

# Urinary incontinence in older adults

Christina Shaw

Adrian Wagg

## Abstract

Lower urinary tract symptoms and urinary incontinence are very common in the general population and increase in prevalence in association with age. Urinary incontinence in particular is still seldom discussed by patients, many of whom delay seeking healthcare for the condition. Urinary symptoms have a considerable impact on morbidity and quality of life. Older people encounter multiple barriers in gaining treatment for their problem and are unfortunately less likely to be given evidence-based treatment than younger people. Despite the increasing body of evidence for the effective management of the symptoms and conditions underlying incontinence, older people often fail to be assessed and treated for the condition. This article discusses the assessment and management of the main subtypes of incontinence likely to be encountered in generalist practice for both physiologically robust and more frail elderly individuals.

**Keywords** Assessment; frailty; overactive bladder; treatment; urinary incontinence

## Introduction

Urinary incontinence (UI), defined as the complaint of involuntary loss of urine, is a common and undertreated problem in older adults. Epidemiological studies show a positive association between age and both the accumulation of symptoms and the prevalence of UI and other lower urinary tract symptoms (LUTS). In the EPIC study, the prevalence of incontinence increased in men from 2.4% in those <39 years to 10.4% in those >60, and in women from 7.3% to 19.3%, respectively.<sup>1</sup> With individuals living longer and older adults making up an increasing portion of the population, the impact of UI on society and on the healthcare system continues to increase.

As with all the 'geriatric giants', UI is often the result of multiple risk factors and modifiers. Physiological, pathological and functional changes can result in a loss of continence. Older adults tend to not seek help from healthcare providers for a variety of reasons, including perceived stigma and social embarrassment, belief that UI is a normal part of ageing and an

**Christina Shaw BSc** is an Undergraduate Medical Student at the Division of Geriatric Medicine, Department of Medicine, University of Alberta, Edmonton, Alberta, Canada. Competing interests: none declared.

**Adrian Wagg MBBS FRCP(Lond) FRCP(Edin) FHEA** Capital Health Endowed Professor of Healthy Ageing, Division Director, Geriatric Medicine, University of Alberta, Edmonton, Alberta, Canada. Competing interests: he, or his institution has received support from Astellas, Pfizer, SCA, Duchesnay (Canada) for any of research, speaker fees or consultancy.

## Key points

- Urinary incontinence is not a diagnosis but has multiple underlying risk factors and potential contributing factors, akin to any geriatric syndrome
- Where there is a dearth of data, there is no reason not to offer a frail older individual treatments that have proven efficacy in robust older persons
- A systematic approach to urinary incontinence affords a symptomatic diagnosis of the most likely underlying causes in most cases, allowing a management plan to be formulated
- There is accumulating evidence for the efficacy of treatment for incontinence in both robust and multimorbid older persons

assumption that there is no available effective treatment. Therefore, in line with current guidelines, a case-finding question about bladder and bowel problems is recommended as part of all interactions between older adult patients and clinicians (see Wagg, 2015, in the further reading list) to overcome this and offer an appropriate assessment and management plan.

## Definitions

Several disorders result in urinary incontinence, but the majority is accounted for by stress UI (involuntary loss of urine on effort or physical exertion, or on sneezing/coughing) and urgency incontinence (involuntary loss of urine associated with urgency). A combination of the two is referred to as mixed UI. A closely related problem is that of overactive bladder (OAB), which is defined as urinary urgency, usually accompanied by frequency and nocturia, with or without urgency UI, in the absence of urinary tract infection or other obvious pathology. Other, less common but no less important, entities are nocturia (frequent nocturnal micturition), nocturnal enuresis (adult bedwetting) and 'functional' incontinence (incontinence caused by either physical or cognitive impairment, with no identifiable lower urinary tract disorder), all being associated with a considerable patient burden (Table 1). Age-related changes in the lower urinary tract can play a role in predisposing an older person to fail to maintain continence (Table 2).

