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### Case Report

## A rare case of Cowper's syringocele in an adult male: Clinical presentation and management

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### المخلص

اشتكى رجل عمره ٢٥ عاما من ضعف تدفق البول مصحوبا بزيادة تواتر التبول لمدة ٦ أشهر. لم يكن الفحص السريري والتحليل الأساسية جديرة بالملاحظة. أظهر الفحص التنظيري المرن للمثانة والإحليل والتصوير بالرنين المغناطيسي وجود قيلة كوبر النخاعية من النوع المغلق. تم استئصال القيلة باستخدام تقنية الليزر الجراحي عن طريق الإحليل من غير مضاعفات. اختفت أعراض المريض بعد الجراحة وبقي بلا أعراض لمدة ١٥ شهرا من المتابعة.

**الكلمات المفتاحية:** قيلة كوبر النخاعية؛ ضعف تدفق البول؛ منظار المثانة والإحليل المرن؛ تقنية الليزر الجراحي عن طريق الإحليل

### Abstract

A 25-year-old male presented with a weak urine stream and increased urinary frequency for six months. Clinical examination and baseline investigations were unremarkable. Flexible cystourethroscopy and magnetic resonance imaging revealed the closed type of Cowper's syringocele. Transurethral laser marsupialization of the syringocele was carried out without adverse events. The patient's symptoms disappeared after surgery and he remained symptom-free through a 15-month period of follow-up.

**Keywords:** Cowper's syringocele; Flexible cystourethroscopy; Transurethral laser marsupialization; Weak urine stream

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### Introduction

Cowper's (excretory bulbourethral) glands are a pair of pea-sized ducts that lie at the dorsal aspect of the membranous urethra, within the urogenital membrane. The secretions from both glands drain in the bulbous urethra through two 4-cm-long ducts. The secretions aid in lubrication and transportation of spermatozoa along the urethra during ejaculation.<sup>1,2</sup>

Cystic dilatation of the gland is referred to as Cowper's syringocele or ductectasia and is caused by distal duct obstruction in the paediatric age group.<sup>3</sup> To the author's knowledge, only eight adults with this condition have been reported in the literature [Table 1]. The clinical presentation, management and follow-up of a 25-year-old male patient with Cowper's syringocele are herein reported.

### Case report

A 25-year-old male patient presented to the outpatient clinic with a weak urine stream and increased frequency for six months. Physical examination was unremarkable. Urine analysis, abdominal ultrasound and retrograde urethrogram were all normal. He did not improve on empirical antibiotic therapy. Office-based diagnostic flexible cystourethroscopy was performed under local anaesthesia. It showed cystic dilatation at the bulbous urethra. The cyst slightly pushed the posterior wall of the bulbous urethra in a forward direction. Further assessment by MRI T2 imaging revealed a homogeneous oval cystic swelling with a smooth wall and

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**Table 1: Cases of Cowper's syringocele in adults reported in the literature.**

Authors	Type	Presentation	Diagnostic modality	Treatment
Richter et al., 1998 <sup>4</sup>	Open	Frequency, UTI	Retrograde urethrogram, endoscopy	Deroofing
Amakura et al., 2000 <sup>5</sup>	Open	Frequency, urgency, post-voiding dribbling	Retrograde urethrogram, endoscopy	Deroofing
	Open	Urethral discharge after perineal trauma	Retrograde urethrogram, endoscopy	Deroofing
	Open	Frequency, weak stream, retention of urine	Retrograde urethrogram, endoscopy	Deroofing
Köksal et al., 2003 <sup>6</sup>	Open	Frequency, weak stream, retention of urine	Retrograde urethrogram, endoscopy	Deroofing
Volders et al., 2005 <sup>7</sup>	Closed	Weak stream, post-void dribbling, perineal discomfort, fullness	Retrograde urethrogram, ultrasound, MRI	Open surgery
	Open	Haematuria	Micturating cystourethrogram	Deroofing
Zugor et al., 2006 <sup>8</sup>	Open	Frequency, urgency, post-voiding dribbling	Retrograde urethrogram, endoscopy, ultrasound	Open surgery
Kumar et al., 2007 <sup>9</sup>	Open	Frequency, urgency, post-voiding dribbling	Retrograde urethrogram, endoscopy, ultrasound	Open surgery
Santin et al., 2009 <sup>10</sup>	Closed	Haematuria, difficulty in voiding	Endoscopy	Deroofing, then open surgery
This study	Closed	Weak stream, frequency	Retrograde urethrogram, endoscopy, MRI	Deroofing

