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Hydatid Cyst of the Psoas Muscle: A Case Report

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Abstract **Case Report**

The psoas muscle is an exceptional localization of the hydatid cyst. The purpose of this article is to report the observation of a hydatid cyst located in the left psoas muscle in a 66-year-old patient. Ultrasonography, computed tomography and positive serology have contributed to the preoperative diagnosis. The patient was operated by lateral pararectus incision (Jalaguier's approach), the surgical act consisted of a partial cystectomy leaving a pericystic wall against the vasculo-nervous elements. The evolution was good without recurrence after the surgical treatment.

Keywords: Hydatid cyst, psoas muscle, partial pericystectomy.

INTRODUCTION

The hydatid cyst or hydatidosis is an anthropozoonosis due to the development in humans of the larval form of taenia Echinococcus granulosis. It is endemic disease and constitutes a real public health problem in Morocco. Isolated muscle localization is an unusual entity even in endemic countries. Its frequency would be 2 to 3% of all locations. The psoas remains an exceptional location. In the world literature some clinical cases of the hydatid cyst of the psoas muscle have been described [1]. We report a new observation of a hydatid cyst located in the psoas muscle.

Observation

A 66-year-old patient, with no particular pathological history, had been complaining for four months of diffuse left flank pain with sensation of heaviness associated with fever without loss of weight or deterioration of the general condition. The clinical examination found a febrile patient at 38.9 ° C, with a mass at the left iliac fossa, sensitive to palpation and fixed to the deep plane. The abdominal ultrasound showed a multilocular cyst located in the left iliac fossa. The CT scan confirmed the presence hydatid cyst in a stage III, developed at the expense of the left psoas muscle with long axis of 15 cm [figure 1]. The rest of the exploration showed no other hydatid cyst location. The hydatid serology was positive. An extra peritoneal approach was used (Leriche), revealing a large single retroperitoneal hydatid cyst located on the anterior surface of the left psoas muscle, consisting of multiple septa divisions. The act consisted in a partial cystectomy leaving the pericyst against the vascular-nervous elements [figure 2] and after taking the necessary precautions to avoid the intra-operative dissemination of the scolex (protection of the operative field by fields soaked with hypertonic solution). The postoperative consequences were without particularity.

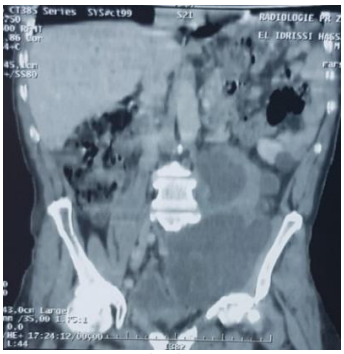

Fig-1: hydatid cyst of left psoas muscle type III

Fig-2: The hydatid membranes of a hydatid cyst of the left psoas muscle type III

DISCUSSION

Hydatidosis is an anthropozonosis due to the larval form of Echinococcus granulosus, a small tapeworm that parasitize, in the adult state, the digestive tract of the dog which constitutes the definitive host. The dog infestation occurs via the digestive track and would be secondary to the consumption of parasitised viscera, including the liver and lungs of the intermediate host: the sheep. The latter, constituting the main reservoir of the tapeworm echinococcus, is contaminated by grazing the grass soiled by the droppings of the dog containing the eggs of the parasite. Man is only an accidental intermediate host; he is infected either directly with the parasitized dog or indirectly with ingestion of contaminated food. Man is an epidemiological impasse [2]. All localizations of hydatidosis have been described; in 90% of cases it affects the liver and lung. This distribution is explained by the blood dissemination of the parasite and the blood flows from the portal circulation. Eggs of an echinococcus tapeworm ingested by man release into the intestine the hexacanth embryo. The latter crosses the intestinal mucosa and passes into the portal circulation. Its size and plasticity allow it to go everywhere. The portal flow carries this embryo to the first dam which is the liver where it is held six times out of ten, if not via the hepatic veins, the parasite reaches the inferior vena cava, the right heart, and then the lung. Which is the second dam where it is held three times out of ten? Once in ten the hexacant embryo crosses the two dams, reach the great circulation and can settle in any part of the body. The soft tissue involvement is unusual; it is described in 0.5 to 4.7% of the cases and mainly concerns the skeletal muscles of the neck and lower limbs. This is due, on the one hand, to the degree of tissue vascularization and muscular contractions which would prevent the development of the larva and, on the other hand, to the lactic acid richness of the muscle which would prevent the growth of hydatid cyst [3]. The diagnosis of hydatid cyst of the psoas muscle, often difficult, is that of an abdominal mass, iliac or lumbar location, renitent, fixed to the deep plane. Some cysts can be revealed by complications such as nerve compression, urinary compression, vascular compression, or superinfection via hematogenous spread, which can lead to severe sepsis [4]. Imaging is essential for diagnosis and pre-treatment assessment. Ultrasonography is an innocuous first-line examination with a diagnostic reliability estimated at 96%. The ultrasound appearance reproduces the stages of Gharbi's classification and reflects the evolutionary stage of the disease [5]. In deep locations like the psoas the interest of a CT scan is necessary. The scanner allows an easy diagnosis with a more accurate topographical assessment. The biological assessment brings a certain finesse to the diagnosis of hydatidosis, especially in the case of a diagnostic problem, and is still of major interest in the context of sero-epidemiological surveys and post-treatment follow-up. Hyper eosinophilia is inconstant and is of interest only in the orientation of the diagnosis. Biology is essentially a question of hydatid serology. It is of a great diagnostic contribution when it is positive. Its negativity does not eliminate the diagnosis of hydatid cyst hence the obligation of a confrontation between the clinic, the imagery and the biology.

The only cure for the psoas hydatid cyst is surgical. The medical treatment based on albendazole remains for inoperable patients or in case of massive recurrence in addition to surgery. The extra peritoneal surgical approach is preferable to avoid the opening of the peritoneal cavity and thus eliminate any risk of intraperitoneal hydatid dissemination [6]. The radical gesture is represented by total cystectomy; however adhesions to the vasculo-nervous elements can make this complete exeresis difficult or even dangerous. The association with vertebral involvement is another contraindication of total cystectomy, since in this case the parasite behaves maliciously and is developed between bone trabeculae without formation of a clean cystic wall [7]. We must then limit ourselves to a partial cystectomy, leaving a pericystic wall against the vascular and nervous elements to avoid their trauma during the dissection. Of course, the precautions necessary for hydatious surgery must be undertaken namely the protection of the operating field by fields soaked with scolicide (hypertonic solution or oxygenated water) and puncture sterilization of the cyst [8,9].

CONCLUSION

The hydatid cyst isolated from the psoas remains a rare entity. The diagnosis is essentially based on the ultrasound and the scanner, the biology brings additional elements. The best treatment is essentially

based on the prevention of hydatidosis, which unfortunately continues to be endemic in our country and represents a real social scourge.

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