

Psoas Hydatid Cyst: 2 Cases Report

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Abstract

Retroperitoneal cystic masses can be benign or malignant, purely cystic or with solid components. Several diagnoses can be evoked in front of a retroperitoneal cystic mass among which: the hydatid cyst of the psoas. The hydatid cyst of the psoas constitutes an exceptional localization of hydatidosis, even in hydatid endemic countries such as Morocco where hydatidosis remains frequent. We report 2 cases of hydatid cyst of the psoas, collected in the department of visceral surgery B at the CHU Ibn Sina in Rabat during a period of 5 years. Our objective was to focus on the diagnostic and therapeutic difficulties of this condition. The clinical symptomatology consists of lateralized pain or at the level of the iliac fossa, it can be associated with an infectious syndrome which directs towards an abscess of the psoas but most often the evolution is done in a context of apyrexia and conservation general condition. The thoraco-abdominal CT confirmed the diagnosis and made it possible to specify the seat of the cyst and its neighborhood relationships. Therapeutic management was surgical in all cases; the diagnosis was made intraoperatively. The technique used was resection of the protruding dome via the midline, sub umbilical abdominal route for the first patient and pericystectomy via the Jalaguier approach for the second patient. The postoperative course was favorable in both cases and no case of recurrence was reported in our series.

Keywords: purely cystic, hydatidosis, diagnoses, apyrexia.

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INTRODUCTION

The retroperitoneal space is an anatomical space located behind the parietal peritoneum and in front of the transversalis fascia [1], it is the site of many pathologies, in particular retroperitoneal cystic masses.

The latter can be benign or malignant, purely cystic or with solid components [2]. Hydatid origin is exceptional, often asymptomatic and incidentally discovered during imaging.

Several diagnoses can be suggested when faced with a retroperitoneal cystic mass, including: psoas hydatid cyst, cystic lymphangioma and primary retroperitoneal tumors [3].

The aim of this work is to highlight the diagnostic and therapeutic difficulties of hydatid cyst of the psoas. For this, we conducted a retrospective study of two cases of hydatid cyst of the psoas collected in the department of visceral surgery B at the CHU Ibn Sina in Rabat during a period of 5 years.

CASES REPORT

M LF, aged 54, with no pathological history, was admitted to the service for intermittent pain and a slight swelling in the left iliac fossa gradually increasing in size without any other associated signs.

On clinical examination, abdominal palpation found a mass 10 cm in diameter, at the level of the left iliac fossa extending towards the left lumbar fossa.

The biological assessment was without abnormalities. The chest X-ray was normal.

Abdominal CT revealed a rounded and heterogeneous mass of the left psoas muscle extending over 14 cm in large diameter, coming into contact with the aorto-iliac axis.

The patient was operated, the surgical approach was a midline sub umbilical laparotomy. The operative exploration found a retroperitoneal mass, oblong, solid, encapsulated, located on the posterior surface of the left psoas muscle and in intimate contact with the aorto-iliac axis without plane of separation.

The puncture of the mass brought back hydatid material, the resection of the protruding dome with drainage of the residual cavity was performed.

Histological analysis was in favor of hydatid cyst including scolex and specific pathogens without histological signs of malignancy.

Post-operative monitoring was without abnormalities, the patient was put on albendazole per os for 6 months with periodic monitoring of liver function tests.

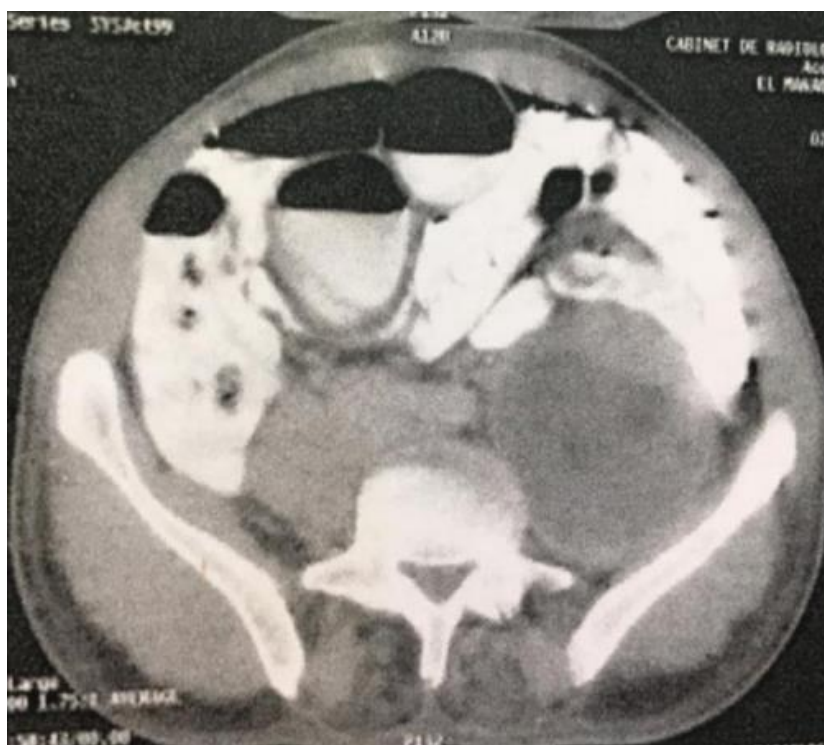


Figure 1: Cross-sectional CT showing psoas hydatid cyst



Figure 2: CT scan in coronal section showing the hydatid cyst in direct contact with the aorto-iliac axis

