

The AAHKS Clinical Research Award

Prophylactic Tamsulosin Does Not Reduce the Risk of Urinary Retention Following Lower Extremity Arthroplasty: A Double-Blind Randomized Controlled Trial

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Introduction: Postoperative urinary retention (POUR) is a common postoperative problem. Selective alpha-1 adrenergic antagonists, such as tamsulosin, are effective for treating various forms of urinary retention. The purpose of this study was to determine if prophylactic tamsulosin perioperatively reduces the incidence of postoperative POUR.

Methods: Male patients 35 years of age and older undergoing primary THA or TKA or unicompartmental knee arthroplasty at a single academic center from 2015 to 2018 were eligible for inclusion in the study. Patients were randomized to receive either tamsulosin 0.4 mg or placebo daily for five days prior to surgery, the morning of surgery, and the first postoperative day. Postoperatively, POUR was defined as any post-void residual urine volume greater than or equal to 200 mL, estimated urinary retention of greater than or equal to 200 mL in patients unable to void for 6 hours, patients experiencing discomfort or distention and unable to void, and new initiation of tamsulosin during postoperative hospitalization.

Results: 154 patients were enrolled in the study. 38 patients were excluded due to abnormal laboratory values, self-withdrawal, and canceled surgeries. The remaining study participants (N=116) were randomized to the tamsulosin (n=56) or placebo (n=60) groups. There was a total of 42 patients (36.21%) who developed postoperative urinary retention in the entire study cohort, with 23 cases of POUR (38.33%) in the placebo group and 19 (33.92%) in the tamsulosin group (p=0.622). The odds ratio is 0.826, but the risk difference (RD) is 4.41% between the groups.

Conclusions: Prophylactic tamsulosin did not reduce the incidence of urinary retention after lower extremity arthroplasty compared to placebo. The odds ratio indicates an approximately 17% decreased odds of developing POUR in the active medication group, although this was not statistically significant. Tamsulosin does not appear to be effective as a prophylactic measure in reducing POUR.