

Case Report

Surgical management of hemorrhagic pancreatic pseudocyst with splenic artery rupture and submucous hematoma of gastric wall development

Belyuk Konstantin Sergeevich, Soroka Aleh Stanislovovich, Zhuk Yaroslaw Michailowicz, Poorna Gayan Wattaladeniya, M. G. W. M. Varsha Priyadarshani, K. D. Ishara Nadeeshani Gunarathna, Sellappulige Sadul Visvajith Rosa*, Akshayan Segarajasingam

Department of Organ and Tissue transplantation, Plastic and Endocrine Surgery, Grodno University Clinic, Grodno State Medical University, Grodno, Belarus

Received: 20 March 2025

Accepted: 17 April 2025

*Correspondence:

Dr. Sellappulige Sadul Visvajith Rosa,
E-mail: sadul.rosa@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Hemorrhagic pancreatic pseudocyst is a rare but life-threatening complication of chronic pancreatitis due to the erosion of vascular vessels by leakage of pancreatic enzymes. This case report aims to highlight the diagnostic challenges, investigation methods, and management strategies for hemorrhagic pancreatic pseudocysts while emphasizing the importance of a multidisciplinary approach. 47-year-old male presented with chronic pancreatitis presented with severe abdominal pain and gastrointestinal bleeding. Investigations included ultrasonography, gastrography with barium swallow study, endoscopy, CT and MRI, which revealed a hemorrhagic pseudocyst eroding the gastric mucosa. Celiacography identified splenic artery rupture, leading to initial management through endovascular embolization using nitinol spirals. However, recurrent bleeding necessitated surgical intervention. Laparotomy revealed a massive hemorrhagic pancreatic pseudocyst invading the gastric mucosa and the patient underwent an en-bloc resection of the proximal part of the stomach with hemorrhagic pseudocyst, and distal resection of pancreas with splenectomy followed by esophagogastrostomy. After proper surgical intervention, patient showed improvement. Post-operative complications including subdiaphragmatic abscess and pleural effusion were managed with surgical drainage and thoracocentesis and antibiotics. The patient gradually improved, and was discharged in a satisfactory condition. This case highlights the importance of early diagnosis through advanced imaging studies and timely intervention using radiological, endovascular and surgical techniques. Although embolization provides a temporary hemostasis, definite surgical intervention is required in cases of vascular destruction and pseudo cyst ruptures invading the surrounding tissues.

Keywords: Hemorrhagic pancreatic pseudocysts, Chronic pancreatitis, Celiacography, Splenic artery embolization, Distal resection of pancreas

INTRODUCTION

Chronic pancreatitis is a multifactorial and progressive fibro inflammatory syndrome characterized by irreversible damage to the pancreatic tissue due to recurrent inflammation.^{1,2} The major risk factors include alcohol

consumption, smoking and metabolic disorders like hyperlipidemia, which are prevalent in various populations. Recent studies, including the Global Burden of Disease study have indicated that both acute and chronic forms of pancreatitis contribute substantially to morbidity and mortality worldwide, particularly in Eastern Europe,

where high prevalence of alcohol consumption among males results in increased age-standardized incidence rates, age-standardized mortality rates and disability-adjusted life years.³

Chronic pancreatitis patients usually experience severe abdominal pain due to chronic inflammation and fibrosis. This condition leads to complications such as exocrine pancreatic insufficiency causing malabsorption, steatorrhea and gut dysmotility, endocrine pancreatic insufficiency causing Diabetes mellitus type 3c. Further complications include pancreatic cancer, pseudocysts, splenic vein thrombosis with portal hypertension accompanied by variceal bleeding and duodenal or biliary obstruction.⁴⁻⁶

