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Short communication

Post-TURP obliterative urethral stricture: Unusual treatment and favourable result

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Abstract
Urethral stricture is a well-known complication after TURP. Most cases present with recurrence of lower urinary tract symptoms. In rare incidences, complete obliteration of the urethra is diagnosed. Management of such cases is challenging and usually associated with a poor outcome. We report a case of post-TURP obliterative urethral stricture that was managed successfully by Holmium laser core-through urethrotomy. On discharge, the patient was continent and voided well.

Introduction

Transurethral resection of the prostate (TURP) is globally being considered as the gold standard surgery for the treatment of benign hyperplasia of the prostate (BPH) [1,2]. The development of urethral stricture after TURP is a well-known late complication [2]. While most cases present with recurrent lower urinary tract symptoms (LUTS), complete obliteration of the urethra after TURP has rarely been described in the literature. This complication is usually managed by end-to-end urethroplasty [1]. We herein present a case of post-TURP urethral stricture managed successfully by Holmium-laser core-through urethrotomy.

The patient was discharged in a catheter-free state without further complications.

Case report

A 70-year-old male patient with persistent LUTS was admitted to a community hospital. On examination, the prostate size was 67 g with median lobe enlargement. Serum PSA was 2.3 ng/ml. The patient had been on combination drug treatment (Tamsulosin + Dutasteride) for 9 months with no symptomatic improvement. As medical management had failed in this patient, he was subjected to monopolar TURP. The 22Fr 3-way Foley's catheter, which had been placed after the intervention, was removed on the second post-operative day, and the patient was able to pass clear urine with marked improvement of the LUTS. However, two months after surgery, he reported a weak urinary stream. He was then re-evaluated in the same hospital and subjected to meatotomy with placement of

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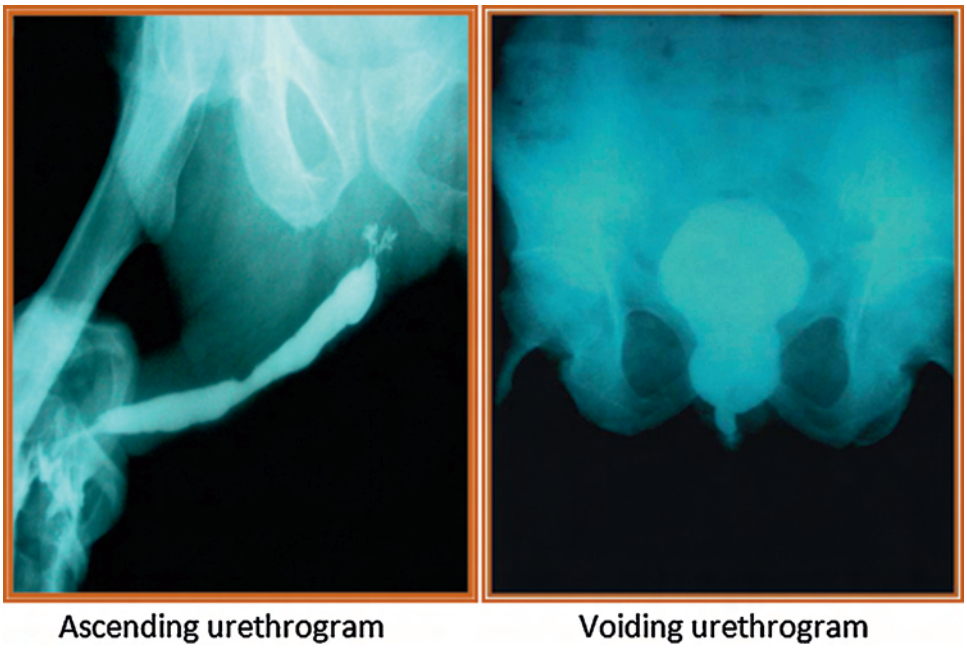

Figure 1 Ascending and voiding urethrogram showing complete obliteration of the proximal bulbar urethra.

