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Inflammation and infection

Pelvic hydatid cyst revealed by acute retention of urine: A case report☆

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A B S T R A C T

We report the rare case of a primary pelvic hydatid cyst in a 37-years old from a rural area. The diagnosis was suspected preoperatively based on the origin of the patient, and CT findings and it was confirmed intraoperatively by finding the typical cystic content. A total excision of the cyst without causing or contamination of the field was carried out by median incision. Our work aims to point to an unusual localization of hydatid disease, clinical and radiological characteristics, and above all to discuss the different ethnic-pathogenic theories and surgical treatment.

1. Introduction

Human echinococcosis is a disease caused by a very old parasite that remains endemic in several countries, especially those where sheep breeding thrives. It is due to the development of the dog tapeworm larva in humans, called Echinococcus granulosus.[1] Retrovesical localization is very rare and is considered an "aberrant" or "ectopic" localization, which is defined by the development of the parasite in the sub and retrovesical fat.[2]

We report a case of acute urinary retention due to a primary pelvic hydatid cyst and review the diagnosis and surgical treatment.

2. Case report

A 37-year-old man, who lives in a rural area in close contact with sheep and dogs, with a history of treated pulmonary tuberculosis 10 years ago, presented to the emergency room with acute retention of urine and hypogastric pain. On admission, the patient was agitated but conscious and afebrile. Physical examination revealed a diffusely tender abdomen with painful hypogastric swelling. A digital rectal examination revealed a sensitive, firm mass filling the Douglas pouch.[1] Laboratory tests showed normal renal function and hepatic function. The cyto-bacteriological urine exam was negative. Abdominopelvic ultrasound revealed a well-circumscribed retrovesical mass measuring 10 cm in its largest axis, with a mixed multicellular echostructure, and several anechoic images (daughter vesicles). These findings are highly suggestive of a hydatid cyst, with the presence of a bladder globe (Fig. 1).

Due to the persistence of irritative symptoms despite bladder drainage and negative infectious assessment, a computerized tomographic (CT) scan was performed, which revealed a large cystic structure measuring 10 cm in length, filling the Douglas pouch and causing mass effect on the bladder. These findings were consistent with a type III pelvic hydatid cyst (Fig. 2).

A chest x-ray was performed to eliminate associated pulmonary hydatidosis, but no abnormalities were found. Hydatid serology was negative. The diagnosis of pelvic hydatidosis was made based on the patient's medical history, physical examination, and the characteristic appearance of CT scans. Albendazole at a dose of 800mg/day was prescribed for a period of 3 months, but there was no regression in the size of the lesion, and the symptoms persisted. Therefore, surgical excision under general anesthesia was planned. During exploratory laparotomy, a large hydatid cyst was found in the rectovesical space, filling the Douglas pouch. No other abdominal location was identified. The cyst was completely excised without any spillage after filling the surrounding area with sponges soaked in 1% cetrimide. The postoperative recovery was favorable, and the anatomopathological examination confirmed the final diagnosis of the hydatid cyst.

3. Discussion

Hydatidosis is a relatively frequent parasitic disease in North African countries, where it represents a significant public health problem.[3] The liver and lungs are the most commonly affected organs, accounting for 90% of all hydatid locations. Pelvic involvement is rare and constitutes

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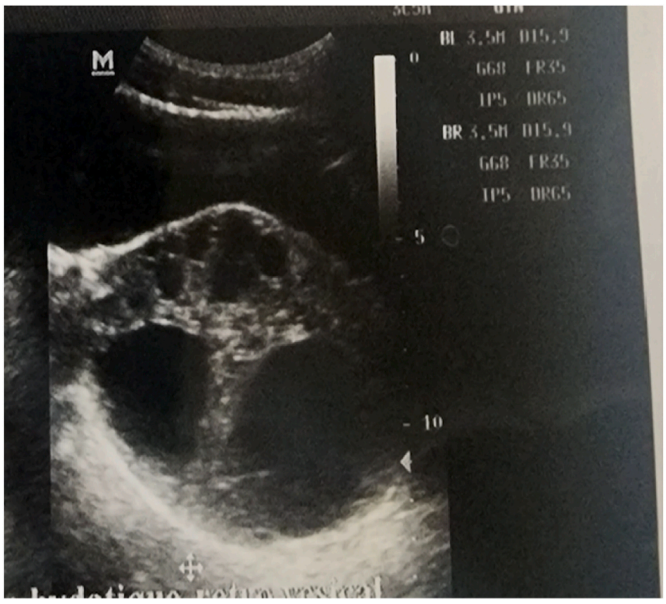

Fig. 1. Ultrasound showing a multiloculated, type III Gharbi classification retrovesical cystic mass.

