Olgu Sunumu

Case Report of Chronic Renal Failure due to a Giant Primary Retrovesical Hydatid Cyst

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Abstract

Hydatid cyst is an endemic zoonotic disease that most frequently affect organs like the liver and the lung. Isolated involvement of retrovesical region is extraordinary. In this paper, we reported a 35-year-old case in whom chronic renal disease had occurred as a result of obstructive uropathy secondary to primary retrovesical hydatid cyst. Although ultrasonography and abdominal tomography aroused suspicion about the presence of hydatid cyst, we made the definitive diagnosis after laparatomy. Keeping in mind that total cysto-pericystectomy is the ideal method in such high-risk cases as ours, partial cystectomy is also another method, provided that protective precautions have been taken.

Key words: Hydatid cyst, renal failure, retrovesical

Introduction

Hydatid cyst disease is a parasitic infection caused by the cestod, *Echinococcus granulosus*. The disease is endemic in Southeast Asia, Mediterranean countries, Middle East and Far East (1). The adult worms are found in the canid's small intestine and their eggs are extracted through feces. People become infected when having the water and the foods containing the eggs (2). The larval form of the worm penetrates through the intestinal mucosa into the blood or lymphatic stream, thereby reaching the internal organs and causing the disease (2). Hydatid cyst disease can practically affect any organ in the body. While they most frequently affect the liver (60-70%), the lungs (10-20%), the periton and the kidneys becomes involved less frequently, leading to cystic formations (3). Retrovesical involvement is seen even rarely in the regions where the disease is endemic. We presented, in this paper, a case in which chronic kidney disease had occurred as a result of obstructive uropathy owing to a giant primary retrovesicular hydatid cyst.

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Case Report

A 35-year-old male patient was admitted to our hospital with the complaints of weakness, frequent urination and constipation, lasting for six months. The patient's histories revealed no known disease, and no familial disease was detected in family history. In the physical examination of the abdomen, a slightly mobile mass with smooth contours located in suprapubic region in the lower abdomen was palpated. In the rectal examination, a soft mass of spherical structure was felt in the area superior to the prostate, pertaining to retrovesical pouch. Urethral catheterization was performed in the patient; however, urinary drainage was just 50 cc.

In the laboratory tests, hemoglobin value and leukocyte count were 12.8 g/dL and 9.260/mm³, respectively; in the serum biochemistry, urea level was 63 mg/dL and creatinin level was 2.72mg/dL. No abnormality was detected in liver function tests, urinary and feces analysis. Posteroanterior chest x-ray yielded no pathology.

In the abdominal ultrasonography, no pathological finding was observed in biliary tracts, liver, spleen and intestinal structures. There were bilateral parenchymal grade 1 echodensity and bilateral grade 2 ureterohidronephrosis. Besides, posterior to the bladder in the pelvis, an anechoic cystic structure of 15x15x12 cm diameter with smooth borders and homogenous content, displacing the bladder anteriorly was detected.

Following 3 day-long conservative treatment given to the patient, serum urea, creatinin levels

were reported to be 74 mg/dL and 2.83 mg/dL, respectively. Moreover, the creatinin clearance was calculated to be 48 mL/min. Due to the fact that it was contraindicated to perform a tomography by using contrast agent, the patient underwent the tomographic evaluation without any contrast agent. The tomography revealed a giant cystic mass image that displacing the bladder anteriorly, leading to bilateral hydronephrosis. The mass was detected to have no septa and homogenous content (Figure 1).

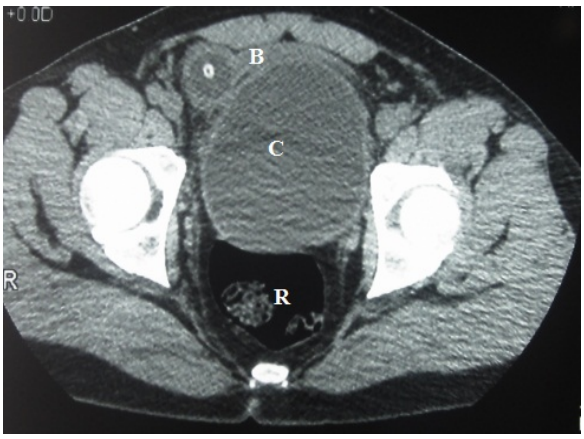

Fig. 1. Non-contrast pelvic CT view of the giant, nonseptated cystic mass with homogenous content. Urethral catheter is seen inside the bladder. B:Bladder, C:Cyst, R: Rectum.

