CASE REPORT

A rare cause of lower urinary tract symptoms: retrovesical hydatid cyst

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Abstract

Retrovesical cysts are extremely rare. For differential diagnosis radiologic findings and serologic tests can be used. In this article, we aimed to report our approach to diagnose and to treat a primary huge hydatid cyst in retrovesical space, between sigmoid colon and bladder. A 34-year old patient presented to our hospital with lower urinary tract symptoms (LUTS). Abdominal ultrasound reported a 14x8 cm cystic lesion adjacent to the posterior wall of the bladder. Computerized tomography revealed a 14x8 cm cystic mass adjacent to bladder posteriorly and prostate and seminal vesicle anteriorly in the retrovesical space. Patient received albendazole prophylaxis and intervention was planned by transperitoneal approach. In a two-year of follow-up patient did not encounter any recurrences. Retrovesical cysts may cause LUTS. With patients suffering from LUTS, hydatid cyst should be kept in mind.

Keywords: Hydatid Cyst, Retrovesical, Lower urinary tract symptoms.

Introduction

Retrovesical cysts are extremely rare. Cystic degeneration of prostatic hyperplasia, prostatic utriculus cysts, seminal vesicle cysts, cysts of vas deferens or ductus ejaculatorius, bladder diverticula, bladder duplication and huge ureterocoeles are the main urological causes; whereas mesenteric cysts, colonic lymphatic cysts and intestinal duplications and hydatid cysts are non-urogenital causes.[1-10] For differential diagnosis radiologic findings and serologic tests can be used.

In this article, we aimed to report our approach to diagnose and to treat a primary huge hydatid cyst in retrovesical space, between sigmoid colon and bladder.

Case

A 34-year old patient attended the Urology Clinic in Adana Numune Teaching and Research Hospital, Turkey in May 2011 with lower urinary tract symptoms (LUTS). Patient's history revealed a three-month ongoing non-specific stomachache, nausea, vomiting and fever.

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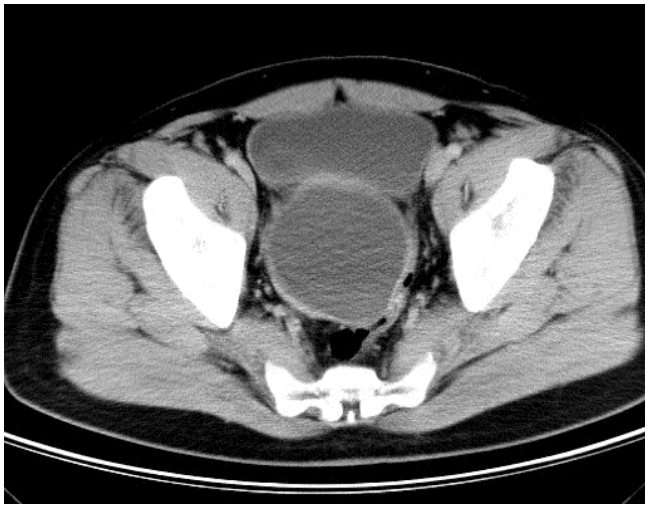

Figure: Computerized tomography image of the hydatid cyst.

Suprapubic tenderness was present in physical examination. Digital rectal examination did not reveal any pathologic findings. Abdominal ultrasound (USG) reported a 14x8 cm cystic lesion adjacent to the posterior wall of the bladder. A pelvic computerized tomography (CT) was planned for the patient. CT revealed a 14x8 cm cystic mass adjacent to bladder posteriorly and prostate and seminal vesicle anteriorly in the retrovesical space. Bladder and seminal vesicles were anteriorly and sigmoid colon was posteriorly depressed. Radiological consult appeared to be a seminal vesicle cyst (Figure).

Transrectal USG revealed a homogeneous cystic mass not related to the bladder. Patient had a maximum flow rate of 11.3 ml/s and an average flow rate of 7.4 ml/s in uroflowmetry. Flexible cystoscopy and bilateral vasography was planned. Cystoscopy revealed an impression of the mass pushing from outside. There were no duplications, ureterocoele nor diverticule. Bilateral vasography showed no seminal vesicle pathology. Indirect haemaglutination test was performed and the result was positive at 1/16384 dilution.

