Promoting urinary continence in older people

Proactive primary care

LIZA LAU MB BS, FRACP

GPs and practice nurses are important primary care partners for patients with urinary incontinence, who often require care co-ordination and long-term management. Multidisciplinary care through a continence clinic may also be valuable.

KEY POINTS

- Primary care providers are well placed to support older people with urinary incontinence.
- Urinary incontinence in an older person often arises because of more than one reason.
- Some factors may be reversible while other factors are not, so a careful basic evaluation can be rewarding.
- The management approach needs to be individualised based on the older person's overall condition, and their wishes regarding investigations and treatments must be respected.
- It is important to recognise when referral for specialist care is required, for example if a 'red flag' condition is present or first-line treatments have not resulted in improvement.

Urinary incontinence in older people is often multifactorial. It is associated with falls and loss of independence, and can have a significant impact on quality of life. The aphorism 'to cure sometimes, to relieve often and to comfort always' sums up the core principles of looking after older people with urinary incontinence.

Awareness of incontinence

Urinary incontinence is often under-reported and underdiagnosed, even though the prevalence rises with age and frailty. Data from the 2012 Australian Bureau of Statistics Survey of Disability, Ageing and Carers showed the prevalence for people aged over 85 years is high, with around one in three women and one in five men experiencing severe bladder or bowel incontinence for which they needed continence aids and/or toileting assistance.[1]

It is good practice to ask about continence when doing regular health checks for older people. Quite often an older person may have silently suffered many decades of mild urinary symptoms. People may delay seeking help until their situation deteriorates, for example:

- they have become housebound
- the severity of incontinence is close to the tipping point for a carer
- financial stress rises due to the cost of pads
- they are simply demoralised and desperate about their incontinence.

MedicineToday 2018; 19(2): 21-29

Dr Lau is a Geriatrician and a Consultant for the Continence Services at Austin Health and Eastern Health, Melbourne; and a Medical Advisor on the Steering Committee for the Melbourne Bladder Bowel Collaborative of the Continence Foundation of Australia, Melbourne, Vic.

1. COMMON RISK FACTORS THAT MAY CONTRIBUTE TO URINARY INCONTINENCE IN OLDER PEOPLE

- Diabetes
- Congestive cardiac failure
- Stroke
- Parkinson's disease
- Dementia
- Obesity
- Fractured hip or pelvis
- Impaired mobility
- Chronic constipation
- Medications
- Chronic cough/smoking
- Urinary tract infections

An empathetic ear can be therapeutic and may help to relieve such distress.

There is a wealth of information about incontinence available in the media and on the internet. Despite this growing spread of public awareness, older patients under-report symptoms due to declining cognition, general frailty and beliefs that incontinence is a normal part of ageing. Many do not think it is something that their doctor or nurse can do anything about, or perhaps have been dismissed and told to just accept it in the past.

Informative patient resources and handouts in English and other languages are readily available from the Continence Foundation of Australia (www.continence.org.au), and free telephone advice from a continence nurse adviser is available from Monday to Friday via the Foundation's National Continence Helpline.

An important way to improve detection and diagnosis in the general community is by training nurses and other healthcare workers to take an interest in managing continence issues in the primary care setting.[2] Nurses with continence knowledge are also highly valued in settings such as urology, gynaecology, neurology, spinal, aged care and rehabilitation services. Developing nurse-led models of care can prove extremely important, especially in rural regions.

Why do some older people have urinary incontinence?

The bladder normally alternates between a storage phase most of the time, followed by a short voiding phase. This is controlled by the autonomic nervous system. In addition, our brain learns to give us voluntary control of the pelvic floor muscles. The kidneys normally produce two-thirds of total urine output during the day, and the remaining one-third during sleep. This is partly controlled by the diurnal pattern of antidiuretic hormone and natriuretic peptide secretion. In addition, the person needs to have the functional ability to move to the toilet, undress, initiate voiding, clean themself and get dressed again.

