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RETROPERITONEAL NON PANCREATIC PSEUDOCYST: A DIAGNOSTIC ENIGMA

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Abstract:
A 53 year old gentleman presented with an abdominal lump associated with pain and loss of appetite of short duration (2 weeks). He was non alcoholic and denied history of pancreatitis. He was diagnosed to have a large retroperitoneal cyst on imaging and underwent endoscopic cystogastrostomy was done elsewhere. He was referred to us with fever and abdominal pain. Repeat imaging in our institution showed persistence of cyst in the retroperitoneum with cystogastrostomy stent in situ. Laparotomy and complete excision of cyst was done. Histopathological examination showed no epithelial lining of the cyst suggestive of a retroperitoneal non pancreatic pseudocyst. The patient had an uneventful recovery and remains asymptomatic on follow up.
Keywords: retroperitoneal cyst, pseudocyst

INTRODUCTION

Retroperitoneal cysts are rare and usually asymptomatic, unless they have grown to huge proportions. They are usually discovered incidentally, while screening for other complaints. Retroperitoneal pseudocysts are usually of pancreatic origin. Here we report a case which was diagnosed initially as a pancreatic pseudocyst and managed endoscopically but the patient landed up with recurrence and required surgical excision of the entire cyst.

Case Report:

A 53 year old gentleman was transferred to our institution with abdominal distension which was associated with pain and reduced appetite. The distension was gradually increasing since last 2 days. The pain was of dull aching`` in the upper abdomen with no radiation to the back. He also gave history of intermittent fever since the last 2 days. He denied history of any habits or any previous history of similar pain and trauma. On examination he had tachycardia, mild tachypnea and had tenderness in the epigastric region with a palpable lump. The lump involved the epigastrium, right hypochondrium and extended into the right iliac fossa. He was admitted a week ago in another institution with abdominal pain and vomiting. His routine laboratory investigations over there including serum amylase and lipase were normal. Ultrasound of the abdomen had shown a large cystic lesion in the epigastrium. Computed tomography (CT) scan of the abdomen with intravenous and oral contrast had shown a large cystic lesion in close vicinity of the pancreatic head and neck, extending into subhepatic space, pushing the transverse colon down and reaching upto the right iliac fossa (figure-1a,b). It was displacing the duodenum, the hepatic flexure and the omentum inferiorly. The cyst wall was enhancing well with no mural nodules or papillary projections. The treating physician at the other hospital did an endoscopic ultrasound (EUS) which showed a cystic lesion indenting along the lesser curvature of the stomach with no solid components, no vascularity, no mural nodules and no papillary projections. (figure-1c). EUS guided cyst fluid aspiration had revealed serous fluid and fluid analysis levels for amylase/ bilirubin/ triglycerides/ CEA/CA19-9 were within the normal range. He underwent EUS guided cystogastrostomy with the placement of a self-expandable metallic stent (SEMS) (figure-1d). About 3.5 litres of serous fluid was drained from the cyst. Post procedure he had relief of symptoms. After 5 days he was transferred to us with abdominal pain, distension, vomiting and fever.

Laboratory profile was normal except leucocytosis. CT scan abdomen with oral and IV contrast done showed

the same cyst in the left subhepatic space anterior to the head and neck of the pancreas extending into the right iliac fossa with air fluid levels within it. The cystogastrostomy was patent (figure-2a,b).

In view of failure of symptomatic resolution after endoscopic management a laparotomy was planned using a right subcostal incision. A Cattell-Braasch manouvre (mobilisation of the right colon) was done. The hepatogastric ligament was incised. A large cyst was found in the retro gastric region. The cyst was occupying the entire hepatogastric region and pushing the left lobe of the liver superiorly. Medially the cyst was abutting the head and body pancreas with its extension behind. Inferiorly the cyst was abutting to ascending colon and proximal transverse colon. The cyst was opened and the gastric contents were drained (figure-2c). The entire cyst was excised (figure-2d). No communication with any anatomical structure was noted. The metallic stent of cystogastrostomy was removed and the rent in the gastric wall was closed in two layers. The histopathological examination of the cyst showed that it is lined predominantly by a fibrinopurulent exudate. There was no epithelial lining. The wall contained proliferating granulation tissue and fibroblasts (figure-2e). The inflammatory infiltrate within the wall showed chronic inflammation. There are a few focal dilated lymphoid spaces. There is no evidence of malignancy or any teratomous elements.

