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CASE REPORT

Unusual sites of pseudocyst; Adrenal

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Abstract
Adrenal psudocyst are rare with unknown etiology. These are believed to be result from haemorrhage into or around a pathological or normal adrenal gland. These are usually discovered incidentally, but large cyst may present with abdominal pain, abdominal lump or abdominal distension.
We report a case of 35 year old lady presented to our institution with dull aching pain left flank since six months. On abdominal examination there was lump in left hypochondrium and in left lumbar region, which was confirmed by ultrasound abdomen. CECT Abdomen was done which shows thin walled cystic lesion in left anterior pararenal space with mural calcification. After all laboratory investigations(including Hormone analysis) we made our final diagnosis of adrenal psudocyst and it was excised under general anaesthesia. Histopathalogy repost of confirmatory of adrenal pseudocyst.

Introduction
Adrenal cysts are generally rare, and around 600 cases have been reported in the literature so far. The incidence of adrenal cysts in autopsy series ranges from 0.06% to 0.18%. They are usually non-functional, asymptomatic and less than 10 cm in diameter when discovered incidentally. There is no side predilection for the right or left adrenal gland. Giant adrenal cysts pose a diagnostic conundrum to the surgeon as localization of their origin is very difficult. They may occur at any age, but most of them are seen in the 3rd to 4th decades of life with a higher preponderance in females, just like in our patient. In some series, a female preponderance of about 3:1 was noted for unknown reasons.

Case Report
A 35 year old woman presented with complaints of dull aching pain in left side of abdomen since six months which was non-radiating. There were no aggravating factors, pain was relieved by oral analgesics. Patient doesn't have complaints of altered bladder and bowel habits. Patient was a known case of hypothyroidism since two years. Patient didn't have any other significant family or personal history.
General physical examination was normal. On abdominal examination there was a vague intra-abdominal lump of size 10×6 cm size occupying left hypochondrium reaching till left lumber region. Lump was non-tender and soft to firm in consistency with smooth surface and ill-defined margins. Lump was not moving with respiration and not bimanually palpable or ballottable. We made a clinical diagnosis of tumor of pancreas or retroperitoneal mass.

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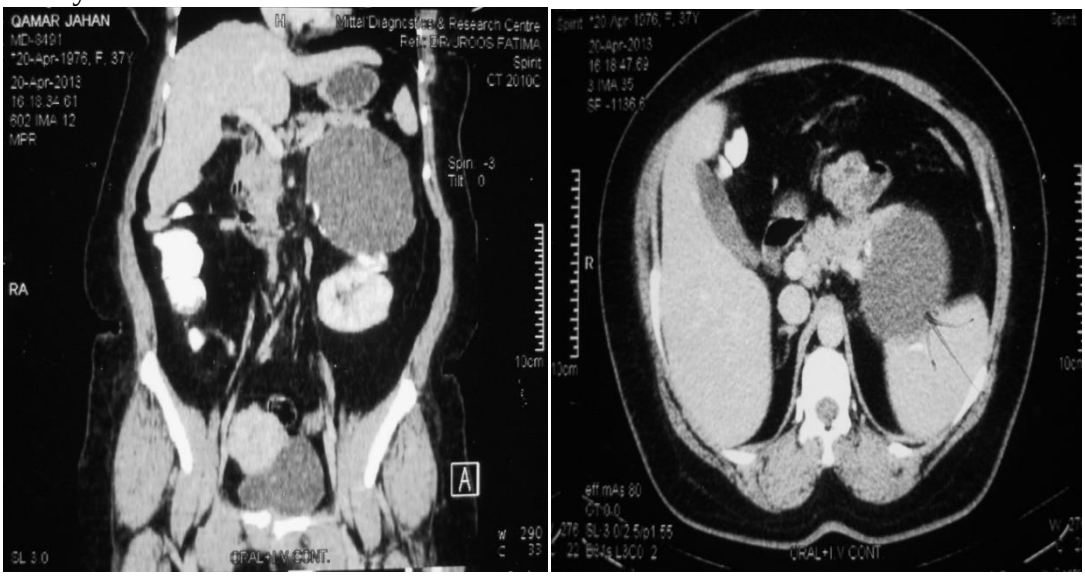
Routine laboratory investigations which include hemogram, liver function test, kidney function test and serum amylase were normal.

Patient got ultrasound abdomen which reported as a cystic lesion(11×9×10 cm) in size, volume=633cc, having inhomogenous solid mass (7×6×7 cm) within it, is seen in left upper abdomen located adjacent to upper part of left kidney and inferio-medial to spleen.

