Prostate Disease

HEALTHY MALE
ANDROLOGY AUSTRALIA

Benign Prostatic Hyperplasia (BPH)

The GP's role

- GPs are typically the first point of contact for men with BPH.
- The GP's role in the management of BPH includes clinical assessment, treatment, referral and follow-up.

Overview

- BPH is the non-cancerous enlargement of the prostate gland[1].
- Whilst not normally life threatening, BPH can impact considerably on quality of life[2].

Diagnosis

Medical history

- Lower urinary tract symptoms (LUTS).

Urinary symptoms of BPH

Obstructive symptoms:

- Hesitancy
- Weak stream
- Post micturition dribble
- Sensation of incomplete bladder emptying.

Overactive symptoms:

- Frequency
- Urgency (if severe incontinence)
- Nocturia.

Other:

- Nocturnal incontinence
- Urinary retention.

Some men with BPH may not present with many or any symptoms of the disease.

Symptom score

- Evaluation of symptoms contributes to treatment allocation and response monitoring.
- The International Prostate Symptom Score (IPSS)[3] questionnaire is recommended.

Physical examination

- Digital rectal examination (DRE) can estimate prostate size and identify other prostate pathologies.
- Basic neurological examination.
- Perianal sensation and sphincter tone.
- Bladder palpation.
- Calibre of the urethral meatus.
- Phimosis.

Investigations

- Urinalysis or midstream urine.
- If suspect urinary retention/large post void residual volume.
  - Ultrasound (Kidneys and bladder).
  - Renal function (Creatinine).
- PSA:
  - If suspect prostate cancer (e.g. based on prostate examination)
  - As part of screening of prostate cancer, after discussion of pros and cons
  - Routine PSA screening is not necessary for patients with BPH. Patients with LUTS are not at increased risk of having prostate cancer.

PSA levels for different age groups of Western men[4]

Age range years	Serum PSA (ng/mL) median	Serum PSA (ng/mL) upper limit of normal
40-49	0.7	2.5
50-59	1.0	3.5
60-69	1.4	4.5
70-79	2.0	6.5

Other PSA tests

- PSA velocity or doubling time: if the PSA level doubles in 12-months it may indicate prostate cancer or prostatitis. An elevated PSA and a stable velocity suggest BPH.
  - Free-to-total PSA ratio: high ratio (> 25%) suggests BPH; low ratio (< 10%) suggests prostate cancer.
  - Prostate Health Index (PHI): not covered by the MBS, PHI thought to be more specific for diagnosing prostate cancer than PSA level alone; good quality evidence lacking & not recommended in Australian prostate cancer testing. guidelines.
- Creatinine levels.
- Post-void residual urine (ultrasound).

Investigations by the urologist

- As per GP investigations as indicated +/-.
- Uroflowmetry and post void residual assessment.
- Voiding diary.
- Cystoscopy.
- Urodynamic assessment.

Management

Observation and review: for mild or low impact symptoms

- Optimise through reassurance, education, periodic monitoring and lifestyle modifications.
- Consider adjustment of medication (e.g. timing of diuretic).

Medical therapy: for moderate to severe symptoms

Alpha blockers (once daily)

- These are generally 1st line.
  - Amsulosin.
  - Silodosin.
  - Alfuzosin.
- Side effect profiles may favour tamsulosin.

5α-reductase-inhibitors (5ARIs)

- Dutasteride.
- Finasteride.

Very rarely used as monotherapy.

Combination therapy

- Dutasteride and tamsulosin.
- Better for patients with large prostates (> 30 ml).
- 5ARI can affect sexual function so consider carefully in sexually active men.
- Controversy regarding 5ARI association with prostate cancer risk so recommend PSA surveillance. If PSA increased whilst on 5ARI, refer to urologist to exclude prostate cancer.

Other drugs

Bladder directed medications are most commonly used for overactive bladder symptoms.

- Beta-3 adrenergic agonist – Mirabegron.
  - Requires blood pressure monitoring within first week.
- Anticholinergics.
  - Oxybutynin.
  - Solifenacin.
  - Darifenacin.
- Side effects include dry mouth, dry eyes and/or constipation.

Urologist referral

Treatment

- Urinary retention history.
- Urinary tract infection.
- Haematuria.
- Failed medical therapy.
- Incontinence (of any type).
- Post void residual of > 100 ml.
- Severe symptoms (especially if poorly responsive to medications).
- Renal impairment.
- Bladder stones.
- Cancer suspected — prostate or bladder.
- Associated Neurological condition (e.g. Parkinson's disease, Multiple sclerosis).

Surgery

Indications for surgery are similar to the indications for referral to a urologist. Surgery can be considered when medications are no longer suitable for whatever reason. Cessation of medication therapy usually results in recurrence of symptoms.

There are multiple operations available. The gold standard operation is a transurethral resection of the prostate (TURP). There are however numerous operations that are available. Each has their pros and cons. When considering the operation the patient is undertake there are different factors that are considered such as:

- Prostate size/configuration
- Anti-coagulation status
- Side effects (e.g. preference to preserve antegrade ejaculation)
- Day stay vs overnight stay
- Catheter duration
- Co-morbidities (long term SPC)
- Durability of operation.

