



Letter to the editor: Influence of solifenacin on the improvement of storage symptoms in the early period after photoselective vaporization of the prostate

Yu Seob Shin¹ , Sung Chul Kam²

¹Department of Urology, Jeonbuk National University Medical School, and Research Institute of Clinical Medicine of Jeonbuk National University-Biomedical Research Institute of Jeonbuk National University Hospital, Jeonju, ²Department of Urology, Gyeongsang National University Changwon Hospital, Changwon, Korea

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

To the editor:

Several investigators have attempted to find the risk factors associated with persistent urgency and frequency after the relief of bladder outlet obstruction through transurethral prostate surgery (TPS), because persistent storage symptoms reduce the patients' satisfaction after surgery and additional treatment is necessary to control unresolved symptoms [1]. Most of the previous studies considered preoperative detrusor overactivity (DO) as one of the risk factors for persistent storage symptoms after surgery, and there have been various reports about the influence of preoperative DO on the surgical outcomes [2]. Some patients with persistent storage symptoms may benefit from medical therapy as antimuscarinic even after TPS. However, there has been little research as to whether antimuscarinics can alleviate voiding and storage symptoms and other symptoms in the patients during the early post-operative period after TPS. We have carefully read the article published in *Investigative and Clinical Urology* by Kim et al. [3], and his findings are indeed interesting. This article was a randomized, double-blinded, placebo-controlled study including 64 patients; they suggest that anticholinergics have a potential role in improving storage symptoms during the early post-operative period of TPS. Solifenacin reduced the storage symptoms of patients after PVP, although there were no significant differences compared with the storage symptoms of the placebo group [3]. However, in our opin-

ion, storage symptom of early post-operative period of TPS may have been induced by inflammation of the prostatic urethra or edema that occurred during TPS, which could be one of the limitations of the study [4]. Authors have to give a clear explanation about this matter. Despite these limitations, the present study raises awareness to the readers about managing post-operative storage symptoms after TPS.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

AUTHORS' CONTRIBUTIONS

Research conception and design: Yu Seob Shin and Sung Chul Kam. Drafting of the manuscript: Yu Seob Shin. Critical revision of the manuscript: Yu Seob Shin and Sung Chul Kam. Approval of final manuscript: Yu Seob Shin and Sung Chul Kam.

REFERENCES

1. Antunes AA, Iscaife A, Reis ST, Albertini A, Nunes MA, Lucon AM, et al. Can we predict which patients will experience resolution of detrusor overactivity after transurethral resection of the prostate? *J Urol* 2015;193:2028-32.

2. Kageyama S, Watanabe T, Kurita Y, Ushiyama T, Suzuki K, Fujita K. Can persisting detrusor hyperreflexia be predicted after transurethral prostatectomy for benign prostatic hypertrophy? *Neurourol Urodyn* 2000;19:233-40.
3. Kim SJ, Bae WJ, Kim SW. Influence of solifenacin on the improvement of storage symptoms in the early period after photoselective vaporization of the prostate. *Investig Clin Urol* 2019;60:480-7.
4. Shin YS, Zhang LT, You JH, Choi IS, Zhao C, Park JK. Efficacy and safety of tamsulosin hydrochloride 0.2 mg and combination of tamsulosin hydrochloride 0.2 mg plus solifenacin

succinate 5 mg after transurethral resection of the prostate: a prospective, randomized controlled trial. *Clin Interv Aging* 2016;11:1301-7.

Received: 1 January, 2020 • **Accepted:** 2 February, 2020

Corresponding Author: Sung Chul Kam 

Department of Urology, Gyeongsang National University Changwon Hospital, 11 Samjeongja-ro, Seongsan-gu, Changwon 51472, Korea
TEL: +82-55-750-8849, FAX: +82-55-757-4503,
E-mail: kamsungchul@hanmail.net

<https://doi.org/10.4111/icu.2020.61.3.330>

The author's reply:

The outcome of benign prostatic hyperplasia (BPH) surgery depends on the improvement of lower urinary tract symptoms (LUTS). Therefore, it is essential to reduce factors contributing to persistent LUTS after surgery. In general, the aim of the BPH surgeries is to relieve LUTS by removing hypertrophied prostatic tissue. However, some of them showed persistent storage LUTS after surgery. Moreover, previous studies reported that photoselective vaporization of the prostate (PVP) might be associated with more severe storage LUTS compared with other procedures [1,2]. Therefore, we evaluated the influence of the solifenacin on the storage LUTS after PVP.

