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Case Report

Disseminated Abdominopelvic Hydatidosis: A Case Report

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Abstract
Hydatidosis is an endemic parasitic disease in Morocco, a country known for its traditional livestock practices. It represents a major public health challenge. We report a case of disseminated abdominopelvic hydatidosis in a 43-year-old woman with a history of hepatic and pulmonary hydatidosis. The diagnosis was suspected on computed tomography (CT) scan, which revealed multiple abdominopelvic cystic lesions. This suspicion was confirmed by positive hydatid serology and parasitological examination of surgical specimens obtained after cyst excision, identifying non-viable hooks and scolices of *Echinococcus granulosus*. This case highlights the complexity of diagnosing and managing abdominopelvic hydatidosis and underscores the importance of rigorous and long-term serological follow-up to prevent recurrence or secondary dissemination.

Introduction

Hydatidosis, or hydatid cyst disease, remains a major concern in regions where humans live in close contact with domestic animals, particularly dogs and livestock. It is a cosmopolitan zoonosis caused by the development in humans of the larval stage of the tapeworm *Echinococcus granulosus* (1). Each year, more than one million people are affected worldwide (2). In Morocco, where echinococcosis constitutes a public health problem, traditional livestock practices contribute to the country's status as an endemic area (3, 4).

Although hepatic and pulmonary involvement are the most common manifestations, hydatidosis may affect various organs due to hematogenous dissemination. However, disseminated abdominopelvic localization of hydatid cysts is rare, accounting for only 5–16% of all cases (5). Imaging plays an important role in guiding the diagnosis; nevertheless,

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biological confirmation remains essential for establishing it with certainty.

We report a rare case of disseminated abdominopelvic hydatidosis an unusual localization diagnosed in a female patient at Ibn Sina Hospital, Rabat, Morocco.

Case presentation

We report the case of a 43-year-old woman living in a rural area near to Laarach (North of Morocco) in close contact with domestic dogs. Nineteen years earlier, she had undergone surgery for hepatic and pulmonary hydatidosis and was subsequently prescribed albendazole at a dose of 400 mg (two tablets per day), with poor treatment adherence. She presented to the emergency department at Ibn Sina Hospital with intermittent abdominal pain and vomiting.

On clinical examination, the patient was afebrile and asthenic, with tenderness in the hypogastric and right hypochondriac regions. Contrast-enhanced abdominal CT revealed hepatomegaly with multiple well-defined cystic lesions with regular contours containing daughter vesicles, consistent with hydatid cysts, measuring between 10 × 10 mm and 90 × 50 mm (two hepatic cysts in segment V and two perihepatic cysts) (Fig. 1, 1a). Some lesions showed peripheral calcifications, with imaging features suggestive of cyst rupture. Additionally, three extrahepatic cystic formations were identified in the abdominopelvic region, located in the left iliac fossa, retro-uterine, right latero-uterine, and presacral areas (Fig. 1), measuring between 30 × 56 mm and 73 × 85 mm, exerting a mass effect on adjacent pelvic structures, including the ureter.

Laparotomy confirmed the presence of the aforementioned cysts, sent to the Central Laboratory of Parasitology and Mycology at Ibn Sina Hospital, Rabat. Macroscopically, the cystic formations were of variable size, with thick, whitish to pearly walls. Upon sectioning, the cyst contents consisted of clear to opalescent hydatid fluid associated with well-defined, small daughter vesicles with thin walls and translucent contents (Fig. 2, Fig. 3).

Microscopic examination of the cyst contents confirmed the presence of *E. granulosus* hooks and scolices (Fig. 2, 2a), found to be non-viable by eosin 0.2% staining (Fig. 2, 2b). Hydatid serology by ELISA was positive at 24 NTU (NovaTec Units) initially, increasing to 28 NTU preoperatively.

The patient was placed on albendazole at a dose of 800 mg/day (400 mg twice daily) to reduce the risk of recurrence. She recovered well postoperatively and was discharged with a planned serological follow-up schedule.

Ethics approval

Ethical approval was not required for this study because it was based on the recorded data. The study was conducted in accordance with applicable institutional and national guidelines.

