

Urinary incontinence response

The GM editorial team received two letters, in response to the article entitled “Urinary incontinence”, published in the March 2010 issue (GM March 2010; 40(3): 147–52). Two specialists in Urological Surgery and an experienced specialist in Geriatric Medicine wrote to us to add further insights into the management of the condition. Here, we present their views.

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Urological surgery response

We write in reference to the above article to raise some important issues. Although there is no doubt that urinary incontinence is an underestimated clinical problem with significant morbidity, we do feel that your readers were denied several fundamentally important pieces of information that may allow them to manage the problems presented in this article in a more appropriate fashion.

When discussing clinical problems, it is best to use standardised terminology. The standardisation subcommittee of the International Continence Society (ICS) have clearly laid out the terms that should be used to reduce confusion around this topic, and as a first point we recommend that these are followed.¹

In a similar vein, it is important to distinguish benign prostatic hyperplasia (BPH), which is a histological diagnosis and presents in an increasing

proportion of the population with increasing age, from benign prostatic enlargement (BPE) and benign prostatic obstruction (BPO). BPO is demonstrable outflow obstruction, but may not be overtly symptomatic. Lower urinary tract symptoms (LUTS) may occur with any, or a combination, of the above.

The authors are correct to highlight the importance of “functional incontinence” as a result of cognitive insufficiency or impaired mobility, where the involuntary loss of urine may not be accompanied by any other pathological features. It is therefore important to address these primary issues before the secondary incontinence can be managed.

The urine leakage associated with stress incontinence is not necessarily purely the result of an incompetent urethral sphincter. Sphincter weakness incontinence is a component of stress incontinence, but other problems are equally implicated, including pelvic floor muscle

insufficiency and/or incomplete urethral support, with resultant urethral hypermobility.

With reference to overflow incontinence, it is fundamental to ensure that high pressure chronic retention is excluded.

One of the pathognomonic features of this is nocturnal enuresis prior to presentation with urinary retention and often significantly deranged renal function. The patient may also dribble urine during the day. Assessment of serum creatinine, residual urine volumes post void and upper tract ultrasound will be necessary. The renal failure tends to resolve with catheterisation and a subsequent post-obstructive diuresis.

A definition of urinary retention as having any residual urine volume in excess of 200 ml is inappropriate. Many patients have higher residual volumes than this and have no problems, and others, who may only typically void 50–100 ml, may run into problems with lower residual volumes. In the absence

of any renal impairment, urinary tract infections or significant symptoms, any residual volume could be considered acceptable.

It is of note that many clinical trials of pharmacological agents define retention of urine as any volume >200 ml, but this is not widely accepted, and a definition of retention as an inability to void is much more practical.

From a management standpoint, we were disappointed to see no mention of botulinum toxin injections for the treatment of detrusor overactivity,² especially in ageing patients with underlying neurological disease. These have been extensively shown to be efficacious and safe, and are recommended alongside sacral neuromodulation in the NICE guidance for the treatment of incontinence in women.³

We agree that neuromodulation is rarely used, especially in the elderly, and other surgical procedures may be rarely considered, but the role of minimally invasive therapy, such as botulinum toxin, should not be underestimated.

It is important, however, to consider the patient's ability, as they should be able and willing to do intermittent self-catheterisation (ISC). This is necessary due to the risk of precipitating retention or incomplete, bladder emptying with this mode of treatment.

When managing stress incontinence, most pharmacotherapy has actually been shown to be less effective than pelvic floor muscle training (PFMT). The effects of duloxetine in clinical trials have not been borne out in clinical experience,

and its role (as per NICE) is not recommended.³

The addition of biofeedback techniques and other adjuncts, such as vaginal cone weights, to PFMT increases efficacy. Surgical treatment of stress incontinence is certainly effective, but would routinely only be considered once conservative management had failed and after careful assessment of the most appropriate type of surgery tailored to the clinical picture and the cause of the incontinence.

Also, especially in men who have had prostate surgery, implantation of an artificial urinary sphincter should be considered as this is by far the most successful treatment for stress incontinence in this population. The importance of losing weight in overweight/obese patients is also fundamental to successful conservative management of stress urinary incontinence.

Medical therapy for overflow incontinence associated with BPO is rarely successful, and is in fact contraindicated if there is any evidence of high pressure chronic retention of urine. In patients with high, post-void residual volumes, or those with detrusor failure as a cause of their excessive bladder filling, however, one treatment that was completely overlooked in the original article is the use of ISC. This allows the patient to regularly empty their bladder, ensuring no overflow leakage, and keeps them relatively appliance-free with obvious benefits in terms of reduction in UTI episodes and other catheter-related complications such as bladder stones and catheter erosion. It also gives the patient more control

over their urinary tract, which many patients appreciate, and age should not be a contraindication to ISC being offered.

