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Large Adrenal Pseudocyst: A Case Report

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Abstract

Introduction: Cysts of the adrenal gland are rare and are usually discovered incidentally, typically presented with abdominal pain or palpable mass. There are four categories of adrenal gland cyst: epithelial, endothelial, parasitic and pseudocysts. We report the case of a 33-year-old woman who presented as a pain of the right hypochondrium and abdominal distention and was diagnosed with a large unilateral adrenal pseudocyst. Case presentation: A 33-year-old Moroccan woman followed for acute articular rheumatism for 3 years was admitted with left hypochondralgia and abdominal distention. Magnetic resonance imaging. (MRI) and abdominal computed tomography revealed a large left adrenal cyst mass measuring 19 cm. The patient underwent surgery, and the cyst was completely removed. Histological examination revealed an adrenal pseudocyst. Symptoms resolved after pseudocyst removal. Conclusion: Adrenal pseudocysts are uncommon. Symptoms are usually related to the size and local pressure effect of the cysts.

Keywords

Adrenal Gland, Cyst, Pseudocyst, Surgery

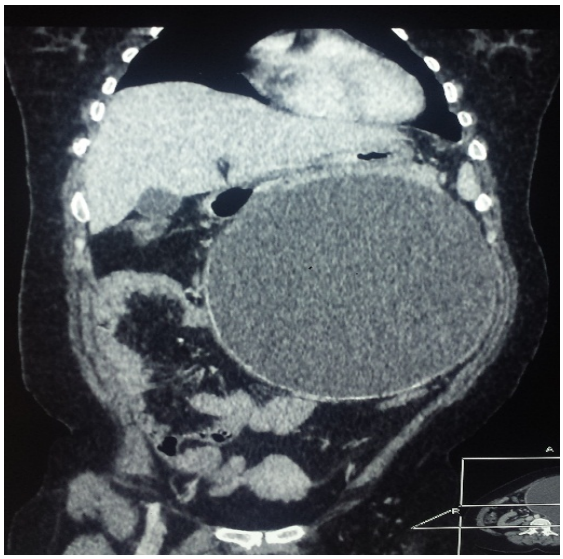
1. Introduction

Adrenal pseudocysts are rare benign lesions. Mostly, these are small lesions discovered incidentally by imaging. The giant forms are rare. There are four categories of adrenal gland cyst: epithelial, endothelial, and parasitic and pseudocysts [1]. Clinical and radiological signs are not specific. Only pathological study can confirm the diagnosis and exclude malignancy. The treatment is based on surgery for large or symptomatic cysts. Through a new observation, we describe the different epidemiological, clinical, pathological features and treatment of this rare entity.

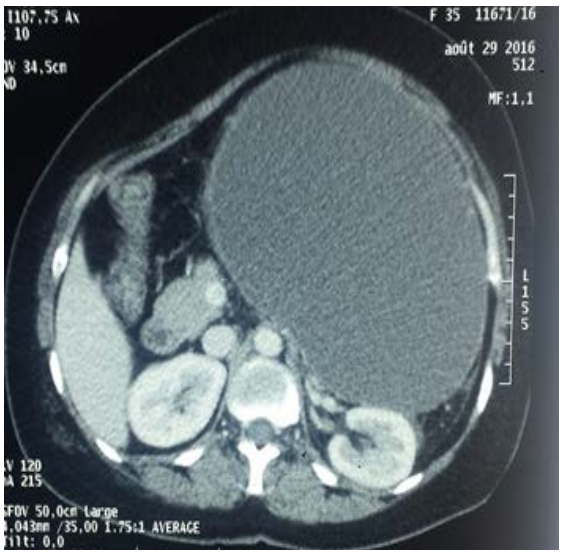
2. Case Report

A 33-year-old woman followed for acute articular rheumatism for 3 years, presented with a 2-month history of nonspecific left hypochondralgia and abdominal distention. On examination, she was found to have a mass in the upper right quadrant that was dull to percussion and tender to palpation. Blood investigations were normal including hormonal examination. She has benefited an abdominal ultrasound scan that demonstrated a heterogeneously hypoechoic lesion measuring 20 × 20 × 17 cm in upper pole of the left kidney.

