

LOW INCIDENCE OF ORTHOSTATIC HYPOTENSION IN BPH PATIENTS WITH TAMSULOSIN HYDROCHLORIDE

Hypothesis / aims of study

Low urinary tract symptoms (LUTS), which are often caused by benign prostatic hyperplasia (BPH) are common in the aging male. LUTS is contributed to quality of life in aging male. LUTS caused by BPH can be managed pharmacologically with alpha1-adrenoreceptor antagonist. Tamsulosin hydrochloride is alpha1-adrenoreceptor antagonist, it is world widely used in the treatment of BPH symptoms. Tamsulosin hydrochloride acts in prostate gland, prostatic urethra and bladder neck by the antagonizing alpha1-adrenergic receptor. Most of BPH patients are improved their urine flow by using Tamsulosin hydrochloride. Generally, orthostatic hypotension is well known as side effects of alpha1-adrenoreceptor antagonist. Because BPH is common disease in aging male, orthostatic hypotension has been sometimes critical side effect for the patients. If orthostatic hypotension can be anticipated before using alpha1-adrenoreceptor antagonist, it is advisable for patients. BPH patients who are treated with alpha1-adrenoreceptor antagonist are evaluated about the orthostatic hypotension, and they should be managed if they are revealed to orthostatic hypotension. In this study, the risk of orthostatic hypotension was investigated in the BPH patients treated with Tamsulosin hydrochloride.

Study design, materials and methods

Over 64 older-year BPH patients were enrolled in this study. They were divided into 2 groups as follows. Tamsulosin group: forty-three BPH patients were treated with Tamsulosin hydrochloride in dose of 0.2 mg/day. They have been treated with Tamsulosin hydrochloride more than 1 month. Their aged was from 65 to 91 years old with an average of 74.5 years old. Control group: thirty-three BPH patients treated without alpha1-adrenoreceptor antagonist. Their aged was from 65 to 87 years old with an average of 74.7 years old. Both two group patients were excluded the patients who were administered another alpha1-adrenoreceptor antagonist, cerebral infarction and already diagnosed as orthostatic hypotension. Orthostatic test was performed at each group. Orthostatic testing consists of measuring the patient's blood pressure (BP) and pulse rate (PR) after 5min in the supine position, immediately on standing, and again after the patient has been standing for 2-3 min. Patients were measured three times BP and PR three times in the supine position, and were measured three times BP and PR two times on standing. After that, mean of each data were statistically analyzed. Table 1 shows a positive orthostatic test.

Table 1: Criteria used to define a positive orthostatic test

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- (1) Decrease in SBP of ≥ 20 mmHg on standing compared with supine SBP
 - (2) Decrease in DBP of ≥ 10 mmHg on standing compared with supine DBP or a DBP of < 65 mmHg on standing
 - (3) Increase in PR of > 20 bpm on standing or a standing PR of ≥ 100 bpm
 - (4) Presence of clinical symptoms on standing (faintness, lightheadedness, dizziness, spinning, sensation, vertigo or nausea)
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SBP; systolic blood pressure, DBP; diastolic blood pressure, PR; pulse rate

Results

Ten of 43 patients (23.3%) in Tamsulosin group and 11 of 33 patients (33.3%) in control group were positive by orthostatic test. There was no significantly different between Tamsulosin group and control group. Five of 43 patients (11.6%) in Tamsulosin group and 4 of 33 patients (12.1%) in Control group were revealed to orthostatic hypotension. A patient in each group presented with the clinical symptoms in orthostatic test.

Interpretation of results

Because Tamsulosin hydrochloride is a selective alpha1-adrenoreceptor antagonist, the incidence of orthostatic hypotension was no significantly different between Tamsulosin group

and control group. Tamsulosin hydrochloride is considered safety to use for the elderly BPH patients.

Concluding message

Tamsulosin hydrochloride is efficacy and safety for the treatment of voiding symptoms with the BPH patients. However, it is recommended that orthostatic hypotension should be evaluated using the orthostatic test, if the BPH patients will be managed with alpha1-adrenoreceptor antagonist.

[1] Review of orthostatic test on the safety of Tamsulosin, a selective α_{1A} -adrenergic receptor antagonist, shows lack of orthostatic hypotensive effects. The journal of internal medical research 29,236-251 (2001)

[2] Khoury AF and Kaplan NM: Alpha-blocker therapy of hypertension. An unfulfilled promise. Jama 266,394-398 (1991)