Anything that upsets the balance with any of the above mechanisms can lead to urinary incontinence. The bladder of an older person tends to hold smaller volumes, and they have weaker pelvic floor and sphincter muscles and less ability to hold on voluntarily. Coexisting conditions, medications and other lifestyle factors may contribute (Box 1). In the older person, it is necessary to look beyond the bladder. Quite often you will be 'rewarded' with the discovery of multiple contributing factors that can be potentially better managed. It is incorrect to assume that incontinence is just an inevitable part of ageing.

Brain diseases in older people and the neurogenic bladder

Urinary incontinence can develop as a behavioural symptom of various subtypes of dementia, most commonly Alzheimer's disease and vascular dementia. Incontinence can also be caused directly by damage to the parts of the brain that control bladder function.

When assessed urodynamically, urinary incontinence associated with dementia is generally related to detrusor overactivity.[3] Some research suggests a link between urinary incontinence and chronic ischaemic changes in the deep white matter of the periventricular and subcortical regions.[4] Brain studies using functional MRI in older people have found that failure of the orbitofrontal and insula cortices leads to bladder urgency.

Some people with dementia may have inappropriate toileting behaviours, such as urinating into a laundry basket, or smearing faeces onto walls or floors. Some people with dementia develop visual-perceptual disturbances and are unable to recognise the toilet. Additional signage in words and pictures may help direct the patient to the toilet. Using contrasting colours in the bathroom instead of all white may help the person recognise the toilet more easily. Aids such as handrails, commode chairs and urinal bottles should be considered, and input from an occupational therapist may be very helpful.

Normal pressure hydrocephalus is a relatively rare condition, but classically has features of an abnormal gait (shuffling), urinary incontinence and dementia. Ventriculo-peritoneal shunt surgery may potentially improve continence in up to 66% of cases.[5]

In people with Parkinson's disease (PD), the mechanism of incontinence is often neurogenic detrusor overactivity causing urge incontinence, which tends to worsen as the basal ganglia degenerates. Bladder symptoms are often more noticeable in people with PD in the medication 'wearing off' state. PD can also cause urine retention because of severe bradykinesia of the bladder neck sphincter. For an older man with PD, it is a trap that the retention may be misdiagnosed as prostatism, and if he went on to have transurethral resection of the prostate the results could be poor, with new onset of stress incontinence and persistent incomplete emptying.

It is extremely common to have chronic constipation and faecal impaction due to neurogenic bowel dysfunction in PD. With advanced PD, functional incontinence develops due to loss of mobility and dementia.

Multisystem atrophy (MSA) can present with some features that overlap with Parkinson's disease as well as onset of urinary incontinence, which may be a mixed picture of detrusor overactivity, urinary

2. THE MOST RELEVANT QUESTIONS TO ASK SOMEONE WITH URINARY INCONTINENCE

- How long have you had a bladder or bowel problem? Did it start after an illness or event?
- Do you feel a sudden strong urge to pass urine and can't hang on? What triggers the urge?
- Do you feel you can't go anywhere without knowing where the toilets are?
- When you do go to the toilet and pass urine, does it come out easily in one go? Does your bladder feel empty at the end?
- Do you leak when you cough/sneeze/laugh/stand up/exercise/lift something up?
- Do you get woken up at night because you have to pass urine? How many hours of sleep would you get before you are woken up at night?
- Do you wet the bed while asleep?
- Do you strain to move your bowels? Are your bowel motions hard like rabbit pellets, or soft like a sausage, or runny like porridge?
- Has there been any blood in your urine or bowel motions?
- Does it sting or hurt when you pass urine?
- Do you wear a pad? How many pads are you using per day?

retention and bladder sphincter weakness. Men with MSA might notice erectile dysfunction as an early feature, so it is important to ask about this. Unfortunately, the prognosis of MSA is poor.

Detection and diagnosis

The causes of incontinence in older patients are likely to be multifactorial, which holds true for most conditions in older people. Some suggested questions to help form a good picture of a patient's incontinence are given in Box 2. Even if the person only mentions urinary incontinence, include a quick screen for bowel problems because bowel problems often worsen bladder function, especially in an older person. Sometimes, history-taking from a caregiver is vital, especially for people with memory loss or lack of insight into their own bladder problems.

