

# Bilateral Simple Orthotopic Ureterocele in an Adult Male Complaining of Urgency and Pain on Urination

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## Abstract

We report a case of a 38-year-old man with a simple orthotopic bilateral ureterocele and pain on urination that was improved by transurethral incision. His symptoms were present for 3 years since he first visited our hospital in 2012. Cystoscopy at our hospital revealed a simple bilateral ureterocele, and he was given an alpha blocker plus anticholinergic agent. The medication did not relieve his symptoms. Three years after his initial visit in 2012, he returned for a re-evaluation in May, 2015, because his symptoms had worsened. Computed Tomography (CT) showed normal locations of the bilateral ureteric orifices in the bladder, bilateral ureterocele with a right-sided predominance and a cobra head sign, and bilateral hydroureter. We performed a transurethral incision of his ureteroceles. Intraoperatively, we found that the ureterocele on the right ureter entered the opening and expanded at the time of urine discharge. The symptoms significantly improved after the procedure.

## Keywords

Simple Orthotopic Ureterocele, Transurethral Incision of Ureterocele, Ureterocele Complications

## 1. Introduction

Simple ureterocele generally has few symptoms and is often treated conservatively [1] [2]. The most frequent symptoms are urinary tract infection, dysuria, palpable abdominal tumor, and vesicoureteral reflux (VUR). The majority of ureterocele are related to duplex systems and are ectopic. Simple ureterocele usually remain asymptomatic and/or unrecognized in adults. We report a case of an adult male with simple orthotopic bilateral ureterocele and pain on urination that was improved by transurethral

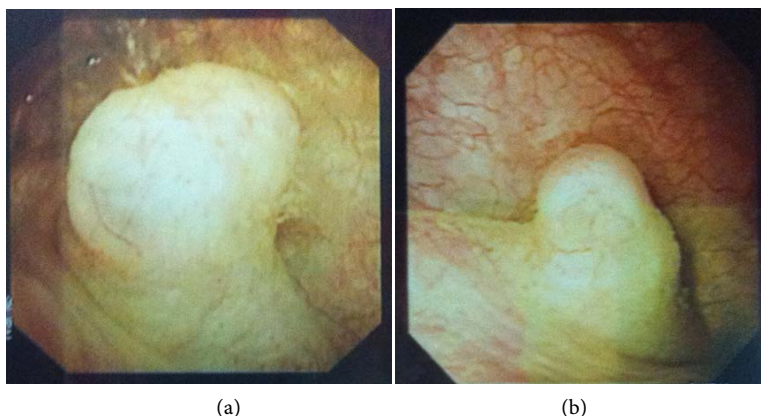
incision.

## 2. Case Presentation

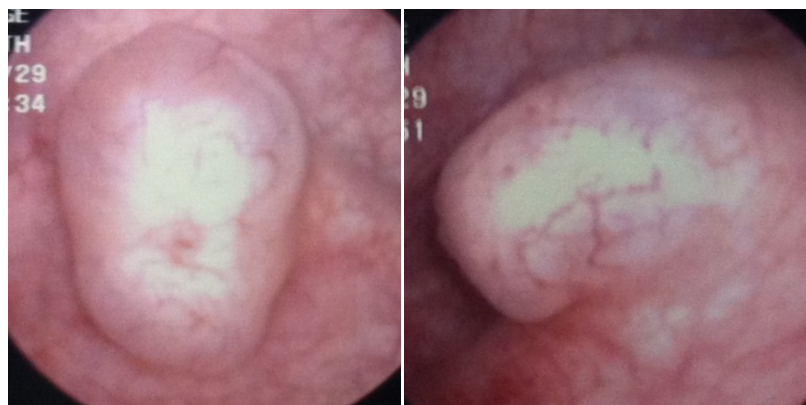
A 38-year-old man with a history of childhood asthma visited a community hospital complaining of urgency and pain on urination present for 3 years. Cystoscopy at our hospital revealed a simple bilateral ureterocele, and he was given an alpha blocker plus anticholinergic agent (**Figure 1**). The medication did not relieve his symptoms, and he experienced adverse effects including dizziness. The medication was thus discontinued, and he left our hospital.

Three years after his initial visit in 2012, he returned for a re-evaluation in May, 2015, because his symptoms had worsened. Laboratory evaluation revealed white blood cells (WBC) 6300 cells/mL, hemoglobin 16.0 g/mL, hematocrit 45.1%, blood glucose 175 mg/dL, blood urea nitrogen 14.5 mg/dL, creatinine 0.73 mg/dL, and C-reactive protein 0.05 mg/dL; 0-1 WBC and 0-1 erythrocyte per high-power field were seen in his urine.

On cystoscopy, the bilateral ureterocele appeared larger than it was 3 years previously (**Figure 2**). Computed Tomography (CT) showed normal locations of the bilateral ureteric orifices in the bladder, bilateral ureterocele with a right-sided predominance and a cobra head sign, and bilateral hydroureter (**Figure 3**). The patient's symptoms were slightly relieved following prescription of tadalafil 5 mg/day. However, after requesting a consultation for further symptom relief, he consented to surgical treatment, and we performed a transurethral incision of his ureteroceles. Intraoperatively, we found that the ureterocele on the right ureter entered the opening and expanded at the time of urine discharge. The ureterocele on left side also entered the ureteric orifice, but was smaller than the one on the right (**Figure 4**). After performing the incision, we confirmed that, on both sides, the ureteric orifices did not act like golf holes to permit VUR after the operation. The symptoms significantly improved after the procedure, and the patient was satisfied with the outcome. No postoperative complications or pyelonephritis occurred, and the symptoms have not reappeared in the 3 months following surgery.