A pancreatic pseudocyst is a fluid collection that forms due to persistent inflammation of the pancreatic parenchyma. This can lead to erosion of adjacent organs such as duodenum, colon and gastric wall, and peritoneal cavity.⁷ A rare but serious life threatening complication of chronic pancreatitis is pancreatic pseudoaneurysm, which occurs due to erosion of nearby blood vessels from the leakage of pancreatic enzyme. This condition commonly affects the splenic artery followed by gastroduodenal, pancreaticoduodenal and hepatic arteries. Over time, this vascular erosion can lead to a hemorrhagic pseudocyst. Although, hemorrhagic pseudocysts associated with pancreatic pseudoaneurysm are rare, their rupture can cause bleeding into the Wirsung duct (pancreatic duct) or gastrointestinal tract (GIT). This bleeding may be asymptomatic or present with melena or hematemesis, usually requiring urgent treatment. However, the spontaneous rupture of a pancreatic hemorrhagic pseudocyst into the stomach is an extremely rare occurrence. In addition, hemorrhagic pancreatic pseudocysts may rupture directly into the peritoneal or retroperitoneal cavity, leading to peritonitis and hemorrhagic shock, which require emergency measures.⁸⁻¹⁰ Early recognition of hemorrhagic pancreatic pseudocyst is crucial as this rare but lethal complication is associated with high mortality and morbidity and often presents without warning signs. Clinically, these patients present recurrent pain and tenderness in upper abdomen, loss of weight, signs of anemia, upper and lower gastrointestinal bleeding, and a pulsatile, palpable mass in the upper abdomen. Hemorrhage into pancreatic pseudocyst should be suspected when there is a sudden drop in the hematocrit values without overt signs of GIT bleeding in a patient with known pancreatic pseudocyst. Diagnostic modalities include ultrasound with color doppler, which can detect turbulent echo currents synchronous with pulsatile arterial flow within pseudocyst. Other important imaging techniques include digital subtraction angiography, and contrast-enhanced CT, which shows evidence of active bleeding. The key diagnostic feature of hemorrhagic pancreatic pseudocyst is identifying the communication between the eroded vessel and the pseudocyst using Duplex Doppler ultrasound.¹¹ Recent studies have suggested that dynamic abdominal CT

and angiography should be the first line investigations to localize the bleeding site, followed by embolization as a temporary measure to control the bleeding and achieve early hemodynamic stabilization. Surgical intervention is then required to prevent re-bleeding. Surgical options include direct arterial ligation with pseudocyst drainage and distal pancreatectomy for bleeds originating from the tail of the pancreas, and trans-cystic arterial ligation for bleeds in the head and body of the pancreas. Endoscopic management has shown success, but may sometimes requires subsequent surgical intervention. The role of emergency surgery remains controversial, but it should be considered in patients who are unable to undergo angiographic embolization, or those in whom endoscopic management of the pseudocyst is unsuccessful.¹⁰

In this case, we present a rare case of chronic recurrent pancreatitis complicated by a hemorrhagic pancreatic pseudocyst, which led to erosion of splenic artery, and involved posterior gastric wall with submucous hematoma development, resulting in recurrent gastrointestinal bleeding. This case highlights the importance of a multidisciplinary approach including radiological, endovascular, and surgical interventions, to achieve a favorable outcome.

CASE REPORT

A 47-year-old male was admitted to the Intensive care unit at the Grodno University Clinic with severe abdominal pain and signs of gastrointestinal bleeding. His medical history included chronic recurrent pancreatitis, chronic calculous cholecystitis, ischemic heart disease with a previous episode of unstable angina, atherosclerotic cardiosclerosis, aortic atherosclerosis, a previous sinus bradycardia episode, and cerebellar ataxia.

Upon physical examination, a hard, non-pulsating mass was palpated in the epigastric region. Initial laboratory investigations revealed anemia, thrombocytopenia, and elevated inflammatory markers shown below.

Laboratory investigations

A series of imaging studies were performed to assess the underlying pathology. Ultrasound findings revealed an irregular pancreatic mass filled with a fluid collection measuring 103×32 mm in size, localized between the pancreas and stomach, along with the pleural fluid bilaterally. The gall bladder measured 76×31 mm in size, with a wall thickness of 3 mm.

