Management of urinary incontinence in frail elderly women

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Abstract
Urinary incontinence (UI) is defined by the International Continence Society as any involuntary leakage of urine. It is a common clinical problem, and its incidence increases with age. It is a particular problem in the frail elderly, who can sometimes pose a diagnostic and therapeutic challenge by virtue of their complexity. UI is a major cause of disability and dependency and adversely affects the psychological and physical health of the older person. However, treatment can lead to significant improvements.

Keywords cognitive impairment; elderly; frail; urinary incontinence

Introduction
Urinary incontinence (UI) is defined by the International Continence Society as any involuntary leakage of urine. It is a common clinical problem, and incidence increases with age. It is a particular problem in the frail elderly, who can sometimes pose a diagnostic and therapeutic challenge by virtue of their complexity. Estimations of prevalence vary according to the definitions used, but is thought to be around 15–30% in the ambulant community dwelling elderly, rising to between 50% and 80% in those in long-term care.

Normal ageing is not a cause of urinary incontinence, although age related changes in lower urinary tract function can predispose older people to UI which is then exacerbated by co-morbidities. UI is a major cause of disability and dependency significantly increasing the risk of care home placement and adversely affects the psychological, physical and social well being of older people. It also predisposes to carer negativity and stress. Which is a major factor in placement for institutional care.

Frail elderly have traditionally been under treated due to fears over the side effects of the medications, under reporting of symptoms, and low expectations of treatment outcomes by both patients and doctors. However, significant improvements can be achieved with correct assessment and treatment. The following forms a framework to aid the management of this challenging group of patients.

Prevalence
A 1991 MORI poll in the UK showed a lifetime prevalence of UI at all ages of 6.6% in men, and 14% in women with approximately 3.9 million sufferers in the UK alone. Prevalence continues to increase as a consequence of an ageing population with resource implications for the NHS and social care. The true prevalence of UI is difficult to accurately estimate as many sufferers never seek due to embarrassment, lack of awareness of treatment options, and the myth that UI is a normal consequence of ageing.

Estimations also vary widely according to the definition used, but a review of the literature suggests a prevalence of 15–30% for community dwelling older people. All studies report a higher incidence of UI among care home residents in the range of 50–80% because UI is associated with older age, frailty, cognitive impairment, limited mobility leading to a greater level of dependency. All of these factors are more prevalent amongst those in long-term care.

The severity of UI has been defined in various ways, but mostly according to the frequency of urine loss. The general prevalence of severe urinary incontinence (weekly or more) in all age groups is thought to be between 3% and 7%. The Newcastle 85+ cohort study in 2009 reported an overall incidence of severe UI in 21%, commoner in women.

Associated factors
UI is associated with other co-morbidities and can contribute significantly towards declining functional status and poor quality of life. It is also associated with substantially increased risk of admission to 24 h care. Incontinence in this context may be functional and treatment should be modified accordingly. A list of some of the major conditions contributing to UI can be found in Table 1. Appropriate treatment of the conditions listed is a necessary part of continence management in this patient group.

The more common medications associated with exacerbations of UI are listed in Box 1. In particular diuretics increase the volume of urine produced. Changing to a loop diuretic with a longer half-life such as torasemide can make some improvement in incontinence associated with diuretic timing.

Medication review is therefore essential with particular reference to drugs that contribute towards incomplete bladder emptying or cause constipation.

Conditions caused by urinary incontinence
UI is generally thought to be a predictor of adverse outcomes in older people. Those with UI have a greater mortality, but generally also have more significant co-morbidities, which may partly explain this association. There is no universally agreed definition of frailty but it is thought of as a multi-system
syndrome of impaired mobility, fatigue, muscle strength, and balance. Common conditions caused by UI are listed in Table 2.

How is continence maintained?

Maintaining continence is a complex process, and depends on:
1. An intact bladder, sphincter, and pelvic floor function with normal innervation
2. An ability to communicate the need to go to the toilet if immobile
3. Adequate cognition to know how to find the toilet and to keep continence until on the toilet
4. Sufficient mobility and manual dexterity to remove clothing
5. Ability to voluntarily initiate micturition at the appropriate time.

