

# The management of benign prostatic hyperplasia

Benign Prostatic Hyperplasia (BPH) can have a major physical and psychosocial impact on patients. It is now generally accepted that out of the two million men in the UK who suffer from lower urinary tract symptoms, around two thirds can initially be managed within primary care. In this article, **Dr Brian Crichton** discusses how best to screen for, treat and manage BPH in primary care.

Ever since the first shared care initiatives were introduced during the mid 1990s, the management of Benign Prostatic Hyperplasia (BPH) has been making a gradual transition from secondary to primary care<sup>1</sup>. The use of joint protocols has seen General Practitioners (GPs), specialist nurses and urologists working together to ensure that most patients suffering from Lower Urinary Tract Symptoms (LUTS) receive prompt and effective treatment within their local communities.

It is now generally accepted that out of the two million men in the UK who suffer from LUTS<sup>1</sup>, around two thirds can initially be managed within primary care (the remaining third should be referred for a specialist assessment)<sup>2</sup>. Case finding, initial assessment/diagnosis and the management of patients with mild to moderate symptoms should all take place within primary care. Specialist treatment is appropriate for those with severe symptoms, those at risk of urinary retention and those whose initial assessment indicates the possibility of prostate cancer.

## Case finding

Although proactively inviting middle-aged men to attend a prostate health check has been shown to be effective in detecting prostate cancer<sup>3</sup>, it is not

generally considered a practical proposition for a busy primary care practice to screen for BPH. Opportunistic case finding, however, can easily be achieved. Every male patient over 50 years who attends the practice for whatever reason should be asked the following three questions:

- > Do you get up in the night to pass urine?
- > Is your urinary stream reduced?
- > Are you bothered by your bladder functions?

Patients who answer yes to any of these questions may then be investigated further.

## Initial investigations

According to the *British Association of Urological Surgeons* (BAUS), which last year adapted its guidelines on the management of LUTS for use in primary care, investigations should begin with a detailed history of the patient's symptoms (*Figure 1*)<sup>4</sup>. These should be rated using the International Prostate Symptom Score (IPSS). Physical examination in appropriate patients should also include a focused neurological examination as well as a palpation of the lower abdomen to exclude a chronically distended bladder.

The GP should also conduct a Digital Rectal Examination (DRE), and they should organise a Prostate Specific Antigen (PSA) blood test to

determine the size of the prostate and to help to exclude early indicators of cancer respectively<sup>4</sup>.

### Referral

A patient should be referred<sup>4,5</sup> for specialist assessment by a urologist if:

- > He has severe symptoms (IPSS >18)
- > He has a history of haematuria
- > He has a palpable distended bladder or chronic retention of urine on ultrasound
- > The DRE is abnormal (especially a palpable nodule or prostatic induration or tenderness)
- > Serum creatinine is raised
- > PSA >4ng/ml.

### Treatment

Before beginning treatment, it is important to determine what the patient wants and expects from his treatment. Many patients with mild symptoms do not find them particularly bothersome and are happy simply to be reassured that they do not have prostate cancer. In these

patients, a policy of watchful waiting may be appropriate. Other patients, however, find that their symptoms seriously impair their quality of life<sup>4</sup>. It is also important to note that some symptoms of BPH appear to be more bothersome than others. A recent survey of 200 GPs asked them to rank the most common/bothersome symptoms of BPH as reported by their patients. Nocturia was overwhelmingly considered the most problematic symptom, followed by frequency, urgency, weak urine flow, hesitancy and intermittency<sup>6</sup>. Thus, if a patient reports that he can cope well enough with his reduced urinary stream but is troubled by having to get up three times a night, it is important that treatment is targeted towards the nocturia.

### Watchful waiting

Many BPH patients identified by opportunistic case finding will not be seeking any treatment at all. After a discussion of all the treatment options, these patients may decide to forego therapy for the time being. They should be followed up every

three to six months, at which stage any changes in symptom severity or PSA levels should prompt a management review<sup>4</sup>.

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## Medical therapy

There are three main categories of medical treatment:  $\alpha_1$ -blockers, 5-alpha reductase inhibitors and combination therapy.

