

# Diagnosis and Treatment of Catheter-Dependent Men After TURP and KTP Laser Ablation (KTPLAP) Failures, #18-8051

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## INTRODUCTION

- Urinary retention and incomplete bladder emptying after TURP and KTPLAP failures may be caused by persistent obstruction and/or impaired bladder contractility
- Aims: compare videourodynamic (VUD) findings and surgical outcomes of TURP and KTPLAP in catheter-dependent men after prostate surgery who were advised that they were not surgical candidates by their prior urologists, but subsequently underwent surgery at our institution

## METHODS

- Retrospective database search of catheter-dependent men s/p prostate surgery to relieve bladder outlet obstruction (BOO)
- Exclusion criteria: complicating comorbidities, neurogenic bladder, temporary catheterization, urethral stricture, incomplete records
- Assessment: cystoscopy, videourodynamics (VUDS), uroflow (Q), postvoid residual urine (PVR)
- Divided into 3 groups:
  - 1) BOO: BOO index (BOOI) > 40 and no detrusor underactivity (DU)
  - 2) DU: Bladder contractility index (BCI) < 100
  - 3) detrusor acontractility (DA)
- Primary outcome measures:
  - Patient Global Impression of Improvement (PGII) Success = PGII < 4
  - Catheter independence
- Secondary outcomes:
  - uroflow (Q)
  - postvoid residual urine (PVR)
- Mann-Whitney and Pearson chi-squared tests

## RESULTS

- 100 catheter-dependent men identified, 29 excluded based on criteria (see methods)
- 24 declined, 47 elected surgery (baseline characteristics in table 1)
- Mean follow-up time: 65 months (range 3 mo - 10 yr)
- Pre-op, DU group had larger bladder capacity and PVR and lower  $Q_{max}$
- BOO and DU patients had similar improvement in Q (surgery results in table 2)
- Small cohort sizes of DU with BOO (n=7) and without BOO (n=32) limits us from drawing statistically significant comparisons
- DU group had greater improvement in PVR

**Table 1.** Baseline characteristics

\*% add up to more than 100% because some patients fall into two categories

n	47
Age	72 ± 9
Intermittent catheter	25 (53%)
Indwelling catheter	22 (47%)
<b>UDS diagnoses*</b>	
DU (±BOO)	39 (83%)
DU (no BOO)	32 (68%)
BOO	15 (32%)
DA	3 (6%)
<b>UDS parameters</b>	
BOOI	50 ± 34
BCI	63 ± 37
Bladder capacity (mL)	710 ± 620
Pre-op $Q_{max}$ (mL/s) (UDS)	1.7 ± 2.1
Pre-op $Q_{max}$ (mL/s) (free-flow)	4.3 ± 9.4
Pre-op PVR (mL)	673 ± 596
Pre-op LUTSS	20/56

**Table 2.** Post-op TURP or KTPLAP.  
P values compare BOO and DU columns. \* < 0.05.  
Groups are not mutually exclusive\*\*

	BOO (no DU)	DU (±BOO)	P value	DA
n	15	39		3
Age	72.0 ± 8.5	71.9 ± 18.4	0.31	64.7
Catheter-free	100%	91%	0.77	67%
Success	93%	85%	0.59	33%
<b>UDS parameters</b>				
BOOI	84 ± 21	40 ± 27	0.00*	NA
BOOI < 30		43%		
BOOI 30 - 40		7%		
BOOI > 40	100%	50%		
BCI	98 ± 32	50 ± 26	0.00*	NA
Bladder capacity (mL)	463 ± 250	774 ± 654	0.01*	1671
Post-op $Q_{max}$ (mL/s)	20.8 ± 10.6	15.9 ± 9.1	0.15	8.7
PVR (mL)	63 ± 58	99 ± 127	0.17	360
Post-op LUTSS	8/56	8/56		

\*\*10 patients are included twice; 7 patients with DU and BOO are included in both groups, and 3 patients with DA are included in two groups (DA and DU)

## CONCLUSIONS

- All BOO patients & 91% DU patients rendered catheter-free
- 93% & 85%, respectively, had a successful subjective outcome (PGII)
- Only 1/3 with acontractile bladder had a successful outcome
- DU is not a major negative prognostic factor for prostate surgery; most patients do well
- Conventional mathematical methods of defining bladder outlet obstruction may be inaccurate in patients with detrusor underactivity

## REFERENCES

Blaivas JG, et al. Surgical treatment of detrusor underactivity. Int Braz J Urol (2017). 43:3:540-548.