A parietal polyp measuring 10×9 mm was observed in the neck region of the gall bladder. The portal vein measured 14 mm, and the common bile duct was measured to be 10 mm. The spleen, liver and kidney had smooth contours and was homogeneous in structure. No free fluid detected in the abdominal cavity.

Table 1: Hemostasiogram and general blood analysis.

Parameters	Results	Reference range
Hemostasiogram		
APTT	29.4 sec	22-35 sec
Prothrombin time	14.4 sec	9.4-12.5 sec
Prothrombin complex activity	66%	83-150%
INR	1.28	0.85-1.3
Fibrinogen	4.48 g/l	2.7-4.7 g/l
General blood analysis		
Erythrocytes	$3.34 \times 10^{12}/l$	$3.9-5.1 \times 10^{12}/l$
Hemoglobin	102 g/l	130-170 g/l
Leukocytes	$7.38 \times 10^9/l$	$4-9 \times 10^9/l$
Color index	0.92	
Hematocrit	31%	35-50%
Platelets	$105 \times 10^9/l$	$150-450 \times 10^9/l$

Table 2: Biochemical analysis.

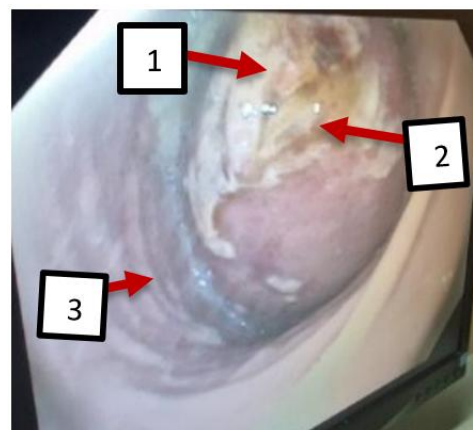
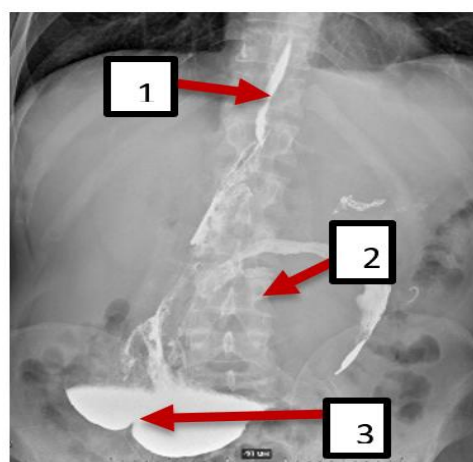
Parameters	Results	Reference
Total protein	58 g/l	60- 83 g/l
Albumins	34 g/l	34 -54 g/l
Urea	4.7 mmol/l	2.5-7.8 mmol/l
Creatinine	50 μ mol/l	62-115 μ mol/l
Glucose	3.7mmol/l	3.9-5.6 mmol/l
Total bilirubin	8 μ mol/l	1.71-20.5 μ mol/l
Aspartate aminotransferase	14 U/l	14 -20 U/l
Alanine aminotransferase	13 U/l	4-36 U/l
Amylase	65 U/l	30-110 U/l
C-reactive protein	84 mg/l	8-10mg/l
Potassium	3.9 mmol/l	3.5 -5.2 mmol/l
Sodium	139 mmol/l	136-145 mmol/l
Chlorides	106 mmol/l	96-106 mmol/l

Endoscopy revealed a narrowed gastric lumen due to a rounded dark-red sub-cardial formation measuring 7 cm, covered with fibrin, with multiple petechial hemorrhages and acute gastric erosions up to 0.3 cm in size beneath a layer of white fibrin, as shown in Figure 1.

The antrum, gastric angle and pylorus were unchanged; However, a moderate amount of mucus, bile, and fibrin was present in the stomach lumen.

Gastrographic imaging with barium showed that the esophagus was freely passable. The stomach was irregularly shaped and contained some contents.

A formation measuring 15×12 cm was visualized on the posterior wall of the stomach. The stomach appeared narrowed, and the retro-gastric space was dilated.