It is often said that 'the bladder is an unreliable witness' because clinical symptoms do not always correlate with the underlying cause. Sometimes the initial working diagnosis will be correct, but sometimes it will turn out to be something else. This is why one solution does not fit all, and sometimes it is necessary to investigate further and revise the treatment plan.

Potentially reversible causes of urinary incontinence

When a person presents with a new onset of urinary incontinence, it is important to first rule out possible transient reversible causes. The well-known acronym 'DIAPPERS' is useful for recalling what these might be (Box 3).[6]

Delirium in an older person often requires treatment of an underlying acute illness as well as provision of best supportive care until the delirium resolves. Ask the patient or their carer about symptoms of urinary tract infection, then obtain a urine culture and start the patient on empirical antibiotics if they are symptomatic.

Atrophic changes in the mucosal lining of the vagina or urethra can aggravate incontinence, and sometimes vaginal treatment with topical oestrogen can be helpful. Medications can directly or indirectly contribute to or cause incontinence, so the patient's medication list should be carefully reviewed (see below).

Severe depression or psychological conditions should be identified and early treatment instituted, as they can be directly related to incontinence. It can be more difficult to address incontinence if psychological issues are overwhelming.

Excess urine output (polyuria) occurs either because there is too much fluid intake or the body has a problem regulating the urine production via endocrine and renal pathways. When there is a solute load in the urine, such as glucose due to diabetes and calcium due to hypercalcaemia, polyuria occurs. It is best to record fluid intake against urine output using a bladder diary if possible, to differentiate between those with true polyuria versus those with excessive fluid intake.

3. AN AID TO IDENTIFYING REVERSIBLE CAUSES OF INCONTINENCE: THE DIAPPERS ACRONYM[6]

D: Delirium
I: Infection (urinary, symptomatic)
A: Atrophic vaginitis/urethritis
P: Pharmaceutical drugs
P: Psychological
E: Excess urine output
R: Restricted mobility
S: Stool impaction

Mobility restrictions from any cause can make it difficult to get to the toilet in time. Check for pain, which is potentially amenable to improvement with analgesia and treatment by allied health professionals, and a history of falls.

Stool impaction can be chronic and the person can be unaware of it, as the rectum has become overdistended and the person is unable to completely evacuate the faeces, which in turn can contribute to urinary incontinence. Digital rectal examination is often necessary.

Clinical syndromes of urinary incontinence

When the person has been adequately treated for any of the transient causes but still has persistent urinary incontinence, there are five main clinical syndromes to consider. These can be diagnosed based on history and examination (Table 1).

Initial clinical workup

Initial basic workup and first-line treatment measures can be undertaken by the GP or practice nurse, and GPs can initiate a chronic disease management plan and involve allied health services.

Physical examination

During an initial physical examination,

TABLE 1. FEATURES OF THE FIVE MAIN CLINICAL SYNDROMES OF URINARY INCONTINENCE

Clinical syndrome	Features
Stress incontinence	Leakage of urine occurs with coughing, sneezing, laughing, lifting, change in posture from sit to stand or with any rise in intra-abdominal pressure
Urge incontinence	Leakage of urine occurs with urgency, a strong desire to void that cannot be delayed, that is associated with frequency, nocturia and voiding in small volumes. The urgency may be triggered by cold temperature, the sound of running water, putting the key in the door, being en route to the toilet or seeing the toilet is nearby
Mixed incontinence	A mixture of both stress and urge incontinence. One component may predominate over the other
Overflow incontinence	Leakage of urine occurs as a result of urinary retention. Triggers are similar to those for stress incontinence, but the person also has voiding problems, such as hesitancy, slow flow, small-volume voids, a sensation of incomplete emptying and needing to double void or apply abdominal straining
Functional incontinence	Leakage of urine occurs as a result of physical limitations due to reduced mobility, dexterity, mental state (e.g. apathy in dementia or loss of motivation in severe depression) or any other disability that renders it difficult to access the toilet in a timely manner

consider the signs most relevant to the older person with urinary incontinence.

