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Primary hydatid cyst in adrenal gland: A case report

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Abstract. The hydatid cyst of the adrenal gland is extremely rare pathology of the adrenal gland; here we report an adrenal hydatid cyst that presented as a solitary renal tumor.

Key words: Adrenal Gland, Echinococcus granulosus, Hydatid cyst, Renal mass, Renal tumor

Introduction

Hydatid disease resulting from Echinococcus granulosus infection is found most frequently in the Middle East, the countries of the Mediterranean area, Australia, South America and New Zeland [1, 2]. Within the genitourinary tract the common sites are the kidney and the retrovesical space [3]. The hydatid cyst of the adrenal gland is extremely rare; only 12 cases have been described in the literature till 2002 [4]. Here we report a case of primary hydatid cyst of the adrenal gland.

Case report

A 47-year-old woman presented with left flank pain. Physical examination was unremarkable; complete blood cell count and electrolytes were within normal limits. Abdominal ultrasonic scanning demonstrated a 78 mm in diameter, heterogeneous solid mass that originates from superior renal pole. Contrast CT scan showed a solid mass that 78 mm in diameter (Figure 1).

We considered as a solitary mass that originating from upper pole of the left kidney. Anterior subcostal approach was performed. At surgery the mass was solitary, it was hard, adhesive and originates from adrenal gland. Left kidney was also completely ischemic, scatrizied and pyelonephritic so we decided to perform radical nephrectomy. The tumor was nearly 8 cm in diameter (Figures 2 and 3). The pathological examination of the specimen revealed a echinococcus cyst of adrenal gland that cyst wall shows an chitinous layer and an inner germinal layer surrounded by granulation tissue or a fibrose capsule. (Stain: HE, 100X) (Figures 4a and 4b). Following the operation, the patient was given mebendazol (30 mg/ kg/ day orally).

Discussion

Hydatid cysts are most frequently found in liver (50–70%) and lungs (20%), while they occur much more seldom in other organs; the myocardium, brain, eye, bones, spleen or kidney [5, 6]. The hydatid cyst of the adrenal gland is extremely rare; only 12 cases have been described in the literature till 2002 [4].

Many patients with renal, suprarenal echinococcal cyst are asymptomatic, the most common symptom flank mass and pain as well as on the number and size of hydatid cysts and related mechanical and immune effects on the host our patient also had flank pain [5, 7].

The diagnosis of the hydatid cyst of the adrenal is based mainly on ultrasonography and CT scan [8]. The most common classification is based on US features and includes five types. Type 1 is a well-defined, anechoic lesion. Type 2 demonstrates separation of the membrane; the ''water lily'' sign is formed by the undulating membrane. Type 3 is

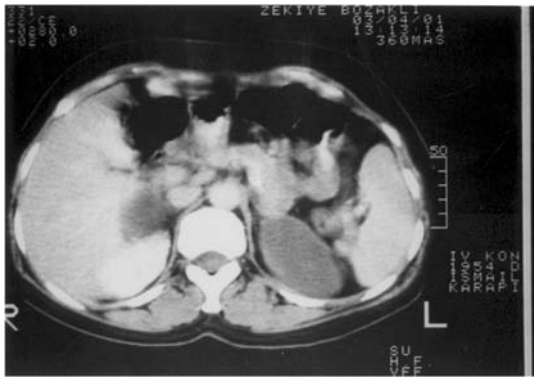

Figure 1. Contrast CT scan of the adrenal mass.

