Behaviour change to treat overactive bladder syndrome

In this article...
- The prevalence of overactive bladder (OAB) syndrome
- The main treatment options for OAB
- How nurses can support patients with bladder retraining

Overactive bladder (OAB) syndrome is a symptom complex characterised by urinary urgency, with or without urgency-associated urinary incontinence. Urinary urgency is defined as a sudden and compelling desire to pass urine that is difficult to defer, and should be differentiated from the strong desire to void that occurs in situations when a healthy person has to refrain from micturition (Abrams et al., 2003). OAB is often associated with urinary frequency (voiding frequently during the day) and nocturia (voiding once or more overnight) in the absence of pathologic or metabolic conditions that may cause or mimic OAB. Examples of such conditions include:
- Urinary tract infections;
- Polyuria;
- Transitional cell carcinoma of the bladder;
- Underlying neurological abnormalities (Ellsworth, 2008);
- Cystitis;
- Bladder calculus;
- Prostate cancer (Yamaguchi et al., 2009).

Prevalence and aetiology
Studies have found broadly similar prevalence rates for OAB, which are higher than those for other common long-term conditions such as diabetes (8%) and asthma (4.5%) (Ong et al., 2008). The NOBLE study found 17% of women and 16% of men had the condition in a US population (Stewart et al., 2003), while Milsom (2001) found similar rates, adding that men tend to develop OAB later in life than women and that women were more likely to develop urge incontinence than men. The prevalence rates for OAB are 11% in men and 13% in women from a sample population in Europe and Canada (Coyne et al., 2008).

OAB has a detrimental effect on quality of life including professional, social and recreational activities; sexual health and function; and relationships with family members (Stewart et al., 2003; Liberman et al., 2001; Abrams et al., 2000). The condition with or without urinary incontinence is also associated with increased comorbidities including depression, urinary tract infection, skin infections, falls and fractures, and vulvovaginitis (Wyman et al., 2009), as well as increased rates of mortality and institutionalisation in older people (Nuotio et al., 2003).

The causes of OAB can be multifactorial in both aetiology and pathophysiology (Ellsworth, 2008). The complete aetiology is not fully understood; the same applies to the relationship between all the potential contributory or causative factors. More research is needed to fully understand the mechanisms of this complex syndrome, which would help to guide new treatment approaches.

For practitioners, this uncertainty has several implications: the treatment of OAB can be complex and multifaceted, and as it is not fully understood there may not be a wealth of empirical evidence to support current treatments. It may be prudent to question some of our interventions, and patients must be treated holistically.

Treatment
Proposed guidelines from the European Association of Urology (Thuorff et al., 2011), Yamaguchi et al. (2009), NICE (2006) and the Scottish Intercollegiate Guidelines Network...
**5 key points**

1. **Overactive bladder (OAB) syndrome is characterised by urinary urgency but not necessarily urgency-associated urinary incontinence.**

2. **The prevalence of OAB is higher than other common long-term conditions such as diabetes.**

3. **The condition has a detrimental effect on individuals’ quality of life.**

4. **The complete aetiology of OAB is not fully understood.**

5. **Management of OAB can be complex and multifaceted.**

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(2004) all recommend that, as long as all organic reasons for OAB symptoms have been excluded, first-line treatment should involve conservative therapies including:

- Behavioural interventions;
- Lifestyle changes;
- Use of antimuscarinics.

Behavioural interventions for the treatment of OAB aim to change patient lifestyle and behaviour and teach techniques to suppress urgency and improve continence skills. They can be classified into two main categories:

- Habit modification to promote bladder health and alleviate bladder symptoms;
- Training techniques that aim to teach skills to control the symptoms of bladder dysfunction (Wyman et al., 2009).

It is important to recognise that there is no definitive cure for OAB; the mainstay of treatment is to improve quality of life and minimise symptoms.

**Bladder retraining**

The usefulness of bladder retraining programmes, with or without the use of pelvic floor muscle exercises as a suppression technique, is well supported in the literature as a successful and safe treatment for patients with OAB (Burgio, 2004; Mattiasson et al., 2003). Some studies have found bladder retraining to resolve 12.73% of urge incontinence, with improvement rates cited from 57–87% (Wyman, 2005). Burgio (2004) argued that bladder retraining is as effective as drug therapy.

The purpose of bladder retraining is to try to extend intervals between each void incrementally to eventually re-establish a normal voiding pattern and bladder capacity, and to suppress urgency. However, to be successful patients must be motivated to adhere to the programme and fully understand its principles.

Bladder retraining may not be suitable for those with learning difficulties or cognitive impairment, patients who are unable to toilet themselves independently, or those with non-compliant bladders following pelvic radiation. To ensure success, it is essential that:

- Patients are assessed appropriately;
- Organic causes for symptoms are excluded;
- Clinicians and patients are willing to invest the necessary time;
- Adequate support and encouragement are given to ensure concordance.