An adrenal protocol CT scan was performed revealing a 20 cm × 20 cm left suprarenal cystic lesion enhanced after injection of contrast agent with a calcified rim (Figure 1(a) & Figure 1(b)). A renal or adrenal origin of the mass was



(a)



(b)

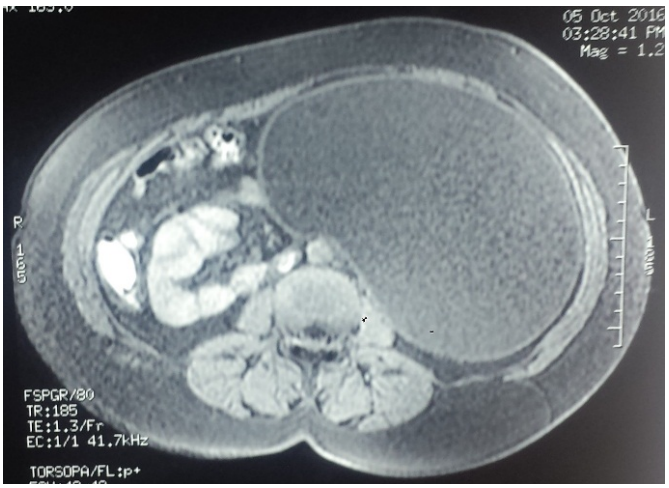
Figure 1. An enhanced computed tomography of the abdomen revealed a giant homogeneous low density mass lesion in the left adrenal region.

difficult to distinguish.

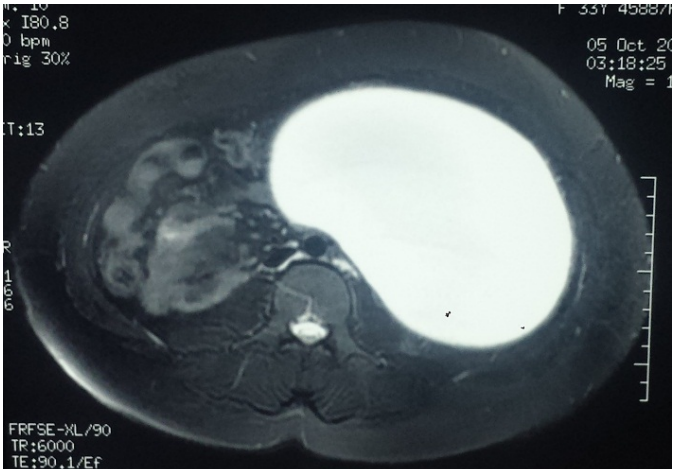
MRI revealed a 20 × 20 cm well-defined mass, which appeared low intensity in the T 1-weighted image (Figure 2(a)) and high intensity in the T 2-weighted image (Figure 2(b)), arising from the left adrenal gland. The left kidney was displaced downward by the mass. The adrenal gland and the mass were then mobilized, excised en-bloc and sent for histology for histological evaluation.

At macroscopic examination, the specimen has corresponded a unilocular cystic mass, measuring 20 × 19 cm, with a fibrous capsule containing a red-brownish material (Figure 3).

The histological examination showed that the cystic wall was 1.3 cm thick and consisted of dense compact fibrous tissue, without an epithelial or endothelial lining. There were areas of dystrophic calcifications within the fibrous tissue. Then cyst appeared to arise in continuity with the adrenal cortex and medullary tissues, and a diagnosis of an adrenal pseudocyst was made (Figure 4). Postoperative follow-up (10 days after the operation) were uneventful and hypochondralgia



(a)



(b)

Figure 2. Abdominal magnetic resonance imaging revealed a well-defined low intensity mass in the T 1-weighted image (a) and hight intensity in the T 2-weighted image (b).

