NICE guideline on lower urinary tract symptoms in men

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The author summarises the recommendations of the NICE clinical guideline on ‘Lower urinary tract symptoms in men’ – the first national guideline to address this umbrella concept rather than focusing on benign prostatic hyperplasia alone.

For many years, a man presenting to his doctor with urinary symptoms was immediately labelled with ‘prostatism’ or ‘benign prostatic hyperplasia’ (BPH), with a rapid assumption as to the aetiology of his symptoms. Fifteen years ago, the term ‘lower urinary tract symptoms’ (LUTS) was introduced to dispel the perception that male urinary symptoms invariably arise from the prostate.

The publication by NICE in May 2010 of the ‘Lower urinary tract symptoms in men’ clinical guideline is a landmark in the recognition of the term ‘LUTS’. The guideline covers the management of a man presenting with LUTS from initial assessment, usually in a primary care setting, all the way through to complex surgical management.

The commonest urological conditions presenting with LUTS are BPH and overactive bladder (OAB) syndrome. These conditions have a high prevalence in the community, with studies estimating that over one-third of men aged 50 or over suffer from significant symptoms from BPH – this would equate to approximately 3.2 million men in the UK alone. There is no doubt, however, that there are a huge number of men with significant LUTS who are not receiving optimal treatment. This is for a variety of reasons, including failure to present to a healthcare professional (‘these symptoms are just a normal feature of ageing’), delayed presentation, dismissal of symptoms at initial assessment, misdiagnosis, incorrect choice of treatment, cessation of treatment as a result of side-effects, or failure to refer to secondary care for failed treatment at a primary care level.

The guideline encourages GPs to make a full assessment in primary care of the patient presenting with LUTS, through...
history taking, general and urogenital examination, and a number of simple investigations. It emphasises that many patients with LUTS can be effectively managed in a primary care setting (Figure 1). There has long been a tendency to refer patients with LUTS for urological assessment, particularly because of fear of missing a patient with prostate cancer. The guideline makes it clear that, provided an adequate assessment is carried out, medical management can be safely instituted in a community setting without the need for specialist involvement. Only those patients with complex presentations, or who fail to respond to initial therapy, should be referred for specialist urological assessment.

INITIAL ASSESSMENT
A patient presenting for the first time with LUTS requires thorough assessment – the generalist is ideally placed to make this assessment, as conditions such as diabetes mellitus, heart failure (nocturia secondary to re-absorption of peripheral oedema when recumbent), excessive fluid intake (or excessive caffeine, alcohol, etc), medication, as well as urological conditions such as BPH or OAB, may be responsible.

Assessment of the patient with LUTS involves a few simple steps – properly carried out, these allow the GP (or other healthcare professional) to establish a working clinical diagnosis, exclude other significant pathology, assess severity of symptoms and their impact on the patient, and ascertain whether the patient wishes to manage his symptoms conservatively or embark on medical therapy.

Initial assessment should therefore consist of:

- history of urological symptoms and consideration of general medical condition
- urological examination (including a rectal examination) and a ‘focused’ general examination to exclude other significant pathology contributing towards LUTS,
- the patient with peripheral oedema presenting with nocturia
- urine dipstick looking for haematuria, glycosuria, urinary tract infection, etc
- a frequency-volume chart or bladder diary – an extremely useful and simple investigation to identify excessive urine output, nocturnal polyuria, etc
- consideration of a prostate-specific antigen (PSA) test.

The PSA test is controversial, but the guidelines offer particular situations in which it should at least be offered and discussed with patients (eg LUTS suggestive of benign prostatic enlargement, an abnormal prostate on rectal examination, or where patients have concerns regarding prostate cancer).

If considering treatment of LUTS, an International Prostate Symptom Score (IPSS) questionnaire should be used to assess the baseline severity of the symptoms – this score is useful in judging response to treatment and is not designed to be used as a diagnostic tool or to judge which patients to treat. Use at this stage allows subsequent assessment of symptom change.

