

Source of Funding: This research study was conducted without external or institutional funding support

**IP16-20
INITIATION OF DE-NOVO MEDICAL THERAPY FOR OVERACTIVE BLADDER AFTER BLADDER OUTLET PROCEDURES**

Michael Uy, Ann Arbor, MI; John Michael Di Bianco, Gainesville, FL; Sabry Mansour, Lapeer, MI; Stephanie Daignault-Newton, Naji Ayyash, Giulia Ippolito, Mahin Mirza, Ann Arbor, MI; Jay Lonsway, Holland, MI; Mark Bradshaw, Kushbu Narender Singh, Khurshid Ghani, Casey Dauw, Wilson Sui, For the Michigan Urological Surgery Improvement Collaborative, Ann Arbor, MI

INTRODUCTION AND OBJECTIVES: Despite mechanical relief of bladder outlet obstruction from benign prostatic hyperplasia (BPH), some men have persistent or de-novo storage symptoms

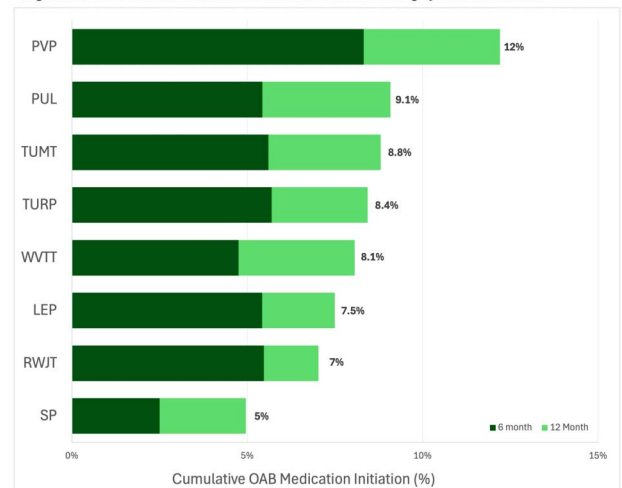
necessitating pharmacologic therapy, resulting in patient dissatisfaction. Identifying clinical or procedural factors that may identify these men preoperatively could better inform shared decision making, especially as the BPH procedural portfolio continues to grow. We sought to report the rates and factors associated with overactive bladder (OAB) prescriptions following BPH surgery.

METHODS: Using Michigan statewide claims data (2017–2023), we identified patients who had BPH surgery without OAB prescriptions (β 3-agonist or anticholinergic) within 90 days preoperatively. Procedures included water vapor thermal therapy (WVTT), transurethral resection of the prostate (TURP), prostatic urethral lift (PUL), laser photovaporization (PVP), simple prostatectomy (SP), robotic waterjet therapy (RWJT), transurethral microwave thermotherapy (TUMT), and laser enucleation of the prostate (LEP). Medication initiation was defined as a prescription between 3 months and 12 months after surgery. Cox proportional hazards models, adjusted for demographic and clinical factors, were used to identify predictors of medication initiation.

RESULTS: 11,926 patients underwent BPH surgery and were OAB medication naive. At 6 months, the initiation rates of OAB medications ranged from 3-8% and by 12 months, ranged from 5-12% (Figure 1). On multivariable analysis, predictors of OAB medication initiation included increasing patient comorbidity as measured by the Elixhauser score (HR 1.02, 95% CI 1.0-1.05). Compared to TURP, only PVP was associated with higher risk of medication initiation (HR 1.5, 95% CI 1.3-1.8). In contrast, preoperative catheterization was associated with a lower risk (HR 0.7, 95% CI 0.6-0.9).

CONCLUSIONS: OAB medication initiation occurs in 5-12% of patients after BPH surgery and varies by procedure type. Compared to TURP, PVP demonstrated the highest rate of medication initiation, indicating a procedure-related risk for postoperative irritative symptoms. Patients who were catheter-dependent prior to surgery were at lower risk, likely reflecting that bladder outlet obstruction, rather than detrusor overactivity, was the predominant underlying pathology.

Figure 1. Cumulative Rate of OAB Medication Initiation After BPH Surgery at 6 and 12 months



Estimates are derived from Kaplan-Meier survival analysis; confidence intervals not shown

Overactive bladder (OAB); Laser photovaporization (PVP); prostatic urethral lift (PUL); transurethral microwave therapy (TUMT); transurethral resection of the prostate (TURP); water vapor thermal therapy (WVTT); laser enucleation of the prostate

Source of Funding: Data was provided by the Michigan Value Collaborative which is funded by BCBSM