

Healthcare Benefits of Preoperative Tamsulosin in Patients Before Ureteroscopy

Sir,

We read with interest the paper by Demir *et al.*, which suggests the use of tamsulosin, an alpha-blocker, before ureteroscopy to not only increase the success of the procedure but also reduce postoperative complications and pain.¹ While the use of alpha-blockers has been shown to be beneficial in promoting the passage of ureteric stones in several studies.² Demir *et al.* investigated the effects when tamsulosin was provided preoperatively, expanding on current literature in managing patient outcomes. Here, we comment on the healthcare implications of implementing these proposed conclusions.

Ureteroscopy (URS) is a minimally invasive procedure, which is routinely used for upper urinary tract diseases, particularly kidney stones. Although it is a well-established procedure, it is associated with several complications such as ureteral wall injury and perforation, stone migration, ureteral stent discomfort, urosepsis, hematuria, renal pseudoaneurysm, and in some rare cases even death.³ Alpha-blockers play an important role in medical expulsive therapy (MET) of ureteric stones, especially in cases with ureteric stones <10 mm in size.⁴ The use of alpha-blockers plays a dual role: it aids in the passage of ureteric stones by relaxing ureteric smooth muscle and allowing the insertion of the ureteroscope into ureteral orifice with relative ease, preventing mucosal wall damage.¹

While the complication rates of URS have been decreasing, there is still an overall complication rate of 12-15% in most studies. A recent study by Almusfer *et al.* reported an intraoperative complication rate of 25.35%,⁵ which suggests the need for better alternatives or adjuncts before going through with the procedure. The study performed by Demir *et al.* is one such option; to treat patients with tamsulosin preoperatively, instead of during or after the procedure to lower some of the most common complications associated with the operation. This will not only benefit patients to manage their pain but also healthcare facilities in conserving their resources. Less complications for patients would mean less additional procedures to manage those complications, which will, in turn, conserve much-needed manpower in healthcare facilities, especially in remote areas where there is a lack of resources. Moreover, the reduced intra- and post-operative complications will also shorten the hospital stay, improving both financial and clinical patient outcomes. Lastly, preoperative use of tamsulosin will also help decrease prescription and/or repeated usage of opioids, overall.

In conclusion, we believe that these proposed conclusions hold tremendous potential in decreasing complication rates in patients undergoing URS.

COMPETING INTEREST:

The authors declared no competing interest.

AUTHORS' CONTRIBUTION:

RH, AI: Conception, manuscript writing, and final review.

REFERENCES

- Demir M, Ertas K, Aslan R, Eryilmaz R, Sevim M, Taken K. Does Tamsulosin use before ureteroscopy increase the success of the operation? *J Coll Physicians Surg Pak* 2022; **32(2)**:197-202. doi: 10.29271/jcpsp.2022.02.197.
- Cui Y, Chen J, Zeng F, Liu P, Hu J, Li H, et al. Tamsulosin as a medical expulsive therapy for ureteral stones: A systematic review and meta-analysis of randomised controlled trials. *J Urol* 2019; **201(5)**:950-5. doi: 10.1097/JU.000000000000029.
- De Coninck V, Keller EX, Somani B, Giusti G, Proietti S, Rodriguez-Socarras M, et al. Complications of ureteroscopy: A complete overview. *World J Urol* 2020; **38(9)**:214-66. doi: 10.1007/s00345-019-03012-1.
- Hollingsworth JM, Canales BK, Rogers MAM, Sukumar S, Yan P, Kuntz GM, et al. Alpha blockers for treatment of ureteric stones: Systematic review and meta-analysis. *BMJ* 2016; **355**:i6112. doi: 10.1136/bmj.i6112.
- Almusfer M, Al-Tawri AMJ. Complications of ureteroscopic stone lithotripsy: A multicentre local study. *Hamdan Medical J* 2019; **12(3)**:119.

Rahim Hirani¹ and Ali Issani²

¹Department of Medicine, New York Medical College and Westchester Medical Center, Valhalla, United States

²Department of Emergency Medicine, The Aga Khan University, Karachi, Pakistan

Correspondence to: Dr. Ali Issani, Department of Emergency Medicine, The Aga Khan University, Karachi, Pakistan

E-mail: aliissani12@gmail.com

Received: June 01, 2022; Revised: June 03, 2022;

Accepted: June 05, 2022

DOI: <https://doi.org/10.29271/jcpsp.2023.01.125>

AUTHOR'S REPLY

Sir,

We read your valuable comments with interest. First of all, thank you for your nice comments. Tamsulosin is widely used in MET because of the presumed inhibition of highly expressed alpha receptors in ureteric smooth muscle that cause contractions of the ureter.¹ However, there is very limited information about its use before URS in the literature. In this study, we showed that tamsulosin can be useful not only in MET but also before URS. The cost of urinary system stones on the health system is undeniable.² Therefore, we estimate that tamsulosin

may also have a positive effect on cost. However, prospective studies are needed for this.

ureteric stones <10 mm in adults: A UK perspective. *BJU Int* 2020; **125**(3): 457-66. doi: 10.1111/bju.14938

REFERENCES

1. Aboumarzouk OM, Jones P, Amer T, Kotsiris D, Emiliani E, Somani B, et al. What is the role of α -blockers for medical expulsive therapy? Results from a meta-analysis of 60 randomized trials and over 9500 patients. *Urol* 2018; **119**:5-16. doi: 10.1016/j.urology.2018.03.028.
2. Constanti M, Calvert RC, Thomas K, Dickinson A, Carlisle S. Cost analysis of ureteroscopy (URS) vs extracorporeal shockwave lithotripsy (ESWL) in the management of

Murat Demir

.....
*Department of Medicine, New York Medical College and
Westchester Medical Center, Valhalla, United States*

.....
*Correspondence to: Dr. Murat Demir, Department of
Medicine, New York Medical College and Westchester
Medical Center, Valhalla, United States*

E-mail: urologmurat72@gmail.com
.....

• • • • •