The frontal cortex is responsible for voluntary control of micturition with the sensation of a full bladder as well as external sphincter contraction and relaxation. The motor cortex controls bladder motor function, as well as the ability to mobilize to the toilet, bypassing any environmental hazards en route. All of these processes can be affected by inter-current illness.

Age related changes affecting the urinary tract

Multiple age related changes occur in the lower urinary tract as well as age-associated co-morbidities that are linked with UI.

Bladder changes

Collagen deposition within the bladder wall results in a reduction in functional bladder capacity and lower urinary flow rates through a reduction in bladder elasticity. Decreased innervation results in less cholinergic transmission and a reduced sensation of bladder filling so that the first sensation of needing to void is

Conditions contributing to urinary incontinence

<table>
<thead>
<tr>
<th>Condition</th>
<th>Type of incontinence</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dementia</td>
<td>Urge incontinence</td>
<td>Causes UI by variety of mechanisms:</td>
</tr>
<tr>
<td></td>
<td>Functional incontinence</td>
<td>(a) Decreased motivation and initiative to go to the toilet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(b) Social disinhibition</td>
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<tr>
<td></td>
<td></td>
<td>(c) Decreased executive function</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(d) Immobility or gait disturbance</td>
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<tr>
<td></td>
<td></td>
<td>(e) Severe autonomic failure (Lewy Body dementia)</td>
</tr>
<tr>
<td>Stroke</td>
<td>Urge incontinence</td>
<td>Varying effects on bladder and bowel function, mobility and functional ability to toilet</td>
</tr>
<tr>
<td></td>
<td>Functional incontinence</td>
<td>UI post stroke often improves over time</td>
</tr>
<tr>
<td></td>
<td>Occasionally urinary retention</td>
<td>Poor prognostic indicator for those in whom it persists</td>
</tr>
<tr>
<td>Parkinson's disease</td>
<td>Functional incontinence</td>
<td>Also autonomic failure in &quot;Parkinson's Plus&quot; syndromes</td>
</tr>
<tr>
<td></td>
<td>Urge incontinence</td>
<td></td>
</tr>
<tr>
<td>Delirium</td>
<td></td>
<td>Delirium can be associated with detrusor underactivity or bladder outflow obstruction causing urinary retention (&quot;cystocerebral syndrome&quot;) as well as infection causing UI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Incontinence, gait and cognitive deficits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potentially reversible with VP shunt</td>
</tr>
<tr>
<td>Normal pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hydrocephalus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety and depression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arthritis</td>
<td>Functional incontinence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urge incontinence</td>
<td>Polyuria in poorly controlled DM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peripheral neuropathy</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Functional incontinence</td>
<td>Autonomic neuropathy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increased susceptibility to UTI</td>
</tr>
<tr>
<td>Peripheral oedema</td>
<td>Nocturia</td>
<td>Reabsorption of peripheral oedema causing increased circulating volume and increased nocturnal urine production</td>
</tr>
<tr>
<td>(heart failure, venous insufficiency, medications)</td>
<td>Nocturnal polyuria</td>
<td>Increased ANP levels secondary to myocardial stretch from increased circulating volume may also contribute to increased nocturnal urine production</td>
</tr>
<tr>
<td>Constipation and faecal impaction</td>
<td>Combined faecal and urinary incontinence</td>
<td>Outflow tract obstruction causing urge incontinence from detrusor overactivity</td>
</tr>
<tr>
<td></td>
<td>Urge incontinence</td>
<td>Straining can result in weakened pelvic floor muscles</td>
</tr>
<tr>
<td></td>
<td>Urinary retention</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stress incontinence</td>
<td>Cough can exacerbate stress incontinence</td>
</tr>
</tbody>
</table>

Table 1
Drugs that cause or exacerbate urinary incontinence

- Alcohol
- Alpha adrenergic agonists e.g. midodrine, pseudoephedrine
- Alpha blockers e.g. doxazosin, tamsulosin
- ACE inhibitors e.g. ramipril, lisinopril
- Caffeine
- Cholinesterase inhibitors e.g. donepezil, rivastigmine
- Diuretics e.g. bendrofluazide, furosemide, bumetanide
- Anticholinergic drugs
- Oral oestrogen therapies e.g. HRT
- Opioids e.g. codeine, morphine, tramadol
- Sedatives and hypnotics e.g. benzodiazepines, zopiclone

Box 1

closer to the functional bladder capacity, giving less time to get to the toilet and void appropriately.