- **Abdominal examination.** Palpable masses or a distended bladder.
- **Pelvic examination.** In women, excoriation, thrush, atrophic changes, vaginal stenosis, prolapse or infection. In men, penile retraction, phimosis or urethral stenosis.
- **Office stress test (women).** Ask the person to cough or bear down with a full bladder and look for stress leakage. Place an absorbent towel on the floor between her legs.
- **Digital rectal examination.** Perianal sensation, anal tone, impacted faeces, rectal mass. In men, check the size and texture of the prostate.
- **Neurological examination.** Signs of underlying neurological disease, e.g. Parkinson's disease, spinal cord disease, stroke, diabetic neuropathy.
- **Cardiac examination.** Signs of fluid overload, dependent oedema, postural blood pressure.
- **Physical function.** Limitations in mobility, dexterity, vision, communication.
- **General mental state.** Memory loss, lack of insight, depression, anxiety.

Urinalysis

Urinalysis should be done routinely, and if the urine dipstick result is positive for infection it should be followed by urine culture. Depending on the patient's history, you may need to check their renal function and screen for diabetes. A baseline bladder diary may be useful for making a diagnosis of the clinical subtype of incontinence, especially if further treatment interventions are being considered. Checking the post-void residual volume may also be useful, especially if they are being treated with anticholinergic medication.

What is normal post-void residual volume? When is a catheter needed?

A volume of less than 50 mL post-void residual (PVR) urine is generally considered to be adequate emptying of the bladder. There is no actual cut-off value for what is abnormal, but more than 200 mL is generally considered inadequate emptying.[7]

Always ensure constipation and faecal impaction are cleared before taking the PVR volume measurement, and if possible, repeat the measurement over a few days. If the patient has acute or painful retention, the bladder should be drained as soon as possible. Admission to the hospital is usually needed, although in residential care facilities referral to a hospital outreach service may be a suitable alternative, especially for frail elderly patients.

A PVR volume of more than 200 mL does not automatically require catheter insertion. In some circumstances a higher PVR volume may be tolerated if the risks of catheterisation are high. Special considerations for older people include the following:

- whether using a catheter has risks that outweigh the benefits (e.g. in a person with dementia who is agitated and unable to tolerate the catheter safely)
- whether the person is capable of self-care with the catheter (e.g. a person with impaired vision who is unable to manage the leg bag).

In some situations, a carer can be trained to assist the person to do intermittent self-catheterisation. However, this may increase carer stress, so the decision should be balanced against whether it is in the best interests of both the older person and the carer to do this.

Red flag conditions for early specialist referral

The International Consultation on Urinary Incontinence recommends further testing for people with urinary incontinence with certain indications (Table 2).[7] People with a strong history of cancers, or those with a history of smoking or excessive alcohol intake, should be screened for bladder or kidney cancer. Start with simple urinalysis, and then consider renal tract ultrasound or cystoscopy if haematuria is present without an infection.

TABLE 2. INTERNATIONAL CONSULTATION ON URINARY INCONTINENCE RECOMMENDATIONS FOR FURTHER TESTING[7]

Sex	Indications for further testing
Both	Recurrent incontinence Pain Haematuria Recurrent urinary tract infections Voiding symptoms Radical pelvic surgery
Women	Pelvic irradiation Suspected fistula with constant dribbling Significant post-void residual volume Significant pelvic organ prolapse Pelvic mass Previous continence surgery
Men	Prostate irradiation

Not everyone will wish to have urinary incontinence investigated. Some people may decide they do not want investigation due to limited quality of life and significant frailty.

Management of urinary incontinence

There are several possible outcomes for older people with urinary incontinence. A useful management paradigm describes a number of ways that older people can be effectively managed according to their preferences and the changing severity of incontinence, as follows.[8]

- Dependent continence: being dry with toileting assistance, behavioural treatments and/or medications
- Contained continence: urine contained with pads or appliances
- Independent continence: dry, not dependent on ongoing treatment.

Discuss with the older person what their hopes are for the outcomes, as well as their preferences for treatment. Conservative strategies, for example weight loss programs, can take time but the results can be quite dramatic. Adopting a person-centred approach is the key to a successful management plan. The GP may need to initiate a comprehensive care plan, and consider involvement of a continence nurse adviser, pelvic floor physiotherapist, dietitian and occupational therapist. Carer involvement is vital, especially for those who are frail. Often the carer will benefit from education and support.

