

update



▼ author



This week's Update is by **Associate Professor Phillip Stricker**, a prostate cancer and prostate specialist practising at St Vincent's Clinic in Sydney, and Conjoint Associate Professor in the department of surgery at the University of New South Wales.

Benign prostatic conditions

The first of this two-part Update on prostatic conditions discusses the assessment and management of benign prostatic hyperplasia and prostatitis.

Benign prostatic hyperplasia

BENIGN prostatic hyperplasia (BPH) is an extremely common condition occurring in middle-aged and older men.

Treatment is generally only indicated in those who have significant lower urinary tract symptoms or the complications related to BPH.

Treatment is tailored according to the wishes of the patient following a full discussion of each option, ranging from conservative measures to surgery.

In most patients, the symptoms gradually worsen over the years but conservative measures will often suffice for a long time, together with follow-up.

INITIAL ASSESSMENT

Three questions are essential to answer. One must:

1. determine why the patient presented
2. assess the severity and type of urinary symptoms, and
3. assess the degree to which these symptoms bother the

patient.

Patients often present for reassurance, often concerned about prostate cancer, thinking that their urinary symptoms are due to cancer, although this is rarely the case.

When assessing the severity and type of symptom it is important to separate obstructive from irritative symptoms (see Table 1), as the former often reflect obstruction whilst the latter often reflect bladder problems that may be secondary to obstruction or may be unrelated to obstruction.

It is important to ask about nocturia – which often has other causes such as sleep apnoea, diabetes, heart failure, poor sleeping habits and polyuria/polydipsia. This is particularly so when nocturia occurs in isolation.

Secondly, it is important to assess the severity and impact of the symptoms on the patient, as the degree of bother will largely influence the need for



Table 1: Lower urinary tract symptoms

Obstructive	Irritative
Hesitancy	Urgency
Weak stream	Urge incontinence
Intermittency	Frequency
Straining to void	Nocturia
Incomplete emptying	

therapy (see Tables 2 and 3 on page following). The International Prostate Symptom Score is a means of quantifying this.

Generally, a prostate symptom score of less than 7 is regarded as mild, 8 to 18 mod-

erate, and 19 to 35 severe.

Finally, it is important to exclude other urinary symptoms such as haematuria, dysuria, pain or incontinence which may indicate bladder, infective or inflammatory causes.

▼ summary

- Benign prostatic hyperplasia
- Examination and investigation of BPH
- Primary care of BPH
- Medical therapy for BPH
- Surgical treatment
- Other forms of treatment for BPH
- Prostatitis

Declaration of interest: None.

See GP Resources for useful links

MEDICAL OBSERVER
Weekly
www.medicalobserver.com.au

03/04 MED0198

Examination and investigation of BPH

It is essential to do a digital rectal examination to assess the size, shape and consistency of the prostate as well as feel the abdomen for the presence of chronic urinary retention.

An enlarged prostate is common in the older male population and by itself is of no concern, unless it is associated with lower urinary tract symptoms.

Further investigation should include a microurine, serum creatinine, urinary ultrasound including a bladder residual volume, a prostate-specific antigen (PSA) test and a voiding diary that documents the nature and degree of urinary frequency and assesses fluid intake.

The PSA test is recommended in the assessment of men with symptomatic benign prostatic hyperplasia as an elevated level not only may pick up prostate cancer at an early stage, but, in the absence of prostate cancer, is predictive of further progression of urinary symptoms.

Table 2. International Prostate Symptom Score (IPSS)

	Not at all	Less than 1 time in 5	Less than half the time	About half the time	More than half the time	Almost always
1. Incomplete emptying Over the past month, how often have you had a sensation of not emptying your bladder completely after you finish urinating?	0	1	2	3	4	5
2. Frequency Over the past month, how often have you had to urinate again less than two hours after you finished urinating?	0	1	2	3	4	5
3. Intermittency Over the past month, how often have you found you stopped and started again several times when you urinated?	0	1	2	3	4	5
4. Urgency Over the past month, how often have you found it difficult to postpone urination?	0	1	2	3	4	5
5. Weak stream Over the past month, how often have you had a weak urinary stream?	0	1	2	3	4	5
6. Straining Over the past month, how often have you had to push or strain to begin urination?	0	1	2	3	4	5
	None	1 time	2 times	3 times	4 times	5 or more times
7. Nocturia Over the past month, how many times did you most typically get up to urinate from the time you went to bed at night until the time you got up in the morning?	0	1	2	3	4	5

Source: Cockett, et al. Proceedings of the Second International Consultation on Benign Prostatic Hyperplasia, Channel Islands. Geneva: WHO, 1994.

