

End to end urethroplasty post Urethral Uventa stent stricture, the First case report

Jalil Hosseini¹, Ali Tayebi-azar^{2,3}, Amir Hossein Rahavian², Saleh Ghiasy^{2,4}

¹ Professor of Urology, Reconstructive Urology Department, Shohada e Tajrish hospital, Shahid Beheshti Medical Science University, Iran

² Infertility and Reproductive Health Research Center (IRHRC), Shahid Beheshti Medical Science University, Iran

³ Nephrology and Kidney transplant Research Center, Urmia University of Medical Sciences, Urmia, Iran

⁴ Urology Resident, Department of Urology, Shohada-e-Tajrish hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Corresponding Author: Saleh Ghiasy, Infertility and Reproductive Health Research Center (IRHRC), Shahid Beheshti Medical Science University, Iran. Email; Saleh.ghiasy@sbmu.ac.ir. Telfax +98 2122712234, Mob +98 9128198037

Abstract

Introduction: Nowadays there is not any specific technique for repairing the recurrent urethral stricture with retained urethral stent. Case presentation: We report a 49 year-old man with history of end to end urethroplasty 11 years ago who was referred to us with urethral stricture. He refused to undergo urethroplasty again, so the stricture was managed by Uventa stent insertion which failed after six months. Finally the patient underwent end to end urethroplasty with complete excision of the obstructed urethra, stent and surrounding periurethral fibrosis. Discussion and conclusion: End to end urethroplasty post Uventa stent stricture is an available option with good postoperative outcomes.

Keywords

End to End Urethroplasty, urethral strictures, Urethral Uventa Stent, spongiofibrosis

Introduction

In 1988, Milroy et al introduced the urethral stents and their usage in treatment of urethral strictures⁽¹⁾. First of all Urolume stent placement was popular among urologists in the 1990's as a minimally invasive therapy for short bulbar strictures with promising early results in the absence of extensive periurethral fibrosis⁽²⁾. But long-term follow up revealed a high failure rate⁽²⁾. After introduction of Urolume stent, so many different urethral stents like Wallstent⁽³⁾, Self-Expandable, Self-Reinforced Poly-L-Lactic Acid Urethral Stent⁽⁴⁾ were introduced with controversial results. The most important complications of these stents are restenosis, recurrent genitourinary infections, stone encrustation, pain, and sexual complaints⁽⁵⁾. Finally Taewoong medical instrument company in south Korea described Uventa urethral stent in 2016 (Figure 1).

Nowadays there is not a definite management for recurrent urethral stricture with retained urethral stent. Different techniques has been described up to the surgery circumstances and surgeons' preference till now ⁽⁶⁾.

Which of these following two techniques is true in recurrent urethral stricture with retained urethral stent; Buccal mucosal graft urethroplasty or End To End urethroplasty?

This report describes the surgical challenges for management of a patient with a history of end to end urethroplasty followed by stent placement that was complicated with stricture and in-growing tissue, which was successfully re-operated.

Case presentation

A 49 year-old man, known case of urethral stricture due to straddle injury during cycling at the age of 15, underwent end to end urethroplasty 11 years ago. This data was gained throughout patient's history and medical reports. One year after operation, anastomotic site stricture was diagnosed, so he underwent direct vision urethrotomy once and cystoscopy-dilatation for six times. Two years ago, regarding to recurrence of stricture, the patient was suggested to undergo urethroplasty again, but he did not accept; so Uventa urethral stenting was done for him. Six months after stent insertion, the patient was candidated for stent extraction, but it failed after two attempts. Trochar cystostomy was performed. A complete workup including flexible cystoscopy and RUG-VCUG (Figure 2A) was done. . Finally he underwent end to end urethroplasty and excision of stent.

Complete excision of the obstructed urethra containing the stent (Figure 2B) with the surrounding periurethral fibrosis was done followed by one-stage end to end urethroplasty (Figure 2c).

