Managing stress incontinence in postnatal women

In this article...

- Causes of stress urinary incontinence
- Assessing women with symptoms of SUI
- Benefits of pelvic floor exercises

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Abstract

Urinary incontinence can have a significant impact on quality of life. This article explores the causes of stress urinary incontinence, and the impact of childbirth in particular, and discusses the importance of thorough assessment and treatment options.

Although urinary incontinence is not life threatening, it can be debilitating and affect confidence, as well as physical and social activities, which may lead to social isolation. It is defined as the involuntary leakage of urine (Abrams et al, 2005). Incontinence is treatable but prompt, high-quality, comprehensive continence services are essential (Department of Health, 2000). However, the National Audit of Continence Care 2010 showed inconsistent care, poor treatment and diagnosis, and only a marginal shift from the use of containment products to active assessment and management (Royal College of Physicians, 2010).

Causes of stress urinary incontinence
Stress urinary incontinence (SUI) is defined as involuntary leakage of urine after exertion, such as exercise, sneeze or cough, and affects 4-35% of adult women (Luber, 2004). It can profoundly impact on women’s physical health, mental wellbeing and social life (DH, 2000), as everyday tasks such as shopping, exercising and doing the laundry can produce incontinence episodes.

The normal micturition cycle, with its alternating urinary storage and voiding phases, requires coordination and function of the detrusor muscle, urethral muscle, urethral sphincter and pelvic floor muscles. Disturbance to any part of this process can result in incontinence.

SUI occurs as a result of the variable combination of urethral sphincter weakness and defect in the urethral support, leading to insufficient closure in the urethra (Abrams et al, 2005). The sphincter muscle at the bladder neck, which is an integral part of the pelvic floor muscles, fails to maintain complete closure of the bladder neck under pressure, allowing the leakage of urine (Simpson, 2000).

The aetiology of SUI is multifactorial. Causes can include lifestyle, neurological conditions, pelvic surgery, age and obesity, although childbirth is generally considered to be the most common cause. However, there is growing interest in whether the mode of delivery or women’s parity affects the outcome of presenting with SUI, and whether pregnancy in itself increases its prevalence.

Although there are obvious outward signs that the body is changing during pregnancy, changes to pelvic floor muscles and nerves are less obvious. As the baby grows, its weight and the pregnant uterus produce anatomical changes to the bladder and urethra. Studies using ultrasound have shown that the angle between the bladder neck and the urethra increases, producing a larger opening of the bladder neck. There is also increased mobility of the bladder due to hormonal changes in pregnancy, which can also affect the pelvic floor complex (Herbert, 2009). Lal et al (2003) supported this, suggesting changes in this article...

5 key points

1. Stress urinary incontinence (SUI) is defined as involuntary leakage of urine following exertion.
2. Childbirth is considered the most common cause of SUI.
3. A thorough assessment is vital to determine the type of incontinence.
4. A pelvic floor examination should be carried out to establish pelvic floor function.
5. Pelvic floor exercises can strengthen the perivaginal and perianal musculature to increase control of leakage.
to the properties of collagen and connective tissues during pregnancy mean incontinence can occur as a result of pregnancy alone, regardless of delivery.

Haslam (1997) identified that women considered most at risk of incontinence postpartum are those who are primigravidae, whose labour involved a prolonged active second stage. Herbert (2009) suggested an active second-stage labour lasting more than 50 minutes is significant for obstetric damage, while Dandy (1999) and MacArthur et al (1993) identified that forceps delivery does not protect against continence problems, and has been shown to damage pelvic floor muscles. However, there is disagreement about whether SUI increases with rising parity (Luber, 2004).

MacArthur et al (1993) found recurrent or continuous SUI was common in multiparous women and only resolved within three months in a small percentage; a large proportion still had symptoms 1-9 years later.

