

Pseudocyst of Adrenal Gland

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Summary

Cysts of the adrenal gland are uncommon. We report a case of symptomatic pseudocyst of adrenal gland in an adult male, which was excised through retroperitoneoscopic route. Surgery was uneventful and patient returned to pre-operative activity within seven days of operation. At ten months of follow up patient is asymptomatic and doing well.

Key Words: Adrenal gland, Pseudocyst, Retroperitoneoscopy

Introduction

Adrenal cysts are uncommon. They are usually asymptomatic and discovered incidentally¹. Pseudocysts of adrenal gland are the most common type of adrenal cysts reported^{1,2}. Symptomatic cysts are usually managed surgically and small asymptomatic cysts require follow-up. We report a case of symptomatic pseudocyst of adrenal gland, which was excised through retroperitoneoscopic approach.

Case Report

A 44-year-old male presented to us in the surgical out patient department with progressively increasing pain in the left flank and upper abdomen of 7 months duration. In addition he also complained of post-prandial fullness. There were no other associated bowel or urinary complaints. Past and family history were non contributory. On physical examination, patient was found to be normotensive with no abnormalities of chest and cardiovascular system. Examination of the abdomen revealed a smooth

spherical lump in the left upper abdomen, which was best felt in left lateral decubitus position. Routine blood tests were normal. Ultrasonogram and CT scan (Fig. 1) of the abdomen revealed a non-enhancing 10 x 10cm smooth walled cyst of left adrenal gland with marginal calcification and displacing the left kidney downwards.

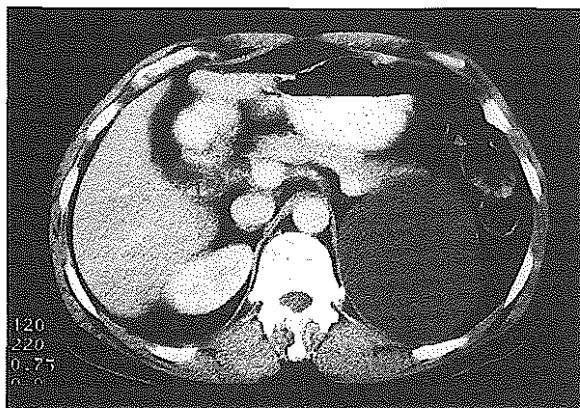


Fig. 1: CT Scan showing a 10 x 10cm smooth walled cyst in left adrenal gland with speck of marginal calcification.

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CASE REPORT

The patient was scheduled for retroperitoneoscopic excision of left adrenal cyst. The procedure was carried out under endotracheal anesthesia with patient in flank position. Access to retroperitoneal space was obtained through a small 2cm incision below the tip of 12th rib. This space was subsequently enlarged using a custom made balloon consisting of two fingerstalls of size 7.5 glove tied over a number 18 red rubber catheter. The balloon was inserted into the retroperitoneal space, and inflated with 350 - 400ml of saline. The inflation was maintained for 3 - 5min to create adequate space and to secure hemostasis. After removing the balloon, a 10mm cannula was introduced into the retroperitoneal space and secured with 2 sutures of 1 - 0 nylon, which also included parietal musculature to prevent any leak of CO₂. A pneumo-retroperitonium was established through this cannula with pressure at 12 - 14mmHg. A 25 degree laparoscope was introduced through this cannula and retroperitoneum inspected. Two additional ports were placed under direct vision as shown in Fig. 2. A large thin walled adrenal cyst was visualized above the left kidney. The cyst was decompressed using a suction cannula. Subsequently it was completely dissected free