Discussion

In literature, delayed surgery with primary anastomosis is introduced as the best option with high success rate for treatment of post urethroplasty urethral strictures^(7,8), however the patient did not accept to undergo urethroplasty before stenting.

Hussain et al reported that the prevalence of stent related complications is 55%. The most common complications were re-stenosis and post-void dribbling (32%) and recurrent urinary tract infection (27%); whereas perineal pain and dysuria were other complications. In total, 45% of their patients had more than one complication, and 45% of them required operative intervention, and open stent extraction was required in 8.3%⁽²⁾. Previous case series revealed that 33% of patients whom underwent post stent extraction urethroplasty had acceptable outcomes in the short-term follow-up⁽⁹⁾.

Commonly buccal mucosal graft urethroplasty is used for patients with urethral stenosis without obstruction while in our patient, the urethral lumen was blind and because of the length of stricture, we couldn't perform augmented urethroplasty.

The decision about how to perform stent retrieval is difficult and the management of these patients is different and it depends on some factors such as the severity of fibrosis, the length of stricture and the patient concrete topography^(6,10). With respect to which is the most optimal technique to extract the retained stent at the time of a definitive reconstruction, en-block urethral excision was better than urethral preservation and removal⁽⁶⁾. **Conclusion**

To our knowledge we report the first end to end urethroplasty post Uventa stent stricture by complete excision of the obstructed urethra containing the stent and surrounding periurethral fibrosis.

Commonly buccal mucosal graft urethroplasty is used for patients with urethral stenosis without obstruction while in our patient, the urethral lumen was blind and because of the length of stricture, we couldn't perform augmented urethroplasty.

. Our final decision regarding to patient's consent was end to end Urethroplasty. Our experience confirms that a single stage urethroplasty after stricture recurrence in these patients is an available option with significantly improved postoperative clinical and patient-reported outcomes, as well as acceptable success rates.

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Patient Permission

We took a written consent from patient to report his images and information for promotion of knowledge.

Conflicts of Interests

All authors declare any conflicts of interest. **Reference**

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Fig 1: UVENTA™ Urethral Stent(Taewoong medical instrument company,Korea)

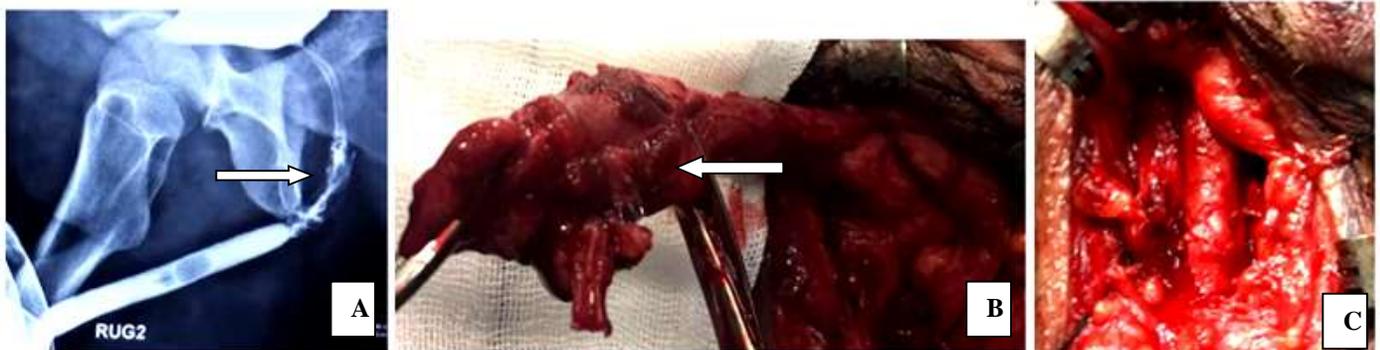


Fig 2: A) urethral stricture at the site of stent in RUG (white arrow),**B)** stent hyperplastic overgrowth (white arrow), **C)** End to End urethroplasty