DOI: 10.7860/JCDR/2023/64591.18380

Case Report

Surgery Section

Primary (Idiopathic) Non-pancreatic Retroperitoneal Pseudocyst in a Young Female: A Rare Case Report

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ABSTRACT

Retroperitoneal Cysts (RPC) are uncommon, with an estimated incidence of 1 in 5,750 to 1 in 250,000. A 26-year-old woman presented with dull aching, non-radiating pain in the upper abdomen for the past two months, with no aggravating or relieving factors. On clinical examination of the abdomen, a grossly visible mass measuring approximately 10×10 cm with a smooth surface, firm consistency, and well-defined borders was observed in the left lumbar and iliac region. Contrast-Enhanced Computed Tomography (CECT) of the abdomen and pelvis revealed a well-circumscribed cystic lesion measuring 9.3×9.5×5.5 cm in the left lumbar region near the tail of the pancreas. The pancreas appeared normal with no surrounding fat stranding or inflammatory changes. Peripheral enhancement and peripheral wall calcification were observed. The patient underwent laparotomy and cyst excision. Intraoperatively, the cyst was found to arise from the retroperitoneum located in the lesser sac. It was dissected out from the tail of the pancreas, and no obvious communication with the pancreas was observed. The cyst was excised completely. Histopathological examination revealed a cyst with absent endothelium, suggestive of a pseudocyst. Previous literature reports indicate that RPCs are very rare and are often discovered incidentally. Patients may be asymptomatic or present with vague symptoms. Imaging can help diagnose these lesions, but surgery is crucial in confirming the diagnosis.

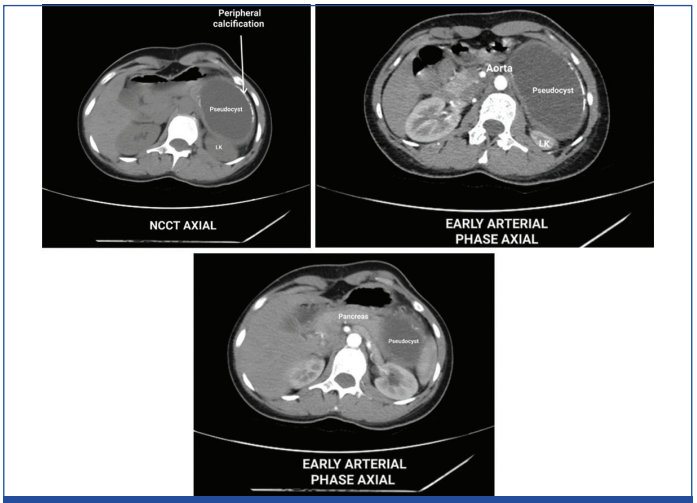
Keywords: Cyst excision, Laparotomy, Lumbar region, Retroperitoneum

CASE REPORT

A 26-year-old woman presented with dull, aching, non-radiating pain in the upper abdomen for the past two months, with no aggravating or relieving factors. There was no history of constipation, weight loss, or rectal bleeding. Her past medical history and family history were not relevant to the case. The patient had no previous episodes of pancreatitis or abdominal trauma, and there was no history of gallstones. During the clinical examination of the abdomen, a visible mass measuring approximately 10×10 cm with a smooth surface, firm consistency, and well-defined borders was observed in the left lumbar and iliac region. The mass was non-tender and did not move with respiration. A digital rectal examination showed no abnormalities.

Haematological investigations yielded normal results, and both amylase and lipase levels were within the normal range. A contrast-enhanced CT scan of the abdomen and pelvis revealed a well-circumscribed cystic lesion measuring 9.3×9.5×5.5 cm in the left lumbar region near the tail of the pancreas. The cyst showed peripheral enhancement and peripheral wall calcification, while the pancreas appeared normal without any surrounding fat stranding or inflammatory changes [Table/Fig-1]. Tumour markers, Carcinoembryonic Antigen (CEA), and Alpha-Fetoprotein (AFP) were found to be normal.

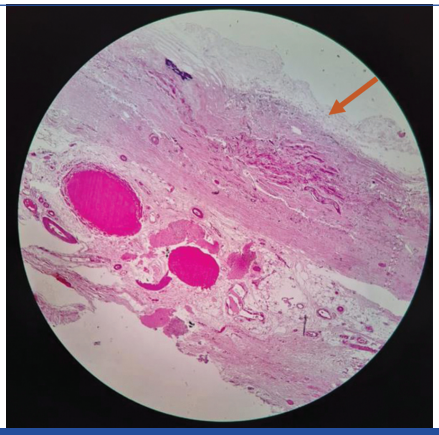
The patient underwent laparotomy and cyst excision. Intraoperatively, it was determined that the cyst arose from the retroperitoneum within the lesser sac. The cyst, which did not demonstrate any obvious communication with the pancreas, was dissected out from the tail of the pancreas and completely removed. The defect in the lesser sac was closed. Since the cystic lesion was sent for pathological evaluation as an intact structure, the cyst fluid was not tested for amylase. Initially, a pancreatic pseudocyst was not considered as a differential diagnosis due to the absence of a relevant medical history and the lack of evidence of communication with the pancreas (confirmed by intraoperative findings as well as imaging) [Table/Fig-2]. The histopathological examination revealed a cyst with absent endothelium, suggestive of a pseudocyst [Table/Fig-3]. The



[Table/Fig-1]: A well circumscribed cystic lesion measuring 9.3×9.5×5.5 cm with peripheral enhancement and peripheral wall calcification seen in the left lumbar region near the tail of pancreas, pancreas appeared normal.

