Jeanette Haslam describes the current treatments for stress urinary incontinence and new developments in drug therapy. She discusses the impact that nurse prescribing could have on this common condition.

**KEY WORDS**

Stress urinary incontinence  
Drug therapy  
Pelvic floor exercises

**REFERENCES**


Duloxetine was effective and safe to be prescribed for the treatment of SUI. Its effectiveness was dependent on motivation, patient adherence and improved quality of life. The drug was generally well tolerated, although there were between nine and 15 per cent discontinuation rates (the higher the dosage, the higher the rate of adverse events). The most common adverse event was nausea.

**Conclusion** Working on the principle that medicine is continually striving to advance and that specialist nurses and physiotherapists are increasingly taking on junior doctors’ roles, perhaps in the future specialist nurses and physiotherapists working in continence care will be able to prescribe appropriate medicines for patients.

All health professionals concerned with continence care should be knowledgeable about current research so that patients receive accurate information on possible treatments, and so that health professionals can communicate effectively with one another.

A new generation of drugs opens opportunities for the treatment of SUI, not necessarily in isolation but with other well- tried therapies.

There will always be patients for which surgery is still appropriate, from the minimally invasive procedures such as vaginal tapes to major surgery such as colposuspension. However, medicines offer more weapons for the armoury in the battle against urinary incontinence.

Motivation is essential for patient adherence. This requires negotiation, goal-setting and agreement on when PFM exercise should be practised (Chiarelli, 2002). The effectiveness of the therapeutic intervention may also depend on the knowledge and expertise of the therapist.

It has been recommended that PFM training should last for 15–20 weeks to achieve an effect before any more invasive treatment (Royal College of Obstetricians and Gynaecologists (RCOG) 42nd Study Group on Incontinence in Women, 2002).

After this time the patient should be referred for surgical review. This may be as a day patient or for an overnight stay and could involve tension-free vaginal tape surgery, or major surgery such as colposuspension procedure.

**Devices for stress urinary incontinence** Various transvaginal devices have also been designed for use in the treatment of SUI, but as they are relatively expensive, many women do not use them daily but only for particular occasions.

Transurethral devices are effective but are associated with discomfort, migration of the device, and high morbidity including haematuria and urinary tract infections (Anders, 2002).

Also, many older women are embarrassed and do not like to use any devices that involve touching their own genitalia (Prashar et al, 2000).

Women frequently use absorbent pads and are often continually anxious that they may have an offensive odour. This contributes to a decrease in quality of life, with some women reducing social and sexual relationships due to their urinary incontinence (Norton et al, 1988).

**Drug therapy for stress urinary incontinence** Drug therapy has been used in the treatment of SUI. In the past, phenytoinpromional and oestrogen therapy were prescribed for the treatment of SUI. Phenylpropanolamine has been withdrawn due to the risk of haemorrhagic stroke and there is a lack of conclusive evidence for the use of oestrogen therapy.

However, duloxetine (a selective serotonin and noradrenaline reuptake inhibitor) should be available for the treatment of stress incontinence in the UK next year.

It is necessary to understand the neurophysiology of the urethral sphincter to appreciate how duloxetine works (Box 1). A study by Norton et al (2002) demonstrated in a double-blind, randomised, placebo- controlled study over a 12-week period (n=553) that duloxetine was effective and safe to be prescribed for the treatment of SUI. Its effectiveness was dependent on...
Stress urinary incontinence (SUI) has been defined as the complaint of involuntary leakage of urine on effort, exertion, sneezing or coughing (Abrams et al, 2002). It becomes known as urodynamically proven stress incontinence (USI) when filling cystometry (a test of bladder function) shows a rise in intra-abdominal pressure, without a detrusor muscle (a test of bladder function) contraction, causing urine loss via the urethra.

Prevalence of SUI The absolute prevalence of stress urinary incontinence is difficult to determine because studies have used different definitions, measures, study designs and sampling procedures. Also, there is a scarcity of well-validated measures (Perry, 2002).

However, it has been found that urinary incontinence is two to three times more prevalent in women than men (Monga, 2002).

SUI is estimated to affect about four million women in the UK, with a prevalence rate of 20–30 per cent. However, only 7–12 per cent perceive it to be a problem (McGrother et al, 2001). The Continence Foundation (2000) has estimated that the cost of incontinence in the UK in 1998 was more than £423m a year.

Causes of incontinence Pregnancy and childbirth are acknowledged to be major factors for SUI. Obesity, smoking and the menopause have also been implicated (Monga, 2002). Chronic cough, smoking, constipation, lifting and pelvic surgery have also been associated with SUI (Bump & Norton, 1998).

Damage to the muscle, fascia and/or nerve supply to the pelvic floor results in bladder neck hypermobility, decreased pelvic floor muscle activity and/or diminished urethral sphincter function – all of these factors can contribute to SUI.

Health promotion strategies are contributing to the awareness of continence.

Assessment Much has been written about the appropriate verbal and physical assessment of a person presenting with urinary incontinence (Laycock, 2002). Assessment is a prerequisite before any therapeutic intervention, and informed consent is essential before any examination or therapy.

All patients should complete a frequency volume chart (a record of volumes and frequency of fluid intake and urinary output) that must be evaluated and discussed. Anyone presenting with irritative bladder symptoms must have a urinalysis to detect abnormal deposits in their urine that may be contributing to continence problems.

Conservative management of stress urinary incontinence Pelvic floor muscle (PFM) exercises have underpinned the conservative management of SUI since Kegel popularised them in the 1940s (Kegel, 1948). More recently other holistic methods of PFM-activation involving the whole abdomino-pelvic cavity muscles have been advocated (Haslam, 2003).

Different methods of rehabilitation of the PFMs aim to improve:

- Strength;
- Power;
- Endurance;
- Functionality.

The rehabilitative process may include the use of self-vaginal assessment, vaginal cones, neuromuscular electrical stimulation (NMES), pressure and/or electromyogram (EMG) biofeedback, or other facilitation techniques. It is also accepted that women should be taught how to use a PFM contraction to increase intra-urethral pressure whenever they are at risk of urine leaks (Miller et al, 1998).

### REFERENCES


### BOX 1. THE NEUROPHYSIOLOGY OF THE URETHRAL SPHINCTER

Noradrenaline and serotonin are released in Onuf’s nucleus, located in the sacral spinal cord.

Release of serotonin and noradrenaline stimulates the pudendal nerve, enhancing contraction of the external urethral sphincter.

The motor neurones innervating the striated urethral sphincter originate in Onuf’s nucleus, a localised column of cells in the sacral spinal cord lying dorsolaterally in the anterior horn of S2–3. Onuf’s nucleus has a high density of serotonin (5-HT) and noradrenaline receptors. When these receptors are stimulated by serotonin (a neurotransmitter that is important in vasoconstriction) and noradrenaline (a hormone which acts as a vasoconstrictor), there is increased activity in the pudendal nerve. The acetylcholine released by the pudendal nerve can then stimulate the receptors in the urethral sphincter to increase urethral sphincter contractility. This in turn helps to prevent urine leakage when any pressure is exerted on the bladder.