Shin et al. [3] reported that tamsulosin monotherapy and combination therapy with tamsulosin and solifenacin did not have additional benefits for the early recovery of voiding and storage LUTS after transurethral resection of the prostate. These findings were different from the authors' results that suggested the possible role of solifenacin treatment on the early recovery of storage LUTS after PVP [4]. We agree with the opinion that early storage LUTS may be induced by inflammation of prostatic urethra or edema. Moreover, the short-term follow-up period of the authors' study was considered a limitation because our results did not show an apparent treatment effect.

However, there were some differences compared with the study by Shin et al. [3]. First of all, the inclusion criteria for each study were different. Shin et al. [3] included the patient showing preoperative International Prostate Symptom Score (IPSS) ≥ 8 . The authors' research included the patient post-operative IPSS storage subscore ≥ 5 , overactive bladder symptom score (OABSS) ≥ 5 , OABSS for question 3 ≥ 4 , an increased number of urgency and frequency in a 3-day voiding diary [4]. The authors evaluated LUTS after surgery to select patients; however, Shin et al. [3] included patients based on the preoperative LUTS. Therefore, the patient's characteristics could not be similar between the two studies. Moreover, Shin et al. [3] used the total IPSS score to estimate the patient's LUTS. However, the authors used the IPSS storage subscore and OABSS questionnaire, focusing on storage LUTS for the inclusion criteria. Thus, the authors emphasized the post-operative storage symptoms after BPH surgery than Shin et al. [3], and therefore, these differences might lead to the improvement of storage LUTS.

As we mentioned, there were limitations in the authors' study. Therefore, it is too early to conclude the effect of anticholinergic treatment on the early storage LUTS after BPH surgery. Moreover, a few have been known about persistent storage LUTS after BPH surgery. Therefore, further study about the pathophysiology of persistent storage LUTS as

well as treatment of the storage LUTS after BPH surgery is necessary as BPH surgery has increased in Korea [5].

CONFLICTS OF INTEREST

The authors have nothing to disclose.

REFERENCES

1. Hamann MF, Naumann CM, Seif C, van der Horst C, Jünnemann KP, Braun PM. Functional outcome following photoselective vaporisation of the prostate (PVP): urodynamic findings within 12 months follow-up. *Eur Urol* 2008;54:902-7.
2. Al-Ansari A, Younes N, Sampige VP, Al-Rumaihi K, Ghafouri A, Gul T, et al. GreenLight HPS 120-W laser vaporization versus transurethral resection of the prostate for treatment of benign prostatic hyperplasia: a randomized clinical trial with midterm follow-up. *Eur Urol* 2010;58:349-55.
3. Shin YS, Zhang LT, You JH, Choi IS, Zhao C, Park JK. Efficacy and safety of tamsulosin hydrochloride 0.2 mg and combination of tamsulosin hydrochloride 0.2 mg plus solifenacin succinate 5 mg after transurethral resection of the prostate: a prospective, randomized controlled trial. *Clin Interv Aging* 2016;11:1301-7.
4. Kim SJ, Bae WJ, Kim SW. Influence of solifenacin on the improvement of storage symptoms in the early period after photoselective vaporization of the prostate. *Investig Clin Urol* 2019;60:480-7.
5. Jeon BJ, Chung H, Bae JH, Jung H, Lee JG, Choi H. Analysis of present status for surgery of benign prostatic hyperplasia in Korea using nationwide healthcare system data. *Int Neurourol J* 2019;23:22-9.

Su Jin Kim¹ , Woong Jin Bae^{2,3} , Sae Woong Kim^{2,3} 

¹Department of Urology, Yonsei University Wonju College of Medicine, Wonju, ²Department of Urology, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, ³Catholic Integrative Medicine Research Institute, College of Medicine, The Catholic University of Korea, Seoul, Korea

Received: 8 April, 2020 • **Accepted:** 12 April, 2020

Corresponding Author: Sae Woong Kim 

Department of Urology, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, 222 Banpo-daero, Seocho-gu, Seoul 06591, Korea
TEL: +82-2-2258-6226, FAX: +82-2-599-7839,
E-mail: ksw1227@catholic.ac.kr

<https://doi.org/10.4111/icu.2020.61.3.332>