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### Alpha<sub>1</sub>-blockers

These agents (tamsulosin, alfuzosin, doxazosin, terazosin, prazosin and indoramin) act by blocking the stimulation of the  $\alpha_1$ -adrenoceptors which, in turn, prevent the contraction of smooth muscle within the prostate, urethra, bladder neck and detrusor muscle. This helps prevent obstruction of the urethra and relieves the detrusor muscle instability that contributes to symptoms such as frequency and nocturia<sup>7</sup>. It has been found that with these treatments, there are reductions of 20–50 per cent in symptom scores and improvements of 20–30 per cent in urinary flow rates<sup>7</sup>. Large,

randomised, controlled trials have shown that some  $\alpha_1$ -blockers (alfuzosin and terazosin) are more effective than both placebo and the 5-alpha reductase inhibitor finasteride in relieving symptoms of BPH and increasing urinary flow<sup>8,9</sup>. Improvements were seen within 48 hours and maintained for up to 42 months<sup>7</sup>.

The introduction of modified-release formulations of alfuzosin, doxazosin and tamsulosin have produced a number of patient benefits including: once-daily dosing, improved patient safety and prolonged pharmacological effect of each dose. Side effects of  $\alpha_1$ -blockers include abnormal ejaculation, postural hypotension and dizziness.

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### 5-alpha reductase inhibitors

These agents (finasteride, dutasteride) block the production of dihydrotestosterone, thereby reducing the size of the enlarged prostate. Trials have shown that finasteride can reduce the size of the prostate gland by 20–30 per cent, improve symptom