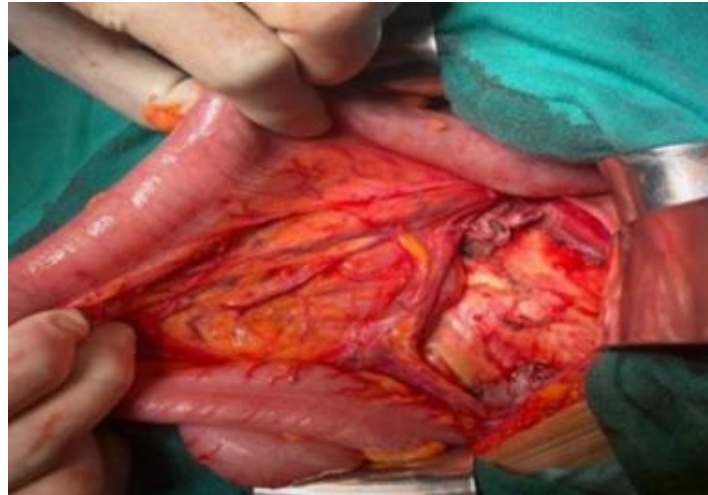


Figure 3: Intraoperative image showing the location of the hydatid cyst at the level of the posterior aspect of the left psoas muscle



Figure 4: Intraoperative image showing the proligerous membrane and daughter vesicles of the hydatid cyst



Figure 5: Intraoperative image showing the residual cavity after resection of the dome projecting

Our second patient is 70 years old, has a history of type II diabetes on insulin. He presented in February 2018 for right lateralized pain evolving in a

context of fever of 39°C with deterioration in general condition.

On clinical examination, abdominal palpation was painful with tenderness in the right iliac fossa.

The biological assessment showed an inflammatory syndrome with hyperleukocytosis at 24,000 elements/mm³, high CRP and a sedimentation rate of 60mm for the first hour. The chest X-ray was normal.

The abdominal X-ray without preparation (ASP) in AP view (patient standing) showed obliteration of the edge of the right psoas.

Abdominal ultrasound showed a collection with heterogeneous contents corresponding to type IV hydatid cyst.

The abdominopelvic CT scan showed a hypodense mass gaining contrast in the periphery as well as a septate collection, which corresponds to an abscessed hydatid cyst of the psoas. The patient was operated on via the Jalaguier approach under general anesthesia.

Intraoperatively, it was an abscessed cystic mass with daughter vesicles and hydatid material. After protection with fields soaked in hydrogen peroxide and aspiration of the contents of the cyst, abundant cleansing with serum and hydrogen peroxide was performed, an open cyst pericystectomy was performed with good clinical and radiological progress. The postoperative consequences were simple.

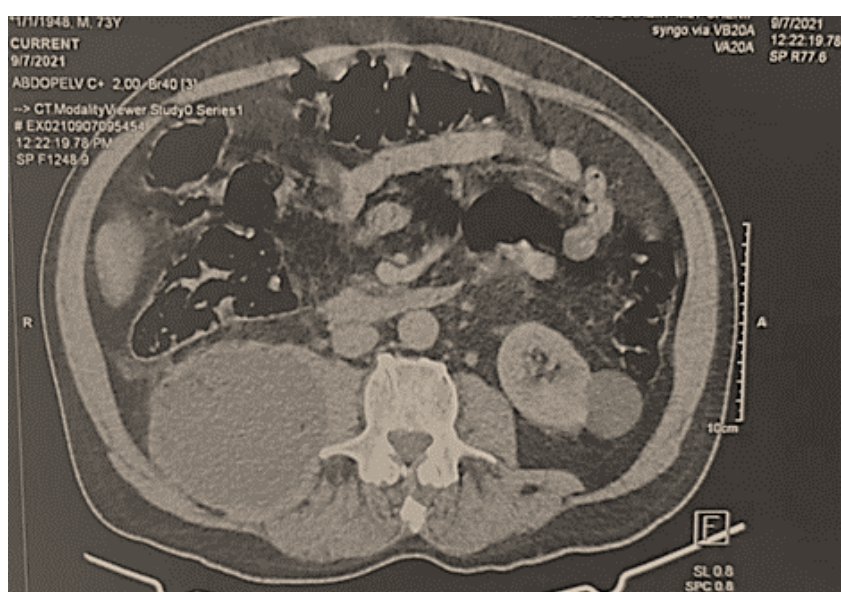


Figure 6: Thoraco-abdominal CT scan with injection of contrast product showing a cystic image of the right psoas



Figure 7: Abdomino-Pelvic CT showing a collection related to a KH of the right psoas muscle

DISCUSSION

Echinococcosis is a cosmopolitan anthroponosis common to men and many mammals, it is due to the development in the organism of the larval or hydatid form of a dog tapeworm called *Echinococcus granulosus* [4]. The muscular localization of the hydatid cyst is rare with a frequency from 1 to 5.4% of all hydatid locations.