Pharmacotherapy for any form of incontinence should only be instituted once conservative measures have failed. It is appropriate and reasonable to try any of the antimuscarinic medications for patients with symptoms suggestive of overactive bladder (OAB), and this is true even in men with symptoms of both outflow tract obstruction and those of OAB as long as the risk of precipitating urinary retention is borne in mind. This risk has been shown to be absolutely negligible if the post-void residual urine volume is less than 150 ml.⁴

Desmopressin should only be used in patients over the age of 70 with great caution. There is a significant risk of hyponatraemia with desmopressin treatment, and if this is to be instituted for patients with problematic nocturia or nocturnal polyuria (as assessed by bladder diary or frequency volume chart; nocturnal polyuria is present if >1/3 of total daily urine output occurs overnight) then the serum urea and electrolytes (U&E) must be monitored pre-treatment and at day three after commencing treatment, and if serum sodium levels are stable then regular monitoring is recommended.

Any drop in serum sodium concentration should trigger immediate cessation of desmopressin treatment. An alternative strategy for nocturnal polyuria is the use of a low dose of a loop diuretic in the early afternoon, but again this requires close monitoring of U&Es as well as blood pressure etc, and may not

be suitable for some patients.

The use of bethanechol for the treatment of an underactive detrusor is not recommended due to the significant side-effects, and the general lack of efficacy. These patients are much better served by ISC, which is far better tolerated and has less morbidity.

In conclusion, the management of incontinence is best served with a multidisciplinary approach. A thorough history and physical examination will provide the majority of the information needed to treat the majority of cases, and simple conservative measures must be trialled adequately before pharmacotherapy or other invasive strategies, which must be tailored to the patient and their needs and abilities.

PFMT is more effective than pharmacotherapy for the initial management of stress urinary incontinence, especially if combined with bladder training and adjunctive measures with physiotherapy input.

Advise patients with stress incontinence to lose weight if their body mass index is greater than 25 kg/m². PFMT has also been shown to be beneficial in patients with OAB symptoms including incontinence when combined with systematic bladder retraining.

For those patients in whom conservative methods fail, or are not suitable due to other comorbidities, then the use of antimuscarinic medication should be tried. Newer agents are better tolerated than oxybutynin, but all are of roughly equivalent effectiveness. Any patients failing at this level should be referred on for consideration of more invasive

treatments, including intra-detrusor injections, of botulinum toxin with the caveat that they should be able and willing to perform ISC if necessary.

For any patient in whom the bladder is not emptying completely and has symptoms, the use of ISC should be considered before consideration of an indwelling catheter. If an indwelling catheter is thought

Key points

- Use standardised terminology
- Stress incontinence may not be due to sphincter weakness
- Residual volume >200 ml alone does not define urinary retention
- In overflow incontinence, exclude high-pressure chronic retention
- Consider botulinum toxin injections for detrusor overactivity refractory to standard therapy
- Intermittent self-catheterisation should be considered for patients needing bladder drainage
- Pelvic floor muscle training is often more effective than drugs for stress incontinence

to be the only option, then a surgically inserted suprapubic catheter should be actively promoted as it is preferable to a urethral catheter, unless the patient is in a pre-terminal condition or is truly unfit for a small surgical procedure, which

can be carried out under local anaesthetic in an outpatient setting. Overflow incontinence with any evidence of deranged renal function could be secondary to high pressure chronic retention, which is an emergency requiring prompt urology input.

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Geriatrician response

I read with interest the article in the March edition on the subject of urinary incontinence and would like to expand on some points that could lead to significant misunderstanding within the readership.

Firstly, stress incontinence is not solely the result of urethral sphincter incompetence; the support offered by the pelvic floor musculature also plays a significant part in maintenance of continence.¹

The article's estimates for the prevalence of urgency incontinence in men in late life is markedly underestimated—this is the largest contributor to incontinence in older men, regardless of the presence of bladder outflow tract obstruction.²

Functional incontinence occurs when either physical or cognitive impairment result in incontinence, usually with a normally functioning lower urinary tract.³

On weight of evidence, hysterectomy does not cause stress urinary incontinence. The majority of studies have found no increase in incontinence 2 years after hysterectomy, others have reported a statistically significant decrease in incontinence following surgery.⁴

There is no indication for estimation of U&E or calcium in the absence of conditions that are known to impair renal function (spinal cord injury, chronic painless retention, acute retention of urine).⁵

Bladder retraining has no role in the management of uncomplicated stress urinary incontinence; indeed, there is little evidence of effect for bladder retraining in older people *per se*, although it is acknowledged that the effect of PFMT appears to be reduced in the elderly, compared with the young.⁶

There is no evidence supporting the use of oestrogen for stress urinary incontinence.⁷ The use of alpha-agonists, such as clenbuterol, has been reported as having a beneficial effect but in studies of poor quality.⁸ Caffeine is not a mild diuretic.⁹

There is no evidence to

support the assertion that bladder antimuscarinics are associated with the induction of cardiac arrhythmia or falls in older people at normal doses; these have been extensively tested with regard to their cardiac safety.

It has been reported that tiroprium chloride can effect resting heart rate, which reaches +9bpm.¹⁰

Flavoxate and imipramine are not recommended for treatment of urgency incontinence; the former owing to lack of evidence and the latter because of the poor quality of supporting evidence and the high incidence of side-effects.^{11,12}

Finally, for those people with impaired emptying due to detrusor failure, there is no evidence to support the use of bethanechol.¹³ The correct management, should this be warranted, is intermittent catheterisation.

It is critical that the multiple inaccurate and misleading points in this article are addressed given the unfortunate lack of understanding of the problem within the geriatrician community.

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