

THE EFFECTS OF TAMSULOSIN IN THE TREATMENT OF POSTVOID RESIDUAL URINE IN WOMEN AND ITS IMPACT ON SELECTED PARAMETERS IN PRESSURE FLOW STUDY.

Hypothesis / aims of study

To investigate the clinical effect of tamsulosin for the treatment of postvoid residual urine in women with LUTS. The aim of this study is to determine urodynamics parameters evolution after tamsulosin therapy.

Study design, materials and methods

In a prospective longitudinal study, 68 women affected with lower urinary tracts symptoms (LUTS) were treated with tamsulosin. All of the patients had residual urine in urodynamic examination. According to the International Continence Society 100 ml was considered as the upper limit of residual urine. The patients were divided into two groups including the stage of anterior vaginal prolapse (according to the Pelvic Organ Prolapse Quantification system) and the presence of bladder outlet obstruction (BOO) verified in urodynamic investigations. Bladder outlet obstruction was recognized in 36 women. Urodynamic parameters for the diagnosis of BOO included: $Q_{max} < 15$ ml/s and $P_{det\ max}(Q_{max}) > 20$ cm H₂O (in voiding pressure flow study). The qualifying criteria described above were not fulfilled in 32 women with residual urine. In the group with anterior wall vaginal prolapse 20 women were in POPQ ANT 0 group (no anterior wall prolapse were demonstrated), 22 in the I stage of POPQ and 26 in the II stage of POPQ anterior wall prolapse.

Inclusion criteria were age >18 years, reporting voiding symptoms (intermittent, narrow stream, straining to void, feeling of incomplete bladder emptying), bladder storage symptoms (increased daytime urinary frequency, nocturia, sudden urge to urinate), without occurrence of vaginal anterior wall prolapse, with anterior vaginal wall prolapse stage I and stage II.

Exclusion criteria were: neurological disturbances, or systemic diseases that could impact upon bladder voiding, patients undergone obstetric-gynecological operations (abdominal hysterectomy, vaginal reconstructive operations, Caesarean sections, adnexal operations and vaginal hysterectomy), the III and IV stage of vaginal anterior and posterior wall prolapse.

Tamsulosin was administered in a single daily dose of 0.4 mg for at least 90 days. Urodynamic investigations were repeated after 3 months of pharmacotherapy.

Voiding pressure ($P_{det}Q_{max}$ cm H₂O), maximum flow rate (Q_{max} ml/s), abdominal pressure (P_{abd} cm H₂O), intravesical pressure (P_{ves} cm H₂O), postvoid residual (ml) were compared among the BOO, fulfilling and not fulfilling the BOO criteria patients and patients with and without anterior wall prolapse.

All data analyses were performed with the Student's *t* test and *chi-square* test.

P value less than 0,05 was considered as significant.

Results

After therapy there was a significant decrease in median postvoiding residue in group with BOO from 172 to 37 ml and in median from 142,5 to 34 ml in group without diagnosis of BOO in pressure flow study (Figure 1). Also there was a significant decrease in median postvoiding residue in POPQ group (Figure 2). In this study Q_{max} value after treatment increased significantly in both groups. Positive drug worked in 75% of patients, and negative in 25 % of patients. With a BOO diagnosis speed increased significantly in patients responding positively, by an average of 202,2 %. Without BOO diagnosis speed increased significantly in patients responding positively, by an average of 28,6 %. Positive drug worked in 61,8% of patients, and negative in 38,2 % of patients on abdominal pressure. With a BOO diagnosis P_{abd} decreased significantly in patients responding positively, by an average of 36,9 %. Without BOO diagnosis P_{abd} decreased significantly in patients responding positively, by an average of 41,0 %. Positive drug worked in 64,7 % of patients, and negative in 35,3% of patients on detrusor pressure. With BOO diagnosis P_{det} decreased significantly in patients responding positively, by an average of 44,9%. Without BOO diagnosis P_{det} decreased significantly in patients responding positively, by an average of 34,1 %. Positive drug worked in 55,9 % of patients, and negative in 44,1% of patients on vesical pressure. With BOO diagnosis P_{ves} decreased significantly, by an average of 31,7%. Without BOO diagnosis P_{ves} decreased significantly in patients responding positively, by an average of 31,7%.

Interpretation of results

This study demonstrated the positive effect of tamsulosin on postvoiding residue and selected urodynamic parameters. In women with retention of urine, both prolapse and without prolapse the anterior vaginal wall and fulfilling and nor fulfilling the criteria for diagnosis bladder outlet obstruction, tamsulosin significantly reduces the residual urine volume while increasing the maximum urinary flow and reducing the detrusor pressure of the bladder.

Concluding message

The result of the study showed that tamsulosin is a good treatment option for women with residual urine.

Figure 1

Comparison of residual urine in patient fulfilling and not fulfilling the criteria for diagnosis bladder outlet obstruction.

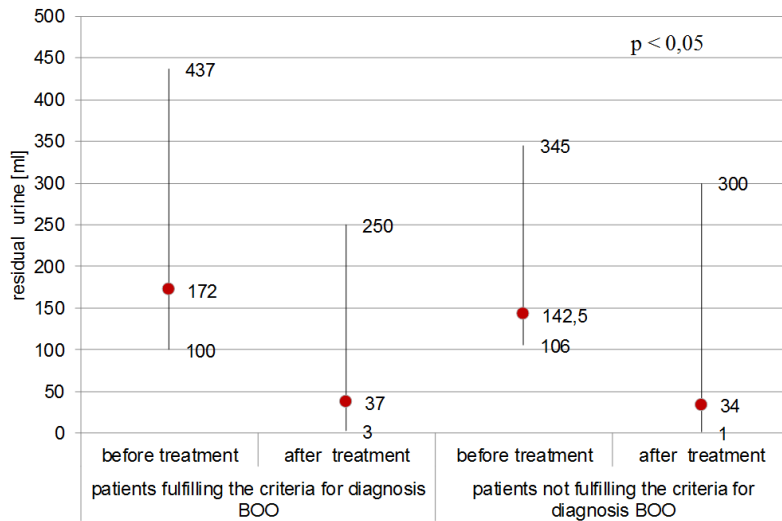
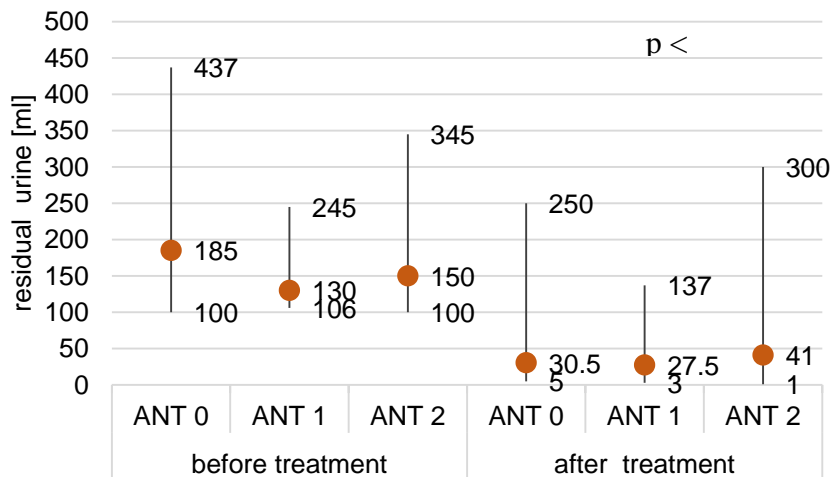


Figure 2

Residual urine before and after treatment with prolapse and without prolapse the anterior vaginal wall.



References

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Disclosures

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