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Case report

Post TURP obliterative urethral stricture: Unusual presentation and favourable result

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KEYWORDS

Urethral stricture;
TURP;
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Abstract

Introduction: Urethral stricture is a well known complication after TURP. Most of the cases present with recurrence of lower urinary tract symptoms. Infrequently, cases of complete obliteration of urethra is diagnosed. Management of these rare cases is always challenging and associated with poor outcome.

We report a case of post TURP obliterative urethral stricture that was managed successfully by holmium laser core through urethroplasty. On discharge patient was continent and voided well.

Conclusion: Holmium laser core through is a useful technique for management of these complicated cases with satisfying result. It should be done by experienced endourologist.

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Introduction

Transurethral resection of prostate (TURP) is globally considered as the gold standard surgery for benign hyperplasia of the prostate [1,2]. The development of urethral stricture after TURP is a well known late complication [2]. Most of the cases presented with recurrence of lower urinary tract symptoms. Complete obliteration of urethra

after TURP is a rare occurrence in literature and managed by end to end urethroplasty in most of the cases [1]. We herein are presenting a case of post TURP urethral stricture that was managed successfully by holmium laser core through urethroplasty and discharged in a catheter free state.

Case summary

A 70-years-old-male patient was presented in a community hospital with persistent LUTS. On evaluation, prostate size was 67 g with median lobe enlargement and serum PSA was 2.3 ng/ml. Patient was on combination drug treatment (Tamsulosin + Dutasteride) since 9 months with no symptomatic improvement. Patient was diagnosed as a case of benign enlargement of the prostate with failed medical management and underwent monopolar TURP (transurethral resection of the prostate). Duration of TURP was 45 min and 22 Fr 3 way Foley's catheter inserted. Foley's catheter was removed on post operative day 2. Patient was passing clear urine with marked improvement in lower urinary tract symptoms. Two months after the

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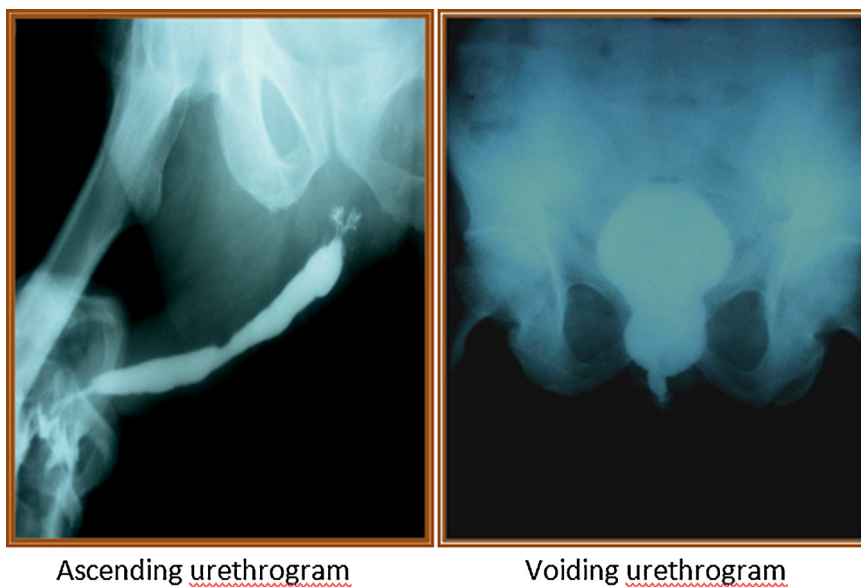


Figure 1 Ascending and voiding urethrogram showing complete obliteration of proximal bulbar urethra.

