Primary adrenal hydatid cyst: a case report

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A rare case of primary adrenal hydatid cyst is reported in a 56-year-old male. The cyst was discovered incidentally. The only symptom was hypertension. Partial excision of the gland and pericystectomy were performed. Surgical treatment was also therapeutic for the hypertension.

Key words: adrenal gland, hydatid cyst, hypertension

INTRODUCTION

Human hydatid cysts are found mostly in the liver (60-70% of cases) or in the lung (5-15%), and rarely in other locations, such as the muscles, fasciae and bones (6%), the kidneys (2%), the spleen (1%), the brain (0.5%) and other organs (1%).1,2 The incidence of occurrence of hydatid disease on the adrenal glands is 0.5%.1-4 The adrenal echinococcosis belongs to the category of extremely rare locations (according to classification by Grassi), together with the lymph nodes, the tonsils, the peripheral nerves, the hypophysis and the prostate.1,5

The adrenal hydatid cysts are usually asymptomatic or present size-related symptoms. Hypertension, as the only symptom of the primary adrenal echinococcosis, has been presented in only one case.6 Diagnosis is difficult and most times incidental. The treatment of choice for the adrenal hydatid cyst is surgical excision of the cyst and partial or total excision of the gland, either with conventional surgery or with laparoscopic procedure.3,4,7

A case of primary adrenal hydatid cyst is presented in a patient with arterial hypertension. The cyst was discovered incidentally. Diagnosis and treatment are discussed.

CASE REPORT

A 56-year-old man visited the general practitioner suffering from headaches, discomfort and nocturia. Arterial hypertension was diagnosed, with systolic blood pressure of 180-195 mm Hg, diastolic BP of 90-110 mm Hg. Treatment with enalapril and hydrochlorothiazide was suggested. As part of the diagnosis, a plain abdominal X-ray was performed, which showed calcification of the mass wall located in the left upper abdominal quadrant; the X-ray was followed by ultrasonography (US), which revealed a calcified cystic lesion in the left retroperitoneal area, close to the upper pole of the left kidney.

The patient was then referred to the 2nd Department of Surgery, Democritus University Hospital. Abdominal computed tomography (CT) was then performed, which revealed a cystic mass of 7 cm in diameter at the upper pole of the left kidney (Fig. 1). In addition, diverticular disease of the large bowel was identified and hypertrophia of the prostate. The patient had a normal plain chest X-ray, and all the laboratory tests were within the reference ranges, with absence of eosinophilia. The indirect hemagglutination test (IHA) was also normal, and, therefore, there was no indication for hydatid disease. However, the patient lives in a village and had direct contact with animals, so a hydatid cyst was suspected.

The decision was surgical excision of the cyst. At laparotomy the abdomen was checked carefully and no intra-abdominal cysts were found. Mobilization of the splenic flexure of the colon was performed and a retroperitoneal cystic mass was revealed, which originated from the left adrenal gland. The area around the cyst was packed with pads soaked in hypertonic saline (N/S 15%), although the cyst was not aspirated. Then, the cyst was removed together with a rim of adrenal gland (Fig. 2). On palpation, there were stone hard calcification areas on the cyst wall. The patient’s condition during surgery was hemodynamically stable. The patient had an uneventful recovery and from the first postoperative day did not need antihypertensive treatment.

The diagnosis of the echinococcal cyst of the adrenal gland was established by macroscopic and histopathological examination of the cyst. At twelve month follow-up the patient is in good condition with normal blood pressure.
DISCUSSION

Adrenal cysts are usually found incidentally in imaging studies or during autopsies. The incidence of occurrence in the general population ranges from 0.06%-0.18%. Adrenal cysts include the following types: endothelial cysts (45%), pseudocysts (32%), epithelial cysts (9%) and echinococcal cysts (6%-7%). Echinococcal adrenal cysts are usually secondary and very rarely primary. Ackay et al. have reported the largest series of adrenal hydatid cysts (9 cases) of which only five were primary. Adrenal echinococcal cysts may be seen in all age groups, but mostly between 50 and 60 years old, and more frequently in female patients. Usually, they are unilateral. Although in most cases they are asymptomatic, the wide variety of non-specific symptoms and findings include dull pain in the renal area, gastrointestinal symptoms, a palpable mass and rarely arterial hypertension (Goldblatt phenomenon). Among all previously reported cases, only one was causing arterial hypertension. This implies that the association between adrenal hydatid cyst and hypertension is occasional, and should be caused by pressure on the gland by the cyst. In our case, arterial hypertension was the main symptom, which was under medical treatment.

Diagnosis of this primary unusual location of the hydatid cyst is difficult, because most times the cyst is asymptomatic. The diagnosis may be easier when the adrenal hydatid cyst is secondary and part of generalized echinococcosis. A plain abdominal X-ray can identify calcification of the cystic wall. Ultrasonography, CT and magnetic resonance imaging can demonstrate cystic lesions and reveal the presence of daughter cysts. US must be the first choice of sensitive and inexpensive imaging in adrenal hydatidosis. In the present case, US and CT showed a cystic mass at the upper pole of the left kidney. Laboratory tests, such as eosinophilia and IHA, are not always positive, as in the present case.

The treatment of choice for the hydatid cyst of the adrenal gland is surgery. Laparoscopic resection of an adrenal hydatid cyst is an alternative to conventional surgery, however, it has been described only sporadically. In conclusion, in endemic countries, primary hydatid disease should be considered in the differential diagnosis of an adrenal cyst. The treatment of choice is pericystectomy of the hydatid cyst with partial or total excision of the adrenal gland. Association of an adrenal hydatid cyst with hypertension is very rare. In such cases, surgical removal of the hydatid cyst may also treat hypertension.

SUMMARY


Ključne reči: nadbubrežna žležda, ehinokokna cista, hipertenzija

BIBLIOGRAPHY


FIGURE 1
ABDOMINAL CT SHOWING THE CALCIFIED CYSTIC MASS.

FIGURE 2
THE ECHINOCOCCAL CYST SPECIMEN AFTER RESECTION ON THE TOP PART OF THE LEFT ADRENAL GLAND.