

HYDATIC CYST OF THE PSOAS MUSCLE: AN EXCEPTIONAL LOCATION

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ABSTRACT

The psoas muscle is an uncommon location for hydatid cyst accounting for only 1 to 3% of cases. This work reports the case of a young patient in the department of Surgery "D" at the Ibn Sina University Hospital in Rabat who presented with abdominal pain. The abdominal CT scan concluded that he had a hydatid cyst of the psoas muscle and the treatment was surgical associated with Albendazole in post-op for 3 months with a very good evolution.

INTRODUCTION

The hydatid cyst is a cosmopolitan parasitosis, which is a real public health problem due to its frequency, morbidity and mortality and causes enormous economic losses.^[1] The four countries known for their hydatid hyperendemic are Uruguay, Argentina, Tunisia and Morocco.^[2]

Humans constitute the accidental intermediate host by ingestion of the larval form of *Tænia Echinococcus Granulosis*.^[3]

The usual sites of this anthroponosis are the liver (63%) and the lung(25%). isolated muscle localization is rare with a frequency of 0.5 to 5%,^[4] the psoas muscle has an exceptional entity.^[5]

OBSERVATION

This is Mr. M.C, 28 years old, with no particular pathological history apart from a chronic active smoking for 8 years, he is admitted in our Surgery Department "D" at Ibn Sina Hospital in Rabat for an abdominal mass of the left iliac pit which has evolved for more than a year by extending to the hypogastrium, associated with lumbalgias with irradiation of the pain towards the left thigh. The whole evolving in a context of apyrexia and conservation of the general state.

Clinical examination revealed a mass in the left iliac fossa, tender to palpation and fixed to the deep plane. The rest of the clinical examination was unremarkable.

Abdominal CT was in favor of a large multilocular hydatid cyst of 136*120*172 mm of the left iliac psoas muscle extended retroperitoneally with lysis of the

homolateral iliac crest without involving the vascular axis.

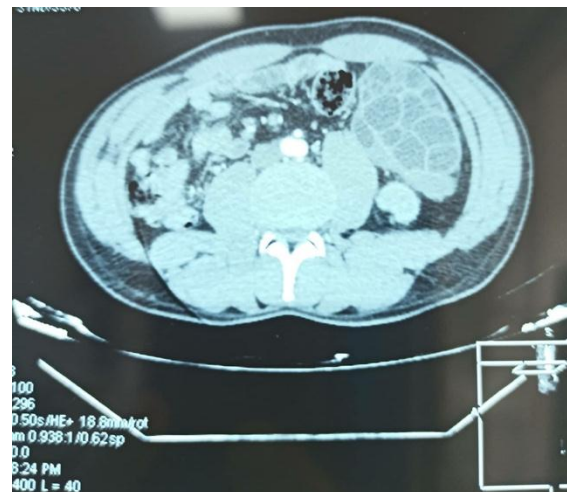


Figure 1 : Abdominal CT Section Showing a multi-vesicular hydatid cyst of the left psoas.

Hydatid serology by ELISA test was positive at 52.33 IU/ml. The patient was operated on by a left retroperitoneal iliac approach, discovering a single retroperitoneal hydatid cyst located on the anterior aspect of the left psoas muscle, consisting of several septal compartments. After protection with hydrogen peroxide soaked drapes and aspiration of the cyst contents and abundant cleaning with serum and hydrogen peroxide, a pericystectomy was performed.

Parasitological examination of the removed vesicles showed the presence of viable hooks and scolex.

The patient was discharged from the hospital on the 5th postoperative day with a prescription of albendazole (2*400 mg / day) for 3 months.



Image 1: Hydatid cyst containing proligerous vesicles.

