

# One-stage buccal mucosal urethroplasty for traumatic anterior urethral stricture: a single-center retrospective cohort analysis

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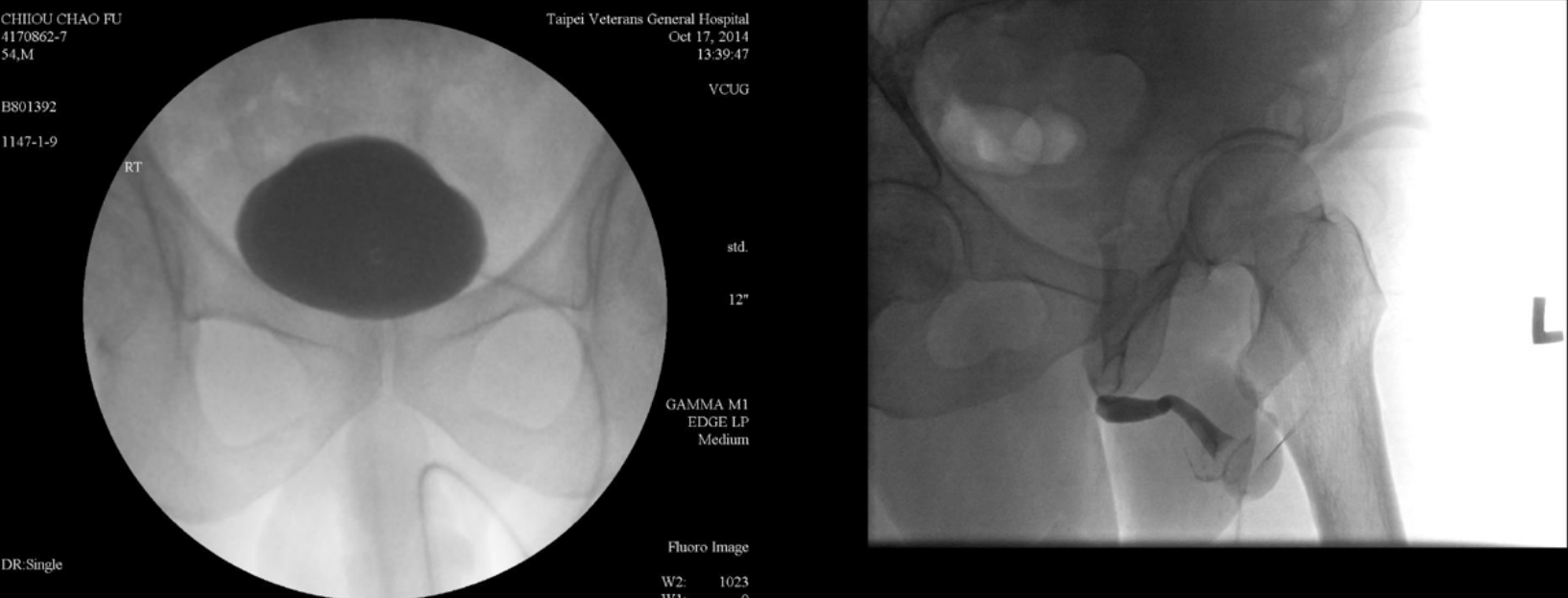
## Introduction

Management of partial or complete traumatic urethral disruption of the posterior urethra poses a challenge. Buccal mucosal grafts(BMG) are the gold standard for substitution urethroplasty. Here, we evaluate the efficacy and complications arising from one-stage BMG with dorsal onlay augmented anastomotic technique for traumatic anterior urethral stricture, examine early surveillance urethroscopy and long term outcomes among urethroplasty patients.

