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Giant Pseudo Cyst of Adrenal Gland – An Unusual Presentation

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ABSTRACT

Giant adrenal pseudo cysts are very uncommon lesions which often produce much diagnostic and treatment dilemmas. An adrenal pseudocyst is a fibrous-surrounded cyst within the adrenal gland devoid of a recognizable layer of lining cells. The three most prominent clinical features are: a dull pain in the adrenal area; gastrointestinal symptoms; and a palpable mass. We are presenting a case which preoperatively diagnosed as renal malignancy and per operatively turned out to be a giant pseudo cyst of adrenal gland. Removal of the lesion with partial nephrectomy done and HPR was Giant pseudocyst of adrenal gland. An adrenal pseudocyst is an uncommon clinical finding and is even rarer when it is giant-sized. Surgery is required for symptomatic cases in order to relieve the symptoms and in cases of uncertain diagnosis. Radiological and clinical features of the tumor are nonspecific, thus, histopathological examination is essential in order to establish a definitive diagnosis.

KEYWORDS : Adrenal pseudo cyst, Renal cell carcinoma, Cystectomy with partial nephrectomy.

INTRODUCTION:

Cystic lesions of the adrenal gland are uncommon and demonstrate a spectrum of histological changes and may vary from pseudocysts to malignant cystic neoplasms. An adrenal pseudocyst is a fibrous-surrounded cyst within the adrenal gland devoid of a recognizable layer of lining cells. The incidences of Giant pseudocysts of adrenal glands are extremely rare.

CASE PRESENTATION:

A 53 year old female, Mrs. X, a moderately nourished lady presented with a mild generalized left sided abdominal pain and abdominal distension of six months duration.

Examination findings: Abdomen was soft and moderately distended, Bowel Sounds +, Minimal tenderness+ on , left upper abdomen. Mass felt in left hypochondrium extending to lumbar, umbilical and epigastric region. BRE & URE – WNL, LFT, RFT, Electrolytes – Normal. Plane X ray Abdomen – 4 fluid levels present USS Abdomen – Complex cystic lesion ? arising from left adrenal/pancreas/ renal CT Abdomen (Fig. 1) – 12X11X12 cm retroperitoneal mass from level of celiac axis to aortic bifurcation in left side, cystic predominantly with high density non-enhancing areas and few irregular enhancing solid areas with possible hemorrhage within.

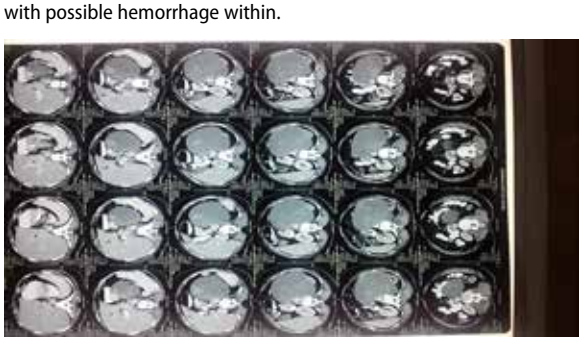


Figure: 1 CT scan picture suggestive of kidney tumor (Renal Cell Carcinoma)

Displacement/infiltration of adjacent structures, body and tail of pancreas and splenic vessels anterosuperiorly. Mass encasing SMA, left RA, left and anterior Wall of aorta. IVC anteriorly displaced and stretched. Left ureter not visualized. Left renal parenchyma was compressed and displaced inferolaterally. Infiltration of left diaphragmatic crura and left lateral abdominal wall.

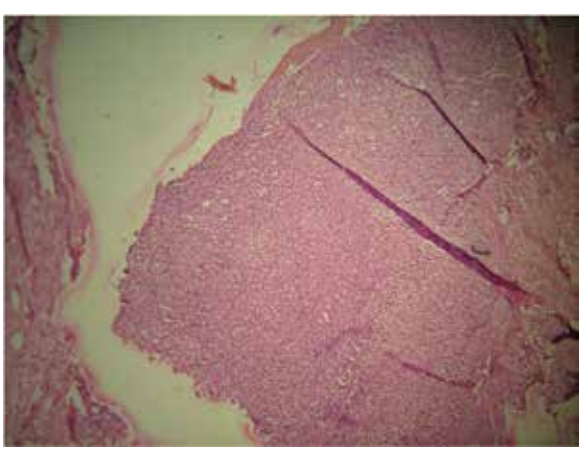
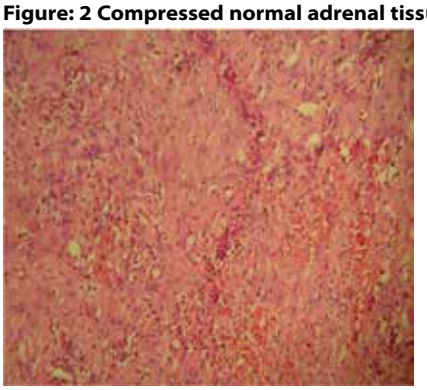


Figure: 2 Compressed normal adrenal tissue



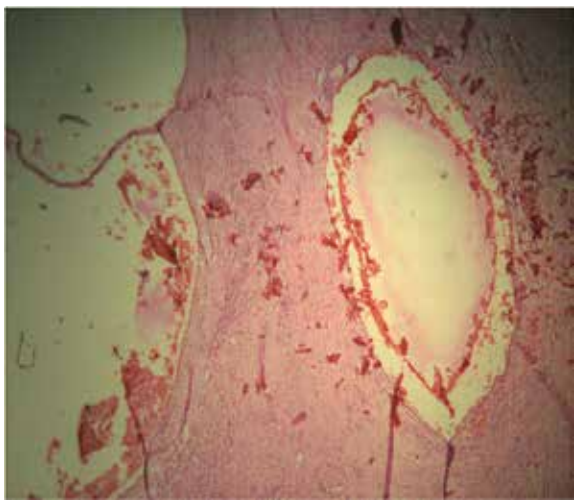


Figure 3 and 4: The cystic wall consisted of dense fibrous tissue without an epithelial lining. A rim of normal adrenal tissue was found compressed within the cystic capsule. (Haematoxylin and eosin stain, Scale bar = 1 mm).