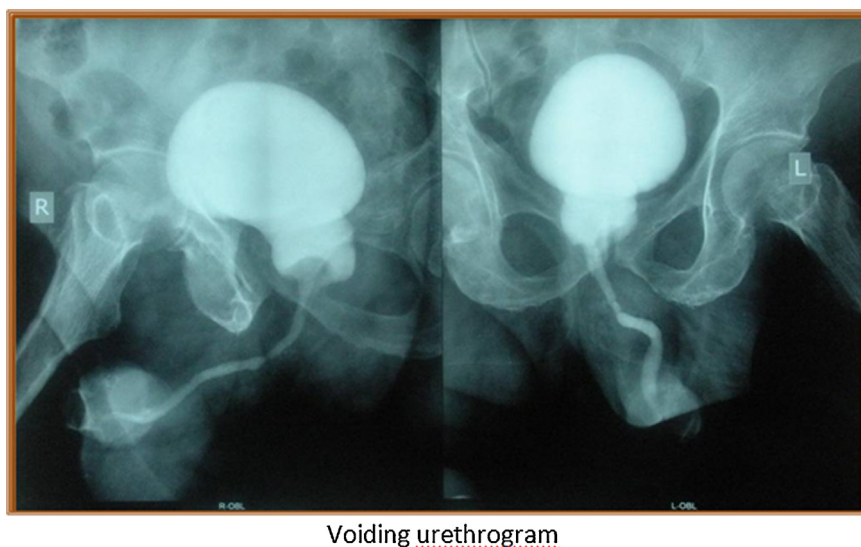


Figure 2 Post holmium laser core through voiding urethrograms after 3 weeks showing good calibre urethra.

surgery he developed weak stream of the urine. Patient was reevaluated in the same hospital and meatotomy was done and Foley's catheter placed. Catheter was removed after 3 days. Patient developed acute retention of urine after 2 weeks. Catheterization tried but could not be negotiated. Ultrasound guided trocar suprapubic catheterization was done. He was then referred to our institute and evaluated in our department. On evaluation renal functions were within normal reference range. Ascending or voiding urethrograms were done. Ascending urethrograms showed complete obliteration at proximal bulbar urethra (Fig. 1). Endoscopic evaluation was done under spinal anaesthesia and found to have complete obliteration in proximal bulbar urethra. Core through internal urethrotomy was done using the holmium laser. Laser machine we used in this case was Lumenis Powersuite 100 W holmium laser. A holmium laser fibre (365 μm) was introduced through a 22 Fr cystoscopy sheath after placing a stent pusher. First we created a central hole in the

fibrotic tissue and negotiated a guide wire in the urinary bladder. Under vision, incision was given at 12 o'clock position and then circumferential ablation of stricture was done by vaporization (0.8 J and 10 Hz) of the fibrotic tissue using holmium laser. 16 Fr silicon catheter was placed. Catheter was removed and voiding cystourethrograms were done after 3 weeks (Fig. 2). Patient was monitored for voiding. Patient voided well with good stream and was continent on discharge. Patient was on routine follow up 3 months since 12 months with uroflowmetry (Fig. 3).

Discussion

Incidence of urethral stricture after TURP varies between 2.2% and 9.8% in various series [3]. Meatal stenosis happens due to incongruously larger diameter of instruments compared to meatal diameter.