Post operatively he was started orally on the 3rd day. He developed fever and abdominal pain on the 6th post operative day. Ultrasonography of the abdomen and pelvis showed collections in the pelvis. The pelvic collection was serous and was aspirated under ultrasonography guidance. He also had a surgical site infection which was managed with antibiotics and regular dressings. His fever settled after the drainage of collections. He was discharged on full diet. Follow up CT scan done after 6 months showed complete resolution of the cyst. He remains asymptomatic at 9 months post surgery.

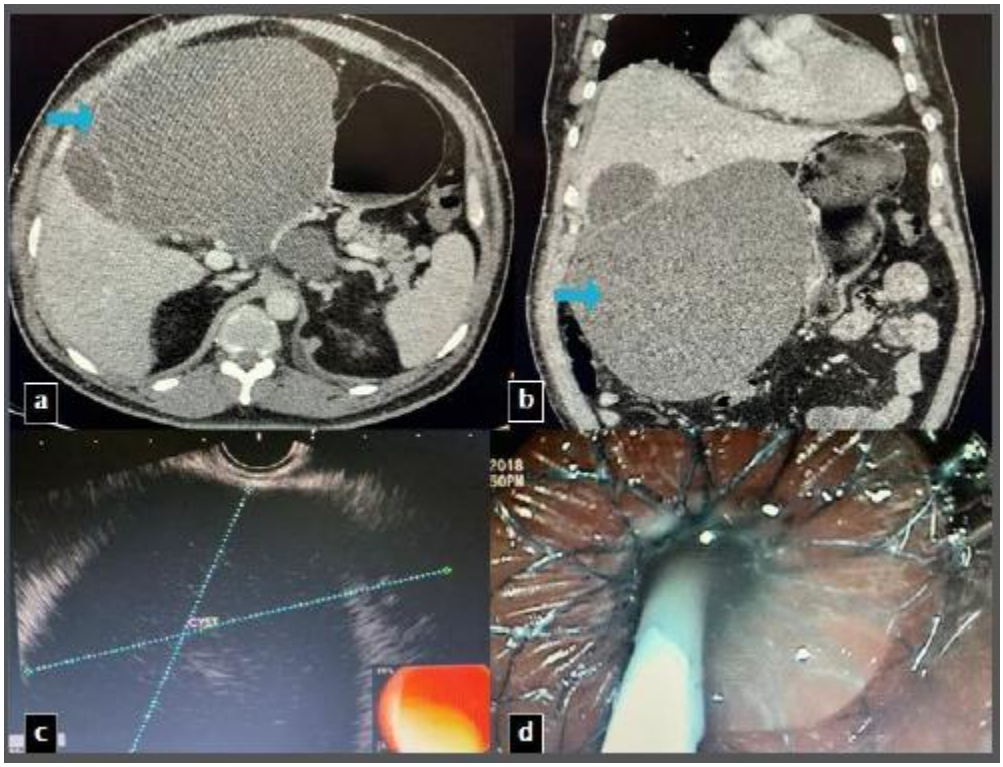

Figure 1:

a) Axial view of CT Scan showing cyst (Blue Arrow) and its extent on initial presentation

b) Coronal view of CT Scan showing cyst (Blue Arrow) and its extent on initial presentation

c) EUS showing dimensions of the cyst (12 x 10cm)

d) 8cm; 16mm Hanaro pseudocyst self-expanding metal stent with double pigtail anchorage.