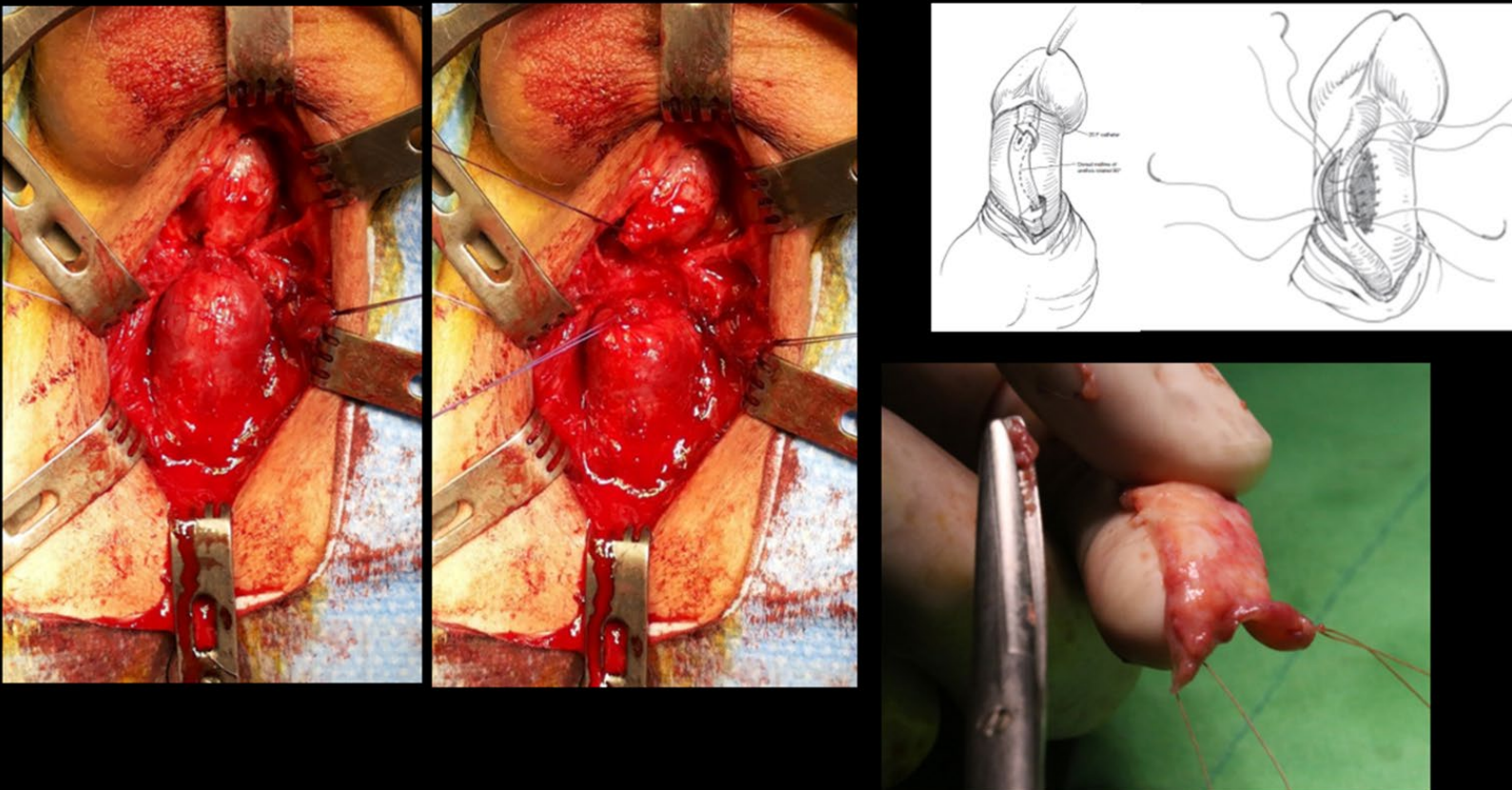
## Materials and methods

From January 2015 to July 2022, male patients with anterior urethral stricture ≥ 2 cm were retrospectively analyzed. All patients underwent one-stage BMG dorsal onlay anastomotic technique by a single surgeon. Preoperative suprapubic catheterization was initially carried out in all patients. Their ages ranged from 18 to 63 years (mean of 42.5 years). Post-operative evaluations including uroflowmetry and early surveillance findings with using a flexible 16.5 Fr cystoscope. The primary outcome was the stricture free survival rate, defined as no stricture recurrence.