Residual volume

A residual volume of more than 100 ml is indicative of incomplete bladder emptying in younger person but in the elderly up to 200 ml can be considered normal. Very large residual volumes (>300 ml) are associated with increased risk of upper urinary tract dilatation and renal impairment.

Urethral changes

Ageing results in increased collagen deposition in the urethra, and loss of circular smooth muscle in the urethral sphincter. This results in decreased urethral closing pressure.

Vaginal changes

Post-menopausal atrophy can cause loss of lactobacilli leading to colonization with pathogens such as *Escherichia coli*, enterococci etc, as well as atrophic vaginitis.

Conditions caused by urinary incontinence

<table>
<thead>
<tr>
<th>Condition</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression and anxiety</td>
<td>Also reduced quality of life and social isolation</td>
</tr>
<tr>
<td>Falls and fractures</td>
<td>Falls and fractures can result from UI, especially UUI and OAB</td>
</tr>
<tr>
<td>Nocturia</td>
<td>Nocturia can result in daytime sleepiness, and have an adverse effect on cognition. It is associated with an increased falls risk of between 10% and 21% with two or more voids per night, as well as an increased fracture risk and nocturnal enuresis</td>
</tr>
<tr>
<td>Pressure areas</td>
<td>UI is an important feature in the development of pressure areas, and slows their healing. Can also cause skin rashes and dermatitis</td>
</tr>
<tr>
<td>Urinary tract infection</td>
<td>UTI is associated with chronic urinary retention, as well as indwelling catheters and condom drainage systems</td>
</tr>
</tbody>
</table>

Table 2

Other changes

Ageing causes reduced pituitary production of antidiuretic hormone (ADH) reducing urine-concentrating ability. Nocturia is also more common due to reversed diurnal urine production through increased production of atrial natriuretic peptide (ANP). This acts on the kidney to produce greater volumes of more dilute urine at night. Nocturnal urine production can also be increased by peripheral oedema re-entering the circulation at night whilst lying in bed.

Changes in the immune system related to age can lead to an increased likelihood of UTI. Practical problems with maintaining anal and vulval hygiene may also contribute.

What are the symptoms and subtypes of UI?

Overactive bladder (OAB): is defined as urgency that occurs with or without urge UI, usually with frequency and nocturia, and in the absence of other pathology. OAB that occurs with urge UI is known as ‘OAB wet’. OAB that occurs without urge UI is known as ‘OAB dry’. OAB is the most common cause of UI in the elderly. In the elderly these are most commonly cerebrovascular or neurodegenerative in origin. Several studies have reported a link between larger numbers of white matter lesions and worsening UUI symptoms.

Stress incontinence

Stress urinary incontinence (SUI): is the complaint of involuntary leakage of small amounts of urine on effort or exertion, sneezing or coughing. It is more common after the menopause.

Incontinence due to incomplete bladder emptying

Is usually secondary to an underactive bladder, or a bladder outflow obstruction, and tends to cause a continuous loss of small amounts of urine. Causes include spinal cord lesions (MS, cord compression), peripheral nerve lesions (e.g. diabetic neuropathies) and constipation. Constipation is the most prevalent cause of this in hospital inpatients and long-term care settings.

Mixed incontinence

This is a combination of OAB and SUI symptoms. Treatment initially should be aimed at the predominant symptom.

Functional incontinence

Functional incontinence is a general term to describe the factors outside the lower urinary tract that contribute to UI, including mobility, environmental factors, medications and other co-morbidities. There are a variety of ways to manage mobility and continence that are discussed later in this article.

Nocturia

The International Continence Society defines nocturia as having to wake one or more times to void urine at night. Nocturnal polyuria is defined as producing more than 35% of total daily urine output at night. Incidence increases with age and usually >50% men and women over the age of 60 will have nocturia. By the age of 80, the majority of women will have symptoms.

