

Hydatid Cyst of the Spleen: A Case Report and Literature Review

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Abstract

Case Report

The hydatid cyst of the spleen is a rare condition, ranking third after those of the liver and lungs. Treatment is primarily surgical, aside from any medical treatment that has proven effective. We report the case of a 23-year-old patient with a history of peritoneal tuberculosis who presented with a hydatid cyst of the spleen treated by total splenectomy.

Keywords: Hydatid cyst, Spleen, splenectomy, Laparotomy.

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INTRODUCTION

The hydatid cyst is an endemic condition in Mediterranean countries. The two most common locations are the liver and lungs, with splenic involvement ranking third, occurring in 2% to 8% of cases. It is, therefore, a rare condition that can pose diagnostic and therapeutic challenges [1, 2]. We report the case of a hydatid cyst of the spleen managed at Avicenne Hospital in Rabat.

OBSERVATION

This is a 23-year-old patient with a history of peritoneal tuberculosis who consulted for pain in the left hypochondrium. The clinical examination was unremarkable, and the ultrasound revealed a multilocular cystic mass in the spleen suggestive of a type 3 hydatid cyst. The hydatid serology was negative, and the complete blood count was normal. The computed tomography favored a benign cyst of the spleen, classified as a stage 1 hydatid cyst. The patient underwent surgery via left subcostal laparotomy, which revealed a cyst in the upper part of the spleen, and a total splenectomy was performed. Postoperatively, anti-pneumococcal and anti-meningococcal vaccinations were administered, and the patient was placed on albendazole for three months, with no recurrence after six months.

DISCUSSION

Hydatid disease is an anthroponosis caused by the development of the larval form of *Echinococcus granulosus* in humans. The definitive host is most often the dog, while the intermediate host, contaminated via

the digestive route, is usually the sheep. Humans represent a parasitic dead end, becoming infected through the ingestion of eggs. The embryo then crosses the intestinal wall, reaches the liver (the first filter) via the portal vein to localize there or migrate to the lungs (the second filter) via the cava vein, and subsequently to any other organ through systemic circulation. Thus, hydatid cysts are most commonly located in the liver, followed by the lungs [3]. Splenic involvement ranks third. Splenic lesions can occur through contiguity (gastric or colonic trans-parietal), lymphatic pathways, and retrograde porto-splenic venous routes [1]. Hydatid cysts of the spleen primarily affect adults, with a slight female predominance. This condition is rare outside endemic areas such as South America and Australia. In Africa, it is mainly encountered in the Maghreb region. Splenic hydatid cysts can be isolated or associated with other hydatid locations, particularly hepatic or peritoneal. The most common circumstances for discovering splenic hydatid cysts include abdominal pain, as seen in our patient, detection of a mass in the left hypochondrium, and incidental findings. Splenic hydatid cysts may also be discovered during complications such as abscess formation, rupture with anaphylaxis, or rupture into the pleura, stomach, colon, or skin [4]. Ultrasound, CT scans, and magnetic resonance imaging of the abdomen combined with serology are the most commonly used examinations for diagnosis. Ultrasound is the key screening tool and features a radiological classification into five types:

- Type 1: pure liquid collection with thin or thick walls;
- Type 2: liquid collection with a double wall;
- Type 3: septated cyst;

- Type 4: altered cyst with heterogeneous content;
- Type 5: calcified cyst.

Computed tomography provides better visualization of cysts and their relationships with neighboring organs, thus guiding therapeutic decisions. In our patient's case, CT revealed a benign splenic cyst classified as a stage 1 hydatid cyst; hydatid serology was negative. However, there may be some diagnostic challenges with other non-parasitic splenic cysts due to similar clinical and radiological presentations [5]. Medical treatment using imidazoles has an adjunctive role in selected cases after surgical treatment to reduce recurrence rates. It is also prescribed for multi-visceral forms, even though results are often insufficient. The treatment for splenic hydatid cysts is primarily surgical; total splenectomy has the advantage of removing the parasitized organ and preventing secondary recurrences, as was done for our patient. This procedure can be challenging due to kysto-visceral adhesions and may lead to serious complications such as hemorrhagic shock, subphrenic abscesses, or infectious accidents (fulminant pneumonia, septicemia). Resection of a prominent dome is advantageous as it is a minimally invasive procedure that is low in hemorrhage risk and almost always feasible when the hydatid cyst is accessible on the surface of the spleen. However, it leaves some pericyst tissue in place that can lead to residual cavities and postoperative infections. The approach depends on the location of one or more splenic hydatid cysts and their association with other cystic locations. Laparoscopic access can be performed in nearly all cases with good short- and long-term results. If untreated, evolution is dominated by the risk of rupture into neighboring organs such as the pleura, bronchi, stomach, and colon; infection may also

occur. Prevention relies on public health education, veterinary control of livestock slaughtering, culling stray dogs, along with census and deworming of domestic dogs [1, 4, 5].

CONCLUSION

The splenic hydatid cyst is a rare but relatively benign condition. It should be treated surgically due to the high risk of rupture. The most commonly used procedure in adults is standard splenectomy, but the surgical technique should be chosen based on the size of the cyst and its location.

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