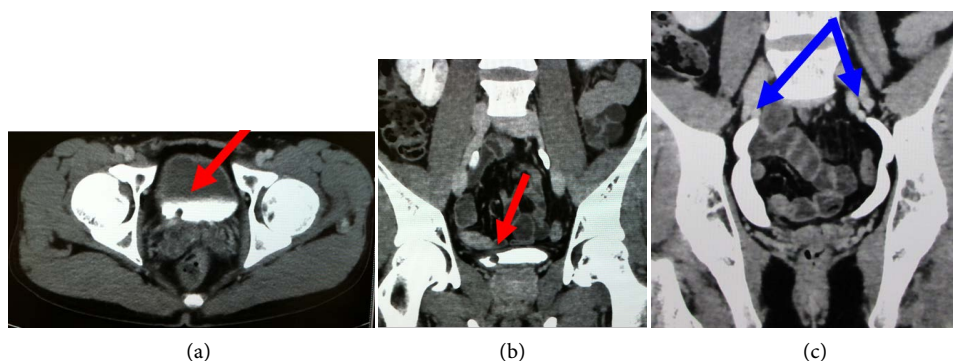
**Figure 1.** Cystoscopy performed in 2012 showing bilateral ureterocele ((a) right; (b) left).



(a)

(b)

**Figure 2.** Cystoscopy performed in 2015 shows that the bilateral ureterocele had increased in size ((a) right; (b) left).

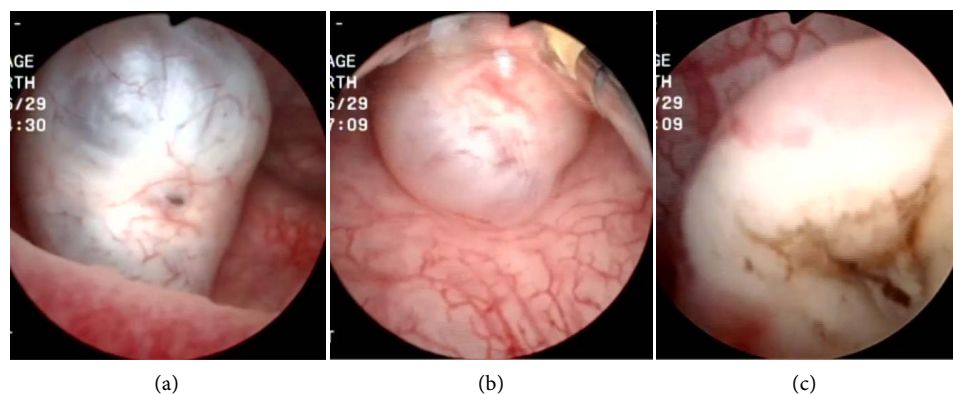


(a)

(b)

(c)

**Figure 3.** Computed tomography (CT) performed in 2015 showed normal locations of the ureteric orifice, bilateral ureterocele ((a) coronal; (b) sagittal) with a right-sided predominance and a cobra head sign (red arrow), and bilateral hydroureter ((c) blue arrows).



(a)

(b)

(c)

**Figure 4.** Intraoperative finding in 2015 showing the right ureterocele on the ureter orifice, expansion of the right ureterocele at the time of urine discharge (a), incision of the ureterocele (b), and the ureterocele after incision (c).

### 3. Discussion

Ureterocele are more common in women, with the female to male ratio of 4 to 1 [3].

Ureteroceleles are bilateral in 10% and occur in 80% in upper poles in duplex systems [4]. This case was a simple bilateral single system ureterocele located in a normal ureteric orifice. A simple ureterocele usually has few symptoms. Symptoms that lead to the discovery of a simple ureterocele include urinary tract infection, sharp pain caused by a calculus in the ureterocele, dysuria caused by a huge cele that obstructs the internal urethral orifice, or a palpable abdominal tumor that acts like a huge cele [5]. A case of prolapse of a simple ureterocele presenting as perineural tumor was reported in a young woman [6]. Treatment of simple ureteroceleles is generally conservative. If recurring urinary tract infections caused by urinary tract obstruction, cannot be resolved by treatment with antibiotics or VUR, surgical treatment may be considered. Transurethral incision is often performed for ureteroceleles, and VUR is a common surgical complication [7]. This patient's chief complaint was urgency and pain on urination, which rarely leads to suspicion of a uretocele. He had no episodes of repeated urinary tract infection or VUR, but based on the cystoscopy findings, we have concluded his symptoms might have been caused by expansion of the ureteroceleles and tugging of the vesical trigon at the time of urine discharge. We also have concluded that the symptoms would have improved following removal of the ureteroceleles. We performed the transurethral incision of the ureteroceleles when the patient gave his consent after being told that his symptoms might not improve following the procedure. Considering the improvement of the symptoms and the patient's satisfaction with the outcome, we believe that the ureteroceleles may have been responsible for the urinary symptoms.

#### 4. Conclusion

We report the case of an adult male with simple orthotopic bilateral ureteroceleles and pain on urination that was improved by transurethral incision.

#### Acknowledgements

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#### Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

#### Patient Consent

Obtained.

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