[Table/Fig-2]: Resected retroperitoneal cyst.

patient had a smooth recovery without any clinical complications and was discharged on the fifth postoperative day. She resumed her daily activities and work within 10 days of surgery and reported no further complaints during follow-up.



[Table/Fig-3]: Haematoxylin and Eosin stained histological slide showing casing cyst wall and the absence of an epithelial layer. Orange arrow depicts absent epithelial layer (400x).

DISCUSSION

Isolated Retroperitoneal Pseudocyst (RPC) tumours are uncommon, with an estimated prevalence of 1/5750 to 1/250,000 [1]. These cysts typically originate from the pancreas. About one-third of RPC patients are asymptomatic, and the cysts are incidentally discovered. They can grow to a significant size before causing symptoms. The most common cause of RPC masses is pseudocysts associated with pancreatitis, which occur more frequently in cases of acute-on-chronic pancreatitis [2]. RPC can also result from cysts that form in neighboring structures, such as mesenteric, omental, splenic, and enteric duplication cysts [2].

RPCs are cysts that do not connect to the surrounding structures and originate in the fatty areolar tissue of the retroperitoneum [3]. Unlike pancreatic pseudocysts, they typically have a thick, fibrous wall without an epithelial lining. These cysts may contain haemorrhage, pus, or serous fluid, but their amylase and lipase levels are not elevated [4]. The exact pathogenesis of this condition is unknown. Clinical features and symptoms often correspond to the location and size of the pseudocyst. Patients may present with abdominal pain, lower limb oedema, or referred pain to the legs. Infection or haemorrhage within the non-pancreatic RPC can cause acute exacerbation of abdominal pain [5]. In a case report by Latif et al., a middle-aged male presented with constipation for five to six years and was on symptomatic treatment with laxatives [5]. In contrast, the patient in the present case had a shorter duration of vague upper abdominal pain. Additionally, unlike the patient in the present case, the mass was not palpable in the former study. It is evident that RPC can present with a range of symptoms and clinical courses.

On imaging, RPCs appear as thick-walled unilocular or multilocular cystic masses. Abdominal CT scans and ultrasonography are both diagnostic for retroperitoneal pseudocysts. Long-standing cysts may become calcified, exhibiting a characteristic eggshell appearance [6]. Histologically, the cyst wall consists of fibrous tissue without an epithelial lining. RPC includes a wide variety of cysts, such as mesenteric, omental, splenic, and intestinal duplication cysts [7]. Neoplastic RPCs can be classified as epithelial (mucinous or serous cystadenoma), mesothelial (mesothelioma), germ cell-related (cystic teratoma), and cystic alterations in solid neoplasms (paraganglioma, neurilemmoma, sarcoma) [7]. Other uncommon cysts that have been identified include Müllerian cysts, epidermoid cysts, tailgut cysts, bronchogenic cysts, and lymphangioma (accounting for 1% of all retroperitoneal neoplasms) [8]. Non-neoplastic causes include hematoma, urinoma, lymphocele, pancreatic pseudocyst, and nonpancreatic pseudocyst [8].

Surgical excision is the primary method of treating pseudocysts [9]. The cyst must be removed to prevent recurrence caused by residual cyst wall. In the current scenario, pseudocysts are typically removed laparoscopically. However, due to financial constraints, laparoscopic excision of the pseudocyst could not be performed. Techniques such as marsupialisation and partial excision are not recommended due to the high incidence of recurrence.

CONCLUSION(S)

Idiopathic non-pancreatic pseudocyst is a rare surgical entity that can attain an enormous size and carries a wide range of differential diagnoses. Symptoms and signs are non-specific. Surgical excision is the only way to establish a definitive diagnosis. However, care should be taken to remove the cyst entirely to prevent recurrence.

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PLAGIARISM CHECKING METHODS: [Jain H et al.]
- Plagiarism X-checker: Apr 12, 2023
- Manual Googling: Jun 21, 2023
- iThenticate Software: Jul 13, 2023 (15%)

ETYMOLOGY: Author Origin

EMENDATIONS: 6

AUTHOR DECLARATION:
- Financial or Other Competing Interests: None
- Was Ethics Committee Approval obtained for this study? Yes
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. Yes

Date of Submission: **Apr 09, 2023**
Date of Peer Review: **May 31, 2023**
Date of Acceptance: **Jul 19, 2023**
Date of Publishing: **Sep 01, 2023**