After the diagnosis of hydatid cyst, patient received albendazole prophylaxis and intervention was planned by transperitoneal approach. A midline suprapubic incision was made and a 14cm hydatid cyst was found adherent to

Table: GHARBI Hydatid Cyst Classification.

Type	Sonographic characteristics
I	Cystic characteristics + wall + mobile internal echogenicities
II	Detached membrane (water-lily sign)
III	Multivesicular, multiseptated cyst, daughter cysts, honeycomb pattern
IV	Heterogeneous, hypo-, or hyper-echoic cyst, no daughter vesicles
V	Cyst with a partial or complete wall calcification

mesocolon of sigmoid. The cyst was aspirated and germinal membrane and vesicles were removed. Cyst walls were washed with hypertonic saline (3%) and diluted iodine solution. Omentoplasty was performed using omentum majus to cyst walls. In a two-year follow-up, the patient did not encounter any recurrences.

Discussion

Retrovesical cysts, especially in male patients, resemble cystic degeneration of prostatic hyperplasia. This degeneration appears to be in transitional zone and in a nodule. Retention cysts of prostate appear in midline after glandular ductus obstruction and aciner dilatation which do not contain spermatozoa. They are usually smaller than 2cm.[1,2] Cysts of prostatic utricule, seminal vesicle, vas deferentes and ductus ejaculatorius should be kept in mind in male patients.[3,4] Mullerian duct cysts are always in midline. Seminal vesicle cysts are found in lateral aspects and when they are present, ejaculator ducts are undamaged. If a seminal vesicle cyst presses onto the bladder, it has to be distinguished from ureterocele. Even though a hydatid cyst is extremely rare, for endemic countries such as Turkey, it should always be kept in mind.[5-10] Even in an endemic country, retrovesical space is an extremely rare site for a hydatid cyst.

Hydatid cyst is a parasitose composed of 99% Echinococcus granulosus and 1% Echinococcus multilokularis. Humans are the medium host of this infestation. The main host is the small intestine of carnivores. The eggs are distributed by faeces. Embryos move to duodenum of the host and may transfer to every tissue by haematologic dissemination.[11] Presence in liver (50-70%), lung (11-17%), soft tissues (2.4-5.3%), pericardium (5%), muscles and subcutaneous tissues (0.5-4.7%) have been reported.[12-15]

Medical treatment, USG guided percutaneous drainage and surgery are treatment options. Albendazole with the dosage of 10 mg/kg/day is a common treatment option. Response to treatment with 4-6 months of Albendazole is between 60-90%, where 30% non-response and 10-20% recurrence may be encountered.[16-19] Medical treatment is challenging and lengthy, with possible hepatotoxicity and teratogenity making the treatment harder to comply.[20] Percutaneous drainage may have important complications such as anaphylaxis or peritoneal dissemination with 4% morbidity and 0.08% mortality. Efficacy is 100%, but the treatment should be preserved only for Gharbi classification type 1 and 2 (Table). Medical treatment before and after drainage decrease morbidity and recurrence.[17,19,20] In our case, classification of the cyst was Gharbi type 1, the treatment options were discussed with the patient and because of the patient's young age and the risk of recurrence in endoscopic treatment an open surgery was planned.

Gold standard treatment for hydatid cyst is surgery. Even though medical and less invasive treatment options have been developed, surgery still remains the gold standard treatment. Treatment decision should be made by number of cysts, localization, site, Gharbi classification, and patients factors. Surgical treatment include emptying the cyst, removing scolexes, destroying any alive scolexes with hypertonic solutions and filling the void of cyst with omentoplasty or capitonage.[21-23] We performed pericystectomy and ometoplasty to fill the void.

Conclusion

Hydatid cyst may arise at retrovesical site and it is known that retrovesical cysts may cause LUTS. When patients suffering from LUTS are encountered, hydatid cyst should be kept in mind for differential diagnosis.

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