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Visceral Surgery

A Calcified Hydatid Cyst of the Adrenal Gland: A Case Report

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Abstract **Case Report**

The hydatid cyst of the adrenal gland is an exceptional entity, even in endemic countries. The clinical polymorphism of this particular location of the hydatid disease, and the lack of specificity of the symptoms explain the importance of radiologic explorations. We report the case of a patient in whom a voluminous hydatid cyst of the adrenal gland. The CT scan had demonstrated the presence of a calcified hydatid cyst in the right adrenal gland. The patient did not benefit from surgical treatment as the cyst was calcified.

Keywords: hydatid disease, adrenal gland, cyst, Hydatidosis.

INTRODUCTION

Hydatidosis is a parasitic disease caused by Echinococcus granulosis which develops in humans in the form of a cyst. It occurs mainly in the Mediterranean region and in rural areas. Adrenal localization remains very rare and its diagnosis is often difficult despite the progress made in imaging.

In this article we report a case of right adrenal hydatid cyst in a patient who did not require surgical treatment and we try to recall the clinical symptomatology and to specify the different imaging means as well as the therapeutic artillery of this entity.

CASE REPORT

A 52 years old female patient with no notable pathological history, had been complaining for 8 months of intermittent right lumbar pain in a context of apyrexia without weight loss or alteration of the general condition. Clinical examination revealed an apyrexic patient at 36.7°C, with a slight tenderness of the right flank without palpable mass. An abdominal CT scan with injection of contrast medium had demonstrated the presence of a calcified hydatid cyst in the right adrenal periphery of about 6.4 cm (Figure 1 & 2). The patient underwent a biological work-up with a hydatid serology which was negative as well as a negative infectious work-up. The patient did not benefit from surgical treatment as the cyst was calcified. Albendazole therapy was not indicated, the patient was put under surveillance with a radiological control in 6 months.

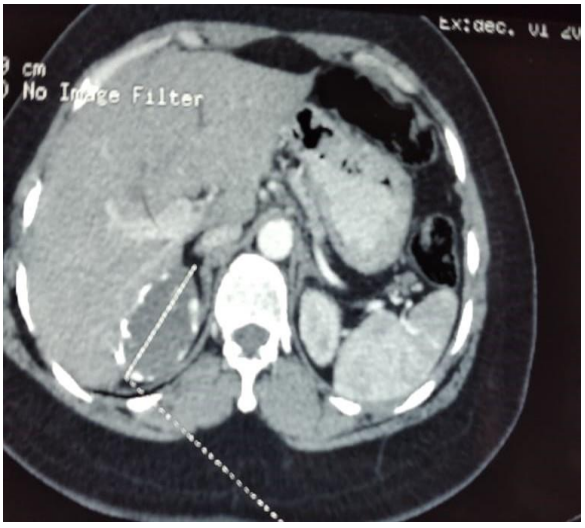

Figure 1 : Abdominal CT scan in axial section after contrast injection: A cystic mass of homogeneous liquid density with a clean, non-enhanced wall after contrast injection in the right adrenal gland

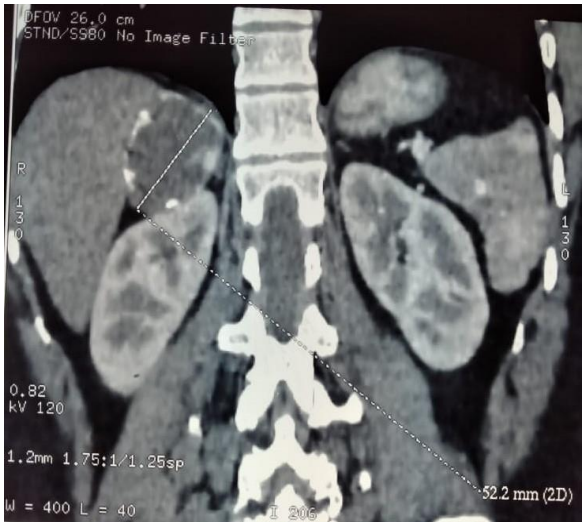

Figure 2: Abdominal CT scan with sagittal reconstruction: a cystic mass of homogeneous fluid density with a clean wall of the right adrenal gland

DISCUSSION

Hydatidosis is an anthropozoonosis that occurs in the rural world and especially in livestock environments. It is due to the development of Echinococcus granulosis, a small tapeworm parasitizing, in its adult state, the digestive tract of the dog, which constitutes the definitive host. The infestation of the latter is done by digestive way and would be secondary to the consumption of parasitized viscera, in particular the liver and the lungs of the intermediate host: the sheep. The embryonic eggs, after being eliminated by the dog's stools, are ingested by man and penetrate the digestive wall, more precisely at the level of the intestinal mucosa, and pass into the portal circulation and then through the liver, which is considered the first. They sometimes pass beyond the hepatic veins and reach the lungs, which is considered the second barrier, via the inferior vena cava and the right heart [1, 2]. Thus, they can enter the large circulation and lodge in any location of the body such as the spleen, kidneys, brain, heart, bones, muscle tissue, pancreas, breasts, retroperitoneum, thyroid and adrenal glands via the arterial circulation [1, 3].

Adrenal location is an extremely rare location of hydatid disease representing less than 0.5% of all hydatid cysts [4, 5]. Hydatid disease constitutes only 7% of adrenal cysts. AHCs are generally asymptomatic lesions and may be manifested by atypical and nonspecific hypochondrial pain, low back pain or a palpable mass. Sometimes, it is revealed by arterial hypertension, the pathophysiology of which remains poorly elucidated or even clinical signs suggestive of pheochromocytoma, which would be related to the compression of the adrenal medulla by the cyst [6].

Ultrasound remains the first examination to be requested for this location. The depth of the adrenal glands and sometimes peripheral calcifications make ultrasound exploration difficult. CT scan then allows to better specify the location and the relationship with the surrounding organs [7]. The most frequent appearance is that of a cystic mass with a thin wall and sometimes a membrane detachment or the presence of daughter vesicles. Peripheral arciform calcifications, although strongly suggestive of the diagnosis, are not pathognomonic [8].

Hydatid serology (hemaglutination, Elisa) can provide diagnostic certainty when positive [6]. Its sensitivity is 90% [8] and its negativity does not eliminate the hydatid origin of an adrenal cyst as it was the case in our patient.

The treatment of choice for AHC is surgical. The laparoscopic approach may be used. The laparotomy can be by intercostal lumbar approach with or without resection of the eleventh rib; or transperitoneal anterior allowing sufficient daylight on the liver in case of associated hepatic localization [6, 9, 10]. It is imperative to protect the rest of the peritoneal cavity with fields soaked in scolicide (hydrogen peroxide or 10 or 20% hypertonic serum) around the hydatid cyst, in order to prevent dissemination of the parasite in case of accidental opening of the cyst during its removal. Preservation of the gland should be the rule, except in the case of destruction of the adrenal gland by the cyst. Resection of the protruding dome of the cyst with drainage of the residual cavity is the procedure most recommended in the literature [6, 7]. The postoperative course is usually simple. Postoperative prophylaxis with antiparasitic treatment (benzimidazoles), even if it is recommended in other localizations by some authors, remains to be discussed. Prevention of hydatid contagion (by interruption of the parasite cycle) remains an essential measure to avoid hydatid disease whatever the location.

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