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TROSPIUM CHLORIDE EXTENDED-RELEASE FORMULATION PROVIDES EFFECTIVE RELIEF FOR THE SYMPTOMS OF OVERACTIVE BLADDER, IMPROVES PATIENT-REPORTED QUALITY OF LIFE, AND IS WELL TOLERATED: RESULTS FROM A MULTICENTER, PHASE III, PLACEBO-CONTROLLED STUDY

Hypothesis / aims of study
Trospium chloride, a quaternary amine antimuscarinic agent, is approved for the management of overactive bladder syndrome (OAB). An extended-release, once-daily (QD) formulation has recently been studied. This multicenter trial was conducted to evaluate the safety, efficacy, and tolerability of this new formulation.
Study design, materials and methods
Adults with OAB of at least 6 months' duration with urinary urgency, frequency, and an average of >1 urge urinary incontinence (UUI) episode per day, as assessed by a 3-day bladder diary, were eligible for inclusion in this 12-week, multicenter, parallel-group, double-blind, placebo-controlled trial. Participants were randomized to receive trospium 60 mg QD or placebo for 12 weeks. The primary efficacy variables were the change in the mean number of toilet voids/day and UUI episodes/day, which were assessed using 3-day bladder diary data at Weeks 1, 4, and 12. Changes in urgency severity and quality of life (QoL) were also assessed (using a validated urgency severity score [IUSS] and the Overactive Bladder Questionnaire [OAB-q], respectively) and adverse events were recorded throughout.
Results
In total, 564 subjects participated in the study, of whom 280 were treated with trospium QD and 284 received placebo. The efficacy of trospium QD over placebo was apparent as early as Week 1 of treatment. The reduction from baseline in the mean daily number of toilet voids was significantly greater with trospium QD than placebo at Week 12 (from >12 voids/day to 10.3 voids/day versus 11.1 voids/day, respectively [$p<0.001$]). Trospium QD was also associated with a significant reduction in the number of UUI episodes/day from baseline (>4 episodes/day) to 1.7 episodes/day with trospium QD at Week 12 compared with 2.4 episodes/day with placebo ($p<0.001$). In addition, trospium QD demonstrated significant reductions compared with placebo in urgency severity ($p<0.001$ at Week 12) and improvements in OAB-q health-related QoL total scores ($p=0.001$ at Week 12). At study end, 21.3% of subjects treated with trospium QD had achieved "normalization" (no UUI episodes and a mean of ≤8 toilet voids per day) compared with 11.2% of those who received placebo. The efficacy of trospium QD over placebo was apparent as early as Week 1 of treatment. Trospium QD was well tolerated throughout. The most frequent adverse events were dry mouth (trospium QD 12.9% versus placebo 4.6%) and constipation (7.5% versus 1.8%, respectively). Discontinuations were not associated with antimuscarinic adverse events and no serious adverse events related to treatment were noted. The incidence of central nervous system adverse events was comparable for subjects who received trospium QD versus placebo (dizziness, 0.7% versus 1.4%; headache, 5.4% versus 3.2%, respectively).
Interpretation of results
Trospium QD provided early relief from the symptoms of OAB and significantly improved patient QoL.
Concluding message
Trospium QD is a new, convenient, once-daily formulation of trospium chloride that provides an effective and well tolerated treatment option for patients with OAB.

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CLINICAL TRIAL REGISTRATION: This clinical trial has not yet been registered in a public clinical trials registry.
HUMAN SUBJECTS: This study was approved by the Multicenter study: Vanderbilt University IRB and followed the Declaration of Helsinki Informed consent was obtained from the patients.