

Outlandish pancreatic pseudocyst: A case report

Vandana Tomey¹, Sudhir Tomey¹, Madhura A. Choudhari-Joshi²,
Chahat Singh³, Gaurang M. Aurangabadkar⁴

¹Department of Surgery, Datta Meghe Medical College and Shalinitai Meghe Hospital and Research Centre, Nagpur, Maharashtra, India, ²Department of Medicine, Mahatma Gandhi Institute of Medical Sciences, Wardha, Maharashtra, India, ³Department of Surgery, Jawaharlal Nehru Medical College, Wardha, Maharashtra, India, ⁴Department of Respiratory Medicine, Datta Meghe Medical College and Shalinitai Meghe Hospital and Research Centre, Nagpur, Maharashtra, India

ABSTRACT

Pseudocysts in the perinephric region are rare and pose a diagnostic dilemma. We present the case of a 54-year-old male with left perirenal pancreatic pseudocyst. The diagnosis was enabled via proper clinical history taking and imaging investigations. The patient was successfully managed with definitive primary surgical treatment. This report highlights difficulties in diagnosis and treatment.

Keywords: Atypical pseudocyst, distal pancreatectomy, perirenal pancreatic pseudocyst

Introduction

Pancreatic pseudocysts are collections of pancreatic enzyme-rich fluid, surrounded by fibrous capsule, lacking epithelial lining.^[1]

Based on pathogenesis, there are two types of pseudocysts in chronic pancreatitis:

1. Cysts secondary to ductal obstruction also called retention cyst, which present as intrapancreatic cyst and occur most commonly in the head of the pancreas.
2. Cysts secondary to ductal disruption with leakage of pancreatic juice due to focal pancreatic necrosis after an episode of acute exacerbation of chronic pancreatitis. These tend to be extrapancreatic and are confined to a lesser sac or occasionally to the tail region with or without extension into the subcapsular plane of the spleen. Such cysts are

notorious for extending into ectopic locations like liver, kidney, and mediastinum and may cause complications like pancreatic ascites, isolated left pleural effusion, and pericardial tamponade.

Pseudocysts in CP differ from those seen as a consequence of acute necrotizing pancreatitis. The fluid content seldom contains overt necrotic material and has a higher incidence of persistent communication with the pancreatic duct, is often rich in amylase, and is less likely to resolve spontaneously.^[2,3]

While the peri-pancreatic location is most common, ectopic locations in the perirenal region are quite rare. Such collections in perinephric spaces clinically and imaging-wise may present a difficult diagnostic challenge.^[4] Here we report a case of perirenal pancreatic pseudocyst managed entirely by surgery.

Address for correspondence: Dr. Vandana Tomey, Department of Surgery, Datta Meghe Medical College and Shalinitai Meghe Hospital and Research Centre, Wanadongri, Nagpur - 441 110, Maharashtra, India. E-mail: sudhirtomey@gmail.com

Case Report

A 54-year-old male patient presented with postprandial upper abdominal pain with radiation to the left side of the chest and flank for 2 months. Abdominal pain was associated with

Received: 11-07-2023

Revised: 05-09-2023

Accepted: 08-09-2023

Published: 21-12-2023

Access this article online

Quick Response Code:



Website:

<http://journals.lww.com/JFMPC>

DOI:

10.4103/jfmprc.jfmprc_1136_23

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Tomey V, Tomey S, Choudhari-Joshi MA, Singh C, Aurangabadkar GM. Outlandish pancreatic pseudocyst: A case report. J Family Med Prim Care 2023;12:3418-21.

dyspeptic symptoms and loss of 10 kg of body weight. He had been consuming alcohol regularly for many years and experiencing similar pain intermittently in the last year. Pain in the abdomen continued despite abstinence for the last 4 months. He was a case of ankylosing spondylitis for 20 years without any specific treatment.

His clinical examination was marked by severely restricted neck and back movement with kyphotic deformity of the spine. He was pale, had cheilosis, and diffuse abdominal tenderness without any free fluid or organomegaly.

