Urinary Retention: Unusual Presentation of Hydatid Cyst. Case Report and Literature Review
R Saadeh, A Mohamed

Citation

Abstract
Retrovesical hydatid cysts are very rare even in endemic areas. We report a case of urine retention and obstructive uropathy caused by a retrovesical hydatid cyst. We also review the literature for this unusual location and presentation of hydatid disease.

INTRODUCTION
Although hydatid cysts can affect all organs in the human body, they are commonly found in the liver (60%) and the lungs (15%). Urinary tract involvement in hydatid disease is not common including only 2-4% of cases. We report a case of secondary retrovesical cyst in an 8-year-old girl who presented with obstructive uropathy.

CASE PRESENTATION
An 8-year-old school girl presented with a 2-day history of lower abdominal pain, which she described as dull and non-radiating with no relieving or aggravating factors. She failed to pass urine for 12 hours before her presentation. There was no past history of trauma or surgery and the review of the family history was unremarkable.

On examination, her vital signs were within normal limits. Abdominal examination revealed a palpable distended urinary bladder. There was no organomegaly or peripheral lymphadenopathy.

Laboratory investigations showed a hemoglobin of 9.3 g/l and a white blood cell count of 5.8×10⁹/L. Urea and electrolytes, liver function test and urine analysis were normal. Echinococcus AB/HA was <160 (negative). Abdominal ultrasonography showed two cystic lesions, one originating from the left lobe of the liver and the other was seated deep in the pelvic cavity with bilateral hydronephrosis. Intravenous urogram showed bilateral hydroureters and hydronephrosis (figure1,2).

The abdominal and pelvic CT scan confirmed the two cystic lesions shown on ultrasonography. The first cyst was arising from the left lobe of the liver (figure 3) while the second cyst was arising from the pelvis posterior to the urinary bladder (retrovesical pouch), compressing the urinary bladder anteriorly with urinary outflow obstruction bilaterally (figure 4). No lymph node enlargement and no other lesions were seen.

Figure 1
Figures 1 & 2: Intravenous urogram showing bilateral hydroureters and hydronephrosis
After a preoperative course of albendazole for two weeks the patient had elective excision of both cysts.

Intraoperatively there were two large cysts, one occupying almost the entire left lobe of the liver (figure 5) and the other lying behind the urinary bladder in the retrovesical pouch (figure 6).

The two cysts were completely isolated from surrounded structures and injected with hypertonic saline. Endocystectomy was done for the liver cyst with partial pericystetomy for the retrovesical cyst (Figure 7 & 8).
DISCUSSION

Echinococcosis or hydatid disease is a parasitic infection caused by the larval stage of four different types of Echinococcus cestodes. The disease affects both humans and other mammals, such as sheep, dogs, rodents and horses (1).

Hydatid disease is endemic in cattle- and sheep-raising regions of the world such as Central Europe, the Mediterranean countries, the Middle East, South America, Australia, New Zealand, and South Africa (2-4).

Although hydatid cysts can affect all organs in the human body, they are commonly found in the liver (60%) and the lungs (15%). Brain, bones, muscles, adrenals, and the spleen are uncommon sites amounting to approximately 10%.

Urinary tract involvement in hydatid disease is not common including only 2-4% of cases. The kidneys are the most commonly affected organs in the urinary tract (5).

Hydatid cysts located in the peritoneal cavity or pelvis are usually secondary to spontaneous rupture from a primary liver focus or surgical inoculation (6). Pelvic echinococcosis is rare, with an incidence of 0.2 to 2.25% (with retrovesical location being even rarer) (7-9).

Pelvic localization may be considered primary if no other site is found to be affected (10). Very often the pelvic cyst coexists with a hepatic one, detected before or on the same occasion, so that these cysts are secondary in most cases (11).

Retrovesical hydatid cysts may have varied and non-specific presentation. The most common presentation was a palpable mass followed by flank pain, frequency, urinary retention and pain on micturition (12, 9).

There are many reports in the literature of hydatid disease presenting with urine retention and obstructive uropathy, most of them in male patients (13 – 17). We believe presentation of hydatid disease with urine retention in females is rare if ever been reported.

Ultrasonography and computed tomography are both excellent imaging modalities for the detection of hydatid cysts. The usefulness of magnetic resonance imaging lays in the precise definition of the anatomic relationship due to the excellent resolution for soft tissues (18).

Ultrasonography is the key diagnostic tool in cases of hydatid cysts. It is cost-effective, accessible and radiation-free with a high sensitivity ranging from 93% to 98% (19, 20).

The ultrasonic diagnosis of hydatid cyst is based on cyst wall and its contents. The majority of the characteristic features of hydatid cyst wall is due to the endocyst or germinal membrane. The ultrasound double line wall sign is highly suggestive of hydatid cyst (21, 22). This sign is produced by the echogenic pericyst and the echogenic germinal layer separated by an anechoic laminated membrane. The germinal layer, on its infolding, produces daughter cysts which are well-known pathognomonic signs of hydatid cyst.
Pelvic echinococcosis is rare, with an incidence of 0.2 to 2.25%, retrovesical location is even rarer. Retrovesical hydatid cysts may have varied and non-specific presentation.

Urine retention and obstructive uropathy are rare presentations of a retrovesical hydatid cyst especially in females. Ultrasonography and computed tomography are both excellent imaging modalities for the detection of hydatid cysts. The treatment of choice for retrovesical cyst is principally a careful and complete surgical excision which can be achieved by both open and laparoscopic surgery. Preoperative albendazole treatment decreases the viability of the cysts, but the duration of the treatment is controversial.

**References**

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Author Information

Raid Jawdat Saadeh, MBBS, Arab Board
Consultant General and Laparoscopic Surgeon, Department of General Surgery, Riyadh Care Hospital

Abbas A. R. Mohamed, MBBS, FRCSI, FICS
Consultant General and Laparoscopic Surgeon, Department of General Surgery, Riyadh Care Hospital