CONSERVATIVE MEASURES
For the man with mild non-bothersome LUTS, immediate initiation of medical treatment may not be required and the guideline recommends a trial of conservative management. This may involve a number of different options according to the presenting symptoms (Box 1).

Urethral milking
This is a technique used to eliminate post-micturition dribble, which is not associated with obstruction but may be caused by the urethra being emptied incompletely by the muscles surrounding it. This technique involves drawing the tips of the fingers behind the scrotum and pushing up and forward to expel the pooled urine.

Fluid intake
There is considerable confusion over how much people should drink, but there is some consensus that fluid intake should be based on body weight. However, patients (particularly those with storage LUTS) will often reduce their fluid intake excessively as a coping strategy, resulting in worsened symptoms and increased risk of infection.

Reduction in the intake of fluids containing alcohol, caffeine and artificial sweeteners, together with avoidance of carbonated drinks, is often suggested by clinicians – the guideline found no evidence for this, however, but it remains worthwhile advice.

Bladder training
The guideline suggests (based on expert opinion rather than evidence) that bladder training for men with OAB should be supervised, eg by a continence advisor rather than merely by way of written information.

Containment products
The guideline emphasises the need to offer men with incontinence containment products such as pads or sheaths to achieve social continence until a long-term management plan is formulated – men must not be left without these products while waiting for urological opinion in secondary care.
MEDICAL MANAGEMENT

Advances in medical therapy in recent decades have revolutionised the care of patients with LUTS, with a dramatic reduction in the number of patients requiring surgical treatment. It has transformed the specialty of urology from a wholly surgical specialty to one in which a large number of patients can be successfully managed in the community.

Anticholinergic drugs for OAB

Medical management of OAB is with anticholinergic drugs, expecting a fairly rapid improvement in symptoms. Side-effects from these drugs are relatively common and may lead to discontinuation of treatment — it is vital, therefore, that GPs warn patients of possible adverse effects, such as dry mouth, and encourage patients to re-attend should these occur. Different patients respond in different ways to anticholinergics, so if side-effects are experienced on one formulation, a trial with another is worthwhile.

Management of BPH symptoms

Two drug groups form the mainstay of management of men with symptoms caused by BPH — alpha-blockers (eg tamsulosin, alfuzosin, doxazosin, etc) and 5-alpha reductase inhibitors (eg finasteride, dutasteride).

Alpha-blockers

The guideline recommends alpha-blockers as the first-line medical therapy for LUTS suggestive of BPH. They work by relaxing the smooth muscle of the bladder neck and prostate. All alpha-blockers are similarly effective for control of LUTS, but older, less ‘uro-selective’ alpha-blockers such as doxazosin or terazosin have different side-effect profiles that may limit their use in management of LUTS. Alpha-blockers have a rapid onset of action, within four to six weeks of initiation, and are generally well tolerated. However, they have not been shown to lower the risk of long-term progression of LUTS (eg deterioration in symptoms, acute urinary retention or BPH-related surgery).

5-alpha reductase inhibitors

5-alpha reductase inhibitors work by decreasing the size of the prostate, through inhibition of the conversion of testosterone to its active metabolite dihydrotestosterone. The guideline recommends their use in patients with significant risk factors for ‘progression’, eg large prostates on digital rectal examination (estimated >30g), a PSA >1.4 (a surrogate marker of prostate volume in the absence of prostate cancer), severe symptoms and in older men.

Combination therapy with both an alpha-blocker and a 5-alpha reductase inhibitor is recommended for patients with both moderate-to-severe symptoms and significant risk factors for progression. Recent data from a four-year study of combination therapy in men with significant risk factors have shown combination therapy to be more effective than monotherapy with either an alpha-blocker or a 5-alpha reductase inhibitor in controlling symptoms and reducing acute retention surgery over this time period.1

Anticholinergic drugs

Anticholinergic drugs also have a role in management of men with BPH — for many years clinicians have been cautious about prescribing this class of drugs in men considered to have BPH because of a perceived high risk of precipitating acute urinary retention. Studies have shown, however, that this risk is actually low, unless patients have severe voiding symptoms or high post-micturition residual volumes.

