

**SPLenic HYDATID CYST: REPORT OF 2 CASES****Boris Adéyèmi<sup>1</sup>, Rita Oze<sup>2</sup>, Nazik Allali<sup>2</sup>, Latifa Chat<sup>2</sup>, N. Mrani Alaoui<sup>2</sup> and Siham El Haddad<sup>2</sup>**<sup>1</sup>Radiology and Surgery Department of the Children's Hospital of Rabat-Morocco.<sup>2</sup>Faculty of Medicine and Pharmacy, Mohammed V University, Rabat-Morocco.**\*Corresponding Author: Boris Adéyèmi**

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**ABSTRACT**

Hydatidosis is a cosmopolitan antropozoonosis caused by the development in humans of the larval form of *Echinococcus granulosus*. It is a parasitic infection constituting a public health problem in the countries of the Mediterranean basin, particularly in Morocco, where it is endemic. The most frequent locations described in the literature are hepatic and pulmonary. The splenic location comes in 3rd position and represents 4% of the intra-abdominal locations of hydatidosis. We report two cases of hydatid splenic cysts treated at the Children's Hospital of Rabat in Morocco.

**KEYWORDS:** Hydatid Cyst; Spleen; Ct Scan; Imaging.**The Story****- 1st case**

14-year-old grandchild, male with no particular history, used to playing with dogs according to information reported by his parents; who brought him for consultation in our hospital for an abdominal arch that gradually increased in size, hard and painful without any notion of trauma. The physical examination revealed a mass in the left hypochondrium whose cystic nature was

confirmed by ultrasound without clear details of its splenic or adrenal origin. The CT scan performed without and with injection of contrast product made it possible to suggest the diagnosis of uncomplicated splenic hydatosis (Figure 1a and 1b), confirmed by biological tests showing *echinococcus granulosus*. The patient underwent a partial splenectomy with simple operative consequences.

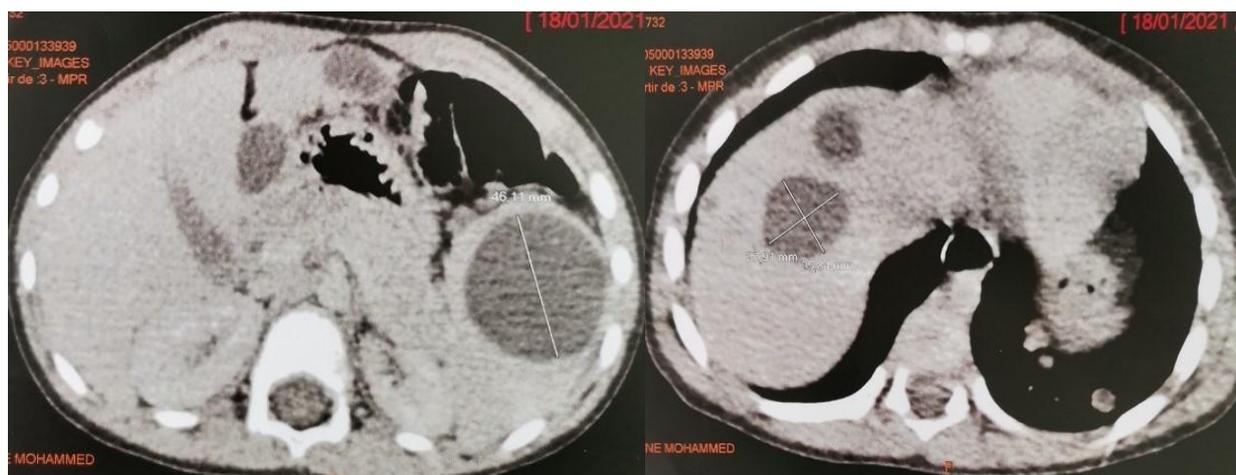


**Figure 1: (a, b): Abdominal CT scan with injection of contrast product in axial slice with coronal reconstruction showing splenomegaly with a large well-limited cystic oval hypodense mass with a slightly thickened wall, partially calcified and enhanced after injection of contrast product. This mass is responsible for an elevation of the diaphragmatic dome at the top, pushes the pancreas and the left colic angle down, as well as the ipsilateral kidney behind; then comes into contact with the abdominal aorta, which is driven back without any sign of invasion with mass effect on the midline.**

## 2nd case

3-year-old grandchild with no particular history or contact with the dog, but who according to information given by his parents played very often in the garden; admitted to our training for symptoms of dry cough, fever and abdominal pain. The physical examination was poor, and it was discovered by chance during the paraclinical explorations a homogeneous oval cystic formation with a regular thin wall located at the lower pole of the spleen, associated with six other formations of identical characteristics and of varying size occupying both hepatic lobes.