**Figure 1: 1) Fibrin covering, 2) erosion, 3) lumen of stomach.****Figure 2: 1) Esophagus, 2) formation in the posterior wall of the stomach, 3) barium accumulation in the stomach.**

CT imaging demonstrated a hemorrhagic pseudocyst in the pancreatic tail, along with free fluid in the left anterior abdominal wall and the gastric cavity. MRI confirmed a fluid collection measuring approximately 136×55×160 mm, involving the posterior stomach wall, with a heterogeneous cystic formation between the stomach and the abdominal wall. A series of scans revealed formation measuring approximately 62×50×56 mm in the upper-posterior part and up to 33×12×23 mm in the anterior part. Below these, along the posterior surface of the anterior abdominal wall between it and the stomach, homogeneous, thin-walled fluid formation measuring up to 76×35×71 mm was observed. The pancreas had clear but uneven contours, with no focal pathology detected. Wirsung's duct was not dilated and the para-pancreatic tissue appeared normal.

The kidneys are in their normal anatomical positions, with a parenchyma thickness of approximately 15 mm. The right kidney shows no obvious focal pathology, whereas the left kidney has a single simple cyst measuring up to 9.5

mm in the upper third. The spleen has clear, even contours, with no focal pathology identified.

In conclusion, were are signs of a fluid formation with blood decay products in the posterior wall of the stomach as well as a cyst like fluid formation between the abdominal wall and the stomach on the left side.

Primarily diagnosis was chronic recurrent pancreatitis with cyst formation in the tail of the pancreas, associated with bleeding into the gastric cavity. Following investigations, it was decided to treat the patient by embolizing the splenic artery to prevent further bleeding.

Celiacography findings revealed pronounced tortuosity of the splenic artery, with small branches supplying the pancreatic cyst, and a branch anastomosing with the splenic artery, extending from the distal section of the arteria pancreaticoduodenalis superior. It was decided to embolize both the splenic artery and the branch of the distal section of the arteria pancreaticoduodenalis superior. Embolization of the splenic artery was performed using eight nitinol spirals. The control angiogram showed a reduction in antegrade blood flow along the splenic artery. Additionally, embolization of the terminal branches of the third superior pancreaticoduodenal artery was performed with one nitinol spiral. The control angiogram showed stasis of the contrast agent and spasm of the third superior pancreaticoduodenal artery.

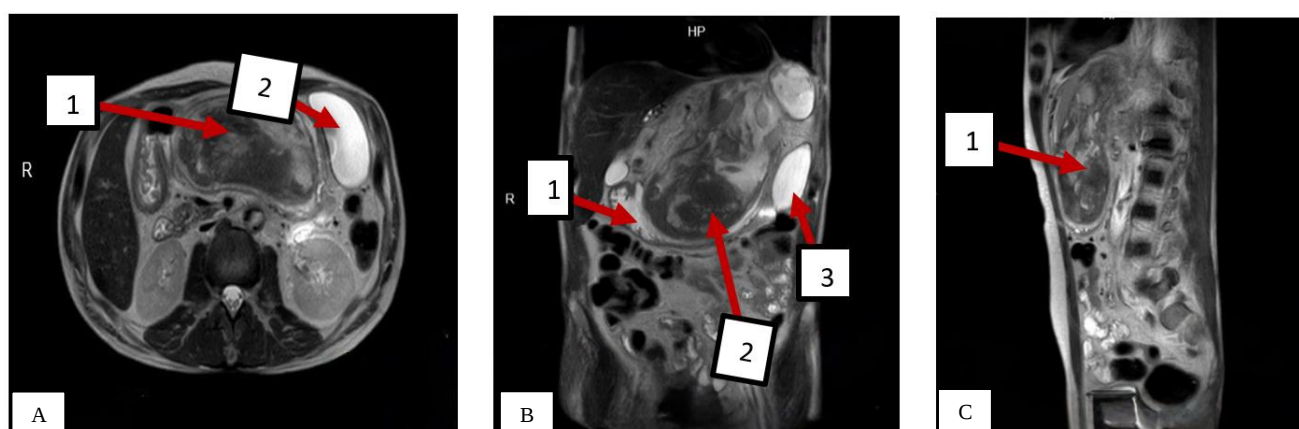


Figure 3: (A) 1) heterogenous formation of the stomach, 2) para-pancreatic cyst with fluid accumulations; (B) 1) lumen of the stomach, 2) heterogenous fluid formation, 3) para-pancreatic cysts with fluid accumulations. (C) 1) heterogenous fluid formation.

