

## Case Report

# Hepatic hydatid cyst: a masquerader

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### ABSTRACT

Liver is the most common organ involved in echinococcosis. Organs affected by *E. granulosus* are the liver (63%), lungs (25%) and muscles (5%). Rest of the organs are rarely affected. Adrenal cysts are uncommon. Their size may range widely and the origin of large adrenal cysts is often difficult to distinguish from other organs, including the kidney, pancreas, spleen, and liver. A large right-sided adrenal cystic mass can rarely be mistaken for a hepatic cyst by imaging. In this report, authors have described an adrenal cyst in a 28 year old lady, who was diagnosed preoperatively to have a hepatic hydatid cyst but intraoperatively it was found to be of adrenal origin. The size of the adrenal cyst can vary from a few millimetres up to 50 cm in diameter. Majority of the adrenal cysts are unilateral, while 8-10% of those cysts have been noted to be present bilaterally. The majority of cases are diagnosed between the 3rd and 6th decades. Although uncommon, Adrenal cyst should be considered as one of the differential diagnosis of upper abdominal cysts. Surgical excision is advisable when the cysts are symptomatic, greater than 5 cm in diameter and in the case of suspecting malignancy.

**Keywords:** Hepatic cyst, Adrenal cyst, Hydatid cyst

### INTRODUCTION

Due to clinical silence of adrenal cysts, its exact incidence remains undetermined. With the improvement in imaging modalities and their increased use, adrenal cysts are being detected more frequently as incidental lesions. The Adrenal cysts have been noted in 0.064% to 0.18% of patients in autopsy series and account for 1% to 22% of incidentally detected adrenal lesions.<sup>1</sup> In a literature review in 1999, Neri and Nance described that 34% of all adrenal cysts were discovered incidentally, and 39% present with abdominal pain or due to mass compression effect.<sup>2</sup> Authors present an adrenal cyst, which was misdiagnosed clinically and radiologically as a hepatic hydatid cyst.

### CASE REPORT

A 28-year-old lady presented with intermittent right upper-quadrant abdominal pain for last 2 years, which was dull

aching and relieved on taking analgesics. Rest of no history was significant.

On clinical examination, the patient's vital parameters were within normal limits. Abdominal examination was unremarkable.

Abdominal ultrasound was performed which showed a large anechoic area in right lobe of the liver measuring 295 cc in volume, which was diagnosed as a hydatid liver cyst. Liver function tests were within normal limits. Rest of biochemical investigations were normal. Chest X-ray was normal. Hydatid serology was negative.

A CT scan was done, which revealed 8.5×7×7.1 cm subcapsular hypodense cystic lesion in the segment VI of right lobe of liver. An ill-defined heterogeneously hyperdense area was seen within it. Cyst was abutting the gallbladder anteriorly, right hemidiaphragm posteriorly

and the right kidney inferiorly. Based on these findings likely diagnosis of hepatic hydatid cyst was made.

Patient was planned for surgery in view of large size and symptoms.

Intraoperatively, liver was normal and a retroperitoneal, suprarenal cyst was present, which was excised. On its medial wall surface, yellowish orange tissue was present suggestive of adrenal gland.

Gross pathological examination revealed 8.5x6 cm suprarenal cyst with wall thickness of 0.2 to 0.3 cm. On cut opening gelatinous mucinous material was seen in its lumen.

Microscopically, the sections of cyst wall showed it to be lined by marked thickened but flattened collagenous lining. Normal adrenal gland was identified outside the cyst wall. Features were consistent with vascular endothelial subtype of adrenal cyst.

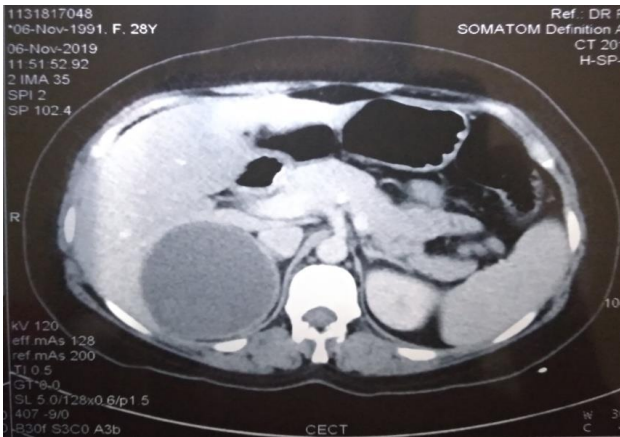


Figure 1: CECT abdomen showing cyst.