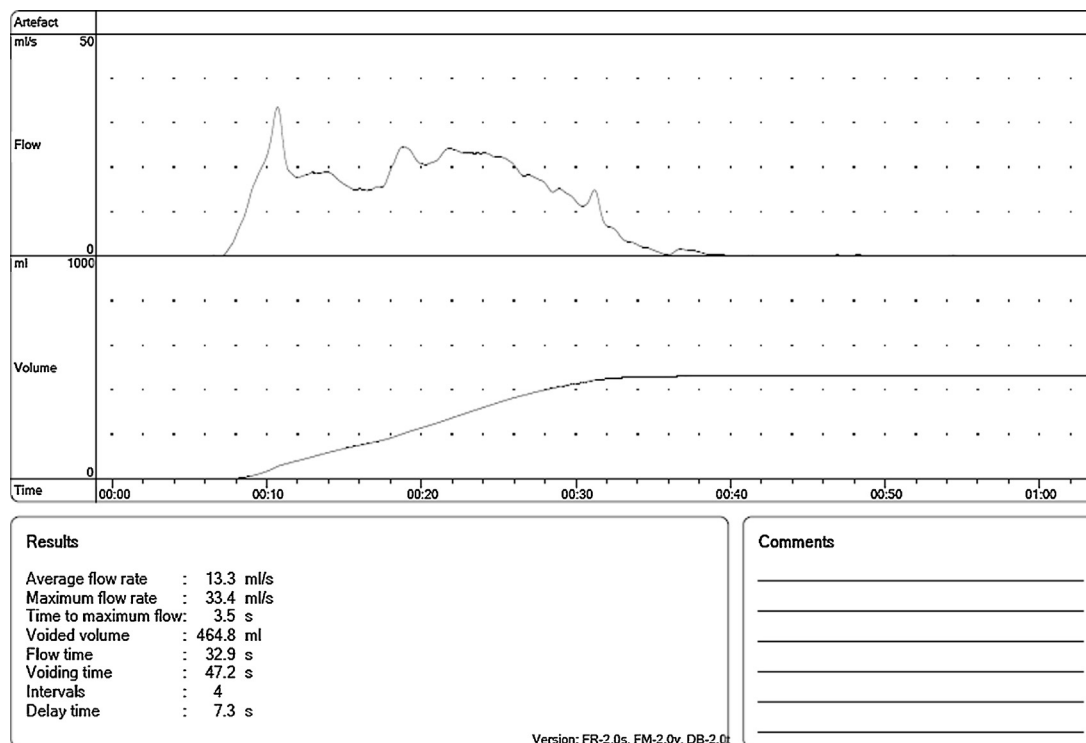


Figure 3 Uroflowmetry 12 months after holmium laser core through.

On the other hand stricture of the bulbar urethra happens due to its insufficient isolation by the lubricant causing the monopolar current to leak. In most of the cases bulbar stricture are managed by endodilation or internal urethrotomy [3–5]. In this case there was complete obliteration of the proximal bulbar urethra. Due to proximity of the stricture with external sphincter the most dreaded complication in our mind was high risk of incontinence in case end to end urethroplasty is done. As we had vast experience of holmium laser core through of post-traumatic obliterative stricture of bulbomembranous urethra [6], we attempted holmium laser core through in this case. The early results were more satisfactory than our expectations.

In the modern era, lasers are used as a well known alternative to electrocautery to incise the urethral stricture [7]. The ideal laser has property to entirely vaporize tissue, exhibits insignificant peripheral tissue damage, is effortlessly propagated along a fibre, and is not captivated by water [6]. Many cases of utilization of various lasers for the management of stricture urethra with acceptable results are mentioned in the literature [7–9]. The obvious advantages of holmium laser are less bleeding, precise vaporization of scar tissue and shorter hospital stay [10].

Hussain et al. shared their experience of holmium laser urethrotomy on 78 patients of post-traumatic stricture urethra [11]. In 2 cases urethrotomy was not possible because of complete obliteration. In the present case we did core through urethroplasty under guidance of metal dilator with acceptable results.

Before conclusion, we can mention that holmium laser core through is a well accepted endoscopic treatment option for such complex

obliterated urethral stricture cases with minimal perioperative complication.

Conclusion

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

References

- [1] Mebust WK, Holtgreve HL, Cockett ATK, Peters PC, Writing committee. Transurethral prostatectomy: immediate and postoperative complications. A cooperative study of 13 participating institutions evaluating 3885 patients. *Journal of Urology* 1989;141:243–7.
- [2] Madersbacher S, Marberger M. Is transurethral resection of the prostate still justified. *BJU International* 1999;83:227–37.
- [3] Hoffmann R. Transurethrale Resektion (TURP) und transurethrale Inzision (TUIP) der Prostata. In: *Endoskopische urologie*. Heidelberg: Springer; 2005. p. 50–84.
- [4] Hartung R, May F. Die transurethrale Elektresektion der Prostata. *Akt Urol* 2002;33:469–82.
- [5] Faul P. Video-TUR: raising the gold standard. *European Urology* 1993;24:256–61.
- [6] Dogra PN, Ansari MS, Gupta NP, Tandon S. Holmium laser core-through urethrotomy for traumatic obliterative strictures of urethra: initial experience. *Urology* 2004;64(August (2)):232–5, discussion 235–6.
- [7] Kamel BA. The use of diode laser for treating urethral strictures. *BJU International* 2001;87:831–3.

- [8] ShanBerg A, Bagholassarian R, Tansey L, Sawyer D. KTP 532 laser in the treatment of urethral strictures. *Urology* 1988;32:517–20.
- [9] Dogra PN, Nabi G. Core through urethrotomy using the neodymium: YAG laser for obliterative urethral strictures after traumatic urethral disruption and or distraction defects: long term outcome. *Journal of Urology* 2002;167:543–6.
- [10] Hussain M. Urethral stricture disease: an old disease with newer treatments. *Journal of the Pakistan Medical Association* 2008;58: 227–8.
- [11] Hussain M, Lal M, Askari SH, Hashmi A, Rizvi S. Holmium laser urethrotomy for treatment of traumatic stricture urethra: a review of 78 patients. *Journal of the Pakistan Medical Association* 2010;60:829.