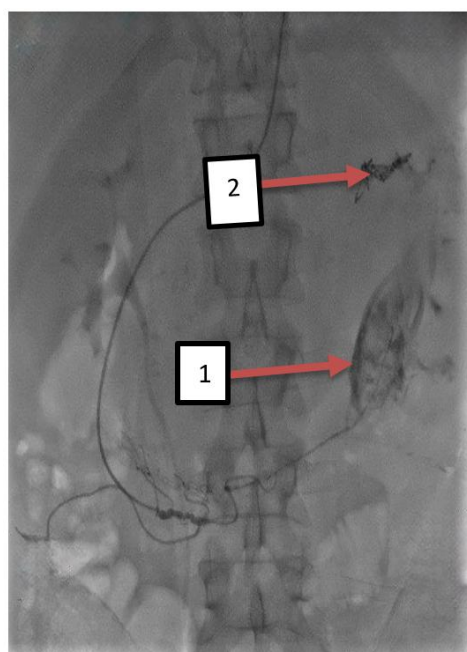


Figure 4: 1) Leakage of contrast, 2) embolization of splenic artery using 8 nitinol spirals.

Conservative treatment with dynamic observation was continued in the intensive care unit.

During observation, on the fifth day, a recurrent but limited (not profuse) bleeding episode was detected, which was associated with a decreased level of RBC.

An upper midline laparotomy was performed, revealing a pronounced adhesive-infiltrative process in the area (involving) of the tail of the pancreas, spleen, and cardiac part of the stomach. A tumor-like formation of elastic consistency was palpated in the cardiac part, located between the anterior and posterior walls of stomach. The cardiac part was involved in a dense adhesive process. A decision was made to perform a gastrotomy along the anterior wall of the stomach. Numerous clots were found on the mucous membrane of the posterior wall and the cardiac region. There were also defects bulging into the lumen of the stomach, one of which, upon revision was found to penetrates into the hematoma cavity, which was subsequently evacuated. A post-necrotic cyst of the tail of the pancreas was identified, along with destruction of the splenic artery and the wall of the cardiac region of the stomach, leading to breakthrough into the submucosal layer and the lumen of the stomach. Proximal resection of

the stomach was performed, extending from the esophagus to the middle third of the stomach using a stapling device. The left gastric artery was ligated and cut off. The vagus nerves were also transected.

The tail of the pancreas and spleen were excised en bloc. The pancreatic stump was closed with Z-shaped sutures, and esophagogastric anastomosis was performed. Multiple surgical drains were placed at key locations, including the pancreatic stump, splenic bed, and esophagogastric anastomosis site.