Table 3. Quality of Life Assessment Index

	Delighted	Pleased	Mostly satisfied	Mixed*	Mostly dissatisfied	Unhappy	Terrible
Quality of life due to urinary symptoms If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that? * About equally satisfied and dissatisfied	0	1	2	3	4	5	6

Primary care of BPH

Lower urinary tract symptoms do not require referral to a urologist if the symptoms are mild to moderate with a low bother score without indication of any other significant pathology.

The indications for referral include suspected prostate cancer, predominantly irritative symptoms, raised creatinine, haematuria, severe urinary symptoms, severe bother, failed initial therapy or the complica-

tions of BPH including urinary retention, recurrent infections, high residual (>200 mL), bladder stones or renal failure.

Primary care involves observation, phytotherapy or medical therapy. Between 5% and 10% of patients progress to surgery within four years of having significant urinary symptoms.

The factors that predict the likelihood of surgery include a low peak flow rate, prostate size

greater than 40 cc, increasing patient age, a prostate symptom score greater than 10, a PSA level above normal, previous urinary retention and a lack of response to medical therapy. Clearly, most patients can be managed conservatively.

If observation is the initial therapy, this should include six- to 12-monthly reviews with an annual PSA test and ultrasound.

Patients should be advised to avoid consuming excess alcohol and caffeine-containing drinks, avoid constipation and a cold environment, take particular care when flying or having an anaesthetic and avoid certain medications such as pseudoephedrine, antidepressants and antihistamines. This will minimise the chance of retention.

If patients desire some mild therapy, *Serenoa repens* (saw

palmetto) can be used; this has been shown to improve urinary symptoms and to be better than placebo.

Serenoa repens has very few side-effects and does not cause retrograde ejaculation. If phytotherapy is unsuccessful, medical therapy using either alpha blockers or finasteride and lifestyle changes can be incorporated. Referral is only required if these fail.

Medical therapy for BPH

Patients most suitable for medical therapy are those experiencing mild to moderate symptoms.

Alpha blockers

These medications, including prazosin, terazosin and tamsulosin, are successful in reducing urinary symptoms in 50-70% of people.

Tamsulosin, unlike its predecessors, does not need to be titrated against blood pressure. The common side-effects of alpha blockers include headache, lassitude and retrograde ejaculation, and the older medications can cause postural hypotension and related dizziness. Recently a new, rare side-effect – intraoperative floppy iris syndrome

– has been reported in patients taking tamsulosin and having cataract surgery. It is therefore recommended that tamsulosin is discontinued at least two weeks before patients undergo cataract surgery.

Finasteride

Finasteride (Proscar) decreases intracellular testosterone. Over

a six-month period, it reduces prostate size by 20%-30% and halves the PSA level. It slowly improves urinary symptoms, particularly in patients with significantly enlarged prostates and it does so over a slow period of time.

One cannot stop taking the medication otherwise symptoms recur. Common side-effects

with this medication include decreased libido, decreased ejaculate, erectile dysfunction, gynaecomastia and decreased body hair; these occur, however, in a minority of patients.

There is evidence that finasteride reduces the chance of retention and surgery if taken consistently. The dose is 5 mg per day.

Surgical treatment

SURGICAL TREATMENT

Surgery is generally indicated in patients who fail medical therapy, who have severe lower urinary tract symptoms or have complications related to BPH.

TRANSURETHRAL RESECTION OF THE PROSTATE

Transurethral resection of the prostate (TURP) is still considered the gold standard treatment if surgery is required.

About 80%-90% of patients who undergo this treatment will experience significant and sustained improvement of their voiding symptoms.

The main side-effect of this treatment is permanent retrograde ejaculation, which occurs in at least 70% of patients. The incidence of de novo erectile dysfunction is very low (2%-4%) and urinary incontinence is rare.

Other complications include

a small incidence of urethral stricture.