Assessment of frail older patients with UI

History

A comprehensive history is the most important part of any assessment of a frail older patient and should include a thorough...
assessed of functional ability and social circumstances in order to enable comprehensive holistic management (Box 2). In patients with cognitive impairment some history should be elicited from the carer if possible.

**Examination**

**See Box 3.**

**Investigation**

Investigations should include baseline blood tests as well as a bladder diary. NICE guidelines recommend the use of bladder diaries over a minimum of 3 days in order to initially assess anyone with UI. Fluid intake, voiding times and quantities, and episodes of urinary incontinence are recorded. This can be done either by the patient or a carer, and is a useful tool in identifying the cause of the UI but is not always possible to achieve in the frail. In the setting of severe cognitive or functional impairment, a modified diary, where the number of voids, episodes of UI and number of drinks consumed gives some useful information.

Urinalysis and a post-void bladder scan are also indicated.

**Specialist investigation**

**Urodynamics:** frail older women may be considered more suitable for conservative management and so urodynamics may be unnecessary. A functional assessment of walking and undressing will usually be of more diagnostic value in this patient group.

**Management**

**General measures and lifestyle modifications:** the management of UI requires a multidisciplinary approach. This is of particular importance in the frail. National guidelines such as the NICE guidelines for the management of UI focus on younger fitter patients and do not consider the difficulties experienced by frailer patients, particularly those with cognitive impairment.

Factors such as the aetiology of incontinence, mobility, co-morbidities, anaesthetic risk, potential side effects and patient choice all need to be considered.

**Conservative measures:** certain conservative measures apply to all aetiologies of UI and it is important to give simple advice first.

**Hygiene** — advise washing daily and after every accident using unscented soap or baby wipes paying attention to adequate drying. Advise loose fitting clothes to reduce the risk of skin damage from soiling.

**Fluid, caffeine and alcohol intake** — advise drinking 2–3 pints of fluid a day. Less than this can exacerbate irritable bladders and more will increase the volume or urine production. Advise avoiding caffeine (switch to decaffeinated tea and coffee if possible) and excess alcohol as both have a diuretic effect and can exacerbate incontinence.

**Weight loss** — obesity carries an increased risk of SI and UUI, and in these cases weight reduction and education programmes can help especially in those with a body mass index greater than 30 kg/m².
**Reversible causes of urinary incontinence**

- Constipation
- Metabolic disturbance e.g. hypercalcaemia, hyperglycaemia
- Urinary tract infection
- Delirium and acute confusional states
- Atrophic vaginitis
- Medications (see Box 1)
- Restricted mobility

**Box 4**

**Smoking** — whilst stopping smoking has no direct effect on urinary incontinence, persistent cough contributes to stress incontinence and stopping smoking may reduce this. 

**Reversible causes** — see Box 4.  
**Medication review** — medication review is essential (Box 5).  
**Environmental interventions** — difficulty in accessing toilet facilities is a potentially major factor in incontinence in the frail. This is known as functional incontinence and usually co-exists with other forms of incontinence. In many, poor mobility may be a contributing factor but environment also plays a part. Occupational therapists assess functional difficulties and problems with home environment. They may be able to provide downstairs commodes, and adjust lighting and flooring. Clothing that is elasticated or with Velcro fastening can be used to aid rapid removal. It is important to consider such factors in hospitals and care homes in addition to patients’ own residences because a change in a frail person’s environment can exacerbate any UI.

**Containment devices** — many frail elderly will require the use of devices to contain urine to preserve dignity when incontinent. A wide range of absorbent pads is available. Pads can be worn next to the skin or as absorbent sheets for beds. Body worn pads are superior to sheets as they are less likely to wrinkle and cause pressure damage and less likely to affect pressure relieving mattresses. Such devices are not treatments in themselves, but are used in addition to other therapies or as a long-term management strategy in those with refractory symptoms despite treatment. The patient and carer preferences should be considered when choosing containment products.

**Catheters** — the indications for catheterization include chronic urinary retention where medical management has failed and surgery is thought to be inappropriate, pressure sores or wounds prone to urinary contamination.

