

Primary Retrovesical Hydatid Cyst causing Acute Urinary Retention in a Young Patient : A Rare Presentation

LOMESH A. KAPADNIS, VIKASH KUMAR, AJIT S. SAWANT, GAURAV V. KASAT, ASHWIN S. TAMHANKAR

ABSTRACT

Retrovesical cysts are very rare. Definitive preoperative diagnosis is difficult in many cases. Hydatid cyst can present as a retrovesical cyst, which can cause a diagnostic dilemma. We present a case of primary retrovesical hydatid cyst mimicking a prostatic utricle cyst, presenting as acute urinary retention in a 29 year old young male patient. Definitive pre-operative diagnosis was difficult even with detailed imaging studies. Hence, exploratory laparotomy was done and diagnosis was suggested intra-operatively

by the presence of slimy germinal layer and a daughter cyst and confirmed by histopathological examination. Hydatid disease is a zoonotic disease caused due to larvae of *Ecchinococcus granulosus*. Humans are the accidental intermediate hosts. Urogenital system is involved in 2.15% and in that, kidney is most commonly involved organ. As such, the retrovesical location is involved very rarely. Hence, retrovesical cysts are rare and hydatid cyst should be kept as differential diagnosis in mind while treating such cysts.

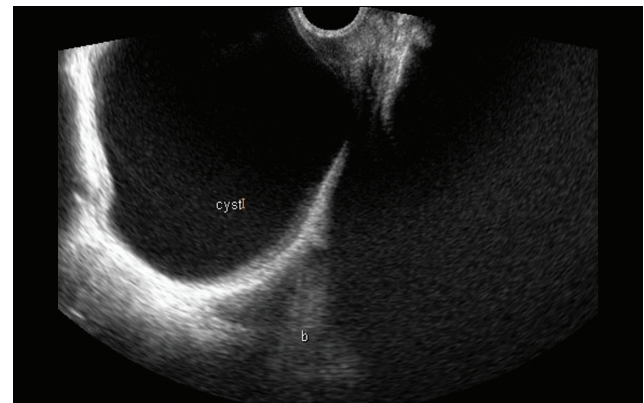
Keywords: Genitourinary cyst, Genitourinary hydatidosis, Urogenital tract Ecchinococcosis

CASE REPORT

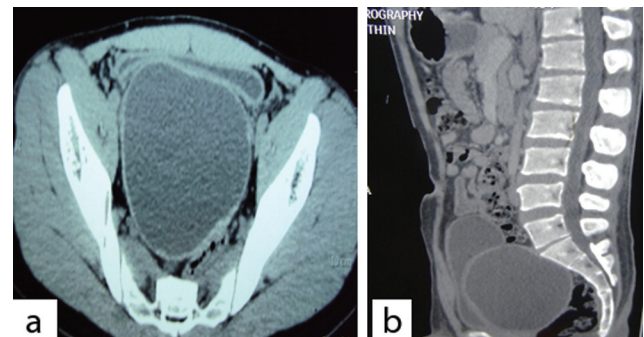
A 29-year-old male patient, butcher by occupation presented with acute urinary retention. He had history of irritative and obstructive lower urinary tract symptoms since last 6 months. He had no history of fever, hematuria, pyuria or any previous surgery in past.

On examination, no lump was palpable per abdominally. On digital rectal examination, a smooth, spherical, firm mass was palpable, which could not be distinguished separately from prostate. Routine blood investigations were normal. Ultrasonography of abdomen revealed a well defined hypoechoic lesion in pelvis posterior to bladder compressing both ureters. On Transrectal ultrasonography a large well defined retrovesical cystic lesion in close proximity of prostate and prostatic urethra was noted [Table/Fig-1]. Contrast enhanced computed tomography (CECT) scan showed 11 x 10 x 11 cm thick walled peripherally enhancing cystic lesion with a thin septa along its postero-inferior wall, reaching upto sacrum and displacing bladder anteriorly and compressing rectum posteriorly [Table/Fig-2]. It was compressing right lower ureter causing proximal hydroureter and hydronephrosis. There was no similar cyst in other parts of abdomen. A diagnosis of prostatic utricle cyst was suspected on CT-scan.

Patient developed right epididymo-orchitis which progressed into testicular abscess that had to be drained. Patient was



[Table/Fig-1]: Transrectal USG showing retrovesical cyst.

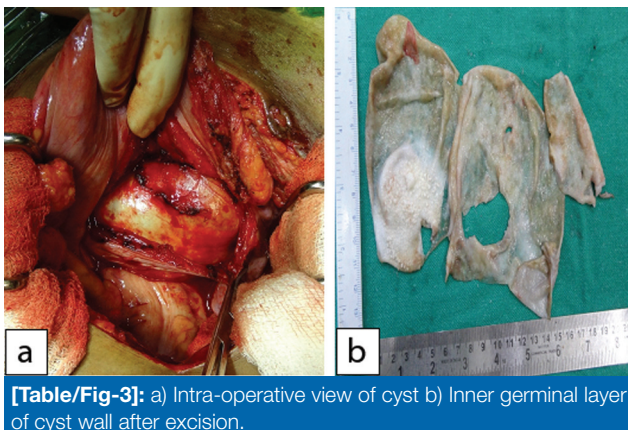


[Table/Fig-2]: CT-scan images a) Transverse section and b) Sagittal section showing the retrovesical cyst compressing the bladder.