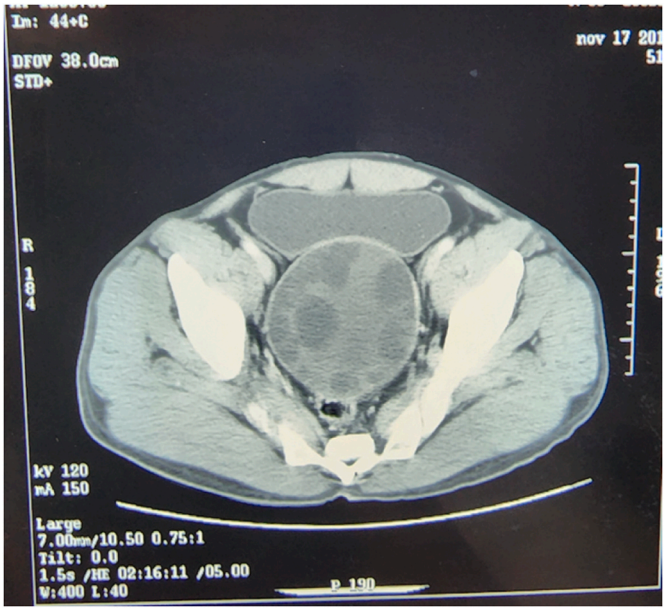

Fig. 2. Computed tomography image of a type III retrovesical hydatid cyst causing compression of the bladder.

an atypical or aberrant localization of the disease.[2] Pelvic echinococcosis can be primary without other hydatid localization, which occurs either following the hematogenous release of the hexacanth embryo after crossing the hepatopulmonary filter or by borrowing from the venous system of Retzius and Schmiedel anastomoses.[4] The other route of dissemination is represented by the rupture of abdominal hydatid cysts and the secondary migration of embryos into the pouch of Douglas. This condition has clinical signs that usually appear late and are dominated by the palpation of a hypogastric retro-pubic mass and the appearance of hydatiduria, which is a pathognomonic sign, and signs of cyst rupture in the bladder.[5]

Our patient was 37 years old, a farmer who lived in close contact with sheep and dogs. The reason for the delayed diagnosis is that cystic echinococcosis usually grows very slowly, taking years to reach an appreciable size. It has an asymptomatic course until it attains full growth, and there are no specific clinical symptoms and signs that enable an accurate diagnosis of urinary tract cystic echinococcosis.[5] Symptoms of cystic echinococcosis are generally the same as those of other space-occupying lesions, except for hydatiduria caused by the rupture of the cyst in the urinary tract's collecting system. Our case presented with nonspecific symptoms, notably acute urinary retention and hypogastric pain.

The positive diagnosis is based on an abdominal ultrasound or CT scan, which makes it possible to specify the location of the cyst and its vascular report, as well as to check for the existence of other synchronous abdominopelvic locations. Ultrasound images of the hydatid cyst in pelvic muscles are identical to those described at the level of the liver by Gharbi et al.[3] Magnetic resonance imaging is not a preferred technique in hydatid disease and is only justified when other imaging techniques fail to establish a diagnosis.[5]

A combination of preoperative albendazole therapy, surgery, and postoperative albendazole therapy (for 6–8 weeks) is a useful regimen to prevent the recurrence of the cyst.[4] In our case, although the patient received preoperative albendazole therapy for 3 months, the cyst did not regress.

The treatment of hydatid cysts is surgical, with the goal of completely excising the cyst without any spillage or contamination of the surgical field. In the narrow confines of the pelvis, with dense adhesions to surrounding structures, dissection may be a challenging task,[5] as was the case with our patient. Postoperative monitoring, including abdominal-pelvic ultrasound and immunology, is necessary for several years to detect any early recurrence.

4. Conclusion

Retrovesical localization of hydatid cysts is rare but not exceptional in countries with high hydatid endemicity, such as Morocco. The diagnosis should be considered in any pelvic mass, especially in an endemic hydatid country. The primary treatment for retrovesical hydatid cysts is surgical. It is also important to emphasize the significance of primary prevention to reduce the incidence of this disease.

Declaration of competing interest

No competing interests were disclosed.

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