Frail Elderly and Urinary incontinence

Dr Vikky Morris – Musgrove Park Hospital, Somerset.
Disclosures

• Speaker – Pfizer and Astellas
• Unpaid work with SCA
Older Person and Dementia Continence Clinic
Aug 2012- Aug 2014

Joint Clinic – Janet Garland – Continence Nurse advisor
Vikky Morris – geriatrician with an interest in continence
Thanks to Astellas funding for Janet

• Aug-Dec 2012 – 4 clinics.
  – 10 new 4 FU (9 female, 1 male)
  – Age – mean 79 median 82 (oldest 88, youngest 65)
• Jan 2013-Dec 2013 – 11 clinics (1 cancelled, 1 Janet alone)
  – 21 new 31 FU (13 female, 8 male)
  – Age – mean 78 median 79 (oldest 92, youngest 48)
• Jan 2014-Aug 2014 – 6.5 clinics (1 cancelled/1 short)
  – 13 new 20 FU (10 female, 3 male)
  – Age – mean 81 median 82 (oldest 89, youngest 64)

• Total – 44 new (32 F 12 M) 55 FU
• 45 mins (new) and 20 mins FU
Co-morbidities

- RIP - 6
- Heart failure – 13 (F-8 M-5)
- Parkinson’s disease – 11 (F-6 M-5) (1 MSA – F)
- CVE – 7 (F-5 M-2)
- Diabetes (type II) – 10 (F-6 M-4)
- Cognitive impairment or dementia – 8 (F-5 M-3)
- Recent #NOF – 4(F-3 M-1)
- Prostate Ca - 2

Common presentations

- Nocturia *
- Nocturnal polyuria*
- OAB wet
- OAB dry
- Nocturnal enuresis
- Recurrent UTIs
Food for thought
Mixed aetiology
Maintaining continence\(^1\)

- Neural circuitry is complex and highly distributed:
  - Many levels of the brain
  - Spinal cord
  - Peripheral nervous system
  - Multiple neurotransmitters

- It has storage and elimination phases.

- It is a voluntary process and depends on learned behaviour.
MANAGEMENT OF URINARY INCONTINENCE IN FRAIL OLDER MEN & WOMEN

UI associated with:
• Pain
• Haematuria
• Recurrent symptomatic UTI
• Pelvic mass
• Pelvic/LUT surgery
• Prolapse beyond introitus (women)
• Suspected fistula

Assess, treat and reassess potentially treatable conditions, including relevant comorbidities and ADLs (see text)
Assess QoL, desire for Rx, goals of Rx, pt & caregiver preferences
Targeted physical examination (cognition, mobility, neurological and digital rectal examination)
Urinalysis
Consider bladder diary or wet checks, especially if nocturia is present
PVR in specific patients (see text)

Delirium
Infection
Pharmaceuticals
Psychological
Excess urine output
Reduced mobility
Stool impaction
(and other factors)
Avoid treatment of asymptomatic bacteriuria

Assess, treat and reassess potentially treatable conditions

Urgency UI*
Significant PVR*
Stress UI*

Lifestyle interventions
Behavioral therapies
Consider trial of antimuscarinic drugs

Treat constipation
Review medications
Consider trial of alpha-blocker (men)
Catheter drainage if PVR 200-500 ml, then reassess (see text)

Lifestyle interventions
Behavioral therapies
(See text)

If insufficient improvement, reassess for and treat contributing comorbidity +/- functional impairment

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If continued insufficient improvement, or severe associated symptoms are present, consider specialist referral as appropriate per patient preferences and comorbidity (see text)

Other*
History and symptoms (LUTS)

- Stress incontinence
  - leak on coughing/laughing/sneezing

- OAB
  - Frequency (voiding >8x per day)
  - Nocturia (getting up >1x at night)
  - Urgency – rushing to get to the loo
  - Urge incontinence (not making it)

- BOO
  - Hesitancy
  - Poor stream
  - Incomplete bladder emptying

- Recurrent UTIs

- Nocturnal polyuria – producing greater than 1/3 urine at night.
Ageing LUT Physiology