The likelihood of requiring further TURP in 10 years is 5%-10 per cent.

There is a four-week period of convalescence after this surgery.

TRANSURETHRAL INCISION OF THE PROSTATE

An incision through the prostate can be used instead of a resection in patients with a smaller prostate.

It has an excellent outcome and a lower chance of retrograde ejaculation of the order of 10%-20 per cent.

OPEN PROSTATECTOMY

Open prostatectomy is now rarely performed but may be necessary in massively enlarged prostates, particularly where there are other complications such as bladder stones or diverticula.

GREEN LIGHT LASER VAPORISATION

Green light laser vaporisation is a new treatment which has now been in use for over five years which vaporises a cavity through the prostate similar to a TURP.

It utilises green light laser (KTP) and this is very haemostatic and particularly suitable for patients who are anti-coagulated.

Initial dysuria is common but after 6-12 weeks this disappears and five-year results are indistinguishable from those with TURP.

Its advantage is that it can be performed as an outpatient procedure with a much more rapid return to normal activity and can be performed on anti-coagulated patients.

The disadvantage is that there is no tissue to examine for histopathology, although these days, with PSA and digital

rectal examination being performed before the surgery, prostate cancers are rarely missed.

HOLMIUM YAG LASER

This technique uses a laser to enucleate the prostate and then remove the pieces.

This method of treatment has also been shown to give good results comparable to TURP. Patients are usually kept in hospital a little longer with the Holmium YAG laser treatment compared with the KTP laser, but the Holmium YAG laser has a longer track record.

The disadvantage is that treatment with the Holmium YAG laser is quite a complex procedure to learn, and, as it widely resects all the prostatic tissue, there is a higher incidence of retrograde ejaculation.

Impotence with both laser treatments is rare.

Other forms of treatment for BPH

Other forms of treatment, including permanent catheterisation, transurethral needle ablation of the prostate (TUNA) and stents are used selectively in specialised situations.

A new emerging therapy is injecting botulinum toxin (Botox) into the prostate, which appears to alleviate urinary symptoms for a time and clearly is the least invasive option. This, however, is still quite expensive and relatively experimental.

CHOICE OF THERAPY IN PATIENTS WITH BPH

Generally patients with BPH are assessed and managed initially by general practitioners in the first instance with observation, phytotherapy or medical therapy.

Finasteride seems to be better for large prostates whereas tamsulosin seems to be better for smaller prostates.

Surgical treatment and referral is reserved for those with

more severe symptoms or those who have failed initial medical therapy.

Although TURP is still considered the gold standard, a number of new, less invasive modalities, such as the green light laser and Holmium YAG laser, appear to give very similar results with fewer side-effects, albeit with a shorter follow-up, and are becoming more popular.

▼ keypoints

- Benign prostatic hyperplasia (BPH) is an extremely common condition in middle-aged and older men.
- It is essential to do a digital rectal examination to assess the size, shape and consistency of the prostate and feel the abdomen for chronic urinary retention.
- Investigation of BPH should include a microurine, serum creatinine, urinary ultrasound including a bladder residual volume, a PSA test and a voiding diary.
- Treatment is generally only indicated in those who have significant lower urinary tract symptoms or complications related to BPH.

Prostatitis

Prostatitis is a broad term that means inflammation, infection or pain in the prostate.

Most prostatitis is not due to infection. Rarely patients will present with fever, rigors and prostatic pain, however I am discussing the more common acute and common prostatic pain.

Many cases of prostatitis are due to the reflux of urine under pressure into the prostate and many cases simply occur for unknown reasons. A small minority of cases is due to infection and the urine often shows

bacteria.

Possible causes of prostatitis include holding onto urination for too long, lifting heavy weights with a full bladder, Tantric sex (delaying ejaculation), excessive alcohol or rapid change in sexual frequency, severe stress, sitting for prolonged periods of time or vigorous mountain bike riding.

Patients with prostatitis often present with perineal and pelvic pain, ejaculatory pain, intermittent attacks of pain and pain that radiates to the inner thigh and lower back.

However, it must be noted

that many cases of pelvic pain are not due to prostatitis, and have been incorrectly attributed to it. Prostatitis is often associated with irritative urinary symptoms; it is rarely associated with frank dysuria.

