

DRUG ADHERENCE IN TREATMENT OF OAB – FACTORS INFLUENCING ADHERENCE RATE AND HOW TO IMPROVE

Hypothesis / aims of study

Antimuscarinic agent is the cornerstone of the medical treatment of overactive bladder (OAB). However, antimuscarinics are known to cause anticholinergic side effects. Numerous evidences have suggested that persistence and adherence in antimuscarinic drug use are poor[1,2]. The most frequently reported reasons are lack of effect, a switch to a new medication and side effects and the patient learning to get by without medication. However, factors influencing the drug persistence are rarely studied. We hypothesized that OAB severity and clinical parameters might have positive effects on the drug adherence. The aim of study was to investigate the predictive factors and how to improve the drug compliance.

Study design, materials and methods

The study was approved by the Research Ethics Committees in our hospital and all patients' informed consent was achieved before study. Four hundred sixteen consecutive patients, who visited the urologic outpatient clinics of a referral hospital for treatment of OAB, were prospectively enrolled in this study. Inclusion criteria included age ≥ 18 years and ≥ 1 -month history of OAB symptoms, including frequent and urgent urination, with or without incontinence. All enrolled patients were asked to complete the overactive bladder symptom score (OABSS) and the modified Indevus urgency severity scale (USS) questionnaires. Uroflowmetry was performed and postvoid residual volume was measured by transabdominal ultrasound. All patients received 5-mg solifenacin daily. The duration of medication was recorded. Patients refractory to antimuscarinic agents were suggested to shift to mirabegron 5mg daily. Logistic linear regression was used to identify the factors of drug adherence.

Results

Two hundred eighty-one men and 135 women were enrolled into the study. The mean patients' age was 70.6 ± 12.4 (range 18–91). The baseline OABSS and USS were 6.39 ± 3.84 and 2.94 ± 1.41 , respectively. The persistence rates were 77.9%, 50.7% and 30.8% after 1, 3 and 6 months, respectively. Male gender ($r=0.11$, $p=0.024$), age ($r=0.22$, $p<0.0001$), OAB wet ($r=0.11$, $p=0.025$), OABSS ($r=0.13$, $p=0.009$), USS ($r=0.11$, $p=0.02$) were predictive factors for drug persistence. One hundred seventy-seven (42.5%) refractory to solifenacin were shifted to mirabegron. After shifting, the mean duration of drug persistence was increased from 6.65 ± 8.10 months to 8.18 ± 8.81 months, $p=0.002$. The USS score was significantly decreased from 1.94 ± 1.67 to 1.61 ± 1.71 , ($p=0.03$).

Interpretation of results

Previous studies have shown that higher OABSSs were associated with improved responsiveness to antimuscarinics. Better therapeutic effects may bring patients more confidence to obey the drug compliance and tolerate the side effects. In addition, the mechanism of antimuscarinic agent and beta-3 agonist for OAB is different. Patients who were refractory to antimuscarinics could benefit from the shifting therapy. This finding might give refractory OAB patients more choices and prevent patients to receive invasive treatment too early.

Concluding message

Male gender, age, OAB severity were favourable predictive factors for antimuscarinic agent adherence. Shifting from antimuscarinic agent to beta-3 agonist was an effective method to improve drug compliance.

References

1. Long-term adherence to antimuscarinic therapy in everyday practice: A Systemic review. Journal of Urology. 2014; 191; 1003-1008.
2. Persistence and compliance with medication management in the treatment of overactive bladder. Investigative & clinical urology. 2016; 57; 84-93.

Disclosures

Funding: none **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** IRB of Tzu Chi General hospital **Helsinki:** Yes **Informed Consent:** Yes