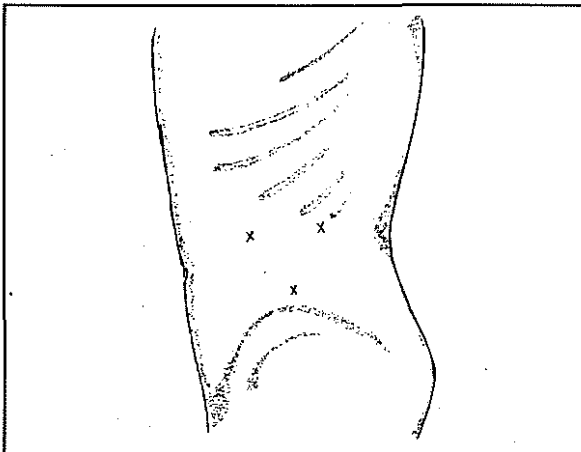


Fig. 2: Patient's position and site of port insertion marked as 'X'.

from all around using a harmonic scalpel (Ethicon Surgical). The complete cyst was removed through primary port. The retroperitoneum was again inspected for the adequacy of hemostasis and a suction drain was placed. The ports were closed using 1 - 0 vicryl suture. The patient had an uneventful recovery. The nasogastric tube was removed at the time of extubation while the urinary catheter and suction drain were removed on post-operative day one. The patient was discharged on post-operative day two. Histopathologic examination of the cyst was reported as pseudocyst of adrenal gland with marked calcification in the cyst wall. At 10 month follow up patient is well and asymptomatic.

Discussion

Adrenal cysts are rare. A recent review reported an incidence of 0.073%². They are usually asymptomatic and are mostly discovered at autopsy¹. However with improvement in imaging techniques, the detection of asymptomatic adrenal cysts is increasing. Female to male ratio varies from 2:1 to 3:1^{1,2}. It is equally common on both sides.

Symptomatic adrenal cysts can present with vague upper abdominal pain, gastrointestinal upset, post prandial fullness and abdominal mass. Acute abdominal pain may develop occasionally when intracystic hemorrhage, rupture or infection occurs^{2,3}.

Radiological investigations done for diagnosis of symptomatic adrenal cysts are plain X-ray of the abdomen, ultrasound and CT scan of the abdomen. A thin curvilinear calcification at the periphery on plain X-ray of the abdomen is suggestive of pseudocyst of the adrenal gland³. CT scan is probably the most useful test to detect an adrenal lesion with an accuracy of 85 - 95%^{2,3}. Ultrasound is useful in patients who have little fat to outline structures². The role of magnetic resonance (MR) is complementary to CT². With the availability of

modern imaging techniques such as Ultrasound and CT scan, pre operative diagnosis of an adrenal cyst is possible in 56% of cases². This is in contrast to only 7% in previous reviews².

Four pathological subtypes of adrenal cysts described by Abeshouse *et al*¹ are parasitic, epithelial, endothelial and pseudocysts. Among these pseudocysts are commonest symptomatic cysts with an incidence varying from 36 to 56%^{1,2}. A recent analysis of data of more than five hundred cases of adrenal cysts, where pathological diagnosis was available shows a incidence of pseudocysts is approximately 56%². Pseudocyst is the most common type in the both symptomatic and autopsy cases. This type of cyst results from hemorrhagic extravasation with in or around a normal or pathological adrenal gland. This may occur in a wide variety of lesions such as benign or malignant tumors, crush injury, severe infection and anoxia in infant causing profound shock². However there is a subgroup of

patients in whom no definite aetiology can be found and such pseudocysts are categorized as being of unspecified origin².

Treatment of adrenal cysts depends on the symptoms and size of the cyst, occurrence of complication and underlying pathology. Small and asymptomatic cysts may be managed conservatively and regular follow up. Image guided aspiration of cyst is recommended in cases of simple adrenal cyst, however there is a risk of cyst recurrence^{2,3}. Large and symptomatic cysts should be treated by surgical excision. With the advent of minimal access surgery laparoscopic excision of adrenal cysts has been successfully performed with excellent results⁴. Most authors have used a transperitoneal approach. Retroperitoneoscopic excision avoids the transgression of peritoneum and its attendant complications⁵. Quick recovery and early return to work being the main advantages of this approach.

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