

Laparoscopic Excision of A Rare Retroperitoneal Non-Pancreatic Pseudocyst

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Abstract

Retroperitoneal cysts (RCs) are rare. They are composed of both epithelial and mesothelial tissues, and those without an epithelial lining in the wall are called pseudocysts. Most retroperitoneal pseudocysts are pancreatic in origin, and non-pancreatic pseudocysts are very rarely reported. We report a case of large cystic lesion adjacent to the left kidney in a 25 years old man. He presented with 2 and half years history of gradual swelling of left upper abdomen. Abdominal ultrasonography and CT scan showed a large unilocular cystic mass in left side of the abdomen, which was attached with the lower pole of the left kidney. The cystic mass was excised laparoscopically. Histology showed a fibrous wall without epithelial lining thus confirming the diagnosis of a nonpancreatic pseudocyst.

Key words : Retroperitoneal cysts; non-pancreatic pseudocysts; laparoscopic excision.

INTRODUCTION

Retroperitoneal cystic (RC) masses are relatively rare in clinical settings. There are no specific clinical signs for RCs, although vague abdominal pain and distention are present in 50% of cases with an RC¹. They usually attain a large mass before causing any symptoms. Therefore, they are often accidentally discovered². RCs without an epithelial lining in the wall are called pseudocysts. Most of the retroperitoneal pseudocysts are of pancreatic origin.

Cystic lesions of the retroperitoneum are pathologically classified as either neoplastic or non-neoplastic. Neoplastic lesions include cystic lymphangioma, mucinous cystadenoma, cystic teratoma, cystic mesothelioma, müllerian cyst, epidermoid cyst, tail gut cyst, bronchogenic cyst, cystic change in solid neoplasms, pseudomyxoma retroperitonei, and perianal mucinous carcinoma. Non-neoplastic lesions include pancreatic pseudocyst, nonpancreatic pseudocyst, lymphocele, urinoma, and hematoma³⁻⁴.

CASE HISTORY

A 25 years old man, who lives abroad, presented with gradual abdominal distension and a swelling over a period of two and a half year. He did not give any history of trauma. He had no alteration of bowel habit. There was neither urinary symptom nor any history of fever. On examination there was smooth non tender swelling felt over the left side of the lumbar area. Ultrasonography of the abdomen detected a large cyst in the abdomen in front of the left kidney. The diameter of the cyst was 9.6cm×9.0 cm. Subsequent CT scan confirmed a unilocular cyst, which has thick wall and contains dense fluid. The cyst was completely separated from the spleen and pancreas but has deep adherence with the lower pole of the left kidney on CT (Fig-1). IVU did not show any communication with the collecting system of the kidney. The patient was non diabetic. His TLC was 14 000/cu mm, Hb 14.1gm, ESR 15mm/1st hour and serum creatinine 1mg/dl. His chest x-ray was normal. USG guided FNAC showed serous fluid and no evidence of malignancy. We decided to excise the cyst laparoscopically.

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The patient was operated on semi-right lateral position. Three trochars were placed as shown in the picture. Two 10 mm and one 5mm trochars were used. During surgery cyst was punctured and aspirated in order to reduce the size of the cyst. Very thick serous fluid was found. The cyst was successfully separated from the surrounding structure such as spleen, descending colon and anterior wall of the kidney. At the lower pole of the left kidney, for an area of approximately 4 sq cm, the cyst was found to be deeply adherent. At that point the cyst and the capsule of the left kidney were inseparable. So cyst was excised leaving the capsule of the kidney intact. The patient recovered uneventfully except a minor wound infection at one of the trocar site. Patient was discharged on 5th postoperative day. He was seen on follow up. The trocar sites have healed. The patient was found to be very satisfied with the surgery (Fig-2). He left for abroad and joined his duty in three weeks time.

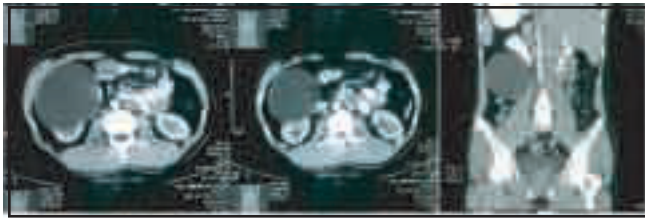


Figure 1: Preoperative CT scan of abdomen



Figure 2: Postoperative photo of port sites

DISCUSSION

RCs were defined by Handfield-Jones as cysts existing in the retroperitoneal fatty tissues that have no connection with any adult anatomic structure except areolar tissue⁵. Their precise pathogenesis remains unknown, but many possible pathologic processes have been proposed that can roughly be divided into urogenital, mesocolic, teratomatous, parasitic, traumatic, and lymphatic⁶.

A pseudocyst differs from a cyst in the absence of any epithelial lining. According to literature reports, pseudocysts commonly originate from the pancreas and develop from acute pancreatitis⁷⁻⁸. Unlike pancreatic pseudocysts, non-pancreatic pseudocysts are not associated with high levels of amylase or lipase in the cystic fluid. They usually has a thick fibrous wall and contain blood, pus, or serous fluid. Because there are no clinically characteristic symptoms or signs for RCs, clinicians should consider the possibility of an RC when they confront a patient who presents with vague abdominal pain and distension and when a palpable abdominal mass is demonstrated. In some circumstances, the patient with an RC may occasionally present with acute abdominal pain when the RC becomes hemorrhagic or infected. CT is ideal for assessing RCs because it provides discrete sectional images of the organs and retroperitoneal compartments. Characteristics of non-pancreatic pseudocysts are clearly manifested on CTscans as unilocular or multilocular fluid-filled masses with thick walls⁹. Histologic features of RCs are important for making final diagnosis. On the microscopic analysis, the walls of pseudocysts consist of dense fibrous tissue (the mesothelium) with no epithelial lining. They are similar to the histologic features of lymphoceles. The differential diagnosis between them is based on the history, imaging and fluid contents. As mentioned above, our patient had no surgical or traumatic history. Lymphoceles were not likely as the cyst did not contain chylous fluid. The treatments of choice for RCs include complete excision and simple drainage. Excision of cysts is the best policy because of their potential recurrence. Possible surgical approach includes open laparotomy or a laparoscopic excision. As the cyst was moderately large and protruded anteriorly, laparoscopic approach seemed feasible. We used semi-right lateral position of the patient after insertion of the first trocar and creation of pneumoperitoneum. This helped left colon and small intestine to fall away from the cyst. Recurrence following excision of a retroperitoneal cyst can occur if the excision is incomplete. In an analysis of the 23 patients who had an RC that the recurrent rate was about 22% (five recurrences occurred in 23 patients)¹⁰. In our case, excision was complete and there was no recurrence in the short period of follow up.

CONCLUSION

Retroperitoneal non-pancreatic pseudocysts are very rare. We presented this case of progressive lower abdominal pain that was ultimately diagnosed as a retroperitoneal non-pancreatic pseudo-cyst. These kind of retroperitoneal or peri-renal cysts can be successfully excised laparoscopically.

DISCLOSURE

All the authors declared no competing interest.

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