

# ENLARGED PROSTATIC UTRICLE CYST WITH INCIDENTAL FINDING OF RENAL AGENESIS: A CASE REPORT AND LITERATURE REVIEW

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PJR October - December 2016; 26(4): 345-347

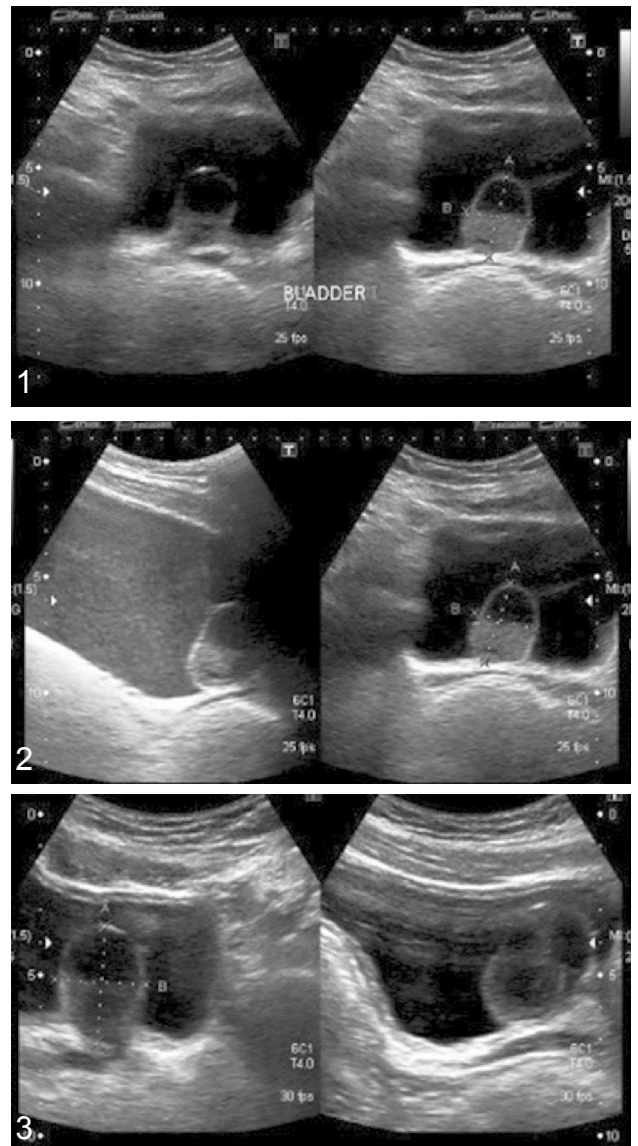
## Introduction

Prostatic utricle cysts are rare midline intra-prostatic cysts present between the bladder and the rectum, mostly associated with other urogenital anomalies like unilateral renal agenesis and hypospadias. We present a case in which the utricle cyst was causing progressive symptoms of lower urinary tract. The cyst with associated incidental findings of unilateral (right side) renal agenesis was demonstrated on ultrasound.

## Case Report

A 27 years old male was referred to our radiology department from an outside hospital for ultrasound (bladder). The patient had progressive symptoms of straining at urination, weak stream, burning micturition, post-coital pain and pelvic discomfort since three years. Past medical and surgical history was unremarkable.

Ultrasound (bladder) was done which showed adequately distended bladder with symmetrical wall thickness measuring 6.7 mm. An oval-shaped cystic mass was seen, arising from prostatic urethra, showed a horizontal air/fluid level, projecting from the lumen of the bladder, representing midline prostatic utricle cyst. (Fig. 1-3) There was associated incidental finding of unilateral (right side) renal agenesis. Prevoid volume of the bladder was measured 429 cc and there was significant postvoid residual volume measured 268 cc. No other pathologic intravesical focus was seen.



**Figure 1-3:** Ultrasound of urinary bladder: An oval-shaped cystic mass arising from prostatic urethra, showing a horizontal air/fluid level.

