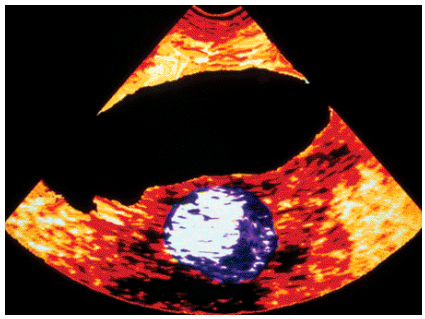
Clinical case review

An older man with problems urinating

Commentary by **PHILLIP STRICKER** MB BS, FRACS

Interrupted urinary flow is usually associated with other symptoms of bladder outlet obstruction rather than being an isolated symptom.



PHOTOLIBRARY

Figure. Coloured ultrasound image of bladder and prostate. Urinary ultrasound can show bladder pathology and the degree of residual urine volume and also any enlargement of the prostate.

Case scenario

Cliff is a 63-year-old man with type 2 diabetes who is being treated for high blood pressure and high lipid levels. He presents to his GP concerned about an ongoing problem that is now occurring every time he urinates. He reports that he starts to urinate with a normal strong stream but the flow suddenly completely stops (like 'turning off the tap') and then, after an interval of about 30 seconds, begins again and continues freely until completion. There is no pain, haematuria, hesitancy, dribbling or nocturia. His prostate is not clinically enlarged and his prostate specific antigen (PSA) level is 0.3 ng/mL.

What is happening to Cliff?

Commentary

The symptom of urine intermittency is usually associated with either bladder outlet obstruction or a weak bladder. Isolated restrictions in urine flow are unusual; they are more commonly associated with other symptoms of outlet obstruction, such as hesitancy and incomplete bladder emptying. Poor flow can be due to obstruction from benign prostatic hyperplasia (BPH), bladder neck obstruction (a common condition of poor relaxation of the bladder neck that occurs at a younger age than BPH and often runs in families), an impacting stone (very rare) or a stricture. It can also be due to a hypocontractile bladder (a fatiguable bladder, which generally occurs in much older patients or in patients with neuropathic bladders – such as those with diabetes) or a neurological cause. Occasionally, a bashful bladder can also cause intermittency, but this classically occurs when a person is passing urine in public.

In this patient, the absence of pain suggests that the intermittency is not likely to be inflammatory in origin, such as prostatitis, a urinary tract infection or a bladder stone. Because the intermittency has been of gradual onset, it is probably due to a bladder neck obstruction but it could be due to a fatiguable bladder or a neurogenic bladder. The patient's PSA value of 0.3 ng/mL tends to exclude prostate cancer and BPH and is more in support of a bladder neck obstruction or a fatiguable bladder. (PSA levels of less than 1 ng/mL are rarely associated with cancer of the prostate.)

A full history and examination needs to be performed. The history should specifically ask about new medications (some medications with anticholinergic or sympathomimetic properties can slow flow), new neurological symptoms and previous urological history (including strictures, injuries, sexually transmitted infections, recurrent prostatitis and urinary stones). The examination should look for retention and should include a neurological examination to exclude neurogenic bladder.

Investigations should include a urinary ultrasound to establish the degree of residual urine volume (a postvoid residual urine volume of less than 100 mL is insignificant) and look for any bladder pathology (Figure), and a midstream specimen of urine test to look for microhaematuria and infection.

Simple uncomplicated urinary obstructive symptoms do not require referral to a specialist and can be managed with a trial of an alpha 1-blocker (tamsulosin or terazosin). The common side effects of alpha 1-blockers are fatigue, postural hypotension and a lax ciliary muscle, and the use of such a drug must be alerted to the eye surgeon should cataract surgery be contemplated. Tamsulosin and terazosin are generally well tolerated.

If there is haematuria, significant urinary retention, other pathology on ultrasound (such as a stone, stricture or bladder tumour) or neurological findings then a referral will be necessary. A urologist may investigate a simple case with a flow study. Urodynamic testing may be needed for cases that are more complex or a cystoscopy if other pathology is suspected.

Conclusion

Urinary intermittency of gradual onset is usually associated with other symptoms of bladder outlet obstruction and its presence in this patient in the absence of other symptoms is rather unusual. Prostate cancer can probably be excluded as the patient's PSA is less than 1 ng/mL. Therapy with an alpha 1-blocker is worth trialling. MT

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