His laboratory parameters were normal except for low hemoglobin, low serum protein, raised CRP, and raised serum lipase.

ECG was normal and chest X-ray showed elevation of the left hemidiaphragm [Figure 1]. Abdominal ultrasound revealed a bulky pancreas with coarse echotexture and multiple cystic

structures surrounding the left kidney raising the possibility of exophytic left renal cortical cysts.

Spiral computerized tomography-scan of abdomen revealed mild dilatation of pancreatic duct with cystic collections encircling the left kidney [Figure 2].

MRI study [Figure 3] revealed dilatation (5 mm) of pancreatic duct and its side branches suggestive of chronic pancreatitis. A cystic collection was seen extending from side branches within the tail region to the left perinephric and peri-splenic region with thick enhancing walls.

In light of above-mentioned finding and Patient's persistent pain, dyspepsia, and weight loss, he was planned for definitive surgical treatment. Anatomic deformity of the cervical and thoracic spine led to difficulty in endotracheal intubation, which had to be done via nasal pathway.

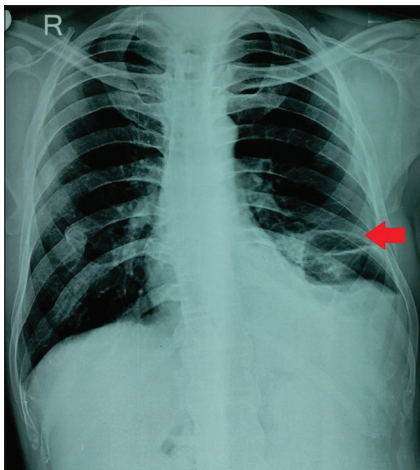


Figure 1: Chest X-ray posteroanterior view showing elevation of the left hemidiaphragm and absence of gas under the diaphragm

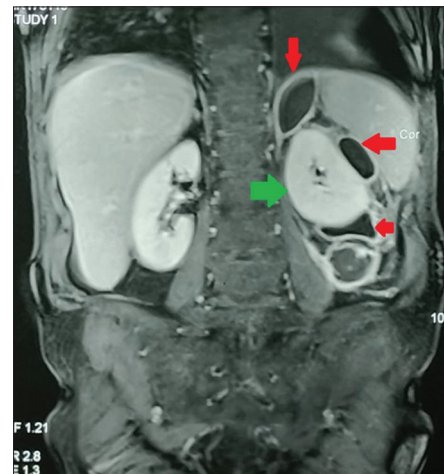


Figure 2: Spiral computerized tomography (CT) of the abdomen showing pancreatic pseudocyst (red arrow) and left kidney (green arrow)

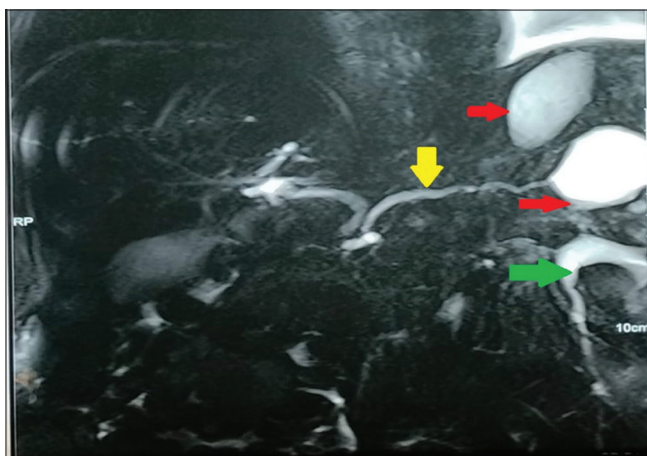


Figure 3: Magnetic resonance cholangio-pancreatography (MRCP) showing main pancreatic duct (MPD) (yellow arrow) in pancreatic tail communicating with the left perirenal cysts (red arrows), left pelvicalyceal system (green arrow)