Continence products are subsidised through state-funded and federal-funded programs. The Continence Aids Payment Scheme is available for those who have been deemed to have permanent and severe urinary incontinence, who need to rely on multiple pads daily and do not have a better alternative solution.

First-line measures

There are many first-line options for treating older people with urinary incontinence that should always be considered.

- Treat urinary tract infection if present (consider asymptomatic bacteriuria)
- Treat faecal impaction if present, using a combination of stool softeners, aperients and enemas where necessary
- Ensure adequate hydration by advising the patient to drink 1.5 L of water per day in temperate climates
- Advise the patient to limit caffeine intake by drinking decaffeinated coffee or herbal tea
- Good toileting habits such as going regularly, having good posture when on the toilet and allowing time for complete emptying
- Appropriate toileting aids such as a commode chair, urinal bottle or bedpan
- Home visit assessment may be very useful for considering mobility aids, optimising access to the toilet and lighting at night
- Pelvic floor exercises for stress incontinence
- Urge suppression techniques and bladder training for urge incontinence
- Urethral massage for men with post micturition dribble
- Continence products such as pads, absorbent underpants (reusable), absorbent bed protectors and chair mats. Consider referral to a continence nurse advisor and assist in the application of funding from the Continence Aids and Products Scheme (CAPS) or other state government funding (varies) if the patient is eligible
- Oestrogen cream or pessary tablets for vaginal atrophy in women.

Prompted or timed toileting strategies

Prompted or timed toileting regimens (two hourly) are sometimes helpful if the person's urgency is not too severe. If the person responds well to regular toileting, wetting decreases and skin excoriation is reduced, with fewer pads used and less cleaning up. It is suggested that a trial of a toileting regime be attempted for three days with a dedicated carer.

If the trial does not work, the traditional 'check and change' technique can be applied, adjusting the aim of treatment to keeping the skin healthy and achieving social containment.

Addressing modifiable factors

By addressing the factors that contribute to urinary incontinence, it may be enough to tip the balance back towards continence. The following are some of the common contributing factors to look out for.

- Medications should be reviewed as some can contribute to urinary incontinence in older people (Table 3). Sometimes medications that have been taken for years without a problem can become an issue as the reserve of bladder function declines over time.
- If the patient has constipation, first manage the bowels and then review the bladder symptoms again.
- Excess body weight puts pressure on the nerves and blood vessels supplying the bladder, as well as putting pressure on the pelvic floor

muscles, and predisposes people to both urge and stress urinary incontinence. Research has shown that loss of around 8% of total body weight in an overweight person can almost halve the number of incontinence episodes.[9]

- Chronic cough needs to be treated because it puts repetitive strain on the pelvic floor muscles, which increases stress incontinence.
- Diabetes control should be optimised as high blood sugar levels will result in polydipsia and polyuria, which may overwhelm the bladder's storage capacity and lead to urgency and frequency. Be aware of the newer diabetic medications, the sodium–glucose cotransporter-2 inhibitors including dapaglifozin and canaglifozin, which lower blood sugar by removing excess glucose in the urine. Their side effects include urinary and genital infections.
- In patients with congestive cardiac failure it may be necessary to titrate up their diuretic medication or use combination therapies such as frusemide and spironolactone to offload the excessive fluid retention. Unfortunately, urinary frequency and urgency may have to become worse for a while to offload the excess fluid, before improving again once the person is euvolaemic.
- Reduce peripheral oedema using strategies to minimise the amount of interstitial fluid that is reabsorbed back into the circulation when the person is lying in bed overnight, such as a low-salt diet, compression stockings and leg elevation.
- Treat postural hypotension or supine hypertension, to prevent an increase in renal perfusion pressure when the person lies down at night, which may result in nocturia.
- Obstructive sleep apnoea needs to be treated as it can disturb the cardiovascular system and sleep patterns, which may lead to nocturia.