With a provisional diagnosis of adrenal malignant tumor/ RCC we went with laparotomy. Per operatively large complex retroperitoneal tumor arising from left adrenal gland was found (Figure. 5).

Figure 5: Large complex retroperitoneal tumor arising from left adrenal gland

Removal of the lesion with partial nephrectomy done and HPR was Giant pseudocyst of adrenal gland

DISCUSSION: Adrenal cysts are rare and the documented incidence varies between 0.064% and 0.18% in autopsy series. However, the rate of detection of adrenal cysts has risen dramatically due to the more frequent use of CT and MRI imaging studies in recent years, which account for approximately 5% of incidentally discovered adrenal lesions. Adrenal pseudocysts are rare cystic masses that arise from the adrenal gland and which are usually non-functional and asymptomatic. Adrenal pseudocysts consist of a fibrous wall without an epithelial or endothelial lining.

In 1903, Doran attributed the first case of adrenal cyst to Greiselius , In 1670, he described a 45-year-old man whose death resulted from a rupture of the cyst. There were only seven cases of adrenal cyst reported by 1906. Wahl questioned the rarity of adrenal cysts in 1951 and found an autopsy incidence of 1 in 1555. The paucity of reports in the literature was a manifestation of clinical silence rather than true rarity. In 1966, Foster described 220 cases of adrenal cyst in the world's literature. In 1979 Incze *et al*. reported 250 cases. Adrenal cysts are rare and the documented incidence varies between 0.064% and 0.18% in autopsy series. However, the rate of detection of adrenal cysts has risen dramatically due to the more frequent use of CT and MRI imaging studies in recent years, which account for approximately 5% of incidentally discovered adrenal lesions. Adrenal cysts may occur at any age but most are found in the 3rd to 5th decades. In some series, a female preponderance of about 3:1 has been noted for unknown reasons.

Classification

- Four types;
- Parasitic
- Epithelial (true cysts)
- Endothelial (vascular cysts with an endothelial lining)
- Pseudo cysts

More infrequent subtypes such as lymphangiomas, mesothelial cysts, dermoid cysts or cystic adrenal carcinomas

Adrenal pseudocysts represent approximately 80% of cystic adrenal masses. Adrenal pseudocysts are devoid of an epithelial or endothelial lining, arise within the adrenal gland and are surrounded by a fibrous tissue wall. The true origin of adrenal pseudocyst remains a mystery. One theory suggests that these lesions result from an intra-adrenal hemorrhage caused by trauma, a sepsis event or some other form of shock . The initial injury leads to the development of a cavity with a scarred, fibrous lining that slowly enlarges over time. Another theory suggests that these lesions are true cysts that have lost their cellular lining because of the inflammation and bleeding within the cyst.

The three most prominent clinical features are: a dull pain in the adrenal area; gastrointestinal symptoms; and a palpable mass. They seldom cause adrenal hypofunction, Cushing's syndrome or pheochromocytoma. Acute abdomen or a tender mass may occasionally be found, when intracystic hemorrhage, rupture or infection occurs a preoperative confirmatory diagnosis of a large adrenal cyst can be very difficult because of the indistinct boundary with surrounding organs and adhesion to neighboring organs. Furthermore, even with integrated PET, adrenal lesions may be identified as false-positive at PET, including adrenal adenomas, adrenal endothelial cysts and inflammatory and infectious lesions. The differential diagnosis of adrenal pseudocysts includes splenic, hepatic and renal cysts, as well as mesenteric or retroperitoneal cysts, urachal cysts and solid adrenal tumors. An exact diagnosis is clinically important in large lesion because adrenal incidentalomas larger than 5 cm carry an increased risk of adrenal malignancy.

The reported incidence of malignancy in adrenal cystic lesions is approximately 7% . CT features of pseudocysts are more complicated than simple cysts due to the complicated components such as septa, blood and soft-tissue components. The cysts wall shows occasional calcification. MRI is the best modality for visualizing the complicated intracystic components. Moreover, MRI is particularly sensitive for detecting intracystic hemorrhage, which shows hyperintense on both T1- and T2-weighted images.

Treatment:

Treatment of adrenal cysts is determined by size and the symptoms related to the mass. Surgical excision is indicated by the presence of symptoms, a suspicion of malignancy and an increase in size, or the detection of, a functioning adrenal cyst. Surgical treatment may not be necessary for small asymptomatic lesions as most cysts are benign. If the adrenal lesion is diagnosed as a simple nonfunctioning cyst, the patient may be treated conservatively with aspiration alone.

CONCLUSION:

An adrenal pseudocyst is an uncommon clinical finding and is even rarer when it is giant-sized. Surgery is required for symptomatic cases in order to relieve the symptoms and in cases of uncertain diagnosis. Radiological and clinical features of the tumor are nonspecific, thus, histopathological examination is essential in order to establish a definitive diagnosis

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