The different methods of catheterization include intermittent catheterization (either by patient or carer), long-term urethral catheterization, or supra-pubic catheter. Intermittent catheterization and supra-pubic catheterization have lower risks of urinary tract infection and also have less impact on sexual function. It is important that in any patient requiring catheterization that patients and carers are counselled regarding the indications, complications and care.

**Specific measures**

**Stress incontinence (SI):**

**Conservative** —

Pelvic floor exercises and vaginal cones: both of these techniques though demonstrated to be highly efficacious in younger women are likely to be less effective in certain groups of frail elderly as patients must have adequate higher mental functions and sufficient motivation.

Bladder training and habit retraining: bladder training aims to gradually increase the intervals between each void. It utilizes scheduled voiding when awake, and relaxation techniques to suppress the sensation of urgency in the time between voids. It can be very effective in those with normal cognitive function.

Prompted voiding and scheduled toileting: in those with cognitive impairment who do not have the cognitive capacity to comply with behavioural interventions, timed voiding and prompted voiding can reduce the risk of UI. Prompted voiding involves asking patients at regular intervals whether they would like to go to the toilet. It is carer and patient dependent and requires a moderate degree of remaining cognition.

Timed toileting is carer dependent and may be more appropriate in those with severe cognitive impairment. Both of these techniques aim to reduce incontinent episodes but do not affect bladder function and they may increase the workload for carers. They are only effective for daytime incontinence.

**Pharmacological therapy** —

Serotonin and noradrenaline reuptake inhibitors (Duloxetine): SNRI’s have been shown in a recent Cochrane review to improve quality of life in patients with SI although as yet it is unclear as to the long-term effects of such drugs. The inhibition of serotonin and noradrenaline reuptake specifically in the sacral spinal cord increases the tone of the sphincter through parasympathetic inhibition and improves urethral closure. Side effects are significant. At present duloxetine is recommended should pelvic floor therapy be unsuccessful and

**Box 5**

**Side effects of anticholinergic medication**

**CNS**
- Sedation
- Cognitive impairment
- Delirium

**Gastrointestinal**
- Dry mouth
- Constipation

**Ophthalmic**
- Mydriasis (glaucoma)
- Impaired accommodation (blurred vision)

**CVS**
- Arrhythmia
- Tachycardia
- Orthostatic intolerance

**Urinary**
- Retention
the patient prefer to avoid surgery. Whilst this is a common situation in the frail elderly, side effects of duloxetine may limit its use in this group.

**Oestrogen therapy** — around the menopause withdrawal of oestrogen may result in a reduction of periurethral pressure. Theoretically replacing this oestrogen locally will reduce SI. There is some evidence that topical oestrogens may improve incontinence for the duration of treatment but the effect is modest and only small proportions of women benefit. Such therapy has not been recommended by NICE. However, it does have a role in the prevention of recurrent urinary tract infection and local symptoms in women with atrophic vaginitis.

**Urge incontinence/overactive bladder**

**Conservative measures:**

As above.

**Pharmacological Rx:**

**Anticholinergic therapy** — anticholinergic drugs used in UUI act on smooth muscle receptors of which there are five types: M1—M5. Type M2 causes bladder relaxation during filling and M3 mediates bladder contraction, therefore the interaction between these receptors contributes to the symptoms of overactive bladder.

Type M1 is found in hippocampus and forebrain and plays an important role in memory and cognition.

It is the presence of muscarinic receptors in other organs that causes the extensive side effects found with anticholinergic agents (Table 3). Use of other drugs with anticholinergic properties (e.g. tricyclic antidepressants, antipsychotics, ranitidine, ACE inhibitors and bronchodilators) is common in the elderly and concomitant use increases the risk of anticholinergic side effects. The side effect profiles of available drugs govern choice of agent in the frail. It is recommended that use of such drugs be reviewed early and frequently.

**Desmopressin** — is an analogue of vasopressin that reduces water excretion from the kidneys. Taken at night it may reduce symptoms in those with troublesome nocturia. However, due to increasing evidence of hyponatraemic electrolyte disturbance and interaction with other medications, this should not be used in the frail elderly.

**Surgical therapies:** details about specific surgical intervention are beyond the scope of this article however it is important to consider the appropriateness of surgery in the elderly. Experienced surgeons and anaesthetists should make any decisions regarding surgery.