Several recent publications have demonstrated, using functional magnetic resonance imaging, that OAB is associated with changes in cerebral blood flow to certain areas of the brain. The amount of white matter changes (seen as areas of hyperintensity on MRI) may link several geriatric syndromes, including decline in cognition, mobility and continence. There is also increasing evidence that suppression of urinary urgency may require more subconscious effort in older persons, and that this may be related to the amount of white matter hyperintensities.

## Assessment

### History

For most older adults, a systematic history allows a symptomatic diagnosis to be formulated (Table 3). A medication history and

### Common subtypes of UI

Overactive bladder	Stress UI	Mixed UI	Voiding inefficiency	Functional incontinence
Urinary urgency, with or without urgency incontinence often with urinary frequency and nocturia	Urinary loss in association with exertion such as coughing, laughing or lifting	Symptoms of both urgency incontinence and exertional incontinence (take a careful history as 'urgency' or 'precipitancy' is often reported by women with stress UI only)	Incomplete emptying is not well reported by men, but more so by women. A large post-void residual volume without symptoms (recurrent urinary tract infections, frequency, dribble, upper tract involvement) does <b>not</b> need treatment (a 250-ml residual volume may be acceptable in older people)	Incontinence unrelated to an underlying disorder of lower urinary tract function, perhaps related to either physical or cognitive impairment

Table 1

### Age-related changes in the lower urinary tract

Decreased	Increased
Bladder capacity	Urinary frequency
Sensation of filling	Prevalence of post-void residual volumes
Speed of contraction of detrusor	Outflow tract obstruction (men)
Pelvic floor muscle bulk	
Sphincteric 'resistance'	
Urinary flow rate	

Table 2

physical examination are also necessary to exclude other diseases and diagnose or identify other factors or co-morbidities that may be adversely affecting the patient's continence. A bladder diary of a minimum 3 days duration can be useful to provide an additional history; however, the benefits may not outweigh the considerable burden of achieving an accurate and complete diary. During the history, account should be taken of the impact the condition has on quality of life, patient's and caregivers' expectations and, depending on the treatment offered, the patient's remaining life expectancy and functional level.

### Co-morbidities

Co-morbidities are common in the older adult population, and UI can be caused by, associated with or worsened by these. One study found UI to be independently associated with having at least one geriatric condition in 60% of study participants, at least two in 29% and at least three in 13%. These co-morbidities can be chronic diseases such as hypertension, congestive heart failure or arthritis. Diabetes mellitus can cause UI by multiple mechanisms leading to detrusor overactivity and culminating in diabetic cystopathy with incomplete bladder emptying or via poor glycaemic control causing osmotic diuresis and polyuria. Co-morbidities associated with UI also include depression and anxiety. Depression in older persons with UI may be under-diagnosed and undertreated, leading to an increased burden by

### Systematic history for continence in older persons

- Chief complaint
- Duration
- Treatment thus far, if any
- Storage symptoms: diurnal frequency, nocturnal frequency, nocturnal enuresis, urinary urgency, urgency incontinence, stress UI
- Voiding symptoms: hesitancy, straining, slow stream, intermittency, splitting or spraying
- Post-micturition symptoms: incomplete emptying, terminal dribble, post-micturition dribble
- Pads: type, number
- 'Red flags': haematuria, pain on micturition, dysuria (internal or external)
- Bowel habits: frequency, faecal urgency, faecal incontinence, acute change, laxative usage
- Sense of prolapse (women)
- Frequency of urinary tract infection
- Fluid intake volume (including caffeinated beverages, alcohol)
- Obstetric history (including instrumental deliveries)
- Gynaecological history
- Functional and cognitive state
- Impact of condition on quality of life
- Goals for treatment
- Assessment tools: bladder/bowel diary, validated condition-specific questionnaires, quality-of-life assessment

Table 3

decreasing life satisfaction and self-rated health. Geriatric syndromes, such as falls, are also associated with urinary urgency and urgency UI. Data from nursing home residents suggest that older persons with urgency incontinence are significantly more burdened by multimorbidity than those without.

UI is commonly associated with neurological conditions including Alzheimer's disease, multi-infarct dementia (or a combination of these), stroke, dementia with Lewy bodies, Parkinson's disease, normal pressure hydrocephalus, and multiple

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