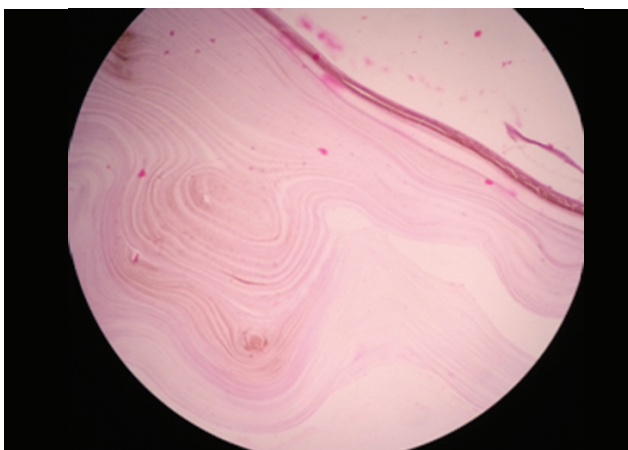
treated with I.V. antibiotics and suprapubic catheter was placed under cystoscopy guidance. Cystoscopy revealed a stretched prostatic urethra but utricle opening could not be visualized. Bladder neck was elevated and the cyst was indenting posterior bladder wall due to which ureteric orifices could not be visualized. Chest radiograph was normal.

After taking informed consent, the patient was operated for exploratory laparotomy with midline incision. Intraoperatively, a tense, thick walled cyst adherent to posterior bladder wall was noted [Table/Fig-3]. Clear cyst fluid was aspirated and cyst opened without spillage. A slimy layer resembling the germinal layer of hydatid cyst along with a small daughter cyst was removed from inside the cyst. Then cyst was irrigated with hypertonic saline solution. Cyst could be excised partially due to its dense adhesions to posterior bladder wall and prostate.

Post operatively, patient was given Albendazole 400mg twice daily for 8 weeks. Histopathological examinations confirmed the diagnosis of hydatid cyst [Table/Fig-4]. On follow-up, patient does not show any symptoms or/of recurrence.



[Table/Fig-3]: a) Intra-operative view of cyst b) Inner germinal layer of cyst wall after excision.



[Table/Fig-4]: The histopathological picture of cyst wall showing laminated hydatid cyst.

DISCUSSION

Retrovesical cysts are very rare. Definitive preoperative diagnosis is difficult in many cases and sometimes post operative histopathology can only confirm the diagnosis. Important differential diagnosis for a retrovesical cyst is prostatic utricle cyst, seminal vesicle cyst, cysts of vas deferens, hydronephrotic pelvic kidney, posterior bladder neck diverticulum or large ureterocele. Non- urological causes like rectal duplication cyst, rectosigmoid neoplasm, lymphatic cysts and rarely hydatid cyst can present as retrovesical cyst. If another hydatid cyst is present in other solid organs then it can aid in the diagnosis. But if the hydatid cyst presents as a primary retrovesical cyst, then it can cause a diagnostic dilemma.

Retrovesical cyst in a young male patient can be prostatic utricle cyst, which are midline and usually associated with hypospadias. Cysts arising from seminal vesicle and ejaculatory duct are laterally located. Imaging can usually differentiate between the other urological causes, their organ of origin and non-urological causes. Though, hydatid cyst in retrovesical location is rare, it should be kept in mind while treating such patients in endemic countries like India.

Hydatid disease is a zoonotic disease caused due to larvae of *Echinococcus granulosus*. Humans are the accidental intermediate hosts caused due to close contact with sheep, dogs or cattle. As our patient was a butcher by occupation, he lived in close contact with cattles. Hydatid cysts are most commonly seen in liver followed by lungs. Urogenital system is involved in 2.15% and kidney is most commonly involved organ in it [1]. So, the retrovesical location is involved very rarely in upto 0.1-0.5% cases [2]. Most of hydatid cysts occurring in pelvis are secondary to rupture of a primary cyst (in liver usually) accidentally or at the time of surgery. A solitary pelvic hydatid cyst can be considered primary when there are no other hydatid cysts in other organs. In such cases, hydatid embryo gets access to pelvis by hematogenous or lymphatic route [3]. In our patient, no other cyst could be identified on CT-scan, chest radiograph as well as intra-operatively. Hence, this is a rare case of primary retrovesical hydatid cyst presenting with acute urinary retention.

The retrovesical hydatid cyst causes compression of surrounding structures like bladder, rectum, ureters and can present with lower urinary tract symptoms, acute urinary retention as in our cases or rarely with obstructive uropathy and renal failure [3]. Ultrasonography, both abdominal and transrectal, is the simple initial investigation. CT-scan gives detailed information about the pelvic cyst such as its size, location, organ of origin, any septae or calcification and relationship with surrounding structures. Even with these investigations, sometimes diagnosis cannot be

made definitively. In such cases surgical exploration and histopathological examination can confirm the diagnosis. In difficult cases, percutaneous cyst aspiration followed by CT-scan can sometimes show germinative membrane separated from cyst wall, which can suggest the diagnosis of hydatid cyst [4]. However, percutaneous drainage may have important complications such as anaphylaxis or peritoneal dissemination with 4% morbidity and 0.08% mortality [5].

Complete cyst excision is ideal treatment but the cyst if adherent to surrounding structures, like in our case, then partial cyst excision can be done. Now-a-days laparoscopic pelvic hydatid cyst excision with Palanivelu Hydatid System (PHS) has been reported [6]. Post operatively Albendazole is given for 6-8 weeks.

CONCLUSION

Retrovesical cysts are rare and pose a diagnostic dilemma. Sometimes, final diagnosis can be made only after examination

of the histopathological specimen. Hence, hydatid cyst should be kept in mind while treating such cases.

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