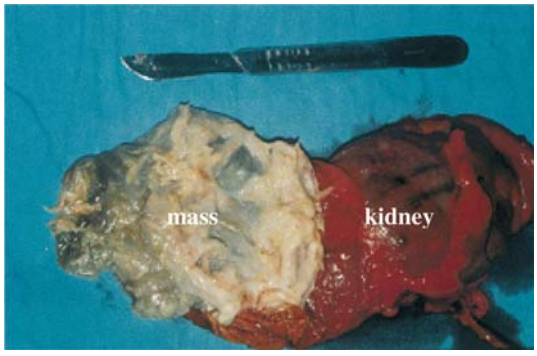

Figure 3. Echinococcus cyst of adrenal.

characterized by septa and intraluminal daughter cysts. Type 4 is a nonspecific solid mass. Type 5 is a solid mass with a calcified capsule [9, 10]. Echinococcal cysts usually have a homogenous fluid content showing water attenuation on CT scan [7]. The hydatid cyst's appearance was looked like nonspecific solid mass at our case and because of this we didn't make investigations like Casoni or latex agglutination tests.

Mebendazol and albendazol, an antihelmintic agent, have been used in the treatment of systemic echinococcosis in endemic areas. There are reports that antihelmintic agents reduce the size of cysts in some cases however, the results are not satisfactory, this treatment should be limited for disseminated and recurrent cysts or in cases of surgical contraindications [7, 11–13]. Puncture of echinococcal cysts has been contraindicated because of potential complications such as anaphylactic shock and spread of daughter cysts. Although such complications have been sporadically reported,

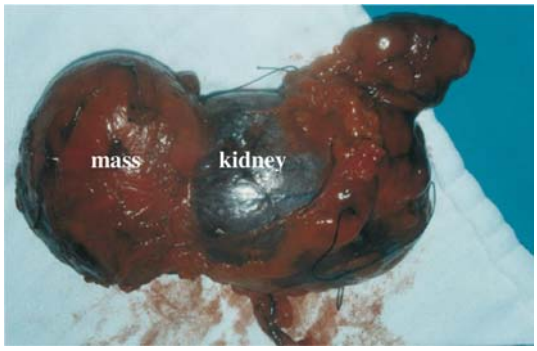

Figure 2. Adrenal tumor.

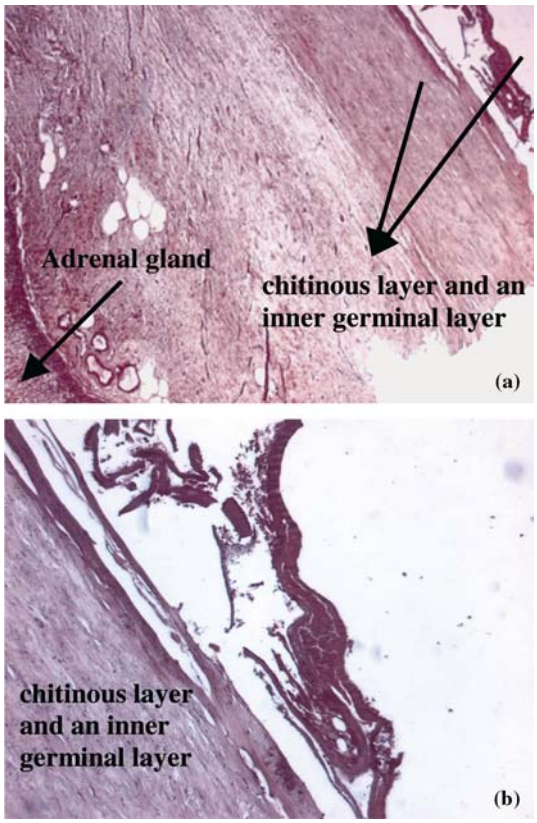

Figure 4. (a) The pathological examination of hydatid cyst (H.E.magnification = 100X). (b) The pathological examination of hydatid cyst (H.E.magnification = 100X).

percutaneous drainage may be an alternative for patients who can not undergo surgery [14, 15]. Surgery with either partial or total excision of the cyst with or without preservation of the adrenal gland is the treatment of choice [5]. Antiparasitic agents can be used prior to surgery and after surgery to prevent further implants and secondary

hydatid seeding but not as a sole therapeutic purpose. Although the hydatid cysts of adrenal gland is rare it must be suspected in endemic countries.

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