An abdominal CT scan performed without and with injection of contrast product concluded in hepato-splenic hydatidosis without signs of complication (Figure 2a and 2b). The parasite tests carried out objectified a serological profile in favor of hydatidosis. The diagnosis of hepato-splenic hydatidosis was made, and the patient underwent treatment with albendazole followed by conservative surgery with resection of the protruding dome. The postoperative course was not enamelled with complications.



**Figure 2: Abdominal CT scan with injection of contrast product in axial section showing splenomegaly with a well-limited oval hypodense mass and thin-walled cystic hypodense after injection of contrast product (a); associated with several other simple hepatic cystic formations diffuse to both lobes (b).**

## The Comments

Hydatidosis is a rare parasitic disease in sub-Saharan countries and common in Mediterranean countries such as Morocco where it is endemic. It is caused by the development in humans of the larval form of *Echinococcus granulosus*. The splenic location of hydatidosis is rare, accounting for 4% of all locations, and thus constituting the 3rd location after the liver and lungs.<sup>[1]</sup>

The definitive host is the dog which infests itself by ingesting the infested meat of the intermediate host which is the sheep. The latter infests himself by grazing on grass soiled by dog droppings. Humans are an accidental host who become infected during contact with dogs or after ingestion of water, contaminated food or infested meat. After passing through the intestinal barrier, the parasite enters the portal circulation and reaches the hepatic parenchyma where it can grow or join the lungs through the portocave anastomoses. This embryo can therefore infest any organ in the human body from the systemic circulation. This pathophysiological mechanism is at the origin of the frequent localizations of hydatidosis, as well as of the splenic involvement which comes in 3rd place. However, splenic involvement can occur via the lymphatic, retrograde portosplenic venous route or by trans-parietal contiguity (gastric or colic).

Splenic hydatid cyst may be discovered incidentally during routine imaging (abdominal ultrasound, CT scan, or MRI) for another cause. Sometimes, the discovery of an arch in the abdomen with a mass in the left hypochondrium, or more often the occurrence of abdominal pain, leads the child to the emergency room where clinical and para-clinical investigations lead to the diagnosis. The child may be admitted to hospital on the occasion of complications such as abscess, cracking or intraperitoneal or pleural cystic rupture, in the stomach or colon with a risk of anaphylactic shock.<sup>[2,3]</sup> The hydatid cyst of the spleen can be associated with an extra-splenic location, most often of the hepatic site, as was the example of our second case.

Abdominal ultrasound, CT scan and Magnetic Resonance Imaging allow us to specify the splenic location of the mass and its cystic nature, thus making it possible to specify the stage. These imaging exams show cystic calcifications, daughter vesicles and intracystic septa.<sup>[2,3]</sup> The positive hydatid serology confirms the diagnosis and eliminates other non-parasitic splenic cysts with similar radiological characteristics.

The prevention of hydatidosis relies on health education of populations for behavior change, veterinary control of the slaughter of livestock, the slaughter of stray dogs and the systematic deworming of domestic dogs.

The medical treatment of hydatid cysts is based on the use of imidazoles (albendazole and mebendazole) which are recommended in multi-visceral forms, and as an adjuvant for isolated forms because they can generate satisfactory results.

Although percutaneous aspiration of cysts with injection of a sclerosing product has been proposed for type 1 and 2 cysts, radical surgery remains the adequate treatment because it has the advantage of removing the parasitized organ and avoiding them. recurrences and complications related to the residual shell. However, modern techniques, in particular conservative surgery, are increasingly practiced, in this case resection of the protruding dome and partial splenectomy which are based on a perfect knowledge of splenic vascular segmentation and on the improvement of suture and splenic materials hemostasis.

### CONCLUSION

Hydatidosis is a parasitic disease caused by *Echinococcus granulosus*, which occurs frequently in Morocco where it is endemic. Splenic localization is rare and constitutes the third after that of the liver and lungs. The elements of radiological semiology associated with the positivity of hydatid serology allow a positive diagnosis. The treatment is medico-surgical associated with the price of imidazoles with conservative surgery providing satisfactory results. Prevention consists of intervening on a link in the chain of transmission.

**Conflicts of interest:** None.

### REFERENCES

1. Karabicak Ilhan, Yurtseven Ilyas, Yuruker Savas, Ozen Necati, Kesim Mete. Splenic hydatid cyst. *Can J Surg*, 2009; 52(5): 209-210. PubMed | Google Scholar
2. Ousadden Abdelmalek, Raiss Mohamed, Hraa Abdelmalek, AilLaalim Said. Kystes hydatiques de la rate: chirurgie radicale ou conservatrice. *Pan African Med J.*, 2010; 5(21): 1-14. PubMed | Google Scholar
3. Abi F, El Fares F, Khaiz D, Bouzidi A. Les localisations inhabituelles du kyste hydatique: à propos de 40 cas. *J Chir*, 1989; 126: 307-312. PubMed | Google Scholar