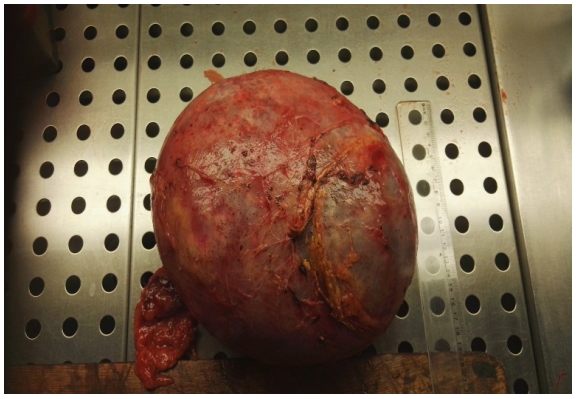
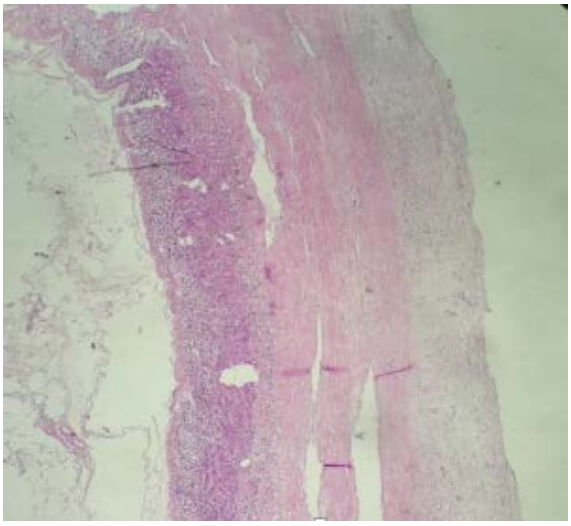
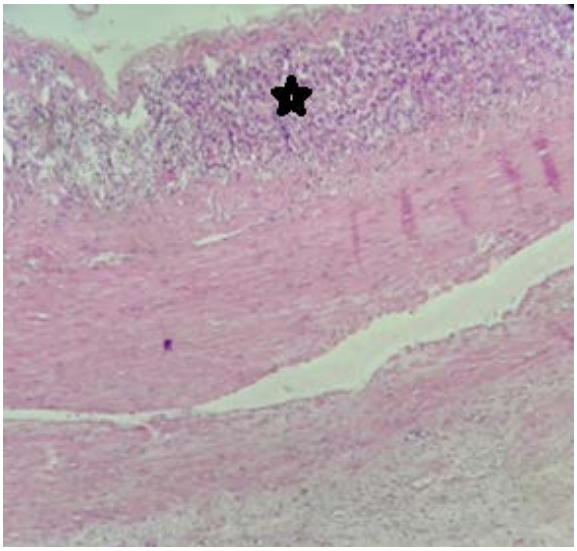


Figure 3. The gross adrenal specimen; the cystic structure measuring 19 cm × 19 cm.



(a)



(b)

Figure 4. Histological examination of the cyst showed an adrenal pseudocyst. 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 (star). (Hematoxylin and eosin stain. (a) (×10); (b) (×20).

and abdominal distention are disappeared after pseudocyst removal.

3. Discussion

Historically, in 1670 Viennese anatomist Greiselius first described an adrenal cyst. In 1903, Doran attributed the first case of adrenal cyst to Greiselius [2]. Adrenal cysts are relatively rare lesions and most of them are nonfunctioning and asymptomatic [3] [4].

The classification of adrenal cysts initially described by Abeshouse, and modified in 1966 by Foster, is divided into four groups by histologic type: endothelial cysts, pseudocysts, epithelial cysts, and parasitic cysts [5].

Epidemiologically, adrenal cysts are more common in women and typically are found between the ages of 30 and 60 [6]. In some series, a female preponderance of about 3/1 has been noted for unknown reasons [7].

Adrenal pseudocysts are rare, but constitute approximately 32% - 80% of all adrenal cysts. The malignant potential of adrenal pseudocysts is 7% and the risk increases with the size of the pseudocyst [8].

Generally, adrenal cysts are asymptomatic but larger cysts can give rise to lumbar pain, vomiting, gastrointestinal discomfort or an abdominal mass [9]. Some may also present as an acute abdomen, usually due to intracystic haemorrhage, rupture, or infection [10].

The above newly developed imaging techniques can detect and localize these lesions with high accuracy, but it remains difficult to differentiate malignancy, cortical adenoma, hyperplasia, or pheochromocytoma from benign cysts [11]. The gold standard for studying adrenal masses is CT, which can detect small tumors with a sensitivity of 100% [12]. MRI can obtain more information on the anatomical details and nature of complicated intracystic components [13].

Macroscopically pseudocysts are usually large uniloculated cysts, with walls composed of dense, fibrous connective tissue. The walls are usually 1- to 5-mm thick, but may be up to 3 cm in rare cases and a red-brown content consisting of fibrin and necrotic debris [14] [15].

Microscopically; adrenal pseudocysts are cystic lesions that consist of a thick fibrous tissue wall devoid of epithelial or endothelial lining and arising as a result of hemorrhage within a normal or pathologic adrenal gland [16].

No consensus exists for surgical management, some authors privileged surgery for all adrenal cysts, and others a more conservative. However some authors recommended surgical management for symptomatic and functional cysts, a large cyst (more than 5 cm) and heterogeneous cyst [17]. The evolution is generally good [18], as was the case for our patient.

4. Conclusion

An adrenal pseudocyst is a rare lesion. Symptoms are usually related to the size and local pressure effect of the cysts. Imaging confirms the cystic nature of the mass. Only the study Pathology provides diagnostic certainty and excludes malignant lesions. Surgery is the treatment of choice.

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