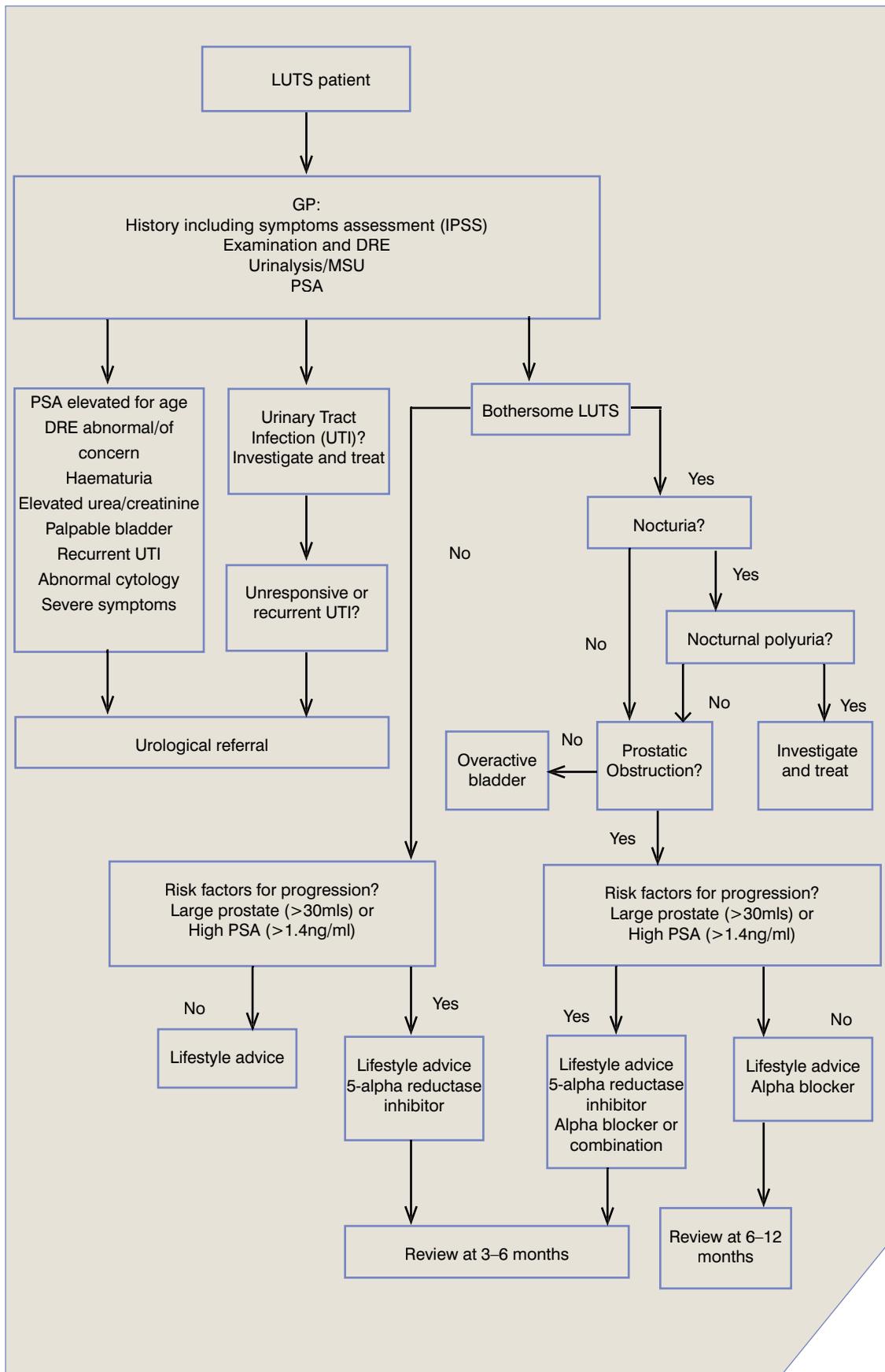


Figure 1. The BAUS Guidelines algorithm<sup>4</sup>

scores by approximately 15 per cent and cause moderate improvements in urinary flow rates<sup>10,11</sup>. However, the treatment often takes several months before offering any symptomatic improvement and tends to be most effective in men with more enlarged prostates<sup>9</sup>. Side effects include impotence, decreased libido and ejaculate volume<sup>12</sup>.

## Combination therapy

Combining an  $\alpha_1$ -blocker with a 5-alpha reductase inhibitor has been shown to reduce the risk of disease progression in BPH by up to 66 per cent compared with less than 40 per cent on either drug alone. The BAUS guidelines recommend that combination therapy is an option to be considered in patients with large prostates (>30mls) causing bothersome symptoms. These patients should then be reviewed every three to six months (Figure 1)<sup>13,4</sup>.

## Surgery

For patients with severe symptoms of BPH or in whom medical therapy has been tried and failed, surgery may be considered. Three procedures are available: Transurethral Resection of the Prostate (TURP), Transurethral Incision of the Prostate (TUIP), and open prostatectomy.

TURP is the most frequently performed surgical procedure for BPH. It involves the endoscopic removal of the prostate's inner portion through the urethra and is recommended for moderately enlarged prostate glands. TUIP is less popular in the UK and recommended for patients with smaller prostate glands (<30mls). A number of small cuts are made into the prostate to reduce the constriction on the urethra.

Open prostatectomy tends to be reserved for patients with particularly enlarged prostates. It involves the surgical removal of part or all of the prostate through an incision in the abdomen.

Although all three types of surgery can result in impressive long-term improvements to urine flow rate, the invasive nature of the operations together with a risk of side effects such as impotence, retrograde ejaculation and stress incontinence, has resulted in reduced popularity in recent years.

## Other treatments

A number of experimental treatments for BPH have appeared in recent years with varying

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success rates. These include: balloon dilation, laser therapy, transurethral needle ablation and transurethral microwave ablation.

## Conclusion

Due to the ageing population, as with many chronic diseases, the prevalence of BPH is increasing. However with effective investigations and treatments, there is a great opportunity to manage BPH patients in primary care ■ GM

**Conflict of interest: none declared**

## Key points

- > It is now generally accepted that out of the two million men in the UK who suffer from LUTS, around two thirds can initially be managed within primary care.
- > Before beginning treatment, it is important to determine what the patient wants and expects from his treatment.
- > Many BPH patients identified by opportunistic case finding will not be seeking any treatment at all.
- > For patients with severe symptoms of BPH or in whom medical therapy has been tried and failed, surgery may be considered.