Figure 2: Gross specimen showing dimensions of cyst.



Figure 3: Gross specimen showing cyst with normal adrenal gland.

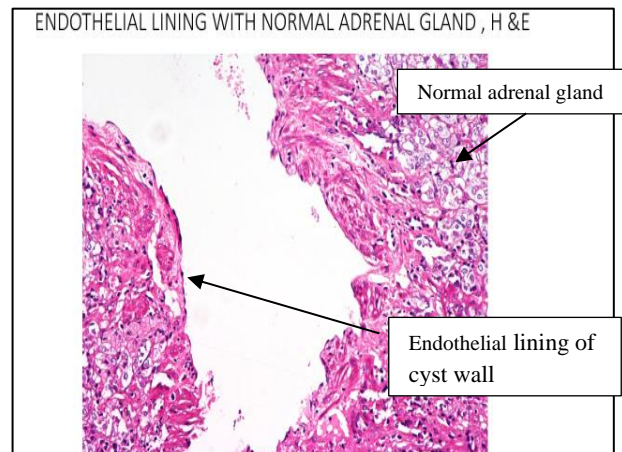


Figure 4: Histopathological image showing endothelial lining of cyst with normal adrenal gland.

## DISCUSSION

In this case, a large cystic mass was found, which appeared to originate from the liver. The hypodense cystic lesion on CT, with ill-defined heterogeneously hyperdense area within, were indicative of a hydatid cyst, warranting surgical intervention. The CT features which supported hepatic origin of mass included its site and contiguity with liver. Further, adrenal cysts are uncommon with reported incidence being 0.064% to 0.18% on autopsies and adrenal hydatid cysts are further rare entities, which almost always occurs in setting of disseminated *Echinococcus* infection.<sup>3</sup> So, this led to the diagnosis of hepatic hydatid cyst.

The reported incidence of adrenal cysts is increasing due to increased detection rates due to widespread use of imaging modalities. Due to its anatomical location, it is often difficult to distinguish adrenal cysts from cysts arising from other organs including the kidney, pancreas, spleen, and liver. On review of literature, authors found

four same cases been reported earlier, but authors could not find the exact incidence of adrenal cysts presenting as hepatic cysts. The size of the adrenal cyst can vary from a few millimetres up to 50 cm in diameter.<sup>4</sup> Majority of the adrenal cysts are unilateral, while 8-10% of those cysts have been noted to be present bilaterally.<sup>5</sup> The majority of cases are diagnosed between the 3rd and 6th decades.<sup>4</sup>

Four histologic types of adrenal cysts have been described: pseudocysts, endothelial cysts, epithelial cysts, and parasitic cysts. Among these, the most common are pseudocysts and endothelial adrenal cysts. Adrenal pseudocysts do not possess a cellular lining. Endothelial cysts lack proliferating endothelium and include lymphangiomatous and angiomatous subtypes. Epithelial cysts are lined by a true epithelium. Parasitic adrenal cysts may occur in association with disseminated *Echinococcus* infections; however, it is extremely rare for a parasitic adrenal cyst to be the only site of infection.<sup>5</sup> Adrenal cysts are usually asymptomatic. Symptoms can develop in the case of large cysts (>10 cm), due to pressure exerted on adjacent organs, if the cyst is rapidly enlarging, or if complicated by hemorrhage, infection, or rupture with leakage of the cyst contents.

For evaluation of adrenal cysts contrast-enhanced CT scan is the standard. The origin of large adrenal cysts is often difficult to distinguish from other organs, including the kidney, pancreas, spleen, and liver.<sup>5</sup>

Surgical excision of adrenal pseudocysts is indicated if the lesion is large (>5 cm) or in the presence of symptoms or endocrine abnormalities, if there are clinical complications, or if there is a suspicion of malignancy.

## CONCLUSION

Although uncommon, Adrenal cyst should be considered as one of the differential diagnosis of upper abdominal cysts. Surgical excision is advisable when the cysts are symptomatic, greater than 5 cm in diameter and in the case of suspecting malignancy.

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