



Oncology

A case of a giant adrenal cyst

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ABSTRACT

Giant adrenal cysts represent rare clinical entities that are usually discovered incidentally. Here, we describe a patient who presented with nonspecific upper abdominal left pain. Imaging studies revealed a huge left adrenal cyst. Routine laboratory tests and endocrine function tests were all normal. The patient underwent surgery, and the cyst was completely removed with total adrenalectomy. Histological examination revealed a benign epithelial adrenal cyst. The postoperative course was uneventful and the patient had no evidence of recurrence during a 3-year follow-up. We discuss the diagnosis and management of adrenal cysts.

Introduction

Adrenal cyst are relatively uncommon and asymptomatic, with a reported incidence rate of 0,06-0,18%.¹ Thanks to the evolution of imaging and computed tomography (CT), more adrenal cysts are being discovered incidentally. The management of cyst depends on size and symptoms, and whether they are functional. The need for surgical exploration depends on clinical and radiological findings.¹

Presentation of case

A 57-year-old woman, without notable medical history, was admitted to our department complaining of flank pain and sensation of pressure in the left upper quadrant over the past three months. There was no history of trauma or malignancy. Physical examination revealed a palpable, painless mass located in the left upper quadrant. Routine laboratory tests and hormone levels were within normal range.

She underwent an abdominal ultrasound that demonstrated a huge simple cyst in the left upper quadrant that appeared to originate in the upper pole of the left kidney. An abdominal CT showed a 17 × 16 × 11cm suprarenal cyst with fine calcifications located between the spleen, left kidney and pancreas (Fig. 1). It revealed cystic mass with anterior displacement of the pancreas and inferior displacement of the left kidney; it was thought to originate from the left adrenal gland (Figs. 2–3).

It was decided to proceed with retroperitoneal approach and a left

lumbar incision was undertaken. Intra-operatively, the cyst was identified retroperitoneally, under the spleen, above the left kidney and originating from the adrenal gland. Cyst was removed with adrenal gland. The post-operative course was uneventful and the patient was discharged four days after the operation. Histopathological analysis revealed a benign epithelial adrenal cyst. Patient remained well without evidence of recurrence during 3 years follow-up.

Discussion

We present our case of a giant adrenal cyst with vague symptoms. Its usually diagnosed by CT scan. Adrenal cysts are rare entities. Its incidence is increasing thanks to easy access to CT imaging. Adrenal cysts are potentially malignant in approximately 7% of the cases. Clinical presentation is mainly determined by the size of the cyst. Small cysts are usually clinically silent and are incidentally diagnosed. Large-sized adrenal cysts (more than 10 cm) are associated with vague symptoms due to mass effect on nearby organs. In that case, three clinical symptoms are present: palpable mass, pain and gastrointestinal symptoms.² Adrenal cysts can be revealed by a complication such as infection, hemorrhage and rupture.² Benign adrenal cysts are classified into four categories, namely vascular cysts (45%), pseudocysts (39%), epithelial cysts (9%) and parasitic cysts (7%). Epithelial cysts are so named because their walls are composed of columnar epithelial lining, with or without cilia.³

Defining the localization of the cyst with CT scan as intra peritoneal or retroperitoneal is important in establishing therapeutic strategy. In

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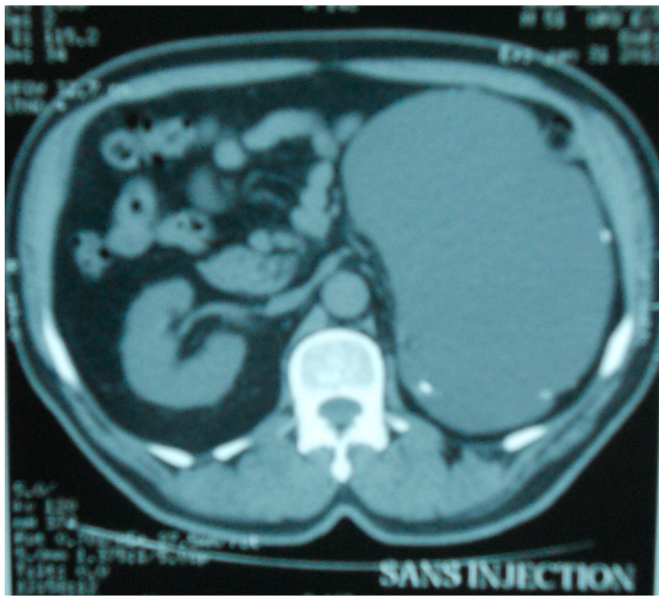


Fig. 1. Abdominal computed tomography scan shows a huge left suprarenal cyst with thin walls and calcification.