The operations available include:

- Transurethral Resection of the Prostate (TURP)
- Transurethral Incision of the Prostate (TUIP)
- Green light laser resection of the prostate
- Minimally invasive insertion of small retractors into prostate
- Plasma Vaporisation
- Water Vapour therapy
- Holmium Laser Enucleation of the Prostate (HoLEP).

Long term catherisation:

- Last resort for patients unfit/unwilling for surgery but with complications (e.g. urinary retention)
- Supra-pubic catheter is preferred to indwelling urethral catheter
- Intermittent Self catheterisation should also be considered in such patients.

Follow-up

- It is appropriate for the GP to monitor and follow-up a patient with respect to all the treatment modalities. However, if the patient is not responding to medical treatment, refer to the urologist.
- Men who have had TURP remain at risk for prostate cancer and need routine prostate cancer checks, as per guidelines.

Recommended follow-up timeline after BPH treatment

Treatment modality	First year after treatment			Annually thereafter
	6 weeks	12 weeks	6 months	
Observation and review	X	X	√	√
5α-reductase inhibitors	X	√	√	√
α-blockers	√	X	√	√
Surgery or minimal invasive treatment	√	√	√	√

Prostatitis

The GP's role

- GPs are typically the first point of contact for men with prostatitis.
- The GP's role in the management of prostatitis includes clinical assessment, treatment, referral and follow-up.

Overview

- Prostatitis is inflammation of the prostate gland.
- It can be a result of bacterial or non-bacterial infection.
- Acute bacterial prostatitis, the least common form, can be serioius if the infection is left untreated.
- Whilst not normally life threatening, prostatitis can impact considerably on a man's quality of life.

Diagnosis

Medical history

- Urinary symptoms.
- Pain.

Symptoms of prostatitis

- Dysuria — painful urination.
- Urgent need to urinate.
- Frequent urination.
- Painful ejaculation.
- Lower back pain.
- Perineal pain.
- Chills and/or fever.
- Muscular pain.
- General lack of energy.

Investigations

- Digital rectal examination (DRE):
  - Should not be performed if you suspect acute severe prostatitis because it can be very painful
  - Some tenderness and swelling may accompany sub-acute prostatitis.
- Prostate specific antigen (PSA) levels:
  - Levels may be dramatically high
  - PSA velocity: if the PSA level doubles in 12-months it may indicate prostate cancer or prostatitis.
- Urine analysis:
  - First pass urine: Chlamydia urine PCR test
  - Midstream urine: MC&S
  - Urine PCR for STIs should be done if Chlamydia or other STI a likely cause.

Management

Treatment

- There are several therapeutic options available. Evidence for benefits of these treatment options is limited; however, they may be trialled with the patient.
- Urologists' use of the following forms of treatment will vary according to the individual, their condition and the stage of their treatment.
- Most patients will have antibiotic therapy at some stage.

Bacterial prostatitis (acute and chronic) can be treated using antibiotics. Once diagnosed, rapid treatment is essential to avoid further complications.

Chronic nonbacterial prostatitis (chronic prostate pain syndrome); treatment is difficult and cure is often not possible. Treatment focus is on symptom management, to improve quality of life. Non-medical therapy is recommended as the initial treatment.

Medication options[5]

- α-blockers.
  - Suited to patients with moderate/severe LUTS.
  - Tamsulosin.
  - Silodosin.
  - Alfuzosin.
  - Side effect profiles may favour tamsulosin.
- Antibiotics (not all antibiotics penetrate the prostate gland).
  - Recommend: Norfloxacin, Ciprofloxacin, Trimethoprim, Sulphamethoxazole/Trimethoprim, Erythromycin, Gentamicin.
  - Young men with confirmed Chlamydia prostatitis: Doxycycline.
- Analgesics.
- Non-steroidal anti-inflammatory drugs.

Surgical options

- Transurethral incision of the bladder neck.
- Transurethral resection of the prostate.

Surgery has a very limited role and requires an additional, specific indication (e.g. prostate obstruction, prostate calcification).

Other options

- Lifestyle changes: avoid activity that involves vibration or trauma to the perineum (e.g. bike riding, tractor driving, long-distance driving, cut out caffeine, spicy foods, alcohol, avoid constipation).
- Some patients may benefit from treatment by a specialised pelvic floor physiotherapist, which may include pelvic floor relaxation techniques and trigger point massage.
- Prostate massage.
- Supportive therapy: biofeedback, relaxation exercises, acupuncture, massage therapy, chiropractic therapy and meditation.
- Heat therapy.

Referral

Indicators for referral to a urologist

- When the GP is not confident in managing the condition.
- If the GP is concerned there are other potential diagnoses, particularly prostate or bladder cancer.
- Those who do not respond to initial first-line therapy such as antibiotics and/or α-blockers. For these patients, more invasive investigations, such as cystoscopy and transrectal prostate ultrasound scan, are commonly done.

Follow-up

- The need for urologist follow-up depends on the patient's progress.
- Most urologists will refer back to the GP to monitor the progress of the patient.
- The urologist will seek re-referral if the patient's progress is not satisfactory.
- A GP can re-refer if they do not feel comfortable in managing a relapse.

References

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Clinical review by Mr Adam Landau, Australian Urology Associates and Mr Darren Katz, Men's Health Melbourne

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