Pharmacology for Urinary Incontinence in Women

Current Concepts in Drug Therapy
University of Washington
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Presentation Goals

Medications
- Review anti-muscarinic medications
  - Focus on newer meds
- Introduce beta-adrenergic medications

A 60 year-old woman with urge incontinence has pursued behavioral modification and pelvic floor training but continues to be bothered by frequent episodes of incontinence and is interested in pharmacologic treatment. She has no other medical problems. She has heard these medications can be expensive and is worried about the potential cost.

Question 1

Which medication would be most appropriate to start for her?

a. Oxybutynin (Ditropan XL) 30mg po daily
b. Fesoterodine (Toviaz) 4mg po daily
c. Tolterodine (Detrol LA) 2mg po daily
d. Mirabegron (Myrbetriq) 25mg po daily
Which medication would be appropriate to start for her?

a. Oxybutynin (Ditropan XL) 30mg po daily
b. Fesoterodine (Toviaz) 4mg po daily
c. Tolterodine (Detrol LA) 2mg po daily
d. Mirabegron (Myrbetriq) 25mg po daily

Primary Outcomes in Most Studies:
- Complete Continence = NO incontinent episodes
- Clinically Important Improvement = reduction in frequency of incontinent episodes by at least 50%
- Quality of Life

All Anti-Muscarinics:
- Many large, well-done RCTs
- BEST effects reduced incontinence or have clinically important improvement in 20% of women
- NO big differences in efficacy across meds
**Anti-muscarinics**

**An Approach**

- Start low
- Start Cheap
- Side Effects?
- Specific Cases

**Answer 1**

Which medication would be appropriate to start for her?

- a. Oxybutynin (Ditropan XL) 30mg po daily
- b. Fesoterodine (Toviaz) 4mg po daily
- c. **Tolterodine (Detrol LA) 2mg po daily**
- d. Mirabegron (Myrbetriq) 25mg po daily

**Question 2**

A 55 year-old woman with urge incontinence as well as atrial fibrillation, depression, and diabetes on Metformin, Fluoxetine, and Metoprolol is interested in starting a medication for her incontinence.

**Question 2**

Which medication would be most appropriate to start for her?

- a. Darifenac (Enablex) 7.5mg po daily
- b. Trospium (Sanctura) 20 mg po daily
- c. **Tolterodine (Detrol LA) 2mg po daily**
- d. Solifenacin (Vesicare) 25mg po daily
Which medication would be most appropriate to start for her?

a. Darifenacin (Enablex) 7.5mg po daily
b. Trospium (Sanctura) 20 mg po daily
c. Tolterodine (Detrol LA) 2mg po daily
d. Solifenacin (Vesicare) 25mg po daily

Answer 2
A 65 year-old woman with mixed stress/urge incontinence and no other co-morbidities was previously on Trospium without improvement. She is now interested in trying a different medication.

**Question 3**
Which medication would be most appropriate to switch to for her?

- a. Oxybutynin ( Ditropan) 5mg po daily
- b. Trospium (Sanctura) 60mg po daily
- c. Darifenacin (Enablex) 7.5mg po daily
- d. Solifenacin (Vesicare) 25mg po daily

**Answer 3**
Which medication would be most appropriate to start for her?

- a. Oxybutynin (Ditropan) 5mg po daily
- b. Trospium (Sanctura) 60mg po daily
- c. Darifenacin (Enablex) 7.5mg po daily
- d. Solifenacin (Vesicare) 25mg po daily
A 60 year-old woman with early Alzheimer’s disease on Donepezil is very bothered by urge incontinence and wants to start a medication.

Which medication would be most appropriate to start for her?

a. Mirabegron (Myrbetriq) 25mg po daily
b. Solabegron mg po daily
c. Oxybutynin (Ditropan) 5mg po daily
d. Trospium (Sanctura) 60mg po daily
Start low
Caution in:
- Cognitive Impairment
- Cholinesterase Inhibitors
- Combination with other
  strong anti-cholinergics
- Severe Hepatic Failure
- Dialysis

Anti-muscarinics

First-Line Therapy

Beta-adrenergics

Beta-3-agonists

Mirabegron

Solabegron

Beta-3-agonists

Mirabegron

Solabegron

Data
- Similar to Anti-muscarinics
- About 20% response

Side Effects
- Increase in BP
- Headache
- Dizziness
- Tachycardia

NO: dry mouth, blurry vision

Mechanism of Action
- Beta-3 agonism
- Relaxes detrusor muscle

Not yet approved in US
Which medication would be most appropriate to start for her?

a. **Mirabegron (Myrbetriq) 25mg po daily**

b. **Solabegron mg po daily**

c. **Oxybutynin (Ditropan) 5mg po daily**

d. **Trospium (Sanctura) 60mg po daily**

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**References**

- Goode PS. Incontinence in Older Women. JAMA 2010;303:2172.