Review: anticholinergic drugs improve symptoms but increase dry mouth in adults with overactive bladder syndrome


QUESTION: What are the effects of anticholinergic drugs in adults with overactive bladder syndrome?

Data sources
Studies were identified by searching the Cochrane Incontinence Group trials register (to January 2002) and reference lists of relevant papers.

Study selection
Randomised or quasi-randomised controlled trials in adults with symptomatic diagnosis of overactive bladder syndrome, urodynamics diagnosis of detrusor overactivity, or both, that compared an anticholinergic drug (given to decrease symptoms of overactive bladder) with placebo or no treatment. Studies of darifenacin, ephedrine bromide or carrageenate, dicloxacillin chloride, oxybutynin chloride, propiverine, propantheline bromide, tolterodine, and trospium chloride were included. Studies of terodiline or drugs with less direct anticholinergic effects were excluded.

Data extraction
Data were extracted by 2 independent reviewers for trial quality, participants, interventions, and outcomes.

Main results
51 studies (32 parallel arm studies, n=6124 adults and 19 crossover studies, n=589 adults) were included. All parallel arm studies compared anticholinergic drugs with placebo. In 4 parallel arm studies, intravesical administration was used, and in the remaining studies, drugs were taken orally (range of treatment duration 12 d to 12 wks). The crossover studies (range of treatment duration 1 dose to 6 wks) did not present data in a way that allowed inclusion in a meta-analysis. All but 1 study was double blind. In 13 studies, analysis was by intention to treat.

Meta-analysis of parallel arm studies showed that patients who received anticholinergic drugs were more likely to report an improvement or cure in symptoms and had fewer leakage episodes in 24 hours, fewer micturitions in 24 hours, increased maximum cystometric volume, increased volume at first contraction, and increased residual volume than those who received placebo. However, they were also more likely to report having a dry mouth (table). In 13 parallel arm studies, anticholinergic drugs and placebo did not differ for rates of withdrawal because of adverse effects.

Conclusion
In adults with overactive bladder syndrome, anticholinergic drugs improve symptoms but are associated with increased dry mouth.