DISCUSSION

Hydatidosis is a parasitic disease of the rural environment, widespread in the countries of sheep breeding where the dog-sheep contact is constant,^[1] it is an anthroponosis resulting from the development in humans of the larval form of *Echinococcus granulosus*.^[6]

The parasite cycle usually includes two hosts: the dog as the definitive host, and herbivorous or omnivorous mammals. Humans represent an incidental intermediate host, who become infected either directly from contact with the parasitized dog or indirectly through ingestion of soiled food.^[7-8]

The embryonated eggs, eliminated with the dog's feces in the external environment, are ingested by the intermediate host, which at the level of its small intestine and under the action of the digestive juice, the released embryo gives the hexacanth embryo. The latter attaches itself to the intestinal wall, which it crosses to reach the portal system, which takes it to the liver, which explains the frequent hepatic localization, otherwise via the supra-hepatic veins, the embryo reaches the lungs. More rarely, through the general circulation the localization can be done in any point of the organism. Once in the viscera, the embryo becomes a hydatid larva.^[9-10]

The muscle location of hydatid cysts is rare, described in 0.5 to 4.7% of cases.^[11-12] Involvement of the psoas muscle is unusual, even in endemic countries. It has been described in 1% to 3% of cases in the literature.^[5] According to a study carried out by S. Bellil et al, on a series of 265 cases of extrapulmonary hydatid cysts in

Tunisia over a period from 1990 to 2007, hydatid localization of the psoas muscle was found to be rare with a percentage of 0.4% or 1 case.^[13]

The rarity of muscular hydatidosis can be explained by the difficulty of implantation and the growth of the embryo due on the one hand to muscle contractions and on the other hand to its biochemical formation in lactic acid.^[14]

The psoas muscle is affected by the haematogenous route, although its contamination may be secondary to the rupture of a splenic, hepatic or renal hydatid cyst.

In addition to the hematogenous route, muscle inoculation can occur via the lymphatic route or via a shunt from the gastrointestinal tract.^[15]

Clinically, the hydatid cyst is most often manifested by a lumbar or iliac mass, characterized by a variable size, renal, of more or less regular contour depending on whether it is unilocular or not, and sensitive or not. It is fixed in relation to the deep plane. Its consistency is variable, can be mobile, fluctuating, moreover firm or difficult to appreciate because of the depth of the cyst. Muscle hydatidosis may also be revealed by functional or general signs related to nerve compression (crural nerve), urinary (dysuria, pollakiuria, mictional burns, hydronephrosis, or even renal insufficiency), vascular, or by superinfection responsible for sepsis, which may be severe.^[16-17]

Ultrasound is the first-line radiological examination, which allows the diagnosis of hydatid cysts.^[5]

In case of muscular localization, CT is a more expensive examination, allowing a more precise study of the cyst, as well as determination of its exact size and its relations with the neighboring organs for a complete lesion assessment, as well as identification of difficult localizations, intra and retroperitoneal.^[6]

The biological work-up is essentially represented by hydatid serology, which allows diagnosis, screening and postoperative follow-up. A negative serology does not eliminate the diagnosis of hydatidosis, hence the interest of a clinico-radiological confrontation.^[12]

Surgery is the reference treatment for hydatid cysts of the psoas muscle. The extra-peritoneal approach is desirable in order to avoid any intra-abdominal seeding.

After the use of scolicidal solutions (hypertonic sodium chloride solution, hydrogen peroxide at 100 volume, formalin 2 at 7%, ethanol 95%, sodium chloride at 5% and silver nitrate at 0.5%), which allow the parasite to be sterilized before its extraction and avoid any secondary dissemination per operatively, the ideal is to carry out a pericystectomy or, better still, an enucleation.^[5-12-18-19]

Medical treatment is always necessary and is indicated in inoperable patients and postoperatively, to prevent recurrence and the appearance of secondary peritoneal echinococcosis.^[16]

Albendazole is the medical treatment of choice, administered at a dosage of 10-12 mg/kg/day for 3 months.^[16]

CONCLUSION

Echinococcosis of the psoas muscle is a rare localization, the diagnosis of which relies mainly on ultrasound and CT. Surgery is the reference treatment in association with postoperative medical treatment.

The prognosis remains favorable in the absence of other localizations or morbid complications and prevention remains the best treatment in endemic areas.

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