

Prevesical hydatid cyst: An exceptional occurrence

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ABSTRACT

Echinococcal cysts usually involve the liver; extrahepatic localization is reported in 11% of all cases of abdominal hydatid disease. We report a case of a prevesical hydatid cyst. A 53-year-old man was admitted with a large suprapubic mass. Ultrasonography and computed tomography revealed a cystic mass situated in front of the urinary bladder. There were no cysts in any other location. Serological tests were positive for Echinococcus. The patient was operated on and the cyst was completely excised. The pathologic examination confirmed the diagnosis of Echinococcosis. Isolated hydatid cyst situated in front of the urinary bladder has never been described in the literature. Hydatid cyst should always be considered in the differential diagnosis of abdominopelvic masses in endemic regions, before any procedure like puncture, biopsy or cystectomy, in order to avoid dissemination of the cystic contents or an anaphylactic shock.

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Hydatid cyst is a parasitic disease caused by the tapeworm *Echinococcus granulosus*.^[1] It is frequently encountered in Mediterranean countries,^[2-4] such as Tunisia. Echinococcal cysts are mostly found in the liver (60-70% of cases); extrahepatic involvement is not common, corresponding to only 2-11% of cases.^[5-7] The most frequent urological localizations are those of the kidney or of the retrovesical area.^[8,9] The aim of this study is to report a case of a hydatid cyst situated in the prevesical area, without hepatic or any other involvement. This localization is uncommon and has not been reported to our knowledge.

Case Report

A 53-year-old Tunisian man was admitted to our surgical ward with a hypogastric mass which was present for more than three years but was slowly increasing in size. The patient had no urinary symptoms. Physical examination showed a firm hypogastric mass 15 cm in diameter [Figure 1]. Abdominal ultrasound (US) revealed a cystic mass in front of the bladder (7 cm x 10 cm), containing a few round lesions corresponding to the "daughter cysts" [Figure 2].

Computed tomography (CT) confirmed the ultra sound findings [Figure 3] and there were no cysts in any other location. Imaging characteristics led us to suspect the presence of a hydatid cyst, and an indirect hemagglutination test for *Echinococcus granulosus* was found positive. The patient underwent a

laparotomy. At operation, the cyst was found in front of the urinary bladder [Figure 4]. It had a thickened wall and was adhering closely to the posterior face of the rectus abdominis muscle. The operating field was protected by hypertonic saline solution. Then, we proceeded to the sterilization of the cyst by the same solution. The cyst was opened and its content (daughter cysts) was aspirated and a pericystectomy was performed. The cavity was irrigated with hypertonic saline and closed with a suction drain.

The postoperative course was uneventful and the patient was discharged after eight days. After a follow-up of 22 months, the patient was well without recurrence.

Discussion

Echinococcal disease is an infection of humans caused by the larval stage of *Echinococcus granulosus*, which involves the liver, lung and other organs.^[10] A small number escape the hepatic filter, enter the systemic circulation, and are scattered to other organs,^[10] such as the extraperitoneal area. The hematogenous dissemination of *Echinococcus granulosus* should explain the pathogenesis of the extraperitoneal involvement.^[8-10] However, extraperitoneal involvement is very rare^[4] and a few authors have reported large series of extraperitoneal hydatidosis. Aydinli reported 14 cases with primary retroperitoneal hydatid cyst over a 25-year period.^[4] We report a case of an isolated hydatid cyst in the prevesical area.



Figure 1: Picture showing the hypogastric mass (arrow)

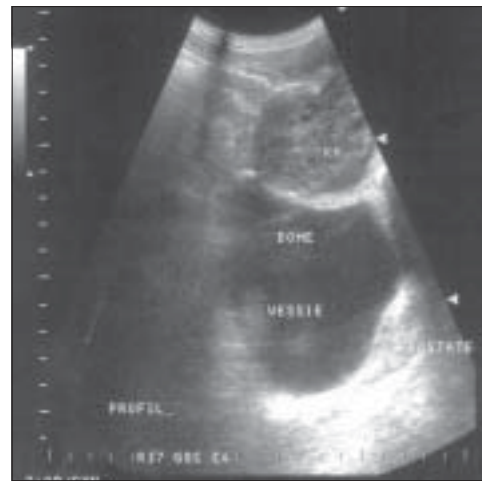


Figure 2: Ultrasound showing the cyst located in front of the urinary bladder

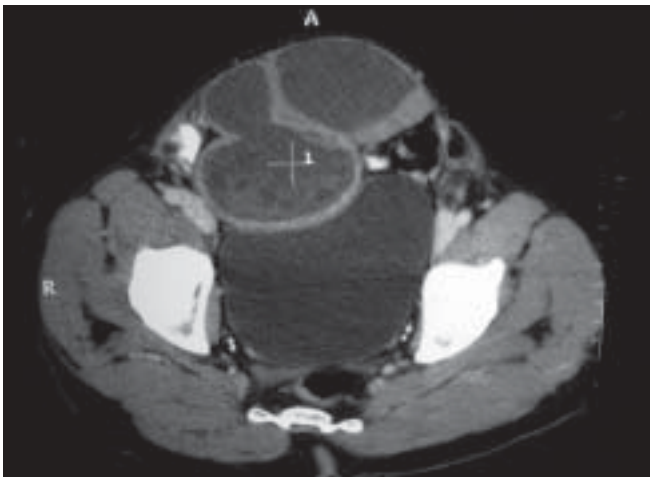


Figure 3: CT scan; hydatid cyst in front of the bladder. Note the round lesions (daughter cyst).



Figure 4: Note the bladder wall (arrow) after evacuation of the cyst

From a clinical point of view, the prevesical hydatid cyst appeared as a hypogastric mass that increased in size slowly. There was no *hydatiduria* or passage of *grape-like material* in the urine, which could be a pathognomonic sign of hydatid disease affecting the urinary tract (testifying of the opening of the cyst into the urinary tract).^[7] Preoperative diagnosis is mandatory in order to prevent any rupture of the cyst during surgery so as to avoid anaphylactic shock and local recurrence. Ultrasound is very helpful for the diagnosis, especially when it reveals daughter cysts or wall calcifications.^[7] However, the lesion can be uniloculated, heterogeneous or even solid, making the diagnosis difficult. Computerized tomography appears to give more information and may be necessary for cysts with an indeterminate sonographic pattern. It confirms the diagnosis by revealing the presence of daughter cysts and plaque-like calcifications in the cystic wall.^[10] Serological tests [*indirect hemagglutination*, *ELISA*, *immuno-electrophoresis* (arc 5)] are also important tools for diagnosis.^[3,10]

Surgical treatment by total cyst excision or pericystectomy is the appropriate treatment that gives successful results in most patients.^[7,9] It is important that the abdominal cavity is isolated with gauzes soaked in hypertonic saline solution to avoid secondary hydatosis and an allergic reaction.^[10] In the present case, a pericystectomy was performed and before that, the operating field was protected by gauzes with hypertonic saline solution. Surgical therapy may be followed by adjuvant anthelmintic therapy as suggested by Tepetes *et al.*^[10] However, in our case, we did not administer any anthelmintic drugs to the patient after surgery.

In conclusion, a hydatid cyst should always be considered in the differential diagnosis of abdominopelvic masses in endemic regions, before any procedure like puncture, biopsy or cystectomy, in order to avoid dissemination of the cystic contents or an anaphylactic shock. And, the diagnosis is simplified today by the new imaging techniques available.

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