- Bladder capacity
- Sensation of filling
- Speed of contraction of detrusor
- Pelvic floor muscle bulk & tone (in parous)
- Oestrogen in women
- Urethral closure pressure in women
- Urinary flow rate

- Urinary frequency
- Prevalence of post void residual volumes
- Involuntary detrusor contractions
- Nighttime production of urine
  ADH usually up at night but not in older individuals.
  ANP usually down at night but goes up in older individuals causing diuresis
Cognitive impairment

- Increasing WMH – increasing urinary symptoms esp frontal lobe.
Polypharmacy

- Diuretics
- Alpha blockers
- Calcium Channel blockers
- Anti-depressants – TCIs and SSRIs
- Anti-cholinesterases
- Sedatives
- Opioids
- NSAIDS

Co-morbidities

- Hypertension
- Diabetes
- Parkinson’s disease
- Stroke
- Venous insufficiency
- CCF
- COPD
- Dementia

- This is our average patient!
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Other*

Initial management
Lifestyle interventions
Behavioural therapies
consider trial of antimuscarinic drugs

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Lifestyle interventions
Behavioural therapies
(See text)

If insufficient improvement, reassess for and treat contributing comorbidity +/- functional impairment

If continued insufficient improvement, or severe associated symptoms are present, consider specialist referral as appropriate per patient preferences and comorbidity (see text)

* These diagnoses may overlap in various combinations, eg, Mixed UI, DHIC (see text)
Clinical Assessment –

- Mobility
  - PT/equipment/commode/rails/raised seat/
- Clothing
  - Buttons/zips vs elastic/velcro
- Cognition
  - Repetition/understanding/awareness
- Polypharmacy
- Co-morbidity
- Red Flags
## Your Daily Bladder Diary

This diary will help you and your health care team understand your bladder function. It is a 24 hour record of your intake and output as well as leakage episodes. The “sample” line (below) will show you how to use the diary.

### ACCIDENTS

<table>
<thead>
<tr>
<th>ACCIDENTS</th>
<th>Did you feel a strong urge to go?</th>
<th>What were you doing at the time?</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-12 noon</td>
<td>Yes</td>
<td>Running</td>
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### Time

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<thead>
<tr>
<th>Time</th>
<th>Drinks</th>
<th>Urine</th>
<th>Accidental Leaks</th>
<th>Accidents</th>
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</thead>
<tbody>
<tr>
<td>Sample</td>
<td>Coffee</td>
<td>2 cups</td>
<td>How many times did you &quot;pee&quot; during the hour?</td>
<td>Use measuring cup (mLs or ozs)</td>
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### Drinks

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<td>6am</td>
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<td>300</td>
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<tr>
<td>8am</td>
<td>Coffee</td>
<td>250ml</td>
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<td>Coffee</td>
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</table>
Bother Bother bother
**Management of Urinary Incontinence in Frail Older Men & Women**

**UI associated with:**
- Pain
- Haematuria
- Recurrent symptomatic UTI
- Pelvic mass
- Pelvic/LUT surgery
- Prolapse beyond introitus (women)
- Suspected fistula

Assess, treat and reassess potentially treatable conditions, including relevant comorbidities and ADLs (see text)

Assess QoL, desire for Rx, goals of Rx, pt & caregiver preferences

Targeted physical examination (cognition, mobility, neurological and digital rectal examination)

Urinalysis

Consider bladder diary or wet checks, especially if nocturia is present

PVR in specific patients (see text)

**Clinical assessment**

- Delirium
- Infection
- Pharmaceuticals
- Psychological
- Excess urine output
- Reduced mobility
- Stool impaction
  - (and other factors)
- Avoid treatment of asymptomatic bacteriuria

**Clinical diagnosis**

* These diagnoses may overlap in various combinations, eg, Mixed UI, DHIC (see text)

**Initial management**

Lifestyle interventions

- Behavioural therapies
  - Consider trial of antimuscarinic drugs

**Urgency UI***

Treat constipation

Review medications

Consider trial of alpha-blocker (men)

