The challenge of incontinence in dementia

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Challenge

A call to engage in a contest, fight, or competition.

A demand for explanation or justification; a calling into question.

A test of one's abilities in a demanding but stimulating undertaking.
Dementia

A. Multiple cognitive deficits
   1. Memory impairment
   2. One or more of:
      (a) aphasia
      (b) apraxia
      (c) agnosia
      (d) disturbance in executive functioning

B. Impairment in social or occupational functioning, decline from a previous level of functioning.

C. Gradual onset, progressive decline.

D. Not due to specified other conditions…

E. … or delirium.

DSM IV
Dementia subtypes

- Alzheimer’s disease
- Vascular
- Mixed
- Lewy body
- Fronto-temporal
- Rarities

… but don’t forget Normal Pressure Hydrocephalus, subdural bleeds or brain tumours
CHALLENGE NUMBER 1

There is a lot of it about: we need to understand why
Incontinence in dementia

‘11-90%’

22% community dwelling

>80% of care home residents with dementia

67% of people with dementia in general hospitals
Incontinence in dementia

85 year old Swedes

With dementia: male 50%, female 60%

Without dementia: male 18%, female 36%
Incontinence in dementia

In the beginning, there was detrusor hyperreflexia
Nerve pathways between the bladder, spine and micturition control centre

Note: nerves supplying the urethra have been omitted for clarity
Urodynamics

Memory clinic
• 44% detrusor instability
• 27% bladder outlet obstruction
• 8% detrusor hyperactivity with impaired contractility
• 8% low compliance/low capacity
• 12% normal

Long term care
• 40% detrusor instability
• 40% normal
• 15% stress
• 5% overflow

Yu 1990; Miu et al 2010
Bladder overactivity is not the whole story

- Predisposition and insult model
- Multifactorial
- Strongest predictors are
  - nocturia
  - immobility
  - severity of cognitive impairment
CHALLENGE NUMBER 2

Treat co-morbidity without being put off by dementia
‘Transient’ causes

- Infection, urinary and other
- Delirium
- Drugs
- Stroke
- Fracture, immobility
- Causes of polyuria
- Constipation/impaction
Drugs

- Diuretics
- Anti-cholinergic
- Opiate
- Sedatives, hypnotics
- Delirium-causing
- Oedema-causing
- Cholinesterase inhibitors
- Constipating
Urinary tract pathophysiology

• Primary detrusor instability
• Detrusor ‘hyperreflexia’ (ie neurogenic DI)
• Prostate
• Atrophic urethritis/trigonitis
• Stones and cancers
• Stress incontinence
• Incomplete emptying
Assess, diagnose

- Symptoms
- Prior function and changes
- Exam: cognition, focused neuro, PR, ± PV
- PVRV
- Urinalysis/culture
- Frequency volume or continence chart
Nocturia
Nocturia

- Overactive bladder (small functional capacity)
- Polyuria, or nocturnal polyuria
- Insomnia
- Incomplete bladder emptying
Nocturnal polyuria

- ‘Medical causes’
  - diabetes mellitus, (diabetes insipidus)
  - heart failure, oedema
  - hypercalcaemia, hypokalaemia
  - sleep apnoea
  - insomnia
  - lithium
- Age-related nocturnal polyuria
- Alzheimer’s-related vasopressin cycle reversal
# Desmopressin

<table>
<thead>
<tr>
<th></th>
<th>Urine flow ml/min</th>
<th>8h equivalent/ml</th>
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<tbody>
<tr>
<td>pre</td>
<td>1.6</td>
<td>768</td>
</tr>
<tr>
<td>100mcg</td>
<td>1.1</td>
<td>479</td>
</tr>
<tr>
<td>200mcg</td>
<td>0.9</td>
<td>432</td>
</tr>
<tr>
<td>400mcg</td>
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N=23 without dementia; Asplund 1998
## Desmopressin