Inoculation of the psoas muscle by the hydatid cyst is done by the hematogenous route, but it can occur via the lymphatic route or via a shunt from the gastrointestinal tract [5], or even be the secondary location of a ruptured hepatic cyst. Preferential fixation at the level of the muscles is favored by conditions in particular: the volume of the muscle mass and the vascular richness [6, 7].

The clinical diagnosis of psoas hydatid cyst is difficult due to the non-specificity of the orientation elements, and the absence of pathognomonic clinical signs, especially in non-endemic countries.

The usual latency of these cysts should also be underlined, which explains the delay in diagnosis with a duration of evolution of up to 20 years [8].

The discovery may be: Incidental during an ultrasound exploration of a mass abdominal pain or during a systematic physical examination, or in the face of clinical symptoms dominated by lumbar abdominal pain or at the level of the iliac fossa. [8]

Some cases may be revealed by complications such as nerve, urinary or vascular compression, or by hematogenous superinfection which can lead to sometimes severe sepsis [9].

Radiological exploration is an essential step in the diagnosis of hydatid cyst of the psoas muscle [8, 10]. The ultrasound appearance of the hydatid cyst reproduces the stages of the Gharbi classification and makes it possible to classify the evolutionary stage of the disease [11]. Ultrasound is more efficient compared to CT for identifying the hydatid nature of the cyst, on the other hand the latter is very useful for the precision of its topography and its reports [8, 12].

In the case of the first patient, the CT scan revealed a rounded and heterogeneous mass of the left psoas muscle extending over 14 cm in diameter, for the second patient an abdomino-pelvic CT scan was performed showing a hypodense mass taking contrast in the periphery as well as a compartmentalized collection.

Magnetic resonance imaging is reserved for cases where the diagnosis remains doubtful [13].

The biology is mainly based on the hydatid serology which has a positive predictive value, but its

negativity does not eliminate the diagnosis. Preferably, this examination should be based on two complementary techniques: quantitative (immunofluorescence-ELISA) and qualitative (immuno-electrophoresis and hemagglutination) [14].

The absence of a pathognomonic radiological image of the daughter vesicle or the serpiginous membrane, as well as the negativity of the hydatid serology do not rule out hydatidosis in front of a cystic mass of the psoas compartment. However, differential diagnoses must be eliminated [8]. The differential diagnosis is made with all cystic or mixed retroperitoneal tumors, tuberculous abscesses or pyogenic abscesses [15].

The only curative treatment for psoas hydatid cyst is surgery. Medical treatment with albendazole is intended for inoperable patients or as a complement to surgery in the event of massive recurrence [8].

The total pericystectomy which removes the closed cyst represents the method of choice [16]. In case of extension or intimate relationship of the cyst with the vasculo-nervous elements, a less radical technique is indicated: partial pericystectomy or resection of a protruding dome [8].

The hydatid cyst is a real public health problem in hydatid endemic countries. It is a non-immune disease. The reinfestation is always possible, which shows the importance of immunological and ultrasound postoperative monitoring, with the aim to eradicate this zoonosis [17, 18].

CONCLUSION

The hydatid cyst isolated from the psoas is a rare entity even in endemic countries, its clinical diagnosis remains difficult because of the poverty of the elements of orientation.

These cysts present in the form of renitent lumbar or iliac abdominal swellings, which gradually increase in volume with preservation of the general condition. The diagnosis can be revealed by complications such as urinary or nerve compression or hematogenous superinfection.

Diagnosis is mainly based on ultrasound and CT scan, biology can also provide additional elements. The use of other imaging techniques only becomes necessary in doubtful cases.

The treatment is essentially surgical. Total pericystectomy with a closed cyst, via an extraperitoneal approach, is the treatment of choice. In case of rupture or multiple location, medical treatment becomes useful in addition to surgical treatment.

The prognosis is favorable in the absence of morbid complications or other localizations.

Prevention remains the best treatment in areas where hydatid disease is endemic, but unfortunately hydatid disease continues to be endemic in our country and constitutes a real social scourge.

Data Availability Statement

The data that support the findings of this article are available from the corresponding author upon reasonable request.

Conflicts of Interest:

Drs Moustapha Traore, Abdellah Moufid, Jihane Sabar and Jalil Medarheri declare no conflict of interest.

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