



Indian Health Service
IHS National Pharmacy and Therapeutics Committee
Formulary Brief: Urinary Incontinence
and Agents to Treat the Overactive Bladder
August 2013



Background:

The IHS National Pharmacy and Therapeutics (NPTC) reviewed the pathophysiology and agents used for the treatment of urinary incontinence at their May 2013 meeting. Review of the literature revealed only urge incontinence/overactive bladder had any significant benefit from treatment with pharmaceutical agents. Oxybutynin, due to cost, would be best tolerated considering its side effect profile in clients less than 65 years of age. Trospium has been shown to cause the least cognitive impairments and should be first line for patients with or at risk for dementia. The committee **added** oxybutynin and trospium to the IHS National Core Formulary (NCF).

Clinical Review:

Urinary incontinence is both common and costly, affecting roughly 20 million American women and 6 million American men at a cost of 19.5 billion dollars in 2004. Urinary continence relies upon control and coordination of smooth muscle found in the wall of the bladder. Effective storage of urine relies upon detrusor muscle relaxation, which allows the bladder to fill, and contraction of the internal and external sphincters within the bladder neck to retain urine. Voiding relies on contraction of the detrusor muscle and relaxation of the internal and external sphincters. Of the 5 kinds of chronic urinary incontinence (Stress, Urge, Mixed, Overflow, and Functional), only Urge incontinence due to bladder overactivity (uninhibited detrusor muscle contractions), shows any benefit from treatment with pharmaceutical/ antimuscarinic agents.

Efficacy:

Antimuscarinic/anticholinergic agents work by suppressing or eliminating unwanted detrusor contractions and relax the bladder, thus decreasing the urge and urgency to void, increasing bladder capacity and decreasing micturition frequency. Efficacy studies looked at individual agents vs. placebo and active controls. DERP 2009, AHRQ, VA class review 2011, and European Association of Urology Guidelines 2012 reviewed the literature and came up with similar consensus statements: All anticholinergic medications were more effective than placebo in achievement of continence and improving urgency, but the degree of benefit was low for all drugs (<20%). Drugs for Urge incontinence demonstrated similar effectiveness, and compliance rates are low due to the side effect profile.

Side Effects: Anticholinergic:

The most frequent side effects are anticholinergic with dry eyes, constipation and blurred vision. Cognitive side effects were noted in the elderly and there is an adverse interaction with cholinesterase inhibitors.

Contraindications to antimuscarinic agents:

1. Patients with urinary retention.
2. Patients with gastric retention.
3. Patients with uncontrolled narrow-angle glaucoma.
4. Patients at risk for 1-3.
5. Patients with hypersensitivity to the products.

Oxybutynin is also contraindicated in patients with severe GI motility conditions.

Recommendations:

1. Offer oxybutynin as first line in patients less than 65 years old without cognitive deficits.
2. Do an objective assessment of mental functioning before treating patients whose cognitive function may be at risk.
3. Check mental function of patients on antimuscarinic medication.

4. Offer and encourage early review of efficacy and side effects of patients on antimuscarinics at less than 30 days to encourage compliance
5. Trospium has been shown to cause the least cognitive impairment and should be first line in patients with or at risk for dementia.

If you have any questions regarding this document, please contact the NPTC at nptc1@ihs.gov.

References:

1. Anger JT, Saigal CS, et. al. Increasing costs of urinary incontinence among female Medicare beneficiaries. *J Urol*. July, 2006; 176(1): 247-251.
2. Morrison A, Levy R. Fraction of nursing home admissions attributable to urinary incontinence. *Value in Health*. July-Aug, 2006; 9(4): 272-274.
3. Khandelwal C, Kistler C. Diagnosis of urinary incontinence. *Amer Fam Physician*. 2013 Apr 15; 87(8): 543-550.
4. Resnick NM, Yalla SV. Current concepts: management of urinary incontinence in the elderly. *NEJM*. 1985 Sept 26; 313(13): 800-805.
5. Brown JS, Bradley CS, Subak LL, et. al. The sensitivity and specificity of a simple test to distinguish between urge and stress urinary incontinence. *Ann Intern Med*. 2006;144(10): 716-724.
6. Lucas MG, Bedretdinova, D, et. Al. Guidelines on urinary incontinence. European Assoc of Urology. 2012.
7. Anticholinergic agents for overactive bladder syndrome. VA Class Review, 2011.