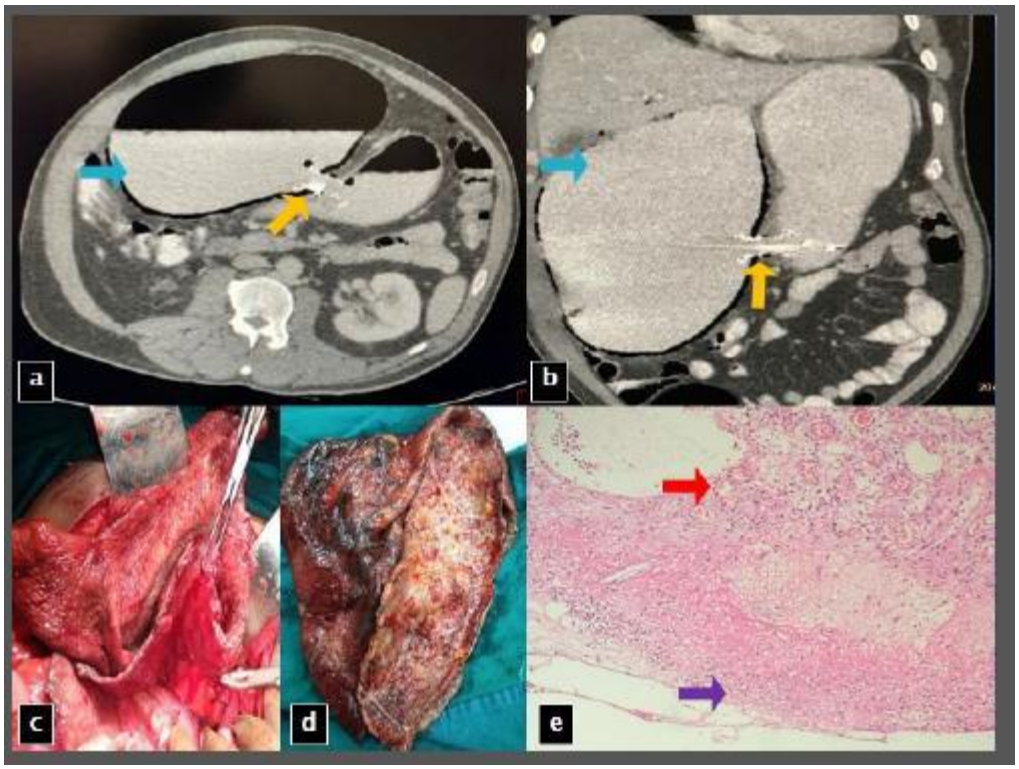

Figure 2:

- **a)** Axial view of CT Scan showing cyst (blue arrow) and patent cystogastrostomy (orange arrow)
- **b)** Coronal view of CT Scan showing cyst (blue arrow) and patent cystogastrostomy (orange arrow)
- **c)** Intra-op view of the cyst
- **d)** Gross Specimen after surgical resection
- **e)** Histomicrograph showing fibrinopurulent exudate lined cyst wall without any lining epithelium (purple arrow) and dilated lymphoid spaces (red arrow).

Discussion:

Retroperitoneal cysts are rare, having an incidence of 1/5750 to 1/250,000 [1]. On the basis of embryology and histology, retroperitoneal cysts can be classified as (a) Urogenital; (b) Mesocolic; (c) Cysts arising in cell inclusions; (d) Traumatic; (e)Parasitic and (f)Lymphatic [2]. Handfield-Jones defined retroperitoneal cysts as cysts existing in the retroperitoneal fatty tissues that have no connection with any adult anatomic structure except areolar tissue [3]. In our patient the cyst was located behind the stomach, abutting the superior border of the pancreas head and body, extending inferiorly behind the right colon.

A pseudocyst is one which is devoid of any epithelial layers. Most retroperitoneal pseudocysts are of pancreatic origin, usually seen as a sequel of acute or chronic pancreatitis. Unlike pancreatic pseudocysts, nonpancreatic pseudocysts are not associated with high levels of amylase or lipase in the cystic fluid. The nonpancreatic pseudocysts usually have a thick, fibrous wall and contain blood, pus or serous fluid [4]. In our case the cyst wall was thick and contained gastric contents due to the communication with the stomach via the cystogastrostomy. The treating phycisian in another institute misinterpreted it as a pancreatic pseudocyst and did an endoscopic cystogastrostomy. Normally a cystogastrostomy relieves the symptoms of a pseudopancreatic cyst. But recurrence of symptoms along with fever immediately after the patient was discharged suggested a different diagnosis.