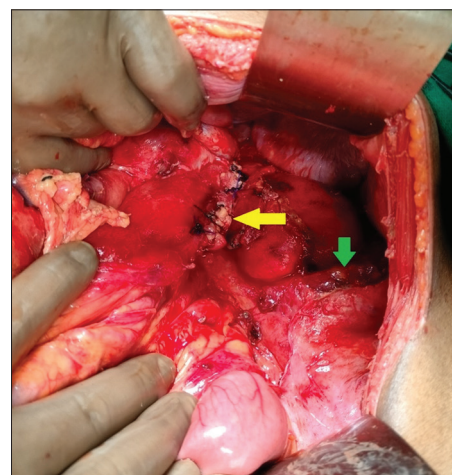


Figure 4: Intra-operative photograph showing stapled pancreatic tail (yellow arrow) and exposed left renal capsule following complete drainage of cyst (green arrow)

Laparotomy through the left subcostal incision revealed half a liter of straw-colored fluid in the subphrenic paracolic gutter and pelvis suggestive of leakage from the pseudocyst. There were multiple thick-walled collections of pancreatic fluid between the pancreatic tail, spleen, stomach, and within left Gerota's fascia. These were communicating with the tail of the pancreas with evidence of partial necrosis of pancreatic parenchyma, Gerota's, and retroperitoneal fat. Complete evacuation and drainage of the cystic collection along with excision of the pancreatic tail and Spleen was undertaken. Operative step is shown in Figure 4.

Post-operative phase was uneventful. Histo-pathology of resected pancreatic tail revealed a picture of acute necrotizing pancreatitis.

At 6 months follow up patient is fully abstinent, asymptomatic and has no recurrence of pseudocyst.

Discussion

The majority of pancreatic pseudocysts are confined to the pancreatic bed and are amenable to endo-therapy or surgical internal drainage.^[5]

The anatomic location of the pancreas and peripancreatic facial planes, however, allows pancreatic pseudocyst to spread to uncommon and ectopic locations such as liver, spleen, media-sternum, pelvis, and kidney.^[6,7]

Perirenal spread and its manifestation have been described in the literature for its rarity, confusion with renal pathology, and ill effects on the kidney.

The incidence of perirenal cyst is between 0.9 and 1.25%.^[6]

It has been confused with renal cysts, abscesses, and renal neoplasm.^[8] It has caused effects on renal functioning by way of compression leading to page kidney and renal arterial aneurysms.^[4,6]

Though imaging has improved our diagnostic abilities, still confirmation via FNAC and the study of cyst fluid with the finding of high enzyme values has been advocated.^[4]

There are no clear guidelines for the management of perirenal pancreatic pseudo cyst due to the scarcity of these cases.

There is paucity of level 1 evidence to support any particular method of drainage, but there is now accumulated evidence that when feasible, endo-therapy should be the first line of treatment preferably with EUS guidance.^[9] Endoscopic drainage is safe, less invasive than surgical drainage and is safe in skilled hands, and has a high success rate.^[10] Recurrence and complications were estimated at 13% and 14%, respectively.^[11]

In this case, the presence of ankylosing spondylitis not only caused difficulty in differentiating symptoms between

pancreatitis and spondylitis but also posed problems for the anesthesia team.

We did not consider endo-therapy because of the distal location of the leak and perceived inability to bridge the leak and possibly the need for pancreatic drainage with its attendant problems and the need for repeated procedures. Similarly, percutaneous external drainage was deferred in view of the multiplicity of cysts.

In the end, laparotomy and resection of the pancreatic tail with spleen as definitive therapy proved to be beneficial as it led to a rapid and cost-effective way of relief to the Patient's problem.

The patient with abdominal pain often presents to a general practitioner or a family physician prior to consulting a specialist. Awareness of the various rare and interesting differential diagnoses of a common complaint such as abdominal pain is essential in a primary healthcare setting. Therefore it is our opinion that this case report will help in educating the primary care physician regarding early recognition of surgical emergencies.

