CLINICAL IMAGE

A giant hemorrhagic adrenal pseudocyst as a cause of a diagnostic dilemma

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A 52-year-old man with a history of hypertension and chronic heart failure was admitted due to abdominal fullness and tenderness in the right upper quadrant of the abdomen. He had no history of abdominal or lumbar trauma. Physical examination revealed a large tumor in the upper right quadrant of the abdomen. The patient underwent an abdominal ultrasound scan that demonstrated a 20 cm × 30 cm cystic lesion of the right adrenal gland. Semiliquid contents of the cyst and calcifications within the wall merited a parasitologist consultation, but echinococcosis was excluded. Comprehensive hormonal analysis of the adrenal gland and liver function tests were unremarkable. Computed tomography (CT) of the abdomen showed a giant oval cystic tumor that displaced the liver, mesenteric vessels, pancreas, and right kidney (FIGURE 1A–1D). Diagnosis of adrenal cyst

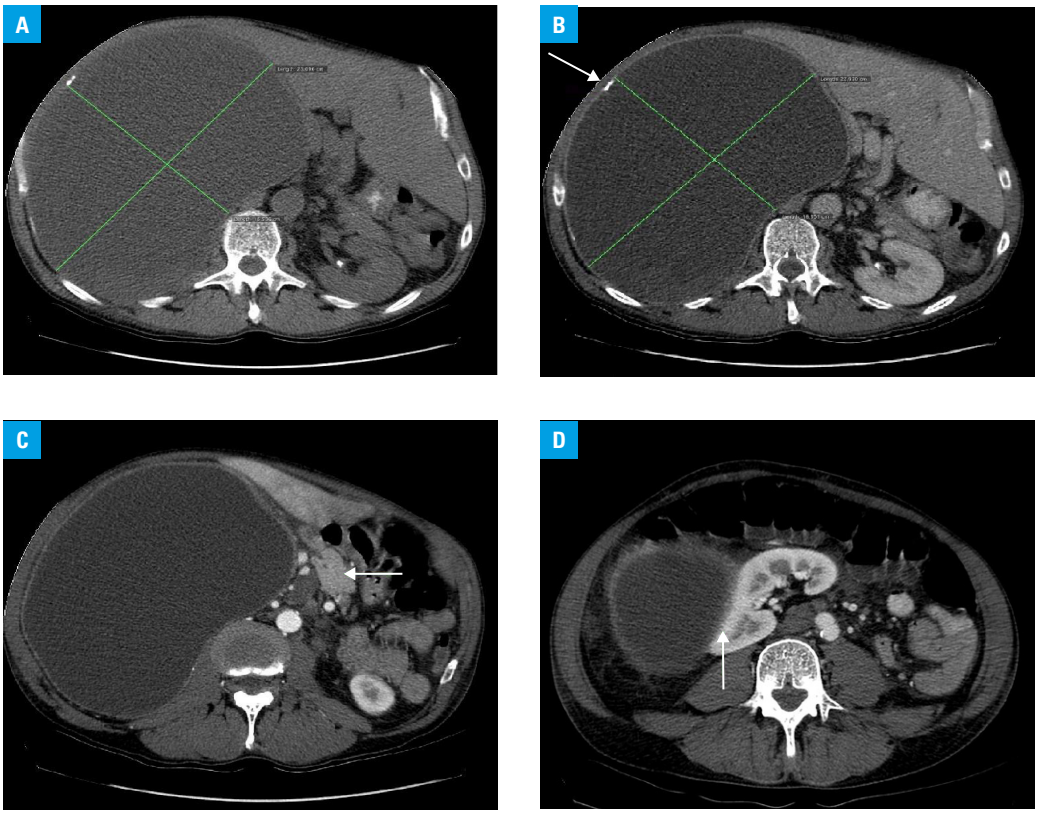

FIGURE 1 A–D – computed tomography scans showing a large cystic mass measuring 23 cm × 16 cm, with calcifications in the wall (A), with no contrast enhancement (arrow) (B), displacing the pancreas and the mesenteric vessels (arrow) (C) and the kidney (arrow) (D)

