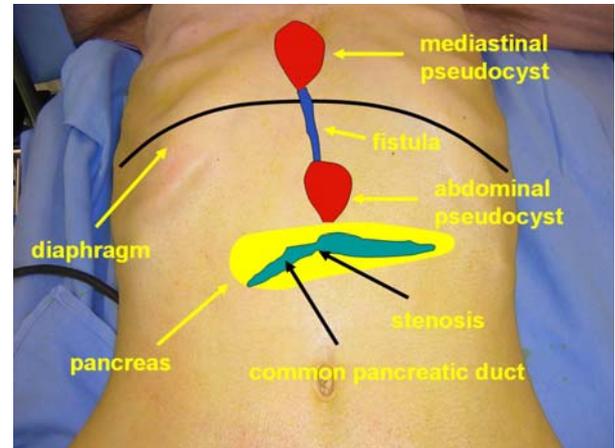


Image 1. The patient and the disease.

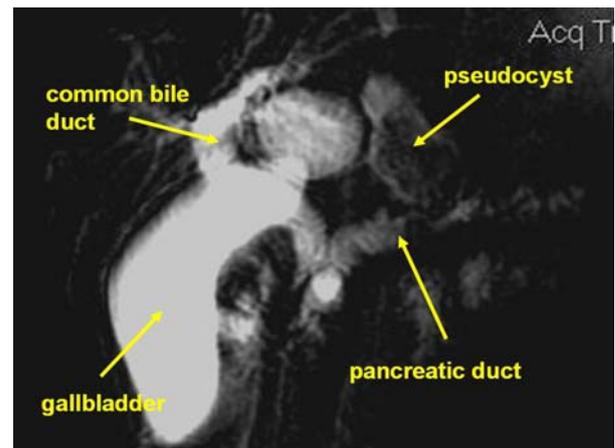


Image 2. MRCP: pancreatic duct and abdominal pseudocyst.

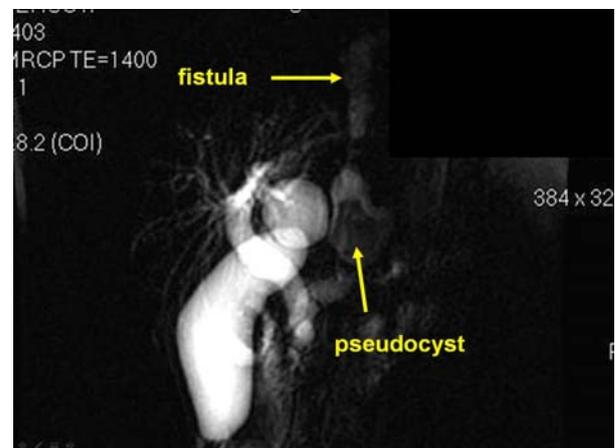


Image 3. MRCP: pancreatic pseudocyst and pancreaticomediastinal fistula.

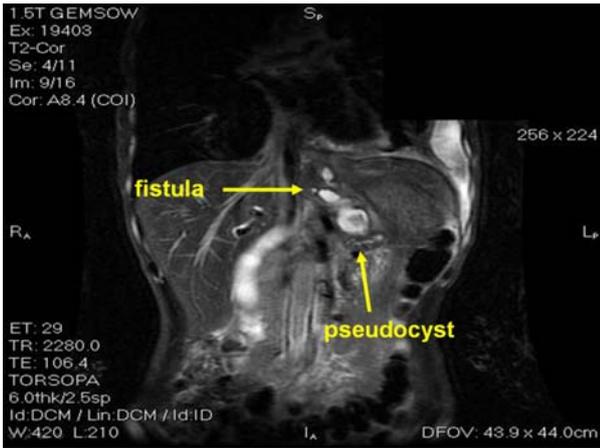


Image 4. MRCP: pancreatic pseudocyst and pancreaticomediastinal fistula.