**Behaviour change**

Although there is evidence to support the efficacy and safety of bladder retraining, it is poorly understood and there is a lack of consensus over other interventions such as:

- Types of fluid recommended;
- Fluid manipulation;
- Reducing caffeine;
- Smoking cessation;
- Weight loss.

**Weight and smoking.** Weight loss and smoking cessation as treatment approaches for OAB are relatively recent developments. However, the evidence base to support either of these is limited and contradictory. While Milne (2008) and Dallosso et al. (2003) suggested weight loss and smoking cessation do improve continence, Hashim and Munsa (2009) argued that the evidence base is weak.

It is my opinion that weight loss and smoking cessation should be encouraged, not only to improve continence, but also for the other potential health benefits. It is also logical to assume that weight loss will reduce abdominal pressure and pelvic floor strain, and that smoking may contribute to a chronic cough, which is a recognised risk factor in developing incontinence.

**Caffeine.** Caffeine is considered the most commonly used psychoactive drug in the world and is present in tea, coffee, carbonated drinks, energy drinks, chocolate and many non-prescription analgesics. It is suggested that caffeine consumption can adversely affect continence by increasing diuresis, cause early and increased urgency and frequency of micturition, worsen nocturnal voiding symptoms (Bryant et al., 2000), cause an increase in detrusor pressure, and increase detrusor excitability (Lohsiriwat et al., 2011). These findings are claimed to have been reported after ingestion of caffeine on urodynamically testing in adults and replicated in animal models including rabbits and rats.

However, other empirical studies do not always support this finding. NICE (2006) found conflicting reports on the effects of caffeine on the bladder and its impact on incontinence: some studies reported no difference in symptoms following reduced caffeine intake, some showed no statistical difference, and some showed improvement after caffeine reduction. Other studies suggest that artificial sweeteners, high sugar levels, chemicals, and acidity of the fluid consumed rather than the presence of caffeine may irritate the bladder (Dasgupta et al., 2006).

It is also interesting to note that neither NICE (2006) nor the European Association...
of Urology (Thuroff et al, 2011) specifically mentioned caffeine reduction in their guidance. SIGN (2004) suggested that, although larger cross-sectional studies of caffeine reduction showed no association with increased incontinence, smaller clinical trials did suggest that caffeine restriction improves continence.

In my experience, caffeine moderation has proved beneficial in the clinical setting in improving urge incontinence and frequency and, when replaced by water-based fluid, has had a positive effect on constipation, acidity and concentration of urine, and increasing intervals between voids and bladder capacity. This improvement could be attributed to having a diluting effect on urine concentration, thereby lessening irritation. However, it is difficult to find empirical research to support this idea and study results are conflicting. NICE (2006) found there was either no improvement in symptoms or a significant increase in symptoms of urgency following an increase in bland fluid intake, such as water and diluted juice, while Griffiths et al (1993) and Beetz (2003) found significant improvements in urinary urgency and reduction in urinary tract infection rates.

The confusion over how to approach caffeine intake is further compounded by commercial branding on packages of tea that claim it is as hydrating as water, or beverages that claim to be caffeine-free and are then wrongly promoted by health professionals as a suitable alternative (Addison, 2000). It may be more useful to approach caffeine reduction in terms of low, moderate and high intake, and suggest that patients who have moderate or high levels try to consume less and reduce their intake slowly to prevent the occurrence of withdrawal symptoms (Addison, 2000).

Another controversial area is the amount of fluid that should be consumed. It is often recommended that adults have 6-8 cups or glasses of fluid per day; however, this advice could lead to wide variations in the amount of fluid consumed, simply depending on the size of glass or cup used. An effort to standardise the amount of fluid consumed was hypothesised by the fluid matrix (Abrams and Klevmark, 1996), which proposed that fluid consumption should be based on a patient's weight. This advice could be dangerous and must be interpreted on an individual basis, taking account of any comorbidities such as heart failure and renal impairment. Also interesting to note is that there is no advice within this matrix for patients who weigh more than 100kg (16 stone).

**Guidance needed**

There is a real need for a consensus of opinion to be collated and standardised at a national level so health professionals can give clear, correct and appropriate advice to patients. It is unprofessional to expect patients to adhere to advice that is conflicting and not evidence based. Patient education and understanding is paramount to the success of behavioural programmes (Wyman et al, 2009), so all health professionals should provide the same advice, where possible, based on an evidence base or clinical judgement based on outcome measures.

**Conclusion**

Behavioural interventions aim to improve quality of life of patients with OAB and empower them to control their symptoms on a long-term basis; both patients and clinicians need to invest time to be successful in this.

Practitioners must assess patients individually; where it is appropriate to recommend some of the interventions that are not well supported in the literature, such as caffeine reduction, they should be guided by their own clinical judgement and previous clinical outcomes. They should also take time to explain to patients the rationale behind the suggested intervention, but ultimately be reassured that these interventions will not cause harm.

While nurses are best placed to provide behavioural therapies for patients with OAB, they need to demonstrate the positive impact these therapies have more robustly through outcome measures, quality indicators and further research, which could lead to a standardised and unified approach to a common and distressing condition.

References