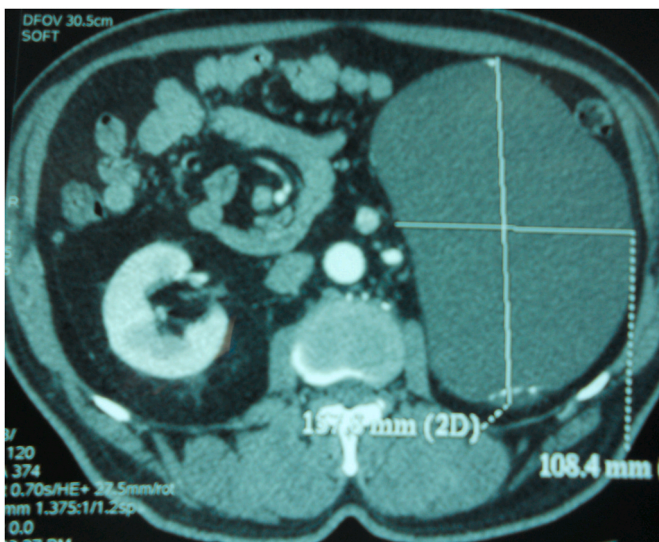


Fig. 2. Computed tomography with intravenous contrast showing the cystic lesion.

our patient, all the displaced structures were retroperitoneal, pointing to the retroperitoneal origin of the lesion. The next step is to identify whether all the retroperitoneal structures can be individually identified despite the size of the cyst.

Magnetic resonance imaging (MRI) is useful in defining the origin of the cyst. It has the advantage over CT scan in studying giant adrenal cysts.

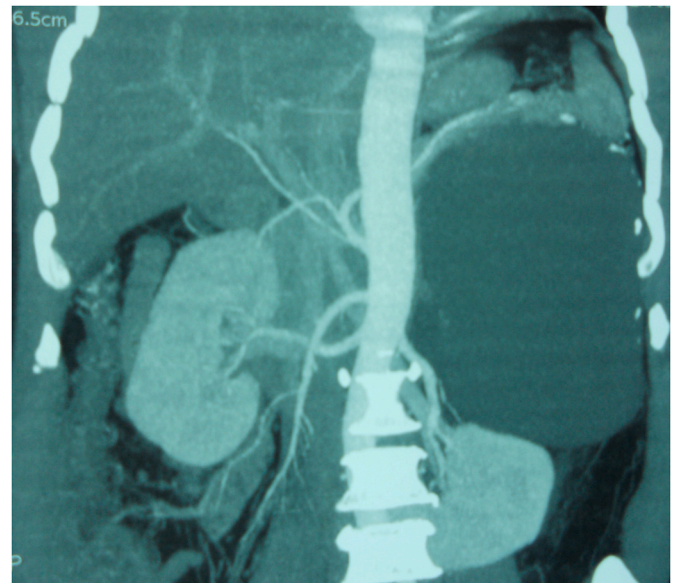


Fig. 3. Coronal CT images showing the downward shift of the left renal artery due to inferior displacement of the left kidney.

The choice of treatment for adrenal cyst depends on several factors, including endocrine function, symptoms, size, and correctly differentiating it from an adrenal cyst.⁴ Clinical surveillance without intervention is indicated for small, asymptomatic, and nonfunctioning adrenal cysts. Otherwise, surgical exploration is recommended especially when malignancy is suspected. Surgical intervention includes open surgery with cyst enucleation, en bloc adrenalectomy, or laparoscopic surgery with cyst decortication and partial or total adrenalectomy.⁵ Laparoscopic enucleation of the cyst with preservation of the adrenal gland is the most favored procedure.¹ However, for potentially malignant or complex adrenal cysts, the operation should be carried out abiding by the principles of surgical oncology.

Conclusion

Giant adrenal cysts are very rare. Clinical and radiological signs are not specific and diagnosis may be difficult. Thus, when the diagnosis is uncertain, treatment is based on surgery and pathological study is the only way to confirm the diagnosis.

References

1. Chou Y-C, Lin C-W, Wei CK, Tseng J-E, Tseng K-C. report Laparoscopic Management of a Giant Adrenal Cyst: Case Report. *Tzu Chi Medical Journal* 2012;1-3 In press.
2. Tazi N, Jahid A, Zouaidia F, Bernoussi Z, Mahassini N. Pseudo kyste géant de la surrénale, à propos d'une nouvelle observation. *Afr J Urol*. 2012;18:196-198.
3. Sanal HT, Kocaoglu M, Yildirim D, et al. Imaging features of benign adrenal cysts. *Eur J Radiol*. 2006;60:465-469.
4. Halefoglul AM, Ercan A, Yasar A, Sahan E. Giant adrenal hemorrhagic pseudocyst. *Eur J Radiol Extra*. 2007;63:35-37.
5. Castillo OA, Litvak JP, Kerkebe M, Urena RD. Laparoscopic management of symptomatic and large adrenal cysts. *J Urol*. 2005;173:915-917.