The retroperitoneum is a large potential space. Hence these cysts can grow to a considerable size before becoming symptomatic. They are usually symptomless, but vague abdominal pain and distension may be present in 50% of cases [5]. If they

become infected or haemorrhagic, they may present with acute abdominal pain. Other symptoms include pain in the back, lower limb pain, lower limb oedema, weight loss or fever [2]. The mass is usually mobile in the transverse plane, but moves in all directions when it originates from the omentum. Our patient presented with abdominal pain, lump and fever. The fever could be due to infection of the cyst secondary to gastric contents. The gastric contents were partly entering into the cyst through the cystogastrostomy communication with its retention and non-emptying.

Computed Tomography (CT) scan is ideal for assessing the retroperitoneum as it provides discrete sectional images of the organs as well as the retroperitoneal compartments. CT scan provides important information regarding the anatomic location, the size, and the shape of the lesion including involvement of the adjacent structures. Nonpancreatic pseudocysts manifest on CT scans as unilocular or multilocular fluid-filled masses with thick walls [6].

The gold standard treatment remains complete removal of the cyst surgically. It can be done by open method via a laparotomy or also laparoscopically [7]. Our patient was approached by the open method as the size of the cyst was very large.

If the cyst is not removed in toto there is always a chance of it recurring. In an analysis of the 23 patients who had a retroperitoneal cyst, Kurtz and colleagues mentioned that the recurrent rate was about 22% [8]. In our case, the excision was complete, and there was no evidence of recurrence in the follow up CT scan done after 6 months. The patient remains symptom free at 9 months post surgery.

Conclusion:

- Non pancreatic pseudocyst in the retroperitoneum is a rare occurrence.
- Often the patients are asymptomatic or have nonspecific symptoms and may have a palpable abdominal lump
- If there is no antecedent history of pancreatitis and cyst fluid analysis is normal, consideration should be given for non pancreatic pseudocyst.
- Surgery with complete removal of the cyst should be the treatment of choice in these cysts to prevent the chance of recurrence following endoscopic approach.

References:

1. Guile M, Fagan M, Simopolous A, Ellerkman M; Retroperitoneal Cyst of Müllerian Origin: A Case Report and Review of the Literature; Journal of Pelvic Medicine and Surgery: May-June 2007 - Volume 13 - Issue 3 - p 149-152
2. Alzaraa A, Mousa H, Dickens P, Allen J, Benhamida A; Idiopathic benign retroperitoneal cyst: a case report; J Med Case Rep. 2008 Feb 8;2:43.
3. Handfield-Jones RM. Retroperitoneal cysts: Their pathology, diagnosis and treatment. Br J Surg 1924;12:119-134
4. Jiun-Hung G, Chun-Hsiung H, Wen-Jeng W, Shu-Pin H, Yi-Ting C Huge retroperitoneal nonpancreatic pseudocyst; Urological Science 23 (2012) 61-3
5. Adams JT. Abdominal wall, omentum, mesentery and retroperitoneum. In: Schwartz SI, Shires GT, Spencer FC, eds. *Principles of Surgery*. 5th ed. McGraw Hill Book 1989; 1491-1524
6. Yang DM, Jung DH, Kim H, Kang JH, Kim SH, Kim JH et al . Retroperitoneal Cystic Masses: CT, Clinical, and Pathologic Findings and Literature Review; Radiographics. 2004 Sep-Oct;24(5):1353-65
7. Palanivelu C, Rangarajan M, Senthilkumar R, Madhankumar MV, Annapoorni S. Laparoscopic excision of an infected "egg-shelled" retroperitoneal pseudocyst. J Gastrointestin Liver Dis. 2008 Dec;17(4):465-8
8. Kurtz R, Heimann T, Beck R, Holt J, Beck R A. Mesenteric and retroperitoneal cysts. Ann Surg 1986 Jan; 203 (1) :109 - 112.