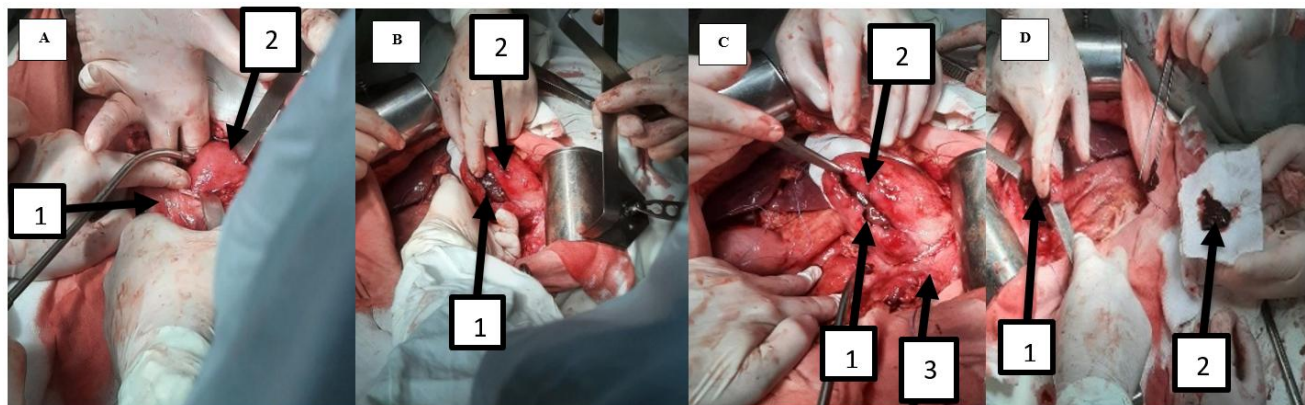


Figure 5: (A) Performing gastrotomy, 1) superior wall of stomach, 2) submucosa hematoma of posterior wall. (B) 1) Thrombotic mass inside the lumen of hematoma, 2) submucosa hematoma of posterior wall. (C) 1) Hematoma cavity, 2) lumen of the stomach, 3) superior wall of stomach. (D) 1) Hematoma cavity, 2) thrombotic mass

DISCUSSION

This case highlights a rare and serious presentation of chronic recurrent pancreatitis, complicated by hemorrhagic pancreatic pseudocyst formation. This pseudocyst led to splenic artery erosion, and posterior gastric wall destruction, followed by rupture into the lumen of the stomach, causing life-threatening recurrent gastrointestinal bleeding. A well-known complication of chronic pancreatitis is pancreatic pseudocyst, studies have shown that such pseudocysts may lead to vascular erosions, rupture, hemorrhagic, fistula formation and infections.^{12,13} However, spontaneous rupture of a hemorrhagic pancreatic pseudocyst with submucosal hematoma of gastric wall development leading to gastrointestinal bleeding is extremely rare.⁹ This case portrays the necessity of early diagnosis and intervention in order to prevent fatal complications.

Diagnostic work up in this case involved multiple imaging modalities, which were critical in identifying the hemorrhagic pseudocyst and associated vascular involvement. Ultrasound findings showed an irregular pancreatic structure with fluid collection measuring 103×32 mm between the pancreas and stomach, which was later confirmed by CT and MRI. The combination of endoscopy, gastrography with a barium swallow study, and celiacography provided a comprehensive overview of the lesion. Celiacography, in particular, was crucial in detecting the source of bleeding, confirming splenic artery involvement, and guiding the angiographic embolization procedure.¹⁰ In terms of imaging modalities for pancreatic pseudocyst evaluation is well-established, with contrast-enhanced CT and magnetic resonance cholangiopancreatography (MRCP) being the most

preferred modalities for detecting complications as such as hemorrhage, rupture, and infections.¹⁴ In case of suspected hemorrhagic pseudocyst, angiography plays a pivotal role in locating the bleeding source, assessing the severity of vascular involvement, and planning interventional procedures.¹¹ Embolization is accepted as the first line intervention for controlling bleeding from pseudoaneurysm in patients with chronic pancreatitis.¹⁵ In this case, endovascular embolization of the splenic artery was performed using eight nitinol spirals, successfully reducing blood flow to the bleeding site. However, despite initial success, the patient experienced recurrent bleeding episodes, necessitating surgical intervention. Even though embolization aids in temporarily halting bleeding (hemostasis) and stabilizing the patient, there are chances for re-bleeding due to failure in achieving the target and due to the presence of collateral circulation.¹⁰ Surgical intervention remains the definitive treatment in cases where embolization fails or when extensive tissue damage necessitates resection.⁸ During laparotomy, a tumor-like hematoma with mucosal defects and clots in the posterior gastric wall was identified, thereby confirming the penetration of the hemorrhagic pseudocyst into the gastric lumen. The splenic artery was completely damaged, emphasizing the need for an en-bloc resection of tail of the pancreas and spleen. Resection of the proximal part of stomach and esophagogastric anastomosis were performed in order to restore the patency of the gastrointestinal tract and prevent further complications. Surgical approaches for hemorrhagic pancreatic pseudocysts vary depending on the extent of tissue involvement. Options range from cyst gastrostomy for contained cysts to distal pancreatectomy and gastrectomy for cases involving vascular destruction and gastric perforation.⁷ Given the extensive adhesion and involvement of multiple structures in this case, the chosen

approach was necessary to ensure complete removal of the hemorrhagic pseudocyst and prevent further complications.