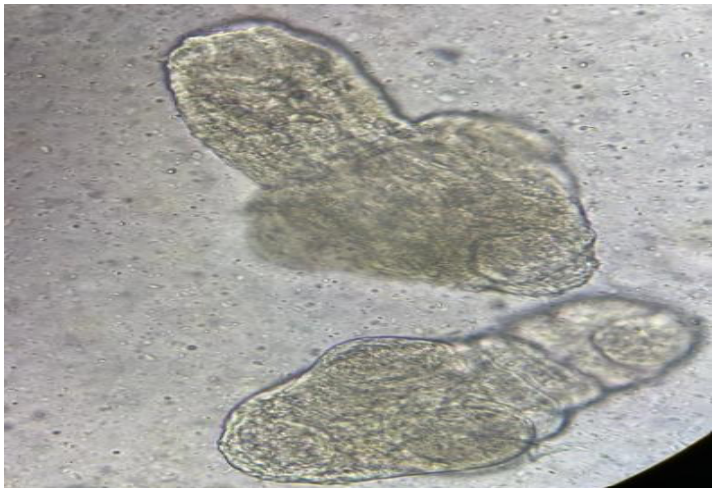


Fig. 1: (a) Perihepatic hydatid cyst

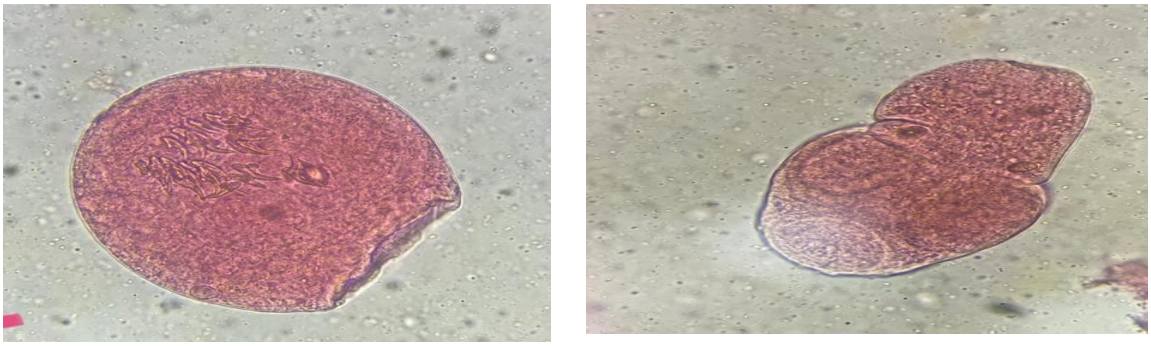


(b) Pelvic hydatid cyst

Fig. 1: (b) Macroscopic appearance of the specimens received

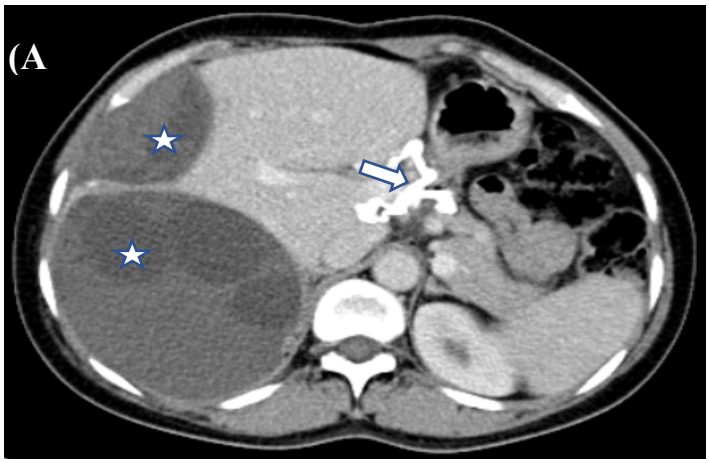


(a) *Echinococcus granulosus* scolex observed on direct microscopic examination at 40×10 magnification

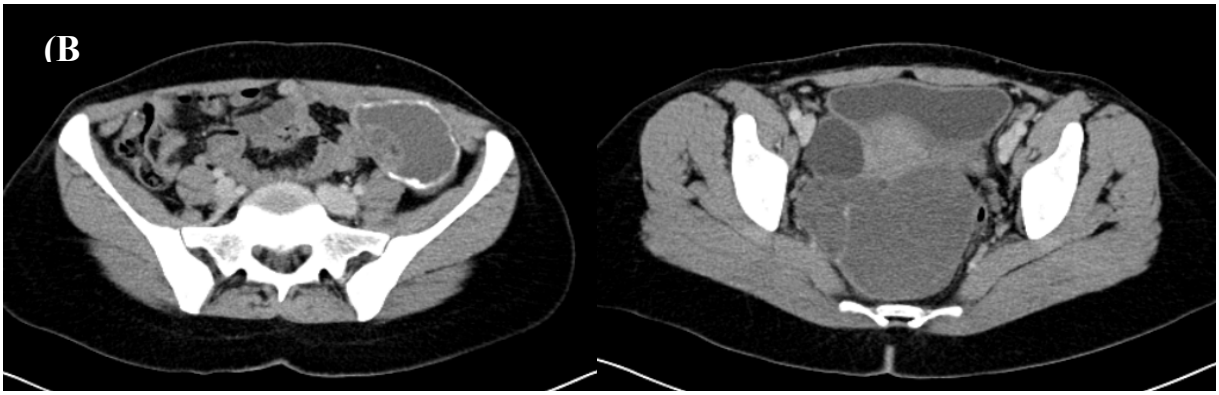


(b) Non-viable invaginated and evaginated *Echinococcus granulosus* scolices (0.2% eosin test) observed under light microscopy at 40×10 magnification

Fig. 2: **(a,b)** Microscopic appearance of the specimens received



(A)



