

## Midline Intraprostatic Cyst: An Unusual Aetiology of Urinary Tract Infection and Epididymo-orchitis

Dear Editor,

A 33-year-old man presented with primary complaint of dysuria and unilateral discomfort of right testis. On examination, the right scrotum was erythematous and the patient was febrile. Digital rectal examination revealed a midline swelling. The patient was found to be in sepsis.

Initial evaluation of urine microscopy, culture and testicular ultrasound confirmed the diagnosis of infective epididymo-orchitis with the urine showing the presence

of *Escherichia coli*. Uroflow studies revealed minimal obstruction (Fig. 1) with no residual volume. Subsequent transrectal ultrasonography (TRUS) (Fig. 2) and magnetic resonance imaging (MRI) (Fig. 3) of the pelvis documented the presence of a midline intraprostatic cyst (4 cm x 4 cm x 5 cm) on the left posterior lobe. Semen analysis revealed azoospermia. However, the patient was single at the time of presentation, so fertility was not his primary concern.

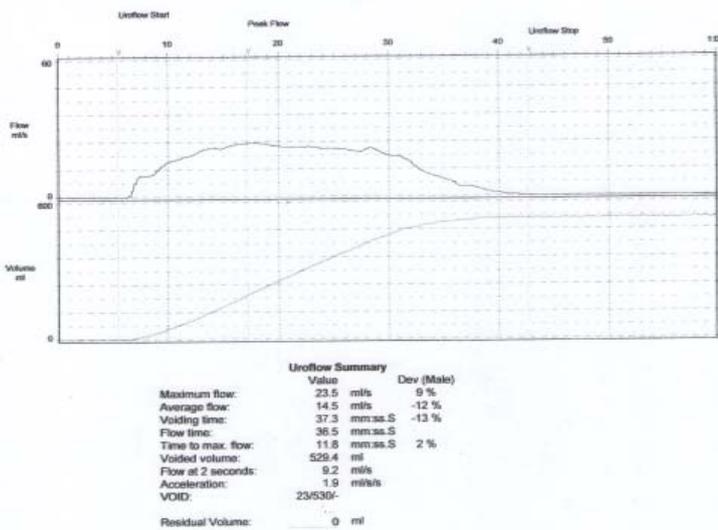


Fig. 1. Uroflowmetry chart demonstrating an obstructed urinary flow.



Fig. 2. Transrectal ultrasound illustrating an intraprostatic cyst.

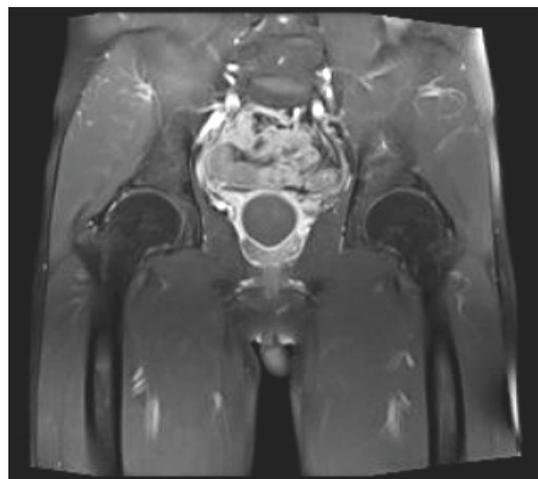


Fig. 3. Pelvic MRI revealed the presence of an intraprostatic cyst.

The patient was managed conservatively with antibiotic therapy and regular follow-up to monitor his progress. Four months following the antibiotic treatment, the epididymo-orchitis resolved.

## Discussion

In recent years, the increasing use of TRUS and computed tomography urography (CTU) scans had resulted in more frequent detection of prostatic cysts.<sup>1</sup> The prevalence of detection through TRUS ranges from 8.6% to 9.8%.<sup>2,3</sup> Based on TRUS and pathological correlation, Galosi et al classified prostatic cysts into 6 distinct types, which are midline cysts, cysts of the ejaculatory duct, cysts of the parenchyma, complicated cysts, cystic tumours and cysts secondary to parasitic disease.<sup>3</sup> Midline prostatic cysts are less common and mostly are of developmental in origin, arising from remnants of fetal tissue—Mullerian duct and utricle.<sup>4</sup>

The majority of these cysts are asymptomatic. Prostatic cysts are categorised as symptomatic when there is presence of infection or when their sizes and anatomical relations affect nearby structures. Urinary retention provides an ideal medium for development of recurrent or chronic urinary tract infection (UTI).<sup>1</sup> Tambo et al analysed 34 patients with symptomatic cysts.<sup>5</sup> Forty percent of the patients complained of obstructive symptoms while 33%, 9% and 6% complained of urinary retention, urodynia and infertility respectively. On top of that, 27% of their patients are aged between the 20s and 30s thus symptomatic cysts are usually seen in relatively young patients as in our case.

Various therapeutic options are available for the management of a symptomatic cyst, namely transrectal aspiration with or without sclerotherapy, transurethral marsupialisation and open surgery. Chang et al reported success with transurethral resection of midline prostatic cyst presenting with lower urinary tract symptoms.<sup>6</sup> Lee et al recommends simple unroofing or transrectal aspiration if the cyst is small.<sup>4</sup> Regardless of the methods used, care must be taken to prevent injury to the bladder neck or urethra considering its close proximity to the cyst. This is to prevent incontinence and retrograde ejaculation in the patient.

Our case is the first presentation of epididymo-orchitis in an asymptomatic patient with a prostatic cyst. Surgical intervention was not indicated in his case. Invasive treatment is only warranted if he is keen to have treatment for azoospermia or recurrent epididymo-orchitis.

## REFERENCES

1. Nayyar R, Wadhwa P, Dogra PN. Midline intraprostatic cyst: an unusual cause of lower urinary tract symptoms. *Indian J Urol* 2008;24:109-11.
2. Soto AJ, Subira NR, Manasia P, Ruiz Castane E, Castineras Fernandez J, Pomerol Monseny J, et al. Classification of cystic structures located at the midline of the prostate: our experience. *Arch Ital Urol Androl* 2004;76:75-9.
3. Galosi AB, Montironi R, Fabiani A, Lacetera V, Galle G, Muzzonigro G. Cystic lesions of the prostate gland: an ultrasound classification with pathological correlation. *J Urol* 2009;181:647-57.
4. Lee JY, Kang DH, Park HY, Park JS, Son YW, Moon HS, et al. An anteriorly positioned midline prostatic cyst resulting in lower urinary tract symptoms. *Int Neurourol J* 2010;14:125-9.
5. Tambo M, Okegawa T, Nutahara K, Higashihara E. Prostatic cyst arising around the bladder neck-cause of bladder outlet obstruction: two case reports. *Hinyokika Kyo* 2007;53:401-4.
6. Chang SG, Hwang IC, Lee JH, Park YK, Lim JW. Infravesical obstruction due to benign intraurethral prostatic cyst. *J Korean Med Sci* 2003;18:125-6.

Da Wei Thong,<sup>1</sup> Chia Yew Kong,<sup>2</sup> George EG Lee,<sup>1</sup>

*MBBChir, MA, FRCS (Urol)*

<sup>1</sup>Monash University Sunway Campus, Malaysia

<sup>2</sup>International Medical University, Malaysia

Address for Correspondence: Dr George EG Lee, Gleneagles Intan Medical Centre, 282 & 286 Jalan Ampang, 50450 Kuala Lumpur, Malaysia.

Email: georgeeglee@msn.com