Pre-operative image:  
voiding cystourethrography and retrograde urethrography

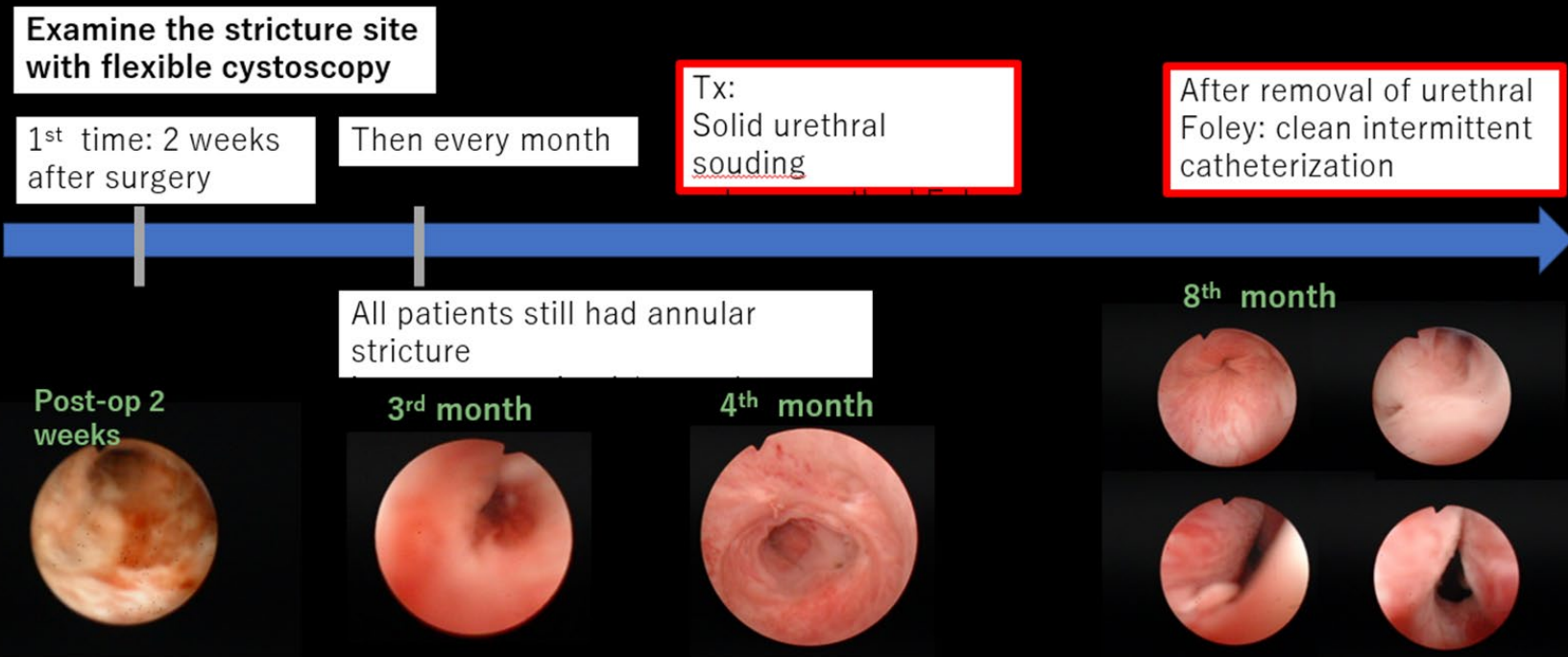


## Urethroplasty with dorsal onlay BMG



reference: Hinman's Atlas of Urologic Surgery Revised Reprint, 4th Edition 2020

## Post operative follow-up



## Results

A total of 10 patients with pinhole or blind end anterior urethral stricture were included. The stricture site was bulbar in 9 and pan-urethral in 1; the mean (range) stricture length was 4.3 (2-6) cm. The mean follow-up period was 32.07 months (range 6-49). Following the anterior urethroplasty, we examine the stricture site with using flexible cystoscope in every 2 weeks and all the patients still had annular stricture in post-operative first month. Two patients had complication with previous buccal mucosa flap grew well but the size shrinkage, then one patient re-do BMG urethroplasty in post-operative first month, another patient re-do in post-operative 3rd month. In our cohort, the post-operative annular stricture could be reconstructed by using the solid sound in every month. The stricture free survival rate was 56% (5/9) after solid sound reconstruction for 12 months.

Patient	Age at repair	Weight (kg)	Stricture length (cm)	Pre-op Qmax (ml/sec)	Blood loss (ml)	Donor site	Post-op catheter (days)	Post-op Qmax (ml/sec)	Follow-up (months)
1	18	77.9	3	-	minimal	Left BM	248	22.6	49.4
2	20	53.3	4	-	50	Left BM	104	4.6	25.4
3	24	75.2	3	-	200	Left BM	311	13.3	48.9
4	25	69.0	2	1	minimal	Left BM	214	10.6	62.2
5	43	79.8	2	-	700	Left BM	104	8.7	21.1
6	49	77.1	3	-	400	Left BM	276	9.9	30.3
7	54	65.0	4	-	600	Left BM	55	6.8	31.1
8	55	62.1	3	-	minimal	Left BM	132	22.5	13.5
9	61	75.0	2	-	minimal	Left BM	18	20.6	32.8
10	63	80.4	2	-	minimal	Left BM	119	8.3	6.0

## Conclusions

Early flexible cystoscopic visualization of the urethroplasty site is a feasible and reliable examination for following post-operative status. Even in difficult cases with traumatic urethral pinhole or blind end anterior urethral stricture, the results of one-stage BMG urethroplasty with the combined solid sound reconstruction demonstrate a decrease in the frequency of recurrence of urethral stricture.

## References

Hinman's Atlas of Urologic Surgery, 4<sup>th</sup> Edition 2020.  
Hillary CJ, Osman NI, Chapple CR. Current trends in urethral stricture management. Asian J Urology. 2014 Oct; 1(1):46-54.  
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## COI Disclosure Information

We have no Conflict of Interest to disclose regarding this presentation

## Research funding

Yin Shu-Tien Foundation Taipei Veterans General Hospital-National Yang Ming Chiao Tung University Excellent Physician Scientists Cultivation Program, No. 113-V-B-119