Following the surgery, the patient showed signs of gradual recovery, with stable vital signs and sufficient intestinal peristalsis with no signs of peritoneal irritation. Diuresis was sufficient.

Serous-hemorrhagic discharge up to 80 ml was evacuated. However, post-operative imaging revealed fluid accumulation in the in the left upper half of the abdomen and left pleural cavity, necessitating left thoracentesis. Laparotomy was performed along the projection of the subdiaphragmatic abscess and removed by blunt dissection followed by surgical debridement and drainage. Such complications are common following pancreatic surgery, particularly in cases of extensive tissue resection and pre-existing inflammation.⁶ The administration of prophylactic antibiotics helped prevent secondary infections, thereby contributing to the patient's favorable recovery.

Limitations

Although this case was successfully managed with endovascular and surgical interventions, there are limitations that should be considered. Delayed diagnosis: The patient had chronic recurrent pancreatitis, but the hemorrhagic pseudocyst was not detected until significant bleeding occurred. Earlier imaging and surveillance in high-risk patients could have potentially identified the complication before rupture.³ Embolization is vital in managing hemorrhagic pancreatic pseudocysts but it may only provide temporary hemostasis. In this case, recurrent bleeding necessitates surgical intervention, highlighting the need for the careful post-embolization monitoring.¹⁵ Surgical challenges and risk: the extensive adhesions and involvement of major vascular structures made surgical resection complex. The procedure carried significant risks, including bleeding, infection, and the potential for anastomotic leakage following esophagogastrostomy.⁸ The patient developed pleural effusion and sub-diaphragmatic abscess, despite successful surgical intervention. This emphasizes the importance of vigilant post-operative care and early detection of complications.⁶ Despite this case report highlights an unusual presentation, further studies are needed to establish standardized protocols for managing hemorrhagic pancreatic pseudocysts in similar scenarios.¹⁰

This case report underscores the importance of early diagnosis and intervention in hemorrhagic pancreatic pseudocysts. While embolization is an effective first-line treatment, surgical resection remains the definitive therapy in cases of persistent bleeding, vascular destruction, and pseudocyst rupture into the stomach.¹⁰ The choice of surgical approach depends on the severity of tissue involvement, with resection being necessary for cases involving major vascular structure.¹³ Monitoring the patients with chronic pancreatitis on a long-term basis is

crucial as persistent inflammation and fibrosis increase risk of bleeding, pseudocyst formation, and gastrointestinal involvement.⁵ Regular follow-up imaging and early intervention in high-risk patients, including prophylactic embolization or surgical cyst drainage, may help prevent life threatening bleeding.³

CONCLUSION

This case report represents a patient with severe abdominal pain with signs of gastrointestinal bleeding who was admitted to the intensive care at Grodno University Clinic. Initially, ultrasound, gastrography with Barium swallow study, endoscopy, CT, and MRI revealed a massive mass in the stomach. Celiography was performed which revealed the source of bleeding from the splenic artery, and it was embolized by 8 nitinol spirals. However, the embolization was effective up-to a certain extent as there were recurrent episodes of bleeding few days later, which prompted an operative laparotomy. During the operation it was revealed to be a massive hemorrhagic pancreatic pseudocyst which has invaded into the gastric mucosa. The resection of hemorrhagic pancreatic pseudo-cyst with proximal part of stomach, and distal resection of pancreas with splenectomy was done. Esophago-gastro anastomosis was performed. After surgery, conservative treatment was given. Following the post-operative period this patient experienced postoperative complications such as serous hemorrhagic discharge, fluid collection in the upper left half of the abdomen and free fluid in the left pleural cavity which were identified through the imaging techniques. Left thoracocentesis was performed and fluid was evacuated. Prophylactic antibiotics were given. In post-operative period, the patient showed signs of recovery with stable vital signs, sufficient intestinal peristalsis, and good diuresis was noted.

