Men’s health management with regards to lower urinary tract symptoms (LUTS) often focuses on issues related to the prostate gland (both benign and malignant) and sexual function. However, overactive bladder (OAB) syndrome and urinary incontinence in men can be a deeply debilitating condition for the patient and cause a considerable drain on NHS resources.

Men are often embarrassed to discuss such issues, suffering in silence, and develop elaborate coping strategies to manage their condition. Often simple advice and education can help improve symptoms; those with more severe symptoms may need investigation, but also have a multitude of treatment options to help with their condition and quality of life.

DEFINING OAB
Overactive bladder is defined as a symptom syndrome consisting of urgency, with or without urge incontinence, usually with frequency and nocturia, in the

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absence of proven infection or other obvious pathology (Box 1). Urgency is the defining symptom of OAB and, while the symptoms may have other possible causes, the presence of another diagnosis (e.g. benign prostatic enlargement) does not preclude the existence of concomitant OAB. Community practitioners should bear in mind that the constellation of symptoms in OAB may vary significantly but the unifying feature is the presence of urgency, which is defined as a ‘sudden compelling desire to void that is difficult to defer’.

Often patients with OAB demonstrate detrusor overactivity (DO), which is a urodynamic diagnosis defined as demonstrable involuntary detrusor contraction during filling cystometry. Using the International Continence Society (ICS) definitions for OAB, DO was demonstrated in 64 per cent of cases of OAB dry (OAB without urgency urinary incontinence) and 90 per cent of cases of OAB wet (OAB with urgency urinary incontinence). Interestingly, 30 per cent of men with DO did not have OAB symptoms.2

Detrusor overactivity can occur in conjunction with a neurological disease, for example after spinal cord injury or in patients with multiple sclerosis, in which case it is termed neurogenic DO. When no clear cause is demonstrated, it is termed idiopathic DO. The overactive bladder syndrome is a definition that implies the diagnosis of DO, but as we can see from the studies quoted above, this is not always the case. Other bladder conditions such as painful bladder syndrome and bladder oversensitivity can present with similar symptoms to OAB, which makes the diagnosis all the more challenging. In men, bladder outflow obstruction typically secondary to an enlarged prostate can cause OAB as a secondary phenomenon.

EPIDEMIOLOGY

The data concerning the prevalence of OAB using new ICS definitions have been assessed in the European Prospective Investigation into Cancer and Nutrition (EPIC) study, a cross-sectional population survey of 19,165 individuals from Canada, Germany, Italy, Sweden and the UK.3 Previous studies used older definitions and perhaps overestimated prevalence.4,5 The age- and gender-specific prevalence of OAB in the EPIC study is shown in Table 1. OAB is more common in females than males in all age groups other than over-60s. Females are also more likely to experience incontinence associated with OAB (51.6 per cent) compared to men (36.1 per cent).6 The EPIC study estimates the incidence of OAB in the UK to be 8.7 per cent of men and 10.2 per cent of women.7

Irwin and colleagues used data from the EPIC study to estimate the economic impact of OAB with and without urgency urinary incontinence. The data from the UK estimate that each OAB patient per annum has ‘excess direct costs’ of €515 (including medical consultation €225, clinical depression €204, incontinence pad use €48 and prescription costs €33), sequelae direct costs of €13 (urinary tract infections [UTIs], etc.) and nursing home costs of €381.8 Overall in the UK there are €1.007 billion of direct costs associated with OAB, €579 million of nursing home costs and €233 million of lost productivity costs.9 There are no proven risk factors for OAB, but there are significant associations (in spite of adjustment for social confounders such as age, gender and country) with

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**BOX 1. Common definitions of lower urinary tract symptoms (LUTS)**

<table>
<thead>
<tr>
<th>STORAGE LUTS</th>
<th>VOIDING LUTS</th>
<th>POST-MICTURITION LUTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Urinary urgency: the complaint of a sudden compelling desire to pass urine that is difficult to defer</td>
<td>● Slow stream: reported by the individual as his or her perception of reduced urine flow, usually compared to previous performance or in comparison to others</td>
<td>● Feeling of incomplete emptying: a self-explanatory term for a feeling experienced by the individual after passing urine</td>
</tr>
<tr>
<td>● Urgency urinary incontinence: the complaint of involuntary leakage accompanied by or immediately preceded by urgency</td>
<td>● Intermittent stream (intermittency): the individual describes urine flow that stops and starts, on one or more occasions, during micturition</td>
<td>● Post-micturition dribble: the individual describes the involuntary loss of urine immediately after he or she has finished passing urine, usually after leaving the toilet</td>
</tr>
<tr>
<td>● Increased daytime frequency: the complaint by the patient who considers that he or she voids too often by day</td>
<td>● Hesitancy: the individual describes difficulty in initiating micturition, resulting in a delay in the onset of voiding after he or she is ready to pass urine</td>
<td></td>
</tr>
<tr>
<td>● Nocturia: the complaint that the individual has to wake at night one or more times to void</td>
<td>● Straining: the muscular effort used to initiate, maintain or improve the urinary stream</td>
<td></td>
</tr>
<tr>
<td>● Terminal dribble: the individual describes a prolonged final part of micturition, when the flow has slowed to a trickle/dribble</td>
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<td></td>
</tr>
</tbody>
</table>

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other chronic conditions such as depression, erectile dysfunction, constipation and neurological disorders. Storage LUTS have been associated with depression, hypertension, irritable bowel syndrome, recurrent UTIs, elevated body mass index and childhood nocturnal enuresis, and may increase the prevalence of falls, fractures and skin infections.

