CASE REPORT

Case of acute severe postpartum urinary incontinence: an extravesical subsphincteric prolapsed ureterocoele

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SUMMARY

A 32-year-old woman presents to outpatients 10 days postpartum, with symptoms of an intermittent vaginal lump and urinary incontinence. Vaginal examination revealed no demonstrable prolapse or stress incontinence. A swelling in the bladder was noted during an antenatal scan suggesting a ureterocoele. She was referred for pelvic floor physiotherapy in the first instance. Forty-eight hours later, she represented to casualty with discomforting vaginal lump symptoms and continuous urinary incontinence. At this stage on vaginal inspection, there was an evident dusky lump emerging from the urethra with continuous incontinence. An extravesical subsphincteric prolapsed ureterocoele was evident, 5 cm beyond the external urethral meatus. The diagnosis was confirmed with an MRI scan which demonstrated the prolapsed obstructing ureterocoele causing significant left-sided hydronephrosis. The ureterocoele was managed with a cystoscopy and transurethral incision of the ureterocoele under anaesthesia, which facilitated drainage and resolution. At 3-month postoperatively, the patient remains continent and satisfied.

BACKGROUND

Ureterocoeles describe a cystic dilatation of the distal ureter, the reported incidence of which is between 1:5000 and 1:12 000, more commonly occurring in women.¹ They can be categorised according to anatomical location such as intravesical (orthotopic) or extravesical (ectopic), or by the patency of the ureteric orifice itself such as stenotic (obstructing and located within bladder) or sphincteric (distal to urethral sphincter), sphincterostenotic or caecoureterocoele (with tunnelling under the trigone and urethra). They can also be associated with single and duplex systems.

The most significant presentation includes the caecoureterocoele which can cause urethral obstruction and urinary retention in infant girls.¹ In children other presentations include urinary sepsis, voiding difficulty and failure to thrive.¹

Intravesical ureterocoeles although maybe contained within the bladder may also prolapse and extend beyond the bladder neck, however the origin of the ureterocoele is contained within the bladder. Single-system intravesical ureterocoeles are seen in adults and are mostly asymptomatic. Extravesical ureterocoeles originate at the bladder neck or urethra and classically arise from the upper pole moiety of a duplex system and more commonly present in childhood. Bilateral ureterocoeles have also been reported.²

There have been a handful of reports that have described prolapse of a single-system ureterocoele in adults presenting as a vaginal lump. Presentation of a prolapse-obstructing ureterocoele causing constant severe urinary incontinence in the postpartum setting has never been reported and is being described for the first time with our case.

CASE PRESENTATION

A 32-year-old woman presents to outpatients 10 days after a prolonged vaginal delivery, with symptoms of an intermittent vaginal lump and intermittent urinary incontinence. Vaginal examination revealed no demonstrable prolapse or stress incontinence. She was noted to have a cystic swelling in the bladder during a routine antenatal scan suggesting a ureterocoele (figure 1). Symptoms were managed conservatively at this stage and she was referred for pelvic floor physiotherapy in the first instance with further imaging of the ureterocoele planned.

Forty-eight hours later, she represented to the casualty department with significant vaginal lump symptoms and now continuous urinary incontinence. At this stage, she was fitted with a urethral catheter and was discharged home. This failed to resolve the urinary incontinence, and she was seen by the urology team the following day in casualty with ongoing severe urinary incontinence and worsening vaginal discomfort.

At this stage on vaginal inspection there was an evident dusky lump emerging from the urethra with continuous incontinence, which was manually reducible back into the bladder (figure 2). It became evident that this was an extravesical subsphincteric

Figure 1 Routine antenatal ultrasound depiction of maternal bladder showing the cystic swelling.

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Figure 2 Vaginal inspection showing the prolapsed dusky ureterocoele.

prolapse of the ureterocoele, almost 5 cm beyond the external urethral meatus.

The diagnosis was confirmed with an MRI scan which demonstrated the prolapsed obstructing ureterocoele causing significant left-sided hydroureteronephrosis. The serum biochemistry was normal.

INVESTIGATIONS

1. A prenatal ultrasound had demonstrated a cystic swelling within the maternal bladder. This can be seen in [figure 1](#).
2. The T2-weighted MRI scan clearly visualises the prolapsed left ureterocoele causing significant hydroureteronephrosis (see [figure 3](#)).

TREATMENT

Only surgical resolution of this condition was able to offer a definitive solution. Manual decompression was attempted,

Figure 3 T2-weighted MRI scan demonstrating obstructing prolapsed ureterocoele causing hydroureteronephrosis.

Figure 4 Cystoscopic view of the endoscopic incision of the reduced ureterocoele.

with urethral catheterisation, however this recurred within days.

The ureterocoele was managed with an examination under anaesthesia, manual reduction of the ureterocoele back into the bladder, followed by cystoscopy and transurethral incision of the ureterocoele orifice, as described in children, which facilitated decompression, drainage and resolution (see [figures 4 and 5](#)). The dilated ureter was also inspected and found to have a normal mucosal appearance. At 3 months postoperatively, the patient remains continent and satisfied.

OUTCOME AND FOLLOW-UP

The patient made an uncomplicated postoperative recovery and was discharged home the following day. She has been reviewed at 3 months postoperatively and remains completely continent and is highly satisfied with the outcome.

Figure 5 Cystoscopic view of incised ureterocoele orifice.

DISCUSSION

Prolapsed ureteroceles in adults have been described by a handful of reports. These usually are associated with a palpable vulval or vaginal swelling.^{3,4}

This case is the first to describe the presentation of a prolapsed obstructing ureterocoele as causing constant severe urinary incontinence in a postpartum setting. In contrast, the prevalence of urinary incontinence in pregnancy is extremely high at 59% and up to 31% postpartum, however, this is predominantly stress urinary incontinence.⁵

In paediatrics, the diagnosis of a ureterocoele is usually made now during routine antenatal ultrasonography, at which point an associated urinary anomaly would be visualised such as an upper pole cyst which may be dysplastic and later managed with an upper pole heminephrectomy.⁶ Interestingly with our patient, the diagnosis was also made during an antenatal scan; however, this was a diagnosis of an anomaly within the maternal bladder rather than a finding within the fetal bladder. If this observation is noted in future cases, the authors recommend a urology opinion during the antenatal course to evaluate for any pathological maternal hydronephrosis.

Learning points

- ▶ Ureterocoele presentation in adulthood may be more commonly associated with single systems.
- ▶ Not all patients will require treatment however when being considered, treatment priorities remain to preserve renal function, prevent recurrent infection, avoid bladder dysfunction and manage urinary incontinence or voiding dysfunction.
- ▶ Endoscopic incision remains the most commonly reported first-line measure of management before consideration of formal ureteric reimplantation.
- ▶ After management, patients should be followed up initially and risk of future vesicoureteric reflux should be considered.

The treatment aims from a paediatric setting remain to preserve renal function, prevent recurrent infection, avoid bladder dysfunction and manage urinary incontinence.¹ These objectives can also be applied to the adult setting.

Due to the rarity of this condition, evidence for treatment is limited to case series data. A series of 14 adult patients >15 years, 13 of which had treatment with endoscopic incision of the ureterocoele, and 1 had a direct ureteric reimplantation.⁷ Vesicoureteric reflux was noted in five (38.5%) of these patients, but persisted at 6 months in only one. Endoscopic ablation with a Holmium laser has also been reported.⁸ Other small series in adults have reported the presence of stones with the ureterocoele,^{7,9} no stones were identified in this case.

Contributors Both authors were involved in the management of this case described and contributed equally to the manuscript production.

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