



## Editorial

# The Alpha Blockers and the Ureteral Access Sheaths Placements

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## HIGHLIGHTS

- Alpha-blockers prior to retrograde intrarenal surgery (RIRS) cannot cover the ureteral access sheaths (UAS) placement difficulties.
- The benefit of laser applications with flexible ureteroscopy and RIRS applications.
- The cost-effectiveness of alpha-blockers to boost the spontaneous passage of ureteral stones.

## ARTICLE INFO

Document type: Editorial

Receive Date: 12 September 2019

Accept Date: 13 October 2019

Available online: 13 November 2019

DOI: 10.22034/AU.2020.229122.1019

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## ABSTRACT

The new technique of laser applications with flexible ureteroscopy and retrograde intrarenal surgery (RIRS) applications has improved a lot over the last years. Nowadays, it is possible to effectively accomplish RIRS operations on upper urinary system stones by using devices that yield high-quality images due to developments of digital technology as well as increased deflection ability. Several modifications and suggestions are considered for its improvement. One of them is using  $\alpha$ -blockers to boost the spontaneous passage of ureteral stones led and relaxation and to decrease intramural ureteral resistance in ureteral smooth muscles.

**Keywords:** Retrograde Intrarenal Surgery; Alpha Blockers; Ureteral Access Sheaths

**Editorial:** It was from 2000 that the combination of laser applications with flexible ureteroscopy and retrograde intrarenal surgery (RIRS) applications has improved a lot. Nowadays, it is possible to effectively accomplish RIRS operations on upper urinary system stones by using devices that yield high-quality images due to developments of digital technology as well as increased deflection ability (1). Despite the huge benefits of RIRS, ureteral access sheaths (UAS) that is produced in different diameters ranging between 9.5 and 14 Fr and lengths between 13 and 55 cm can bring some difficulty in the ureter and some uneasiness for the patient. Ureteral access implements include access sheaths, wires, and dilators which are both under debate and upgrading. The safety, effectiveness, and limitations of lithotrites continue to be refined. Stone retrieval devices are moving to be miniaturized, and their cost-effectiveness is at issue (2).

One suggestion to cease such problems of UAS is using the alpha-blockers. Alpha-blockers ( $\alpha$ -blockers) are a class of pharmacological agents that act

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as antagonists on  $\alpha$ -adrenergic receptors ( $\alpha$ -adrenoceptors) (3). Generally,  $\alpha$ -blockers are taken into account arterial blood pressure and central vasomotor control in the autonomic nervous system (4). There are some recent suggestions over the benefit of  $\alpha$ -blockers to facilitate UAS placement. It is suggested that alpha-blockers raise the spontaneous route of ureteral stones and resulted in the reduction of the severity and frequency of pain, which is more evident in distal ureteral stones. The European association of urology (EAU) Urolithiasis Guidelines Panel on Interventional Treatment for Urolithiasis suggested  $\alpha$ -blockers (5).

Contradictory, the study by Erturhan and his colleagues discuss the impact of  $\alpha$ -blockers over the easier placement of UAS in RIRS (6). In his study candidate patients of RIRS due to renal stones received Tamsulosin (0.4 mg/day) two weeks before the operation as the case group contrary to the control group (n=25) underwent the operation without any additional treatment. It was shown that despite the higher successful UAS placement rate, no statistically significant values were reported. Moreover, a multicenter, placebo-controlled, randomized controlled trial and cost-effectiveness analysis of calcium channel blocker (nifedipine) and tamsulosin as  $\alpha$ -blockers, by Pickard et al., indicated that  $\alpha$ -blockers are very unlikely to be cost-effective (7). The use of alpha-blockers before RIRS cannot cover the UAS placement difficulties.

#### **Authors' contributions**

BN was responsible for study conception. FKH wrote the manuscript.

#### **Acknowledgments**

Special thanks to Urology Research Center (URC), Tehran University of Medical Sciences (TUMS), Tehran, Iran.

#### **Conflict of interest**

All authors claim that there is no competing interest.

#### **Funding**

There was no funding.

#### **Ethics statement**

Not applicable.

#### **Data availability**

Not applicable.

#### **Abbreviations**

EAU European association of urology  
RIRS Retrograde intrarenal surgery  
UAS Ureteral access sheaths

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**How to cite this article**

Narouie B, Khatami F. The Alpha Blockers and the Ureteral Access Sheaths Placements.

Translational Research in Urology. 2019 Oct;1(2):58-60.

DOI: 10.22034/au.2020.229122.1019

URL: [http://www.transresurology.com/article\\_108114.html](http://www.transresurology.com/article_108114.html)