The surgical exploration was performed transperitoneally through midline incision. The retrovestical cystic formation displacing the bladder anteriorly was observed to be attached to the rectal wall and the bladder, thereby making us realize an intact and complete resection of the cyst is unlikely. Bilateral ureteral catheters were placed in an attempt to avoid any ureteral injury. Hypertonic saline (%3 NaCl) sponges and compressors were wrapped around the cyst in order to prevent spilling. The content of the cyst was aspirated, then the inside of the cyst was washed with 10% povidone iodine, a scolicidal agent. The germinative membranes were extracted from inside the cyst (Figure 2). The cyst wall was dissected to as much extent as possible, avoiding injury to surrounding organs. A drain was placed inside the residual cavity, and the drain was removed on the postoperative fourth day following cessation of the drainage. Albendazol (20mg/kg/day, twice a day) treatment was given to patient for 6 weeks postoperatively in order to prevent recurrences. The laboratory analysis performed at the sixth postoperative month showed that blood urea level and creatinin level were 69 mg/dL and 2.76 mg/dL, respectively; moreover, liver function tests were within normal limits. The patient was decided to develop chronic compensated renal failure due to obstructive uropathy caused by the primary retrovesical hydatid cyst. No trace of recurrence was encountered during control ultrasonography.

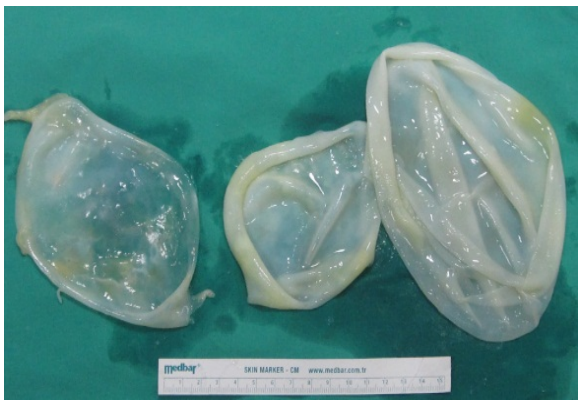

Fig. 2. The germinative membranes extracted from inside the cyst.

Discussion

Retrovesical hydatid cyst is seen seldom even in the regions where it is endemic, and it was reported to comprise 0.1%-0.5% of all cases of hydatid cyst (4). Various theories were proposed to clarify retrovesical placement of hydatid cyst, the most accepted of which was the theory of Deve claiming that there occurred retroperitoneal cyst due to the inoculation of cystic content within the Pouch of Douglas secondary to rupture of a primary intraperitoneal cyst (5). However, this theory does not prove sufficient in revealing the reason for secondary retrovesical involvement. On the other hand, the primary retrovesical involvement was proposed to occur either by hematogenous route, or through settlement of the embryos in perivesical tissues and pelvic plexus, after penetrating directly the rectosigmoidal mucosa (6).

Retrovesical hydatid cyst generally gives rise to symptoms by compressing the organs in the near vicinity (7). The most commonly seen symptoms are the presence of palpable abdominal mass and/or the bladder-related ones like urinary frequency, urinary urgency, urinary retention (8). Presentation with chronic renal failure due to obstructive uropathy as in our case is quite rare (8, 9).

Even if the total cysto-pericystectomy has been the ideal method during the surgery, in such cases where the cyst is highly adherent to the surrounding tissues and the risk of organ injury is high as in our case, partial cystectomy may become imperative. In such cases, wrapping the

surrounding tissues with sponges soaked with hypertonic saline and irrigation of inside the cyst with scoledical solutions (3% NaCl, 10% povidone iodine, formalin) in order to prevent dissemination; and, resecting the cyst wall as much aggressively as possible, paying attention not to harm the surrounding organs in an attempt to minimize recurrency are pivotal steps (8). In such cases where bilateral ureterohydronephrosis develops and presence of retrovesical hydatid cyst adherent to the ureters is considered as in our case, we recommend catheterization of the ureters in an attempt to prevent ureteral injury.

Usage of medical agents like albendazole postoperatively can decrease the likelihood of recurrences (1). Some authors advocate that cases in whom the cyst has been extracted intact and completely without any complication do not require postoperative medical treatment (2). However, we used in our case albendazole postoperatively, considering the possibility that the content may come off from the cyst opened. That is obvious that postoperative follow-up is mandatory to uncover any recurrence, but it is not easy to anticipate when and at which rate the recurrence occurs in primary retrovesical hydatid cyst. For this reason, the patients should be followed up closely with serology, ultrasonography and CT in the postoperative period.

Primer Dev Retrovezikal Kist Hidatiğe Bağlı Kronik Böbrek Yetmezliği Olgusu

Özet

Kist hidatik en sık karaciğer ve akciğer gibi organları etkileyen endemik zoonotik bir hastalıktır. İzole olarak retrovezikal alanın tutulumu çok nadirdir. Bu yazıda primer retrovezikal kist hidatiğe bağlı obstruktif üropati gelişen ve buna bağlı olarak kronik böbrek yetmezliği gelişen 35 yaşındaki erkek vakayı raporladık. Ultrasonografi ve abdominal tomografi kist hidatik hakkında şüphe uyandırsa da kesin tanıyı laparotomi sonrası koyduk. Total kisto-perikistektomi ideal tedavi yöntemi olsa da bizim vakamız gibi yüksek riskli vakalarda parsiyel kistektomi koruyucu önlemler alındıktan sonra kabul edilebilir bir tedavi yöntemidir.

Anahtar kelimeler: Kist hidatik, böbrek yetmezliği, retrovezikal.

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