Abbreviations

1. Kg—Kilogram
2. CRP—C-Reactive Protein
3. ECG—Electrocardiogram
4. CT—Computed Tomography
5. MRI—Magnetic Resonance Imaging
6. FNAC—Fine Needle Aspiration Cytology
7. CP—Chronic Pancreatitis

Author's contributions

Drafting the manuscript: Dr. Vandana Tomey, Dr. Sudhir Tomey, Dr. Madhura Joshi, Dr Chahat Singh, Dr Gaurang Aurangabadkar

Patient Diagnosis: Surya Clinic, Atrey Layout, Pratap Nagar, Nagpur

Surgery Performed: Dr. Sudhir Tomey and Dr. Vandana Tomey

Post-operative care was given by all the above-mentioned surgeons, the resident, and nursing staff.

All of the writers participated in the care of the patients, and all the authors reviewed and approved the final work.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Umopathy C, Gajendran M, Mann R, Boregowda U, Theethira T, Elhanafi S, *et al.* Pancreatic fluid collections: Clinical manifestations, diagnostic evaluation and management. *Dis Mon* 2020;66:100986. doi: 10.1016/j.disamonth.2020.100986.
2. D'Egidio A, Schein M. Pancreatic pseudocysts: A proposed classification and its management implications. *Br J Surg* 1991;78:981-4. doi: 10.1002/bjs.1800780829.
3. Apostolou C, Krige JE, Bornman PC. Pancreatic pseudocysts. *S Afr J Surg* 2006;44:148-55.
4. Baker MK, Kopecky KK, Wass JL. Perirenal pancreatic pseudocysts: Diagnostic management. *AJR Am J Roentgenol* 1983;140:729-32. doi: 10.2214/ajr.140.4.729.
5. Agalianos C, Passas I, Sideris I, Davides D, Derveniz C. Review of management options for pancreatic pseudocysts. *Transl Gastroenterol Hepatol* 2018;3:18. doi: 10.21037/tgh.2018.03.03.
6. Hiremath R, Kuttancheri T, Gurumurthy B, Kini DV, Poojary SR, Bannampalli SR, *et al.* A new page in the literature of pancreatic pseudocyst: case report on perirenal pseudocyst presenting as page kidney. *Egypt J Radiol Nucl Med* 2022;53:240. <https://doi.org/10.1186/s43055-022-00925-7>.
7. Bhasin DK, Rana SS, Nanda M, Chandail VS, Masoodi I, Kang M, *et al.* Endoscopic management of pancreatic pseudocysts at atypical locations. *Surg Endosc* 2010;24:1085-91. doi: 10.1007/s00464-009-0732-8.
8. Madani MA, Ouannes Y, Chaker K, Marrak M, Noura Y. Pancreatic pseudocyst mimicking a left kidney abscess: A case report. *J Med Case Rep* 2023;17:228. doi: 10.1186/s13256-023-03957-3.
9. Dumonceau JM, Delhay M, Tringali A, Arvanitakis M, Sanchez-Yague A, Vaysse T, *et al.* Endoscopic treatment of chronic pancreatitis: European Society of Gastrointestinal Endoscopy (ESGE) Guideline-Updated August 2018. *Endoscopy* 2019;51:179-93. doi: 10.1055/a-0822-0832.
10. Varadarajulu S, Bang JY, Sutton BS, Trevino JM, Christein JD, Wilcox CM. Equal efficacy of endoscopic and surgical cystogastrostomy for pancreatic pseudocyst drainage in a randomized trial. *Gastroenterology* 2013;145:583-90.
11. Panamonta N, Ngamruengphong S, Kijrithareanchai K, Nugent K, Rakvit A. Endoscopic ultrasound-guided versus conventional transmural techniques have comparable treatment outcomes in draining pancreatic pseudocysts. *Eur J Gastroenterol Hepatol* 2012;24:1355-62. doi: 10.1097/MEG.0b013e32835871eb.