Managing urge incontinence

Urge incontinence is usually a symptom of the overactive bladder syndrome, and correlates with findings of detrusor overactivity on urodynamic studies. Pelvic floor muscle training including urge suppression techniques, taught by a professional pelvic floor physiotherapist, should be tried as a first-line treatment for urge incontinence. Sometimes the physiotherapist can simplify exercises so an older person is still able to make substantial improvement.

Anticholinergic medications can be used in conjunction with the relevant first-line behavioural and physical therapies as discussed above. A combination approach with nonpharmacological management will probably lower the dose necessary.

Oxybutynin (as oral tablets or transdermal patch) is the only anticholinergic drug available on the PBS, while others such as solifenacin and darifenacin are not. It is indicated for treatment of detrusor overactivity where conservative measures have failed. The main side effects of oxybutynin are dry mouth, dry eyes, constipation and urinary retention. Avoid its use in patients with glaucoma unless an ophthalmologist has assessed it as safe. It is associated with increased confusion due to its anticholinergic properties, so its use in people with cognitive impairment or dementia needs to be carefully considered and closely monitored over time. Extended release oxybutynin via the transdermal route may have a lower incidence of gastrointestinal side effects but can cause skin irritation.

The beta-3 receptor agonist mirabegron is generally well tolerated in older people and is considered a reasonable drug of choice for elderly patients because it has no known side effects on cognition and does not increase the risk of urinary retention. However, many pensioners cannot afford the cost of a private prescription for mirabegron, although this cost may potentially be offset by savings from using fewer pads and be worth it for the immense improvement in quality of life expected with this drug. Mirabegron is started at a lower dose of 25 mg oral daily for the first 30 days, then increased to 50 mg oral daily if well tolerated. Ensure that cardiac failure, severe hypertension or atrial fibrillation are well controlled if present before commencing mirabegron at low dose. Do not start if baseline systolic blood pressure is above 160 mmHg and/or diastolic blood pressure is above 100 mmHg. It would be best to stabilise blood pressure with antihypertensive medication first, then monitor it closely when starting mirabegron. Mirabegron is

TABLE 3. DRUGS THAT MAY CONTRIBUTE TO URINARY INCONTINENCE IN OLDER PEOPLE

Drug effects	Agents
Urethral sphincter relaxation	Alpha blockers (e.g. prazosin, terazosin, doxazosin)
Bladder relaxation	Anticholinergics (e.g. ditropan) Tricyclic antidepressants (e.g. amitriptyline)
Bladder stimulation	Caffeine (e.g. tea, coffee)
Central nervous system control impairment	Antihistamines Antidepressants Antipsychotic agents Anticonvulsants Tranquillisers Hypnotics Alcohol
Excess urine production	Diuretics (e.g. frusemide) Lithium (induced diabetes insipidus) Sodium–glucose cotransporter-2 inhibitors (e.g. dapaglifozin)
Fluid retention	Calcium channel blockers Nonsteroidal anti-inflammatories
Constipation*	Opiates Anticholinergics Calcium channel blockers (e.g. verapamil)

*Any drug that causes constipation can lead to reduced bladder emptying and increased bladder urgency.

contraindicated if systolic blood pressure remains raised above 180 mmHg and/or 110 mmHg diastolic. Use a lower dose of 25 mg daily if the patient has moderate chronic renal failure or Child-Pugh stage B liver failure, but its use has not been tested if end-stage renal failure or severe liver failure are present.

The tricyclic antidepressants imipramine and amitriptyline are no longer recommended for treating overactive bladder. They are considered unsafe in older people because they often cause postural hypotension and sedation.

In older men, overactive bladder often develops secondary to chronic bladder outlet obstruction due to prostate enlargement. Relief of the obstruction may lead to improvement of the overactive bladder symptoms, but sometimes this is not the case, especially if there are other coexisting conditions present.

Advanced treatment options for refractory overactive bladder

Posterior tibial nerve stimulation (PTNS) works via the peripheral nerve pathway that can modulate the activity in the sacral micturition centre and can be delivered by transcutaneous needles or percutaneous skin patches just above the medial malleolus. Positive improvements have been reported in older people who may not be able to tolerate other forms of treatment, and the efficacy seems to be at least as good as medication in the short to medium term. The PTNS protocol requires weekly visits for 12 weeks, followed by maintenance treatment. Percutaneous skin patches to deliver the nerve stimulation can be safely used at home by the person or their carer. It is also suspected but not fully proven that PTNS can be beneficial for faecal incontinence as well.