There is a fourfold increased risk of incontinence for pregnant women who have had a previous vaginal delivery (Herbert, 2009) and no significant difference in the prevalence of incontinence symptoms between women who delivered vaginally and those who had a Caesarean section (Lal et al, 2003). However, MacArthur et al (1993) found women who had emergency or elective C-sections were much less likely to report SUI. C-section, which offers considerable protection against SUI, would scarcely be justified on these grounds alone, but it may be worth considering if a woman already has clear evidence of pelvic floor weakness (MacArthur et al, 1993).

Although equal consideration should be given to the wellbeing of mother and child after childbirth, Mason et al (2001) found health professionals focused on the baby to the exclusion of the woman’s needs. Haslam (1997) argued that health visitors should specifically ask all postnatal women about urinary and anal function.

Although the impact of childbirth-related SUI is evident, opinion still differs on the contributing factors, or whether the factor of pregnancy itself is the main precursor. Further research is needed to improve information, care and education for women who are pre- and postnatal.

**Assessment and advice**

Clinical guidelines stress the importance of a thorough initial assessment to determine the type of incontinence and focus on the treatment required for the individual (National Institute for Health and Clinical Excellence, 2006; DH, 2000). It is important to do the assessment where patients feel comfortable, to motivate and encourage concordance. MacInnes (2008) found removing barriers to concordance may reduce the number of patients dropping out of therapy; this includes the option of carrying out house calls where appropriate (see Case Study, p20). Assessors need to adopt a positive and empathetic approach that motivates patients (Benson, 2003). Hinchcliffe et al (2003) found bladder diaries are a useful way of adding to the symptom history and engaging patients in trying to overcome lower urinary tract symptoms. This is supported by NICE (2006); in the initial assessment of women, bladder diaries should be completed for at least three days covering variations in usual activities, such as working and leisure. Diaries are excellent at motivating patients and giving them ownership of their condition. Subsequent follow-up diaries can also help compare bladder function, and motivate patients when progress is identified.

Women who have chronic constipation during pregnancy or after delivery have a higher risk of continence problems after childbirth (Dandy, 1999). Scowen (1996) also highlighted that one of the less recognised problems of childbirth is the onset of severe constipation, which may be due to a mixture of factors, such as pelvic nerve damage. Resultant straining can continue to be a contributory factor to pudendal nerve damage (Haslam, 1997).

Dietary and fluid intake should be discussed and advice given to patients, together with supporting information on dietary fibre and bladder irritants. Adequate intake of caffeine-free fluids (1-2 litres a day) is an important part of promoting continence (Haslam, 1997).

The DH (2000) said patients with bladder and bowel problems should be given general advice about healthy living, including information on drinking appropriate fluids in sufficient quantities. Getting the balance right can be hard for patients with difficulties should be encouraged to vary between hot and cold fluids and, with water, to use aids like sports bottles, which are portable so fluids can be drunk throughout the day.

Women should be advised about positioning and perineal support during defecation. The recommended position is to sit with feet well supported, knees flexed, ideally higher than the hips, with a bulge of the abdomen (Haslam, 1997).

Other investigations during the assessment should include urinalysis to exclude infection (DH, 2000). A pelvic floor examination should be done, with informed consent, to establish pelvic floor function. Muscle strength is rated according to the modified Oxford scale (Laycock and Jerwood, 2001). Women graded 0, 1 or 2 can be offered one or more of the following treatments: electrical stimulation, biofeedback or cones. Those graded 3, 4 or 5 are offered pelvic floor muscle exercises (The Chartered Society of Physiotherapy, 2003). Accurate assessment is imperative to identify those most likely to benefit from a pelvic floor exercise regimen (Paddison, 2002).

**Treatment**

The pelvic floor is composed of muscles, ligaments and fascia, which form a hammock-like support at the base of the pelvis (Fig 1). This supports the abdominal and pelvic organs and helps maintain urinary and faecal continence. The levator ani and pubococcygeus muscles of the pelvic floor are important in maintaining continence.
as they supply an occlusive force to the urethral wall during raised abdominal pressure (Laycock, 1992).