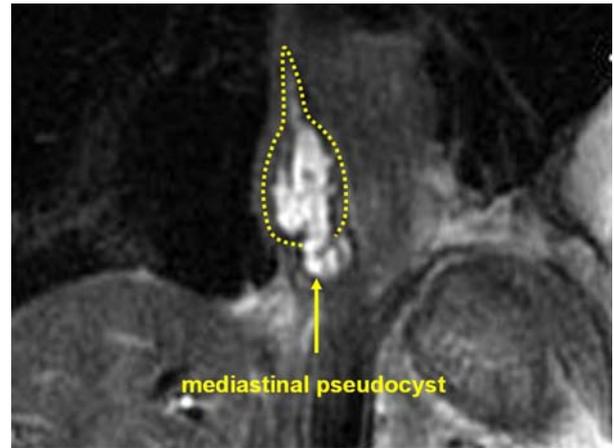


Image 7. MRCP: mediastinal pseudocyst.

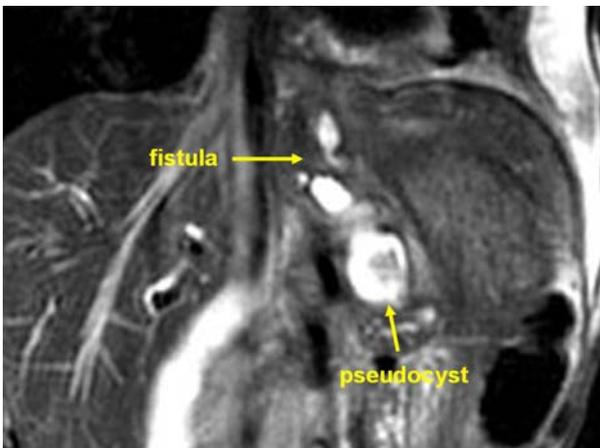


Image 5. MRCP: pancreatic pseudocyst and pancreaticomediastinal fistula.

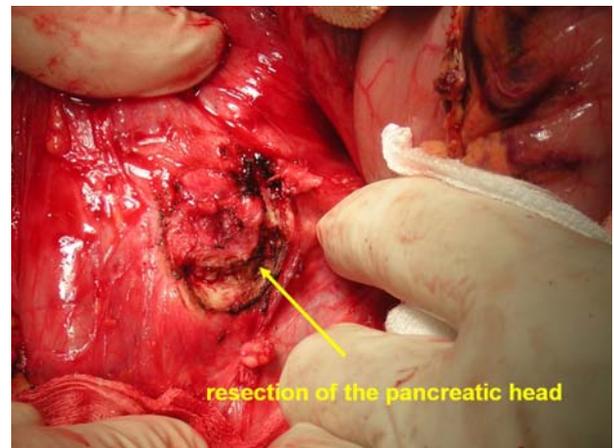


Image 8. Resection of the pancreatic head, the Frey procedure.

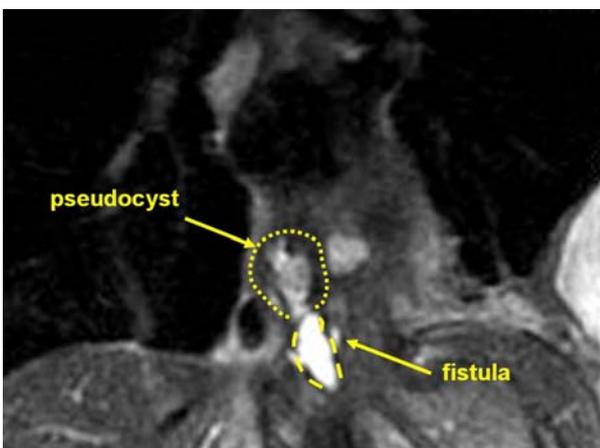


Image 6. MRCP: pancreaticomediastinal fistula and mediastinal pseudocyst.

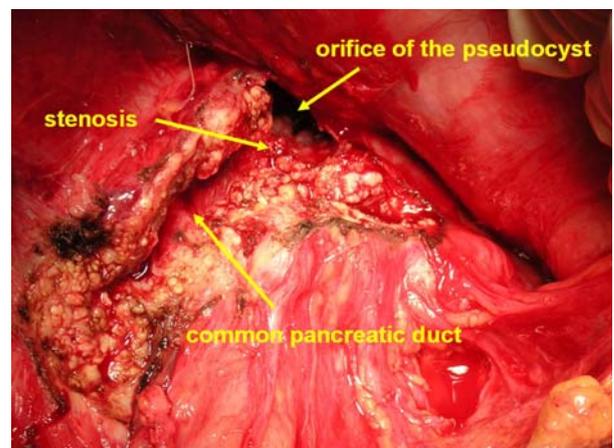


Image 9. Resected pancreatic head and the common pancreatic duct.