Intradetrusor muscle injection of botulinum toxin A using cystoscopy under general or local anaesthetic is a day procedure done by urologists or urogynaecologists and is a Medicare rebatable item for idiopathic detrusor overactivity that has been refractory to first-line treatments. Botulinum toxin can be fairly well tolerated in older people and can achieve good outcomes. The use of lower doses has minimised the risk of urinary retention after administration, but detrusor underactivity is associated with the ageing bladder, so patients should be forewarned of the possibility of retention and the subsequent need for a catheter until they can pass a trial of void. Another adverse effect is the increased risk of urinary tract infections, so for those who are prone to urosepsis it may be wise to consider antibiotic prophylaxis. Repeat Botulinum toxin A injections are usually needed every six to nine months, or whenever the toxin has worn off and symptoms of overactive bladder return.

Sacral neuromodulation (SNM) is in some ways similar to putting in a pacemaker, except it goes in to stimulate the sacral nerve roots. SNM has benefits for both urinary and bowel function, but access to SNM in public hospitals is very limited. The effectiveness of SNM can be tested by insertion of a temporary lead, and if it is deemed effective then the permanent lead is inserted. Revision surgery is rarely required.

Last-resort surgical options such as augmentation cystoplasty and urinary diversion are rarely necessary these days, but may still have a role for people with complex anatomy due to congenital bladder problems.

Managing stress incontinence

Pelvic floor muscle exercises should be the first-line treatment for stress incontinence. Again, seeking instruction from a professional pelvic floor physiotherapist is recommended for best results, as doing these exercises with the wrong technique is one of the reasons for failure to improve with conservative management. Physiotherapists have biofeedback tools that they can use to improve the quality of pelvic floor muscle exercises.

Gold standard treatment is incontinence surgery, and some surgeries can be done as a day procedure with minimally invasive methods. Surgical options should be considered in consultation with the urogynaecologist or urologist who may be able to advise on the risks and the potential benefits.

Vaginal pessaries are devices that can be fitted individually to provide mechanical pelvic floor support. Some women find this helps to reduce their stress incontinence leakage and may prefer this rather than having surgery, or it may be used as a temporary measure while waiting for incontinence surgery. Surgical options available for women with stress incontinence include minimally invasive periurethral collagen bulking injections, which tend to have short-lived effects; midurethral slings, which are minimally invasive and effective for stress incontinence; and colposuspension, which is abdominal surgery and can be done laparoscopically to shorten recovery time.

Men with postprostatectomy stress incontinence do have surgical options including the male sling or the artificial urinary sphincter. However, it should be emphasised that early intervention with pelvic floor physiotherapists for men pre- and postoperatively will achieve the best outcomes.

Managing mixed stress and urge incontinence

When symptoms are mixed with both stress and urge incontinence, the general rule of thumb is to treat what is worse first. Based on clinical findings, try to decide which one is the predominant component. Sometimes a urodynamics study (below) can be very helpful.

Alternative therapies

Transcutaneous magnetic nerve stimulation, otherwise known as 'magnetic chair', has not been shown to be of benefit to people with urinary incontinence. It has been claimed to help strengthen pelvic floor muscles, but the mechanism is unclear and there is insufficient evidence to support its use.[10]

Laser vaginal rejuvenation is an

emerging field of interest and is a specialised treatment provided by gynaecologists, but also some dermatologists and cosmetic centres.[11] A wide variety of lasers are available, but their use on the vagina was originally intended for vaginal tightening and improving lubrication. There is insufficient evidence to support its use outside of clinical trials for urinary incontinence.

When and where to refer patients

Offer to send a referral for specialist review after first-line measures have been tried and there is no improvement. Depending on the individual case, input from medical specialists (geriatrician, urologist, urogynaecologist), continence nurse advisors, and pelvic floor physiotherapists may be required.

Most older people struggling with urinary incontinence benefit from the multidisciplinary team approach offered by continence clinics.[12] However, GPs and practice nurses remain important primary care partners as these patients often require care coordination and long-term management.