(B)

Fig. 3: Contrast-enhanced abdominal CT showing hepatic and pelvic hydatid cysts
(A): Axial CT image reveals multiple well-defined hepatic cystic lesions with internal septations (daughter cysts), consistent with hydatid disease. Calcifications are noted in the hilar region (arrow), associated with signs of ruptured hydatid cysts
(B): Axial contrast-enhanced pelvic CT demonstrates multiple cystic formations in the left iliac fossa, including retro-uterine and right latero-uterine lesions, with partially calcified walls. These cysts exhibit imaging features similar to the hepatic lesions, supporting the diagnosis of extra-hepatic hydatid cysts (secondary pelvic involvement)

Discussion

Echinococcosis is a zoonotic helminthiasis caused by *E. granulosus*, widely distributed and remains a significant public health concern in many endemic regions, including North Africa, the Middle East, Central Asia, and South America (6). Morocco is among the most affected countries due to traditional livestock practices and environmental conditions. Humans, accidental intermediate hosts, become infected by ingesting parasite eggs shed in the feces of definitive hosts (dogs, foxes, wolves, jackals) or through direct contact (7, 8). The most frequent sites of involvement are the liver (59–75%) and lungs (up to 27%) (8).

Thus, pelvic localization, as observed in our case, remains exceptional, accounting for only 0.30% to 5.27% of all hydatid cyst locations (9).

Dissemination to the pelvis generally occurs secondary to rupture or fissuration of an intra-abdominal cyst, often hepatic, allowing implantation of daughter vesicles or scolices in the pouch of Douglas, followed by a process of endothelialization integrating them into pelvic tissues (1). In our case, the presence of multiple abdominal and pelvic cystic formations, combined with the surgical intervention the patient underwent 19 years prior for hepatic hydatidosis, strongly suggests a silent and progressive secondary dissemination.

The clinical presentation of pelvic hydatid cysts is often delayed or asymptomatic and typically manifests as abdominopelvic pain, a palpable mass, or signs of compression. In a Moroccan series conducted at CHU Ibn Rochd in Casablanca, diagnosis was suspected based on pelvic pain and abdominal masses, mirroring the clinical presentation of our patient (10).

A thorough medical history plays a crucial role in diagnosing hydatidosis by identifying risk factors such as dog contact, rural origin, and high-risk activities. Additionally, a history of prior surgery for hepatic hydatidosis or an acute episode suggestive of cyst rupture provides strong diagnostic clues (1). In our patient, these factors were clearly present: rural environment, previous hydatid surgery, and contact with dogs.

Imaging is an essential diagnostic tool. Ultrasonography is the first-line examination, with diagnostic reliability approaching 96%, and allows visualization of the cyst's evolutionary stages and disease progression (11). Computed tomography (CT) and magnetic resonance imaging (MRI) enable identification of cysts, their location, contents (daughter vesicles, calcifications), and their relationships with adjacent structures. In our patient, CT revealed typical lesions consistent with hepatic and abdominopelvic hydatidosis.

Definitive diagnosis relies on parasitological examination, which demonstrates hooks and scolices of the parasite, along with hydatid serology (12). In this case, microscopic examination of the cyst contents revealed non-viable *E. granulosus* hooks scolices, and ELISA serology was positive. Indeed, the postoperative serological follow-up in our case highlights a major deficiency: had the patient undergone rigorous serological monitoring after her initial surgery, a secondary rise in antibody titers could have been detected early, allowing timely management and preventing a 19-year delay in diagnosis. This underscores the critical importance of long-term serological surveillance in patients at high risk for secondary dissemination.

Surgical intervention remains the treatment of choice for abdominopelvic hydatid cysts. Cystectomy is the ideal procedure when feasible, with prior cyst sterilization and protection of the operative field (hydrogen peroxide, scolicidal solutions), as well as systematic exploration of the abdominal cavity. Albendazole, administered postoperatively, serves as an indispensable adjunct, particularly in cases of residual disease, multiple dissemination, or recurrence (8). The prescription of albendazole in our patient thus aligns with standard therapeutic recommendations.

Our observation confirms several findings reported in the literature regarding secondary and atypical forms of hydatidosis, while highlighting a critical aspect of management: postoperative serological surveillance. This case reinforces the need for prolonged vigilance in treated patients, particularly in endemic regions, and supports the systematic integration of long-term serological follow-up to detect any recurrence or potential complication.

Conclusion

This case illustrates the diagnostic and therapeutic challenges of abdominopelvic hydatidosis, a rare localization in a patient with a

history of hepatic hydatidosis. It particularly highlights the importance of rigorous and long-term serological follow-up, which constitutes a cornerstone of postoperative management. In the absence of such monitoring, as observed in our patient, recurrence or secondary dissemination may go unnoticed for several years, delaying diagnosis and complicating management. In endemic areas, raising awareness among healthcare professionals and systematically integrating serological follow-up into care protocols are essential to improve prognosis and prevent complications of secondary hydatidosis.

Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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