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Submitted 26 April 2016, Accepted 31 May 2016

## Discussion

Prostatic utricle cysts are median intra-prostatic cysts, located in midline behind the upper half of the prostatic urethra, typically between the bladder and the rectum and present very rarely. They are remnant of the Mullerian duct system, resulting in incomplete regression of this system in embryologic development.<sup>1,2</sup>

Utricle cysts are pear-shaped structures, usually 8-10 mm in size, do not extend above the base of prostate and communicate freely with the prostatic urethra.<sup>3</sup>

Literature search of the prostatic utricle cysts shows prevalence rates of 1% in newborns and 4% in adults<sup>4</sup> while 10% to 25% prevalence rates in association with renal agenesis/dysgenesis, 11% to 14% in patients with hypospadias/sexual deformity and 50% in patient with perineal hypospadias. They commonly occur in males in first two decades of life.<sup>5,6</sup>

Symptoms associated with utricle cyst depend on the size of the cyst; patients can presents with varied symptoms ranging from asymptomatic to recurrent urinary tract infections, epididymitis, hematuria, pyuria, urinary incontinence, oligospermia, lower abdominal discomfort/heaviness, retention or constipation. Enlargement of utricle cyst is rare; and these rare enlarged cases can present as an abnormal lower abdominal or pelvic mass; or at pelvic/trans-rectal ultrasonography, they can manifest as a midline anechoic fluid filled cystic cavity posterior to the urethra, between the bladder and the rectum. The utricle cysts may complicate with infections or malignancy.<sup>1,7</sup>

Some of the major differential diagnoses include Mullerian duct cysts, bladder diverticulum, teratoma, seminal vesicle cyst, epididymal cyst and Wolffian duct cyst. Among all of these differentials, Mullerian cysts are the most challenging and very difficult to differentiate embryologically, clinically and sonographically from utricle cysts because both of them are median intraprostatic cysts. Mullerian cysts are midline teardrop shaped cysts, usually present in 3<sup>rd</sup> and 4<sup>th</sup> decades of life, extend above the base of prostate and do not communicate with the urethra.<sup>1,6,8</sup>


In view of the above discussion and literature review, our index case, 27 years old male, had developed these lower urinary tract symptoms because of this rare, enlarged, midline, intra-prostatic and fluid containing utricle cyst, seen on ultrasound. The midline intraprostatic location, fluid containing cystic appearance and incidental findings of the unilateral renal agenesis strongly backed the diagnosis of utricle cyst. The thickened wall of the bladder was suggestive of cystitis. All these symptoms of weak stream, straining at urination burning micturition and pelvic discomfort were because of the blockage due the enlarged utricle cyst.

## Conclusion

Prostatic utricle cysts are uncommon, midline, intra-prostatic cystic lesions, mostly associated with renal agenesis. Ultrasonography is usually the initial, easy and non-invasive modality of investigations which may help in diagnosis of the lesions. Also the prostatic utricle cyst should be taken into account in the differential diagnosis of pelvis mass or cyst in the male.

## References

1. Shebel HM, Farg HM, Kolokythas O, El-Diasty T. Cysts of the lower male genitourinary tract: embryologic and anatomic considerations and differential diagnosis. *Radiographics*. 2013; **33(4)**: 1125-43.
2. Schuhrke TD, Kaplan GW. Prostatic utricle cysts (mullerian duct cysts). *J Urol*. 1978; **119(6)**: 765-7.
3. Parsons RB, Fisher AM, Bar-Chama N, Mitty HA. MR imaging in male infertility. *Radiographics*. 1997; **17(3)**: 627-37.
4. Desautel MG, Stock J, Hanna MK. Mullerian duct remnants: surgical management and fertility issues. *J Urol*. 1999; **162(3 Pt 2)**: 1008-13.

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5. Momin YA, Dhende NP, Ghodke BA, Ansari SA, D'Costa GF, Mahajan VR. An abnormally large prostatic utricle cyst associated with unilateral renal agenesis. *Urol Ann.* 2013; **5(2)**: 129-31.
  6. Wang W, Wang Y, Zhu D, Yan P, Dong B, Zhou H. The prostatic utricle cyst with huge calculus and hypospadias: A case report and a review of the literature. *Can Urol Assoc J.* 2015; 9(5-6).
  7. Priyadarshi V, Singh JP, Mishra S, Vijay MK, Pal DK, Kundu AK. Prostatic utricle cyst: a clinical dilemma. *APSP J Case Rep.* 2013; **4(2)**.
  8. Nghiem HT, Kellman GM, Sandberg SA, Craig BM. Cystic lesions of the prostate. *Radiographics.* 1990; **10(4)**: 635-50.