**IMPACT OF OAB**

Patients with OAB have a considerably lower quality of life, work productivity, sexual satisfaction and quality of sleep; they also have higher rates of depression, and slightly poorer overall health. Given the emotional and personal context of these effects, clinicians have a key role in the assessment and holistic management of OAB.

Irwin et al. used the International Prostate Symptom Score (IPSS) to assess the severity of LUTS experienced by the general population compared with men with OAB in the EPIC study. Men with OAB were more likely to experience multiple LUTS subtypes, ie storage, voiding and post-micturition LUTS, and report moderate to severe LUTS (30 versus 6 per cent) when compared to the general population. Patients reported increasing symptoms of bother and associated increased healthcare consultation rates with increasing LUTS. These data may have underestimated LUTS severity because IPSS does not assess urinary continence.

These data illustrate the importance of assessing the full range of LUTS in patients who present with urgency and emphasise that OAB may coexist with other pathology, either secondarily or as an independent process. Typically in men as they get older, an enlarging prostate may lead to bladder outflow obstruction and the emergence of OAB symptoms as a result. In younger men a tight or high bladder neck may result in a similar pattern. In other cases the two conditions may coexist. OAB symptoms may continue to cause bother even if the primary pathology, eg bladder outflow obstruction, is treated. Studies have suggested that in those who undergo transurethral resection of the prostate for LUTS, 50-60 per cent have DO, of which 25-50 per cent persist following surgery.

**INITIAL ASSESSMENT**

The initial assessment of a patient who presents with LUTS should always start with a comprehensive history. Enquire about each individual LUT symptom (see Box 1). Establish the level of bother from each symptom and whether the patient has developed any coping behaviours that may be masking further symptoms (such as avoiding drinking fluid or early, regular voiding). Enquire about the impact of the symptoms on lifestyle, including key areas such as mood, sleep, sexual function and work.

A full drug history may reveal contributing medications such as diuretics, alcohol and caffeine. Ask about any medications already taken in an effort to treat this condition. Past medical and surgical history such as congestive cardiac failure, neurological pathology or previous urological instrumentation may elucidate a cause.

Physical examination of the abdomen and external genitalia, and digital rectal examination to assess prostatic size and the potential for benign prostatic hyperplasia in men >50 years of age, are essential for excluding common or worrying potential causes. In selected patients a neurological examination may be appropriate. A palpable mass, abnormal prostate or neurology should always prompt further investigation.

Investigations should include a urinalysis and midstream urine for culture if appropriate and renal function. A voiding diary is essential to assess the frequency and average voided volume throughout the day and during the night. If a diagnosis of polyuria or nocturnal polyuria is identified, the cause can be addressed and the treatment strategy refined. Typically a patient with OAB will void frequently with small volumes, including during the night.

There can be a mixture of storage and voiding LUTS and, if there are concerns regarding voiding LUTS, a flow rate and residual may be helpful. Urodynamics are not required before treating OAB symptoms in the community. The definition of OAB includes ‘in the absence of any other pathology’ and it is crucial to bear this in mind – for example, screen for UTIs or haematuria and investigate appropriately if detected.

The male patient often incorrectly associates LUTS with prostate cancer. Prostate-specific antigen (PSA) can be offered to patients at their request or/and after appropriate counselling regarding its benefits and limitations. An abnormal PSA result or abnormal-feeling prostate at rectal examination should be referred for further assessment.

According to the NICE guidance on LUTS in general, reasons for referral would include failure of medical therapy, LUTS complicated by recurrent UTIs/pyelonephritis, urinary retention (acute or chronic), renal impairment of a lower urinary tract origin, and suspicion.
of malignancy/age-related elevated PSA. For men with symptoms of OAB specifically, failure of conservative management, haematuria or recurrent UTIs would all be appropriate reasons to refer to the specialist.

Cystoscopy and upper tract imaging should be considered for anyone with haematuria (not UTI associated), recurrent infections, sterile pyuria, profound symptoms, pain or chronic retention. An overview of the management of urinary incontinence and OAB in males from the EAU guidelines is summarised in Figure 1.

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**Table: Management of Urinary Incontinence and OAB in Males**

<table>
<thead>
<tr>
<th>History</th>
<th>Clinical Assessment</th>
<th>Presumed Diagnosis</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-micturition dribble</td>
<td>Incontinence on physical activity (usually post-prostatectomy)</td>
<td>Stress incontinence presumed due to sphincteric incompetence</td>
<td>Urethral milking pelvic floor muscle contraction</td>
</tr>
<tr>
<td>Incontinence with mixed symptoms</td>
<td>Urgency/frequency, with or without incontinence</td>
<td>Mixed incontinence (treat most bothersome symptom first)</td>
<td>Discuss treatment options with the patient</td>
</tr>
<tr>
<td>'Complicated' incontinence</td>
<td></td>
<td>Urege incontinence presumed due to detrusor overactivity</td>
<td></td>
</tr>
</tbody>
</table>

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**Declaration of interests**

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