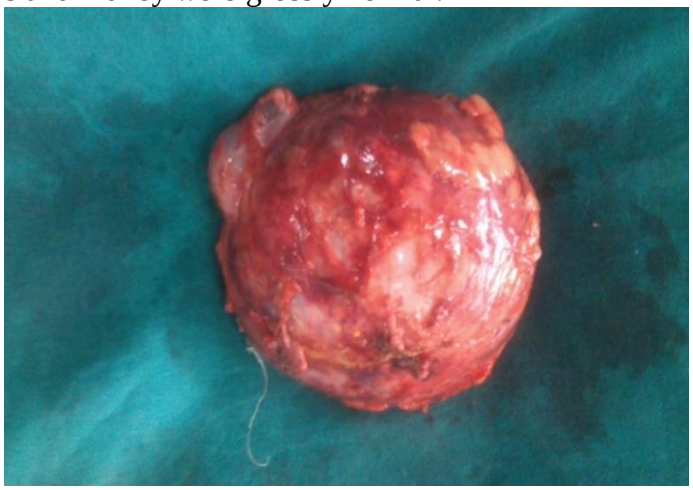
CECT abdomen was advised which showed a thin walled cystic lesion(12×11×10.5 cm) in left anterior pararenal space along with another (5×3×2.5 cm) posterolateral to it with mural calcification splaying the left kidney inferiorly and pancreatic tail anteriorly with non visualization of ipsilateral adrenal gland separately. Impression- ?pseudocyst of pancreas, ?adrenal hydatid.



Subsequently, hydatid serology and functional investigations of adrenal mass were performed including serum cortisol, aldosterone, urinary catecholamines, metanephrines and 5-HIAA, which were in normal limits.

So, we made our final diagnosis, non-functional adrenal (hormonally inactive) mass. Therefore keeping in mind of it's larger size and chances of malignancy, patient planned for surgery.

Left subcostal incision was given. A large 12×10×8 cm sized adrenal cyst was present in lesser sac having following relations- superiorly- pancreas, spleen, inferiorly- left kidney, t. mesocolon ,anteriorly- stomach, splenic flexure.Content of cyst were necrotic debris (~500 ml). Spleen, pancreas and kidney were grossly normal.



The post-op period was uneventful. Patient discharged on post-op day four.Patient doing well at follow-up with resolution of all symptoms.

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Histopathology report Shows features s/o adrenal pseudocyst.
Gross examination- a large smooth walled cyst of size~12×8×5 cm.
Microscopic examination- cyst wall made up of dense fibrous tissue with few areas of calcification without lining epithelium. Adrenal tissue was found scattered within wall.

Discussion

Adrenal pseudocyst are defined as a cystic lesions arising within the adrenal cortex or medulla, enclosed by a fibrous wall that is devoid of a recognisable lining.[1]First described at autopsy by Greiseluis in 1670.[2] These are usually solitary (B/L in 10% cases).[3]Frequency of adrenal pseudocyst on CT scan is between 0.35 and 4.4%;and on autopsy series it is in between 1.4 and 5.7%.[4]

On the basis of histopathological characteristics adrenal cyst are of four types,endothelial cyst(lymphangioma and hemangioma), pseudocyst, epithelial cyst and parasitic cyst(hydatid). Size of adrenal cyst varies widely, which may correlate with the degree of malignancy. Lesion >6cm, has malignant potential of 35%.[5]

Etiology of adrenal pseudocyst is not known. Pseudocyst are believed to be result from haemorrhage into or around a pathological or normal adrenal gland.[6] These are also seen in association with Acute trauma, crush injuries, Haemorrhagic disease, Burn, Shock, Toxaemia of pregnancy, Syphilis and Incompatible blood transfusion.[7] Majority of adrenal pseudocyst are asymptomatic but larger cysts can give rise to abdominal pain or abdominal mass etc. About 8% patients of incidentaloma may present with subclinical Cushing syndrome, with subtle features of cortisol excess. Some patients may present as acute abdomen due to intracystic haemorrhage, rupture or infection.

USG, CT abdomen and MRI abdomen are the imaging modalities that are usually required for adrenal mass. CT abdomen is thegold standard imaging technique for adrenal masses. It can identify mass as small as 1cm (100% sensitivity).[8]characteristics of adrenal cysts are low-density masses with smooth borders and thin walls on CT, calcification may be seen.

Ultrasound abdomen is the first line investigation for adrenal mass evaluation. Ultrasound abdomen is inexpensive and can detect adrenal mass >2 cm in size, but it does not define accurate size of mass and morphological characteristics.

MRI abdomen is also a good investigation which is usually required in the case of indeterminate adrenal mass after CT.

FNAC is useful in a patient with h/o cancer and solitary adrenal mass, but it is less useful in workup of benign adrenal lesions.

Management of adrenal pseudocyst which is symptomatic, a suspicion of malignancy, functional adrenal cyst or size of cyst is >6cm is surgical.[9]Laparoscopic adrenalectomy is the gold standardtechnique. Laparoscopic technique is less invasive, so less pain noted post-operatively and patient return to normal daily activities early.[10]

Conclusion

Adrenal pseudocyst areusually non-functional and rare adrenal cyst. Radiological and clinical features of adrenal pseudocyst are not confirmatory, histopathology needed to confirm the diagnosis. Surgical decision usually depends on their size or symptoms related to their size and Laparoscopic excision is the preferred technique.

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