Anticholinergics are particularly useful for treatment of storage symptoms that have failed to respond to treatment with an alpha-blocker. These storage symptoms cause far more bother than voiding symptoms because of the effect they have on a patient’s quality of life — improving voiding symptoms may lower the IPSS score and give an impression of success, but unless these troublesome symptoms of frequency, urgency and nocturia are addressed, patients will experience little improvement in quality of life.

Diuretics

For patients identified with nocturnal polyuria on their frequency-volume chart (defined as passing more than one-third of total daily urine output during the night), if simple measures such as evening fluid restriction fail, the guideline recommends first-line treatment is a loop diuretic (eg furosemide 40mg) taken at 4pm. This aims to produce a diuresis during the evening, thus decreasing the number of nocturnal voids. Desmopressin (synthetic antidiuretic hormone) is a second-line therapy, but should be prescribed with caution unless the doctor is familiar with potential side-effects such as hyponatraemia.

SURGICAL MANAGEMENT

Men failing to respond adequately to medical management should be offered referral for specialist assessment. Further investigations may be required at this stage, such as flow rate assessment, and then consideration of surgical intervention. Transurethral resection of the prostate (TURP) is recommended, as is a newer technique of holmium laser enucleation of the prostate (HoLEP). This procedure has good results in the literature, but the guideline recognises the steep learning curve for surgeons with HoLEP and thus recommends it is performed only in centres specialising in the technique.

For smaller prostates an alternative surgical procedure is transurethral incision of the prostate (TUIP — also known as a ‘bladder neck incision’) and for large prostates, an open prostatectomy may be required. Newer laser techniques such as green light laser (KTP) do not as yet...
have a sufficient evidence base to be recommended, but are considered acceptable in the context of a clinical trial. Minimally invasive techniques such as microwave therapy (TUMT) or needle ablation (TUNA) are not recommended because of high failure and re-operation rates, which greatly decrease cost-effectiveness.

**MANAGEMENT OF URINARY RETENTION**

Acute retention of urine is extremely painful and, unsurprisingly, the guideline simply recommends immediate catheterisation. Most men with acute retention will be offered a trial without catheter (TWOC) and the guideline recommends that all men should be treated with an alpha-blocker before proceeding to TWOC. There is no clear evidence for how long this treatment should continue before TWOC, but at least two days’ treatment before TWOC is advised.

The guideline gives a useful definition of chronic retention: ‘A non-painful bladder, which fails to empty and remains palpable or percussable after the patient has passed urine, with a post-voiding residual of more than 1 litre. Such patients may be incontinent especially at night-time.’ Management of chronic retention is more complex and there are several recommendations in the guideline, including:

- Consider intermittent catheterisation before indwelling – self or carer administered
- Consider offering intermittent catheterisation instead of surgery in men with chronic retention whom you suspect have markedly impaired bladder function
- Carry out a serum creatinine test and imaging of the upper urinary tract in men with chronic urinary retention
- Consider surgery without prior catheterisation in men who have chronic urinary retention and other bothersome LUTS but no impairment of renal function or upper renal tract abnormality.
- Catheterise prior to surgery those who have impaired renal function or hydronephrosis
- Long-term catheterisation is only for those in whom surgery is inappropriate.

**CONCLUSION**

Clinicians are faced with ever-increasing numbers of clinical guidelines and the challenge is always to convert guideline recommendations into change in clinical practice, particularly in primary care where generalists face so many demands during the 10-minute consultation. There are many challenges that need to be addressed in ensuring full implementation of these guidelines on a national level.

Finally, it is notable that the guideline steers clear of referring to primary care and secondary care, but talks of initial assessment/generalist/specialist assessment. This recognises the increasingly blurred boundary between primary and secondary care, which is likely to develop further in the next few years, with GP commissioning increasingly likely to develop community LUTS services, recognising that only a minority of these patients require the opinion of highly specialised urologists.

**Declaration of interests**

Since completing the NICE guideline, the author has undertaken consultancy work for GSK.

**REFERENCES**