a Foley's catheter which was removed after 3 days. Two weeks later, the patient developed acute urinary retention. Since an attempt at transurethral catheter placement failed, ultrasound-guided trocar suprapubic catheterization was resorted to. The patient was then referred to our institute. Evaluation at our department revealed normal renal function, but ascending urethrography showed complete obliteration at the proximal bulbar urethra (Fig. 1), which was confirmed by endoscopy carried out under spinal anaesthesia. Holmium-laser core-through internal urethrotomy was performed using the Lumenis Powersuite 100 Watt laser device and the following technique: A Holmium laser fibre (365 μm) was introduced through a 22Fr cystoscopy sheath after placing a stent pusher. A central hole was created in the fibrotic tissue, and a guide wire was placed into the urinary bladder. Under vision, an incision was made at 12 o'clock, and circumferential ablation of the stricture was performed by laser vaporization (0.8 J and 10 Hz) of the fibrotic tissue. A 6Fr silicon catheter was placed. Three weeks later, the catheter was removed, and the patient underwent voiding cystourethrography (Fig. 2). On discharge, the patient was continent and voided well with a good stream. He was then subjected to follow-up uroflowmetry in 3-month intervals for 12 months with good results (Fig. 3).

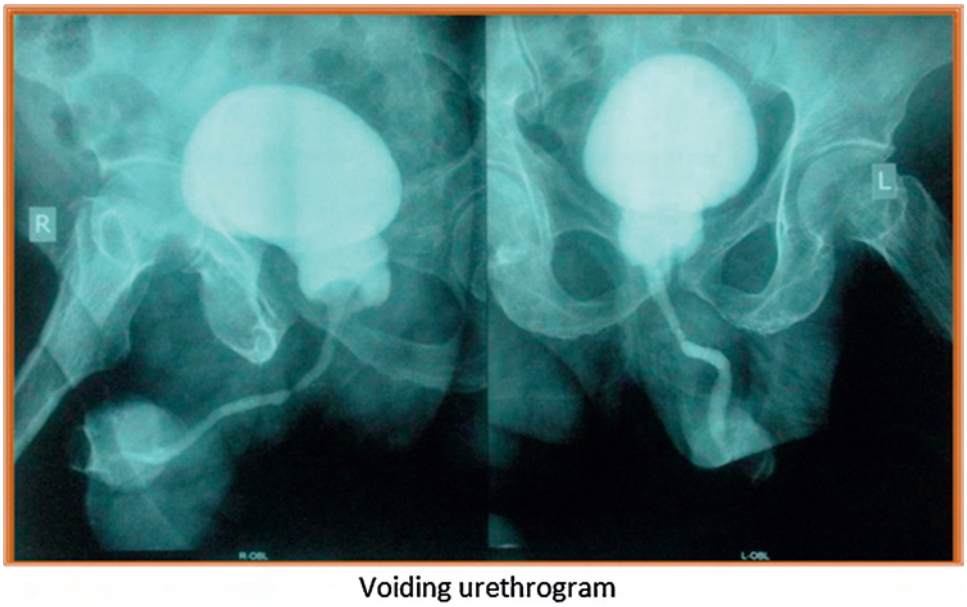

Figure 2 Voiding urethrogram performed 3 weeks after Holmium-laser core-through urethrotomy, showing a urethra with a good calibre.