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<tr>
<th></th>
<th>Baseline</th>
<th>Desmopressin 100mcg</th>
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<tbody>
<tr>
<td>Nocturia mean voids</td>
<td>5.2</td>
<td>2.2</td>
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<tr>
<td>Night volume/ml</td>
<td>956</td>
<td>528</td>
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N=30; Asplund 1999
Challenge Number 4

Learn how to use anti-muscarinic drugs appropriately
Drugs

• Anti-cholinergic drugs (M1-2) can worsen cognition
• … or cause delirium
• Hydrophilic (tropism) and M3 specific (darifenacin)
• But their effect is small in any case
## Effectiveness of trospium 20mg bd

<table>
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<tr>
<th></th>
<th>Placebo</th>
<th>Trospium</th>
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<tbody>
<tr>
<td><strong>Means</strong></td>
<td>baseline</td>
<td>12 weeks</td>
</tr>
<tr>
<td>Voids/d</td>
<td>13</td>
<td>12</td>
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<tr>
<td>Incontinent episodes</td>
<td>4.3</td>
<td>2.2</td>
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<tr>
<td>Voided volume</td>
<td>157</td>
<td>170</td>
</tr>
<tr>
<td>Nocturia</td>
<td>2.0</td>
<td>1.7</td>
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<tr>
<td>Dry mouth</td>
<td>7%</td>
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</table>

N= 523 without dementia ; Zinner et al 2004
Habit training and timed voiding

• Control incontinence by pre-empting …
• … rather than changing behaviour
• Severer cognitive and physical disabilities
• Relies on carers, client is passive
Prompted voiding

- Active participation of patient and carer
- Regular asking/checking
- Aims increase self initiated requests to use toilet
- Needs some mobility
- Several trials in NH, 32% reduction in incontinent episodes
Trial of prompted voiding

- 191 nursing home residents; able to state name
- Hourly prompted voiding for 7 days
- Assessed for response on days 5-7: 41% responders
- % wet checks reduced 27% to 6% at day 7
- ... and 10% at week 9
- Response predicted by mobility, self care ADL

Ouslander et al 1995
Distinguish toileting difficulties from incontinence
Incontinence or toileting difficulties?

• Recognise need
• Respond
• Get up or ask for help
• Find toilet
• Safely and in time
• Recognise it
• Manipulate clothes
• Use it
• Cleaning
• ‘Malignant social psychology’
Incontinence or toileting difficulties?

- Recognise need – bladder sensation, awareness, apathy
- Respond - judgement, planning, foresight, memory
- Get up or ask for help – mobility, aphasia
- Find toilet – obstacles, memory, orientation
- Safely and in time – mobility, balance, urgency
- Recognise it - agnosia
- Manipulate clothes – apraxia, dexterity
- Use it – fear, cleanliness, privacy
- Cleaning – apraxia, dexterity
- ‘Social psychology’ – uncooperativeness, avoidance, passivity, aggression, denial
Incontinence or toileting difficulties?

- Recognise need – prompting, communication
- Respond – prompting
- Get up or ask for help – no restraint, rehab, aids, help
- Find toilet – signage, door ajar
- Safely and in time – mobility, grab rails, raised seat, staff
- Recognise it – signage, colour contrast
- Manipulate clothes – adapted clothing, practice, help
- Use it – biography, habit, clean, mirrors
- Cleaning – adapted facility, help
- ‘Social psychology’ – person centred care, identify needs
Person-centred care

- Understand ‘non-co-operation'/stubbornness
- Effective communication
- Understanding non-verbal cues
- Achievable activity
- Privacy vs need for help
- Denigration, infantalisation, punishment vs reassurance
Containment
CHALLENGE NUMBER 6

Identify resources to deliver best practice care
Where are the studies? Where is the evidence?
CHALLENGES

- There is a lot of it about - assess
- Treat co-morbidity properly
- Nocturia
- Learn if, and how, to use anti-muscarinic drugs
- Toileting difficulties or bladder dysfunction
- Identify resources to deliver best practice care
- Where is the research?