ACKNOWLEDGEMENTS

We would like to extended our gratitude to the Grodno University Clinic for providing necessary resources. Our heartfelt appreciation goes to Dr. Belyk Konstantin Sergeevich whose guidance and expertise were significant in making this report a success. We also extended our gratitude for the patient and their family for their cooperation in sharing their case which contributes to the advancement of medical knowledge. Lastly, we acknowledge our colleagues and medical staff for their valuable insights and assistance throughout the study.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Benjamin O, Lappin SL. Chronic Pancreatitis. *StatPearls*; 2022.
2. Beyer G, Habtezion A, Werner J, Lerch MM, Mayerle J. Chronic pancreatitis. *The Lancet*. 2020;396:499–512.

3. Li T. Global and regional burden of pancreatitis: epidemiological trends, risk factors, and projections to 2050 from the global burden of disease study 2021. *BMC Gastroenterol.* 2024;24:11-9.
4. Muniraj T, Aslanian HR, Farrell J, Jamidar PA. Chronic pancreatitis, a comprehensive review and update. Part I: epidemiology, etiology, risk factors, genetics, pathophysiology, and clinical features. *Dis Mon.* 2014;60:530–50.
5. Sergeevich BK, Vladislavovich ME, Wattaladeniya PG, Priyadarshani MGWMV. Pancreaticoduodenal resection with marginal resection of the portal vein: case study. *Int Surg J.* 2023;10:1993–9.
6. Ramsey ML, Conwell DL, Hart PA. Complications of Chronic Pancreatitis. *Dig Dis Sci.* 2017;62:1745–50.
7. Sankaran S, Walt AJ. The natural and unnatural history of pancreatic pseudocysts. *British Journal of Surgery.* 2005;62:37–44.
8. Rocha R. Spontaneous Rupture of Pancreatic Pseudocyst: Report of Two Cases. *Case Rep Surg.* 2016;705:65-7.
9. Tseng K-C, Hsieh Y-H, Tseng C-A, Lin C-W, Chen C-Y. Spontaneous Regression of Pancreatic Pseudocyst Mimicking a Submucosal Tumor of the Stomach with Upper Gastrointestinal Bleeding Report of a Case; 2006.
10. Chiang KC, Chen TH, Hsu J. Management of chronic pancreatitis complicated with a bleeding pseudoaneurysm. *World J Gastroenterol.* 2014;20:16132.
11. Kudaravalli P, Garg N, Pendela VS, Gambhir HS. Hemorrhagic pancreatic pseudocyst: A rare complication. *Am J Emerg Med.* 2021;43:243–4.
12. Habashi S, Draganov PV. Pancreatic pseudocyst. *World Journal of Gastroenterology.* 2009;15:38.
13. Sornsin SM, Marx JA. Rupture of a pancreatic pseudocyst following blunt abdominal trauma. *J Emerg Med.* 1988;6:29–32.
14. Aghdassi A. Diagnosis and treatment of pancreatic pseudocysts in chronic pancreatitis. *Pancreas.* 2008;36:105–12.
15. Zabicki B, Limphaibool N, Holstad MJV, Juszkat, R. Endovascular management of pancreatitis-related pseudoaneurysms: A review of techniques. *PLoS One.* 2018;13:e0191998.

Cite this article as: Sergeevich BK, Stanislovovich SA, Michailowicz ZY, Wattaladeniya PG, Priyadarshani MGWMV, Gunarathna KDIN et al. Surgical management of hemorrhagic pancreatic pseudocyst with splenic artery rupture and submucous hematoma of gastric wall development. *Int Surg J* 2025;12:818-24.