

STONE DISEASE

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doi: 10.1590/S1677-553820090006000012

**The effects of tolterodine extended release and alfuzosin for the treatment of double-j stent-related symptoms**

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J Endourol. 2009; 23: 1913-7

**Aim:** To evaluate the effects of tolterodine extended release (ER) and alfuzosin for the treatment of Double-J stent-related lower urinary tract symptoms.

**Materials and Methods:** Fifty-two patients (33 men and 19 women; mean age 52.0 years) who underwent insertion of a Double-J stent after urological surgery were prospectively randomized into three groups. Group 1 included 20 patients who received 10 mg of alfuzosin, once daily for 6 weeks; group 2 included 20 patients who received 4 mg of tolterodine ER, once daily for 6 weeks; group 3 included 12 patients who received a placebo for the same protocol. All patients completed a validated Ureteral Stent Symptom Questionnaire at 6 weeks after the stent placement.

**Results:** The mean urinary symptom index was 22.1 in group 1, 22.1 in group 2, and 28.1 in the placebo group ( $p = 0.032$ ). The mean pain scores were 8.2, 11.7, and 16.2, respectively ( $p = 0.020$ ). There were no significant differences in urinary symptoms and pain between the alfuzosin and tolterodine ER groups. In addition, there was no significant difference in the general health, work performance, and sexual performance scores among the groups.

**Conclusions:** Tolterodine ER and alfuzosin improve stent-related urinary symptoms and body pain.

**Editorial Comment**

The authors present a heterogeneous group of patients undergoing ureteroscopy, percutaneous nephrolithotomy or ureteroplasty. Indeed, the associated pain, morbidity, incisional discomfort, and risk of urinary or irrigant extravasation vary greatly between these three surgical groups. However, evaluating the primary endpoint at six-weeks would most likely minimize the variability induced by this limitation of the study.

Unfortunately evaluating the primary endpoint at six-weeks introduces a different limitation of the study. Typically ureteral stents are left indwelling for only 5-10 days after an endoscopic urologic procedure, therefore the impact of adjunct medical therapy on pain and urinary symptoms must be evaluated earlier in the postoperative course than was conducted in this study.

The authors do not report their method of randomization or allocation - indeed; there is imbalance in numbers between the treatment and placebo groups. It is not reported as to whether patients and physicians were blinded to the treatment allocation. The authors do not present a power analysis to justify their sample size, yet they do note that the study was terminated early due to difficulty with recruitment.

A study evaluating combination therapy would be a natural extension of this clinical trial.

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