high signal intensity [Figure 1]. These findings were consistent with the diagnosis of Cowper's syringocele. Transurethral holmium laser marsupialization of the syringocele was performed [Figure 2]. This was followed by complete recovery with immediate post-operative relief from urinary symptoms. The patient remained symptom-free during a 15-month follow-up period.

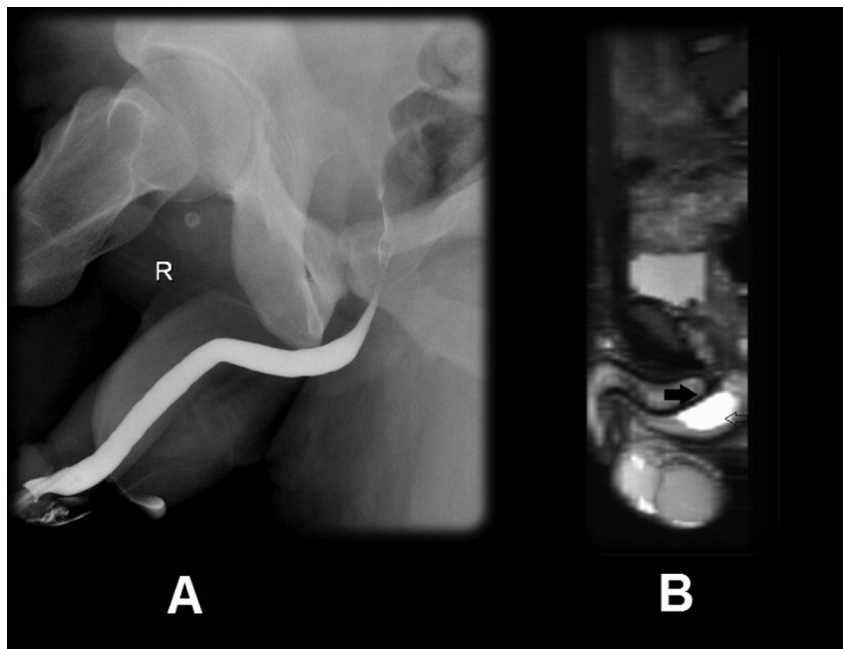
## Discussion

Cystic dilatation of Cowper's gland, originally described in 1881, is known as Cowper's syringocele. It is rare in adults, and the aetiology is not fully understood.<sup>4</sup> It has been suggested that previous infection or trauma with obliteration of the gland's duct can be a possible etiologic factor.<sup>1</sup> Accumulation of mucus or even urine within an