As a frontline treatment for women with SUI one of the key priorities is a trial of supervised pelvic floor muscle training for at least three months (NICE, 2006; DH, 2000). The aim is to enhance power, strength and endurance of the muscles.

Arnold Kegel first described pelvic floor exercises as a possible treatment for urinary incontinence in 1948. The aim is to strengthen the perivaginal and perianal musculature to increase control of urinary leakage (Joanna Briggs Institute, 2006). Over the years since these exercises were introduced, no single programme has been adopted and some components have been found not to be beneficial. An example is stopping urine mid-stream, which has been found to irritate the bladder and may cause incomplete emptying, which increases urinary tract infection risk (Herbert, 2005).

Patients often ask about the issue of stopping urination mid-stream, and some GPs recommend doing this to test pelvic floor function. As part of the initial patient assessment, I fully explain the pelvic floor function and why this is not recommended, with supporting visual information. The better patients’ visualisation of the pelvic floor muscle function, the greater the results.

The Joanna Briggs Institute (2006) argued verbal instructions alone are not adequate for many women to successfully perform pelvic floor exercises. These should be accompanied by written information where possible, to reinforce the message and increase concordance (Simpson, 2000). An individualised programme accounting for a patient’s daily routine, lifestyle, expectations and motivation is key to success.

Motivation is a critical to a successful pelvic floor exercise programme (Paddison, 2002). Health professionals must develop an understanding of factors that can influence motivation if they are to optimise clients’ chances of successfully incorporating these exercises into their lives (Paddison, 2002). Drop-out rates have been shown to be high among postpartum women, so programmes should be designed to fit in with normal daily routines to aid acceptability (Chiarelli and Cockburn, 2002).

A combination of fast and slow exercises ensures both types of muscle fibres found in the muscles of the pelvic floor are exercised equally (Simpson, 2000). The aim is to increase the number of pelvic floor contractions; NICE (2006) guidance recommends at least eight contractions three times daily.

Some women may take longer than others to establish their exercise regimen, so patience and time are vital when supporting and teaching. Gaining an insight into the effect of incontinence on women’s lives, how they cope with symptoms, and what they hope to achieve from treatment is a valuable starting point. Realistic individual and achievable goals as well as client empowerment are vital (Paddison, 2002).

Research showed the degree of professional contact women receive enhances concordance with their exercise regimens; cure/improvement rates were higher in those with more frequent contact with health professionals, suggesting regimen concordance was superior (Paddison, 2002). There is also strong evidence to support pelvic floor muscle training, with expected cure rates of up to 73%, and improvement in symptoms in up to 97% of patients (Hanzaree and Steggall, 2010).

Williams (2004) said new mothers with SUI would, ideally, have the condition identified by the midwife; assessment and advice should follow, with health visitors providing advice and referring to the continence advisor as necessary. Mason et al (2001) also reported that women felt contact with health professionals stopped too soon and they were left “high and dry”. Although the literature is clear on the potential problems that can occur after childbirth, there is little on how to prevent potential continence problems.

**Conclusion**

There is an obvious need for more antenatal pelvic floor exercise instruction, continuing through to postnatal care. Motivating women to exercise and helping them understand the pelvic floor should preferably be taught antenatally (Scowen, 1996).

Closer working relationships between continence services, maternity/midwifery teams, and physiotherapists are essential – not only to reduce continence problems but also, more importantly, to improve awareness for women at risk. Conservative treatment targeted at women with incontinence reduces risk of it a year later, and contact with nurses aids exercise reinforcement and social support (Matharu, 2002).

Negative attitudes to, and health professionals’ lack of awareness of, incontinence cause misconceptions about how to deal with patients (Hope, 2007). Raising awareness and changing attitudes is vital if patients with this debilitating condition are to receive the care they should expect. With greater understanding of the function of the pelvic floor muscles, and risk factors for trauma and damage as a result of pregnancy and birth, health professionals will be better able to meet women’s needs (Herbert, 2000).