Catheter drainage if PVR 200-500 ml, then reassess (see text)

**Significant PVR***

**Stress UI***

**Ongoing reassessment and management**

If insufficient improvement, reassess for and treat contributing comorbidity +/- functional impairment

If continued insufficient improvement, or severe associated symptoms are present, consider specialist referral as appropriate per patient preferences and comorbidity (see text)
Conservative Treatment

**Lifestyle**
- Fluids
- Type
- Volume
- Time
- Constipation - foods
- Exercise

**Behavioural**
- PFMT
- Timed voiding
- Prompted voiding
- Habit training

**Think outside the box**
- Clothing
- Equipment
- Physio
- Stop medications
Anti-cholinergics\textsuperscript{13}

‘increasing body of evidence concerning the dependence of normal cognition on and the age-associated decline in the central cholinergic System’. (mulsant\textsuperscript{4}, Carriere\textsuperscript{5}, etc)

when using an anticholinergic for OAB in the elderly consider\textsuperscript{12}:

• the pre-existing cognitive state of the patient, including the cognitive reserve
• the overall anticholinergic load
• the choice of agent and absolute dose of the agent used
• the chronicity of exposure
• Is it working????????

• Oxybutinin IR– has been associated with impaired cognition in cognitively intact older adults and recommend not used in older, frailer patients

BUT

• Short term cognitive safety of bladder antimuscarinics in cognitively intact older people have been shown with – Solifenacin\textsuperscript{6} Fesoterodine( and vulnerable elderly )\textsuperscript{7,8}, Darifenacin\textsuperscript{9}, oxybutinin transdermal gel\textsuperscript{10} and Trospium\textsuperscript{11}.

• SENIOR study
Nocturia - tricky

Figure 1. Prevalence of nocturia in men (A) and women (B) from a meta-analysis of epidemiology studies, by number of nocturia episodes per night. Reproduced with permission from Bosch JL, Weiss JP.
Nocturia

- Increased total urine production
  (>40 mL/kg/24 hours)
  - Global polyuria
    - Primary polydipsia
    - Diabetes mellitus
    - Diabetes insipidus

- Increased urine production at night
  (>20% of 24 hour urine volume in young adults;
   >33% in older adults)
  - Nocturnal polyuria
    - Oedematous states
      (eg. congestive cardiac failure, renal disease, hepatic failure)
    - Obstructive sleep apnoea
    - Alcohol/caffeine
    - Excessive night time fluid intake
    - Medications

- Frequent small volume voids +/- LUTS
  - Bladder storage disorders
    - Bladder outflow obstruction (eg. BPH, prostate cancer, urethral stricture disease)
    - Overactive bladder syndrome
    - Urinary retention
    - Bladder cancer
    - Calculi
    - Cystitis
    - Neurogenic bladder dysfunction (stroke, Parkinson disease)
    - External compression
      (pelvic mass/pregnancy)
Treatment options

• Global polyuria – treat underlying cause and fluid restrict.
• Nocturnal polyuria – treat underlying cause, medication review, Fluid management, consider Desmopressin??, late afternoon diuretic.
• Small bladder volume – if BOO – treat with alpha blocker, If OAB anti-muscarinic (at night).
• Some will have a combination!
Updates

• NICE –guidelines for women 2013\textsuperscript{14}–
  – Not oxybutinin IR for frail older
• Mirabegron\textsuperscript{15}
• Fesoterodine vulnerable elder study\textsuperscript{8}
Summary

- We are dealing with an increasingly frail elderly population.
- 1 in 3 women and 1 in 7 men > 65 suffer with UI.
- There is a strategy for comprehensive assessment and treatment of UI.
- On balance – drugs are worth a go but must be reviewed regularly.
- Nocturia is tricky but worth investigating and trial treatments.
- Incontinence is treatable and everyone should have access to assessment and treatment.
11. Trospium chloride has no effect on memory testing and is assay undetectable in the central nervous system of older patients with overactive bladder. Int J Clin Pract. 2010 Aug; 64(9): 1294-300