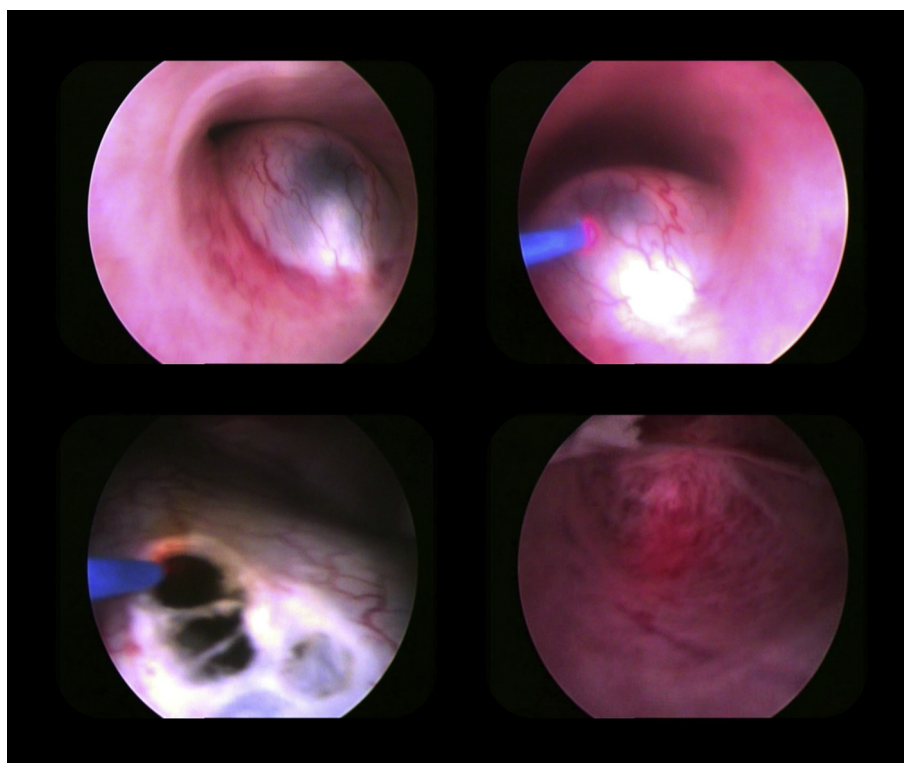
obliterated dilated duct would exacerbate bacterial colonization and recurrent infection.<sup>1,11</sup>

Cowper's syringocele is usually small and asymptomatic, but it becomes symptomatic when enlarged or complicated. Patients with open Cowper's syringocele usually present with storage urinary symptoms, whereas patients with the closed type present with voiding urinary symptoms.<sup>1</sup> Sudden urethral discharge occurs if a closed syringocele ruptures.<sup>1</sup> Other rare presenting symptoms include vague abdominal or perineal pain, incontinence, enuresis and haematuria.<sup>8,12</sup> In this report, the patient had a closed-type syringocele that presented with storage symptoms. This is the third closed-type syringocele among the eight adult cases reported in the literature [Table 1].

Ultrasound has limited diagnostic value for the diagnosis of Cowper's syringocele because of inadequate tissue penetration.<sup>1,11</sup> Retrograde urethrogram or micturating



**Figure 1:** (A) Retrograde urethrogram was normal. (B) Reconstructive sagittal view of a T2-weighted MRI image revealed an oval-shaped, high-intensity cyst indicative of Cowper's syringocele (light arrow) at the posterior aspect of the bulbous urethra (dark arrow).



**Figure 2:** Endoscopic images of the Cowper's syringocele before and after holmium laser marsupialization.

cystourethrogram reveals a pouch or a filling defect in the presence of open or closed type syringocele, respectively.<sup>3,11</sup> Although urethrography is considered an important diagnostic tool, a syringocele can still be present with a normal urethrogram, as noted in this report. Endoscopy is the most reliable method of diagnosis. Flexible cystourethroscopy under local anaesthesia shows a pouch in the posterior wall of the bulbous urethra if open or a bulge if closed. MRI has been occasionally performed.<sup>13</sup> It can assess the degree of deep tissue extension by the lesion, and can be of value in the differential diagnosis with other lesions such as urethral diverticulum, ectopic ureter, periurethral tumour or abscess.<sup>13</sup>

Treatment of Cowper's syringocele by limited endoscopic incision is usually successful, especially in small non-complicated cases.<sup>14</sup> The patient in this report was managed by transurethral marsupialization of the lesion using a holmium laser. Surgical ligation of Cowper's duct through a transperineal approach has been reported in some cases to prevent reflux of urine into the dilated duct and gland.<sup>10</sup>

Unfortunately, Cowper's syringocele in adults can be easily missed because of its non-specific symptoms. Its true incidence is probably higher than currently recognized. For this reason, urethrography and flexible cystourethroscopy should be performed in young adult male patients with persistent lower urinary tract symptoms.

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#### Authors' contribution

AAA is the sole author in this article. He collected the data, conducts literature review and interpreted the result. He also wrote initial and final draft of article, and is responsible for the content and similarity index of the manuscript.

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