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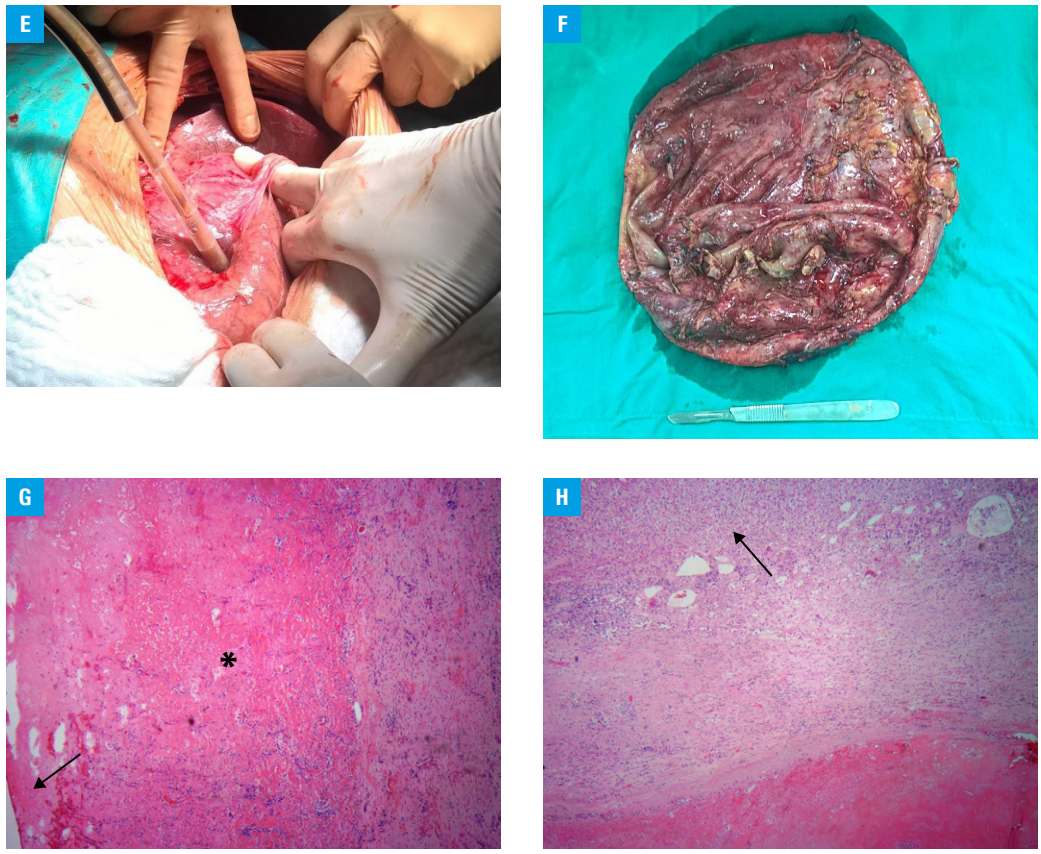

FIGURE 1 **E** – intraoperative photograph showing cystic mass of the abdomen. Surgical suction instrument is placed within the adrenal cyst to drain its contents. **F** – surgical specimen of the adrenal cyst; **G** – histopathology of the adrenal pseudocyst. Note the fibrous pseudocapsule and lack of epithelial lining (arrow) with resorbed hematoma (asterisk). **H** – normal adrenal tissue (arrow) (**G** and **H**, hematoxylin and eosin staining, magnification × 40)

was made as the most likely preoperative diagnosis. A large right retroperitoneal tumor containing fluid was diagnosed via laparotomy (FIGURE 1E). Intraoperatively, the cyst was punctured and its contents were aspirated. Then, en bloc right adrenalectomy with cyst resection was successfully performed (FIGURE 1F). The postoperative course was uneventful, and the patient was discharged on the fifth postoperative day. Histopathologic examination confirmed a hemorrhagic adrenal pseudocyst (FIGURE 1G and 1H).

Adrenal cystic lesions are uncommon, typically unilateral, commonly diagnosed in the fourth and fifth decade of life with female predominance.[1] Adrenal pseudocysts, the second most common subtype of cystic lesions of the adrenal gland, are vascular-origin cysts. Classic causes of this particular lesion include infections, pregnancy, and trauma-induced hemorrhage into the adrenal gland. Pseudocysts and true cysts mainly differ because the former are devoid of the inner epithelium or endothelium, and considering their vascular origin they may contain blood clots as well as proteinaceous materials. Most pseudocysts are clinically silent and diagnosed incidentally or due to symptoms of a mass effect. Although most cases of adrenal cystic lesions are benign, approximately 7% are malignant.[2]

Adrenal cyst features indicating possible malignancy on CT include: 1) heterogeneous echotexture, 2) wall thickness greater than 5 mm, and 3) stippled central calcification.[3]

Ultrasound examination, CT, or magnetic resonance imaging are routinely used for confirming the nature of the adrenal cyst components with diagnostic sensitivities of 66.7%, 80%, and 100%, respectively.[4]

Based on previous studies, indication for surgical resection of adrenal cystic lesions include: 1) symptomatic cysts due to a mass effect, 2) functional cysts, 3) size exceeding 5 cm, 4) potentially malignant lesion, and 5) parasitic cysts.[5] The method of choice is en bloc adrenalectomy with the cyst resection. Percutaneous drainage of the adrenal cyst is suggested in the case of cysts smaller than 5 cm, nonfunctioning ones, and with no evidence of malignancy. Adrenal cyst enucleation is not recommended due to highly vascularized nature of the adrenal gland and a risk of intraoperative hemorrhage.

An adrenal pseudocyst remains a rare lesion. Preoperative diagnosis may be challenging and could be a source of a diagnostic dilemma due to asymptomatic course of the disease and heterogeneous appearance on imaging.

ARTICLE INFORMATION

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