Initially it is worth investigating prostatitis with a microurine and an ejaculated specimen to assess for the presence of pus cells or bacteria. If either of these are present, a four-week course of a quinolone antibiotic is reasonable in the first instance.

In the absence of this, many

people still try four weeks of antibiotics, but it rarely helps the symptoms.

All therapy for prostatitis should incorporate avoiding aetiological factors and instituting lifestyle changes. If one can identify any of the aetiological factors listed above, these should be stopped.

In general, it is wise to avoid lifting heavy weights with a full bladder, avoid sudden changes in sexual frequency and Tantric sex, avoid doing a heavy gym workout with a full bladder, avoid heavy bike riding, exercise

regularly, eat a well balanced diet and avoid foods which will aggravate the symptoms (particularly caffeine, alcohol and spicy food) and ensure a high intake of water.

Occasionally when symptoms are bad, often from stress, a short course of anti-inflammatories with a decongestant such as bromhexine (Bisolvon) and even occasionally a quinolone antibiotic may help the symptoms, but lifestyle changes seem to have the greatest impact. In the past, regular prostatic massage made some impact.

Online and interactive

You can read Update online at www.medicalobserver.com.au and earn CPD points co-ordinated by Genesis Ed and Tenstream. Brought to you by an educational grant from sanofi-aventis.

MEDICAL OBSERVER
Weekly



GENESIS ED
Innovative Medical Education

omnus

First for medical information
Presented by sanofi-aventis
www.omnus.com.au

▼ Patient hand-out

Benign prostatic hyperplasia

WHAT is benign prostatic hyperplasia (BPH)?

Benign means not malignant (that is, non-cancerous); prostatic refers to a man's prostate gland (a small walnut-sized gland, near the opening of the bladder, that makes some of the fluid in semen); hyperplasia means an abnormal increase in the number of cells causing an overgrowth of that part of the body. So, BPH is a non-cancerous overgrowth of cells in the prostate.

SYMPTOMS

The first sign of trouble is usually difficulty in passing urine: it may be hard to start, and the stream may not be very strong.

You may have trouble emptying your bladder completely and therefore have to go more often, which can disturb your sleep. You may feel a strong urge to urinate, but not have much to pass, or dribble a bit after you have finished.

Very occasionally, there can be blood in the urine. You may get a bladder infection or your urine may be suddenly blocked completely.

TREATMENT

Following medical confirmation of the diagnosis of BPH, the decision to treat is based on your age, the severity of symptoms and your general health. Your doctor may decide to simply 'watch and wait'. If the symptoms become too troublesome, there is a range of treatments available.

Self-care

- Avoid or cut down on alcohol and caffeine drinks.
- Avoid constipation and cold environments.
- Avoid certain medications such as pseudoephedrine, antidepressants and antihistamines.
- *Serenoa repens* (saw palmetto) may help improve urinary symptoms.

Medications

Drugs may be prescribed to improve urine flow (for example, terazosin, tamsulosin or prazosin) or reduce the size of the prostate (for example, finasteride), or antibiotics may be prescribed if there is infection. If

symptoms are very troublesome and not improving, you may need to have surgery.

Surgery

Between 5% and 10% of men with significant urinary symptoms will go on to have surgery within four years. Surgical options include:

TURP

Surgery may take the form of TURP – transurethral resection of the prostate.

TURP involves removing the prostate in small pieces. The surgeon passes a small tube with a camera on the end into the urethra. Via this tube the surgeon can cut away part of the prostate using a metal loop carrying an electric current. Removing part of the prostate gland stops it from pressing on the urethra.

TURP is sometimes done under a general anaesthetic and sometimes a spinal anaesthetic.

After having TURP, some men will suffer from retrograde ejaculation. This is when semen flows backward into the bladder during ejaculation.

Erectile dysfunction is a very rare complication of TURP.

Green Light Laser Vaporisation

If suitable, the prostate can be treated with green light laser therapy, which vaporises a cavity through the prostate, similar to TURP. This newer therapy can be performed as an outpatient procedure and its results are similar to TURP.

Holmium YAG Laser

This older form of laser therapy involves using the laser to cut the prostate and then remove the pieces. It has also been shown to be as effective as TURP but has a higher rate of retrograde ejaculation compared with green light laser therapy.