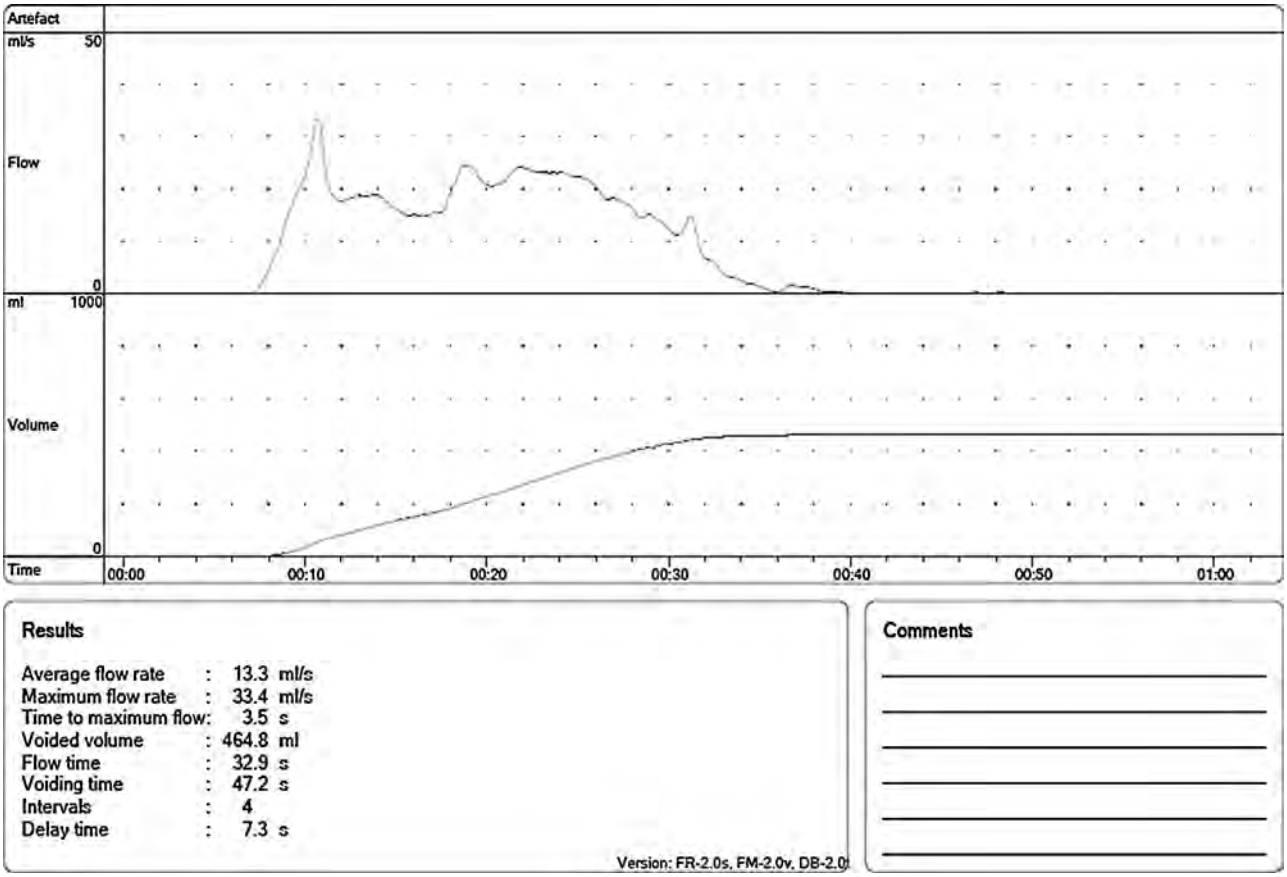

Figure 3 Uroflowmetry 12 months after Holmium-laser core-through urethrotomy.

Discussion

According to the literature, the incidence of urethral stricture after TURP varies between 2.2% and 9.8% [3]. Meatal stenosis may occur when instruments are used which have a larger diameter than the meatus itself. On the other hand, stricture of the bulbar urethra may occur as a consequence of insufficient isolation by the lubricant, causing the monopolar current to leak. In most of the cases, bulbar strictures are managed by endodilatation or internal urethrotomy [3–5]. In the present case, there was complete obliteration of the proximal bulbar urethra. Due to the stricture's proximity to the external sphincter, end-to-end urethroplasty would have involved a high risk of incontinence. Our vast experience of Holmium-laser core-through urethrotomy of post-traumatic obliterative strictures of the bulbomembranous urethra [6] encouraged us to attempt this technique also in the present case. The early results were more satisfactory than expected.

In recent years, the use of lasers for the incision of urethral strictures has become a popular alternative to electrocautery [7]. The ideal laser has the property to entirely vaporize tissue, it causes insignificant peripheral tissue damage, is effortlessly propagated along a fibre and is not captivated by water [6]. The use of various laser types for the management of urethral strictures with satisfactory results has been reported in the literature [7–9]. The obvious advantages of the Holmium laser include a reduced risk of bleeding, precise vaporization of the scar tissue and a shorter hospital stay [10].

Hussain et al. reported on their experience with Holmium laser urethrotomy in 78 patients with post-traumatic urethral strictures [11]. In 2 cases, urethrotomy was not possible due to complete obliteration. In the present case, core-through urethrotomy was performed under guidance, using a metal dilator, with acceptable results.

Conclusion

Holmium-laser core-through urethrotomy is a well described-modality in the management of post-traumatic urethral stricture. It can be used in cases of post-TURP obliterated urethral stricture with gratifying results. It should, however, be performed only by experienced endourologists to achieve satisfactory results.

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