Drugs for Urgency Incontinence, Frequency and Overactive Bladder Syndrome

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Background

Urinary incontinence (UI) is the complaint of any involuntary loss of urine. UI can have a significant detrimental impact on the physical, psychological and social wellbeing of a person. In general, UI is approximately twice as common in women as in men, and is more common in older than younger persons. There are three main subtypes of UI:

- **Stress urinary incontinence**: involuntary leakage on effort or exertion, or on sneezing or coughing.
- **Urgency incontinence**: involuntary leakage accompanied by, or immediately preceded by, a sudden compelling desire to pass urine which is difficult to defer (urgency).
- **Mixed urinary incontinence**: involuntary leakage associated with both urgency and also physical stress (exertion, effort, sneezing, or coughing). Mixed UI may be stress or urge dominant.
- **Urinary frequency** usually denotes ≥ 8 micturitions per day during waking hours, though may vary depending on fluid intake, hours of sleep etc.

Overactive bladder (OAB) syndrome is defined as urgency, usually with increased frequency and nocturia, which may occur with or without urgency Incontinence. Troublesome **lower urinary tract symptoms (LUTS)** occur in up to 30% of men over the age of 65 years, and are categorised into voiding, storage or post-micturition symptoms.

Supervised bladder training, pelvic floor exercises, advice on fluid and caffeine intake, and lifestyle advice may all positively impact UI, OAB and LUTS. Pharmacological treatment may also help to improve the symptoms. Antimuscarinics and the beta$_3$ agonist mirabegron are the available drug treatment options for UI, frequency and OAB.

The Preferred Drug for UI, frequency & OAB is TOLTERODINE ER (extended-release).

Tolterodine ER

Dose

Adults (≥18 years) including the elderly: **4 mg once daily**

Where there is significant renal impairment (GFR ≤30 ml/min) or hepatic impairment, reduce the dose to 2 mg daily. Swallow whole with or without food.

The need for continuing antimuscarinic drug therapy should be reviewed every 4–6 weeks until symptoms stabilise, and then every 6–12 months thereafter.

Cautions & Contraindications

- Urinary retention or significant bladder outflow obstruction at risk of urinary retention
- Uncontrolled narrow angle ('closed angle') glaucoma
- Myasthenia Gravis
- Ulcerative colitis, toxic megacolon and gastrointestinal obstructive disorders, e.g. pyloric stenosis
- Risk factors for QT interval prolongation, e.g. congenital QT prolongation, electrolyte disturbances (hypokalaemia, hypomagnesaemia, hypocalcaemia), bradycardia or pre-existing cardiac disease (e.g. cardiomyopathy, arrhythmia, congestive heart failure)
- Concomitant administration with drugs known to prolong the QT interval, e.g. anti-arrhythmic drugs (e.g. amiodarone, sotalol)

Practice Points - Urinary Incontinence, Frequency and Overactive Bladder Syndrome

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Tips for Treating UI, Frequency and OAB

Categorise: Treat UI on the basis of category, i.e. where there is mixed UI, treat towards the predominant symptom (see categories overleaf) . The use of a bladder diary (or urinary frequency volume chart in men with LUTS) to record symptoms helps in the diagnosis and classification of UI/OAB and can be used to measure improvement on treatment.

Considerations: When starting drug treatment, always take into account factors such as:

- **Patient** – age, frailty, pre-existing contraindications/cautions to drug treatment.
- **Concomitant medications** – check for pharmacodynamic and pharmacokinetic drug interactions.
- **Risk of adverse effects** – some patients may be at greater risk due to age, pre-existing conditions etc.

Discuss with the patient:

- **Expectations of treatment** – set realistic targets. Remember, antimuscarinics and mirabegron treat only the symptoms of UI, frequency and OAB; they are not curative. The benefits of drug treatment may not be seen until 4 weeks after commencing drug treatment .
- The **likelihood of some adverse effects**. Adverse effects such as dry mouth and/or constipation are quite common with tolterodine and antimuscarinics and may be an indication that the drug is beginning to exert an effect. However, some patients may find these adverse effects intolerable.

Monitor for effect:

- Where there is **no/inadequate improvement** in symptoms after at least 4 weeks of treatment, or where **adverse effects are intolerable**, consider switching to an alternative antimuscarinic or mirabegron.
- Review the need for continued treatment every 4-6 weeks until symptoms stabilise and every 6-12 months thereafter (more frequently in elderly patients ≥ 75 years).

The preferred drug for UI, frequency and OAB is **Tolterodine ER**

Refer **women** with UI who have the following symptoms for specialist review:

- Microscopic haematuria (in women ≥ 50 years) or visible haematuria
- Recurrent or persistent UTI in women ≥ 40 years
- Suspected malignant mass of the urinary tract
- Visible symptomatic or palpable bladder after voiding

Refer **men** with LUTS for specialist review if they have:

- Recurrent/persistent UTI
- Urinary retention
- Suspected renal impairment
- Suspected urological cancer

Lifestyle considerations

Caffeine – reducing intake may improve symptoms of urgency and frequency. Suggest limiting caffeine intake.
Fluid intake – while the evidence for fluid restriction is conflicting, it is generally agreed that daily urine output should not be < 1,500 ml and should not exceed 3,000 ml.
Weight – In women, obesity appears to confer a 4-fold increase in the risk of UI. Encourage overweight patients with UI/OAB to lose weight (at least 5%).
Physical exercise – moderate physical exercise is associated with lower rates of UI in middle-aged and older women.