Frailty has been shown to independently predict post-operative complications, length of stay and discharge to care homes. However, it is important not to discount such management purely on the basis of age and ‘physiological age’ is an increasingly common concept in modern surgery within the ageing population.

In patients with prolapse causing stress incontinence, pessaries or surgery can be considered. The use of pessaries in the frail elderly is often well tolerated and if effective may avoid the need for surgery.

**Botulinum toxin A therapy** — limited evidence suggests an improvement in symptoms of UUI. Unfortunately all research has been in patients under the age of 80 years old the majority. It is difficult therefore to extrapolate this data to the frail elderly population. At present this is not a recommended treatment option in this patient group.

**Incontinence associated with incomplete bladder emptying**

Medication review is essential as anticholinergic medications can increase incomplete bladder emptying and should be avoided. Constipation should be avoided. Specific treatment depends on the cause.

**Urinary incontinence and cognitive impairment**

The incidence of dementia rises substantially after the age of 75, and UI in the cognitively impaired can range from 11% in an outpatient setting to 90% in care homes. Dementia can cause UI by a variety of mechanisms ranging from decreased motivation and initiative to go to the toilet, social disinhibition, decreased executive function, immobility or gait disturbance or even severe autonomic failure.

In Alzheimer’s disease UI presents an average of 6.5 years after dementia onset. However in Lewy Body dementia UI presents sooner after dementia onset (3.2 years) and in Vascular dementia UI can precede dementia onset by 5 years or more.

Managing UI in the patient with cognitive impairment presents a challenge. Patients are often difficult to assess as they may not be able to give an accurate history and may not comply with examination or investigations. Patients with dementia tend to have other major co-morbidities and may be on medications that cause UI. They are more likely to be susceptible to the side effects of drugs, particularly anticholinergics and may be on other drugs that interact with medications for UI. Patients may be difficult to nurse, may pull out catheters and pads putting significant strain on carers. However, the benefits of any improvement in continence in this patient group cannot be underestimated.

Methods such as prompted and timed toileting are effective and avoiding constipation is important. A medication review is vital in these patients. Anticholinergic drugs can be considered but use with care (see Box 5 and Table 3).

**Anticholinergics and cognitive impairment**

The interaction of anticholinergic drugs with M1 receptors in the brain can cause problems with attention, concentration,
memory, and visuospatial awareness. Patients who are particularly susceptible to the development of cognitive impairment from anticholinergics include; the frail, patients with pre-existing cognitive impairment, Parkinson’s disease, cerebrovascular disease, multiple sclerosis and psychotic illnesses.

Different anticholinergic agents have differing propensities to cause cognitive impairment and this is probably a result of their varying size and lipophilicity and subsequent ability to cross the blood–brain-barrier. In theory agents with low lipophilicity cause less problems with cognitive impairment but this is yet to be demonstrated in clinical trials.

**Conclusion**

Chronological age is no indicator of frailty. Treatment options in the biologically young cognitively intact female should not differ from those of the chronologically young.

The frail older woman is disproportionately more disadvantaged by UI. It can affect both social and domiciliary functioning and negatively impact on their relationship with their carers. The supposition that the frail female will inevitably be incontinent and that nothing can be done to alleviate her symptoms is a myth.

The importance of comprehensive medical and multidisciplinary assessment cannot be overemphasized. Goal setting that is realistic and perhaps based on improvement rather than absolute cure can be more appropriate in this group. Assessment of functional status, carer availability and cognition allows these goals to be tailored to the needs of the individual. Avoidance of constipation, appropriate medication review, promotion of hygiene and availability of appropriate aids and containment products can help frail older women maintain social activity and to remain in their preferred environment.

### FURTHER READING


### Practice points

- Urinary incontinence is not a normal feature of ageing
- A full history and examination including functional and cognitive status should be performed as part of the assessment
- The impact of medication on continence should always be considered
- Physiologically young elderly patients should be considered for surgical intervention if conservative management fails
- Timed toileting can be of use in managing UI even in the frail cognitively impaired elderly
- It is important to exclude and to treat constipation in the frail