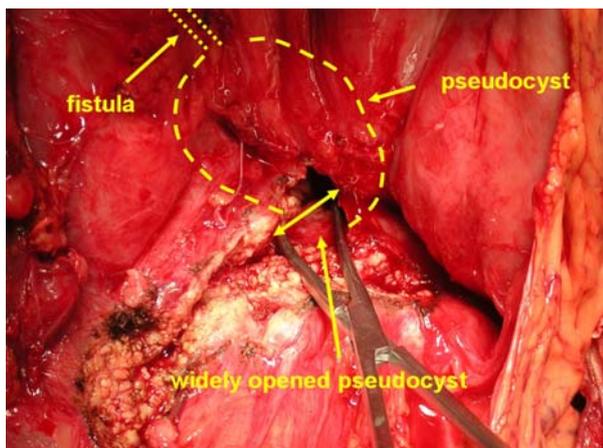


Image 10. Pancreatic pseudocyst.

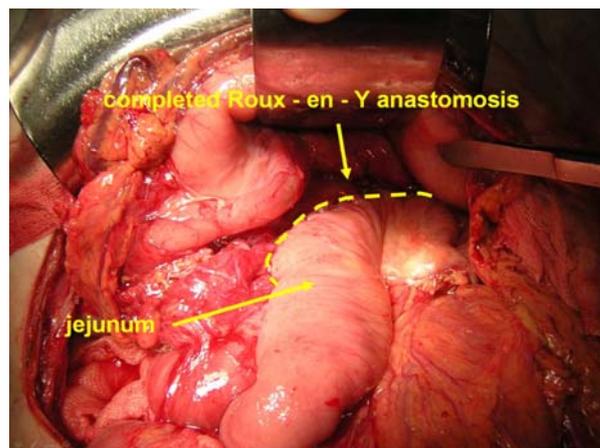


Image 12. Completed pancreaticojejunostomy.

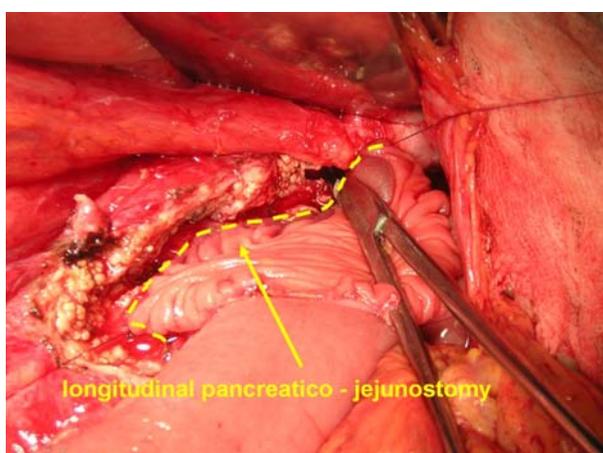


Image 11. Longitudinal pancreaticojejunostomy.

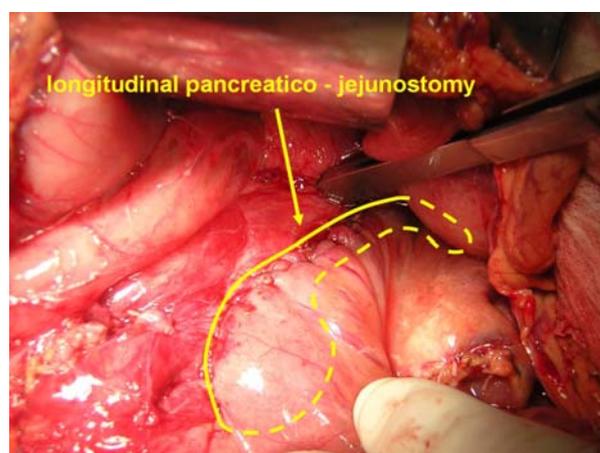


Image 13. Longitudinal pancreaticojejunostomy.

Conflict of interest The authors have no potential conflicts of interest

Correspondence

Tibor Belágyi
Department of Surgery
Petz Aladár Teaching County Hospital
Vasvári P. u. 2-4
9024 Győr,
Hungary
Phone: +36-30.994.1798
Fax: +36-96.355.106
E-mail: tibor_belagyi@t-online.hu

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