What does a continence clinic do?

A continence clinic is set up with a multidisciplinary team. Usually a comprehensive bladder and bowel assessment is completed. Quality of life questionnaires are administered and a psychosocial history is taken into consideration. The person's bladder diary can provide useful diagnostic clues and also guide management decisions.

Tests that may be available at the clinic include uroflowmetry, which is measuring the urine flow rate (in mL per second) during voiding with a comfortably full bladder is a useful and simple test. A bladder scan pre- and post-void may be done, noting the bladder sensation felt by the person. A urodynamics study is an invasive test of bladder function, generally by inserting both a urethral catheter and rectal balloon connected to a pressure transducer and recorded by computer software. In most cases, a urodynamics study is not needed and would not change the management or outcome for older patients. However, a urodynamics study is useful in selected cases, and age alone is not a barrier.

A major aspect of the therapy provided through the clinic is empowering the patient with a better understanding of their bladder problem, and commencing them on a self-directed management plan. Being more involved, the patient becomes more actively motivated and achieves a greater benefit.

Conclusion

Always investigate and treat any potentially reversible causes of incontinence first, and encourage patients to use behavioural and physical therapies as first-line treatment when appropriate. The subset of older people with both dementia and overactive bladder symptoms presents particular challenges in management; however, with recent advances in treatment some refractory cases can be better managed. When in doubt, refer to basic principles of the paradigm for achieving continence.[8] Most importantly, always ensure the overall goal is person-centred care. MT

References

1. Australian Institute of Health Welfare. Australia's health 2016. Australia's health series no. 15. Cat. no AUS 199. Canberra: AIHW; 2016. Available online at: https://www.aihw.gov.au/reports/australias-health/australias-health-2016/contents/summary (accessed February 2018).
2. Aharony L, De Cock J, Nuotio MS, et al. Consensus document on the detection and diagnosis of urinary incontinence in older people. Eur Geriatr Med 2017; 8: 202-209.
3. Abdelmoteleb H, Ismael M, Hashim H. Patterns of urodynamics in elderly patients. Eur Geriatr Med 2017; 8: 505-508.
4. Gibson W, Wagg A. New horizons: urinary incontinence in older people. Age Ageing 2014; 43: 157-163.
5. Kilic K, Czorny A, Auque J, Berkman Z. Predicting the outcome of shunt surgery in normal pressure hydrocephalus. J Clin Neurosci 2007; 14: 729-736.
6. Resnick NM. An 89-year-old woman with urinary incontinence. JAMA 1996; 276: 1832-1840.
7. International Continence Society. Post voiding residual in the female and male patient. Committee 5A: Initial assessment of urinary incontinence in adult male and female patients. Chairs: Castro Diaz D, Robinson D. In: Abrams P, Cardozo L, Wagg A, Wein A, eds. Incontinence. 6th ed. Proceedings of the 6th International Consultation on Incontinence; 2016 Sep; Tokyo, Japan.
8. Fonda D, DuBeau CD, Harari D, et al. Chapter 18: Incontinence in the frail elderly. In: Abrams P, Cardozo L, Khoury S, Wein A, eds. Incontinence. 3rd ed. Vol 2. Bristol: International Continence Society; 2005. p. 1167.
9. Subak L, Wing R, Smith West D, et al. Weight loss to treat urinary incontinence in overweight and obese women. N Engl J Med; 2009; 360: 481-490.
10. Stillman B, Chase J. Strengthening of the pelvic floor muscles using transcutaneous magnetic nerve stimulation: a review of the literature. Aust N Z Continence J 2006; 12: 31-40.
11. Karcher C, Sadick N. Vaginal rejuvenation using energy-based devices. Int J Womens Dermatol 2016; 2: 85-88.
12. Wagg A, Lowe D, Peel P, Potter J. Do self-reported 'integrated' continence services provide high-quality continence care? Age Ageing 2009; 38: 730-733.

COMPETING INTERESTS: Dr Lau has received reimbursement for travel to attend Bladder and Bowel Collaborative Steering Committee meetings run by the Continence Foundation of Australia.