**PROSTATE DISEASE**

**BPH AND PROSTATITIS – DIAGNOSIS AND MANAGEMENT**

**CLINICAL SUMMARY GUIDE**

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**BENIGN PROSTATIC HYPERPLASIA (BPH)**

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

**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.

### Diagnosis

**Medical History**

- Lower urinary tract symptoms (LUTS)
- Urinary symptoms of BPH
- Hesitancy
- Weak and poorly directed stream
- Straining
- Post-urination dribble or irregular stream

Note: 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) 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

**Investigations**

- Urine analysis: midstream urine: microscopy, culture and sensitivity (MCsS)
- Prostate specific antigen (PSA) levels: while PSA levels are mostly used as a marker of prostate cancer, PSA levels can be elevated as a result of non cancerous prostate disease (BPH and prostatitis) - benefits & risks of PSA testing should be discussed.

### PSA Levels for Different Age Groups of Western Men

<table>
<thead>
<tr>
<th>Age range years</th>
<th>Serum PSA (ng/mL) median</th>
<th>Serum PSA (ng/mL) upper limit of normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>40–49</td>
<td>0.65</td>
<td>2.0</td>
</tr>
<tr>
<td>50–59</td>
<td>0.85</td>
<td>3.0</td>
</tr>
<tr>
<td>60–69</td>
<td>1.39</td>
<td>4.0</td>
</tr>
<tr>
<td>70–79</td>
<td>1.64</td>
<td>5.5</td>
</tr>
</tbody>
</table>

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**Management**

**Treatment**

- **Observation and review:** for mild or low impact symptoms
- Optimise through reassurance, education, periodic monitoring and lifestyle modifications

**Medical therapy:** for moderate to severe symptoms

- **α-blockers**
  - Suited to patients with moderate/severe LUTS
  - All α1-blockers (Alfuzosin, Tamsulosin, Terazosin, Prazosin, Silodosin) have similar clinical efficacy and side-effects.

- **5α-reductase-inhibitors**
  - Suited to patients with moderate/severe LUTS and enlarged prostates (>30–40 mL)
  - Including Dutasteride and Finasteride.
  - Dutasteride and Finasteride both reduce prostate volume by 20–30% and seem to have similar clinical efficacy.

**Combination therapy**

- Combination of α-blocker (tamsulosin) with 5α-reductase-inhibitor (dutasteride), available in Australia as Duodart®.
- Shown to be more beneficial and durable than monotherapy.

**Beta 3-adrenoceptor agonists & antimuscarinics:**

- Used for overactive bladder or storage symptoms
- Day procedure (Urolift® system):
  - Involves placement of several retractors into the prostatic lobes to increase the urethral opening.
  - Not suitable for all men (urologist assessment).
  - Short-term side-effects profile better than surgery but longer term outcomes unknown.

**Surgical therapy:** for severe or high impact symptoms

- Transurethral resection of the prostate (TURP) for prostates 30–80 mL.
- Transurethral incision of the prostate (TUIP) for prostates <30 mL and without middle lobe.
- Open prostatectomy or TURP for those >80 mL.
- Laser ablation or resection of BPH available in specific surgical centres.
- Laser surgery regarded as equivalent efficacy to TURP.
- Other options also available.

**Specialist referral**

Indicators for referral to a urologist

- The patient’s symptoms become more serious: their symptom score moves into the ‘severely symptomatic’ category.
- The patient’s symptoms significantly interfere with their quality of life – score of 5 ‘unhappy’ or 6 ‘terrible’ on the IPSS.
- After an episode of urinary retention, urinary infection, haematuria.
- No response to medical treatment.
- A risk of prostate cancer exists.
- No response to medical treatment.
- Post-void residual urine on ultrasound assessment >100 mL.

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**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 suggests 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)

**Optional investigations (usually by the urologist)**

- Uroflowmetry (specialist only)
- Urinary tract imaging
- Pressure-flow study
- Endoscopy

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**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.

**Clinical notes:** 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**

<table>
<thead>
<tr>
<th>Treatment modality</th>
<th>First year after treatment</th>
<th>Annually thereafter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation &amp; review</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>5α-reductase inhibitors</td>
<td>X</td>
<td>✔</td>
</tr>
<tr>
<td>α-blockers</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Surgery or minimal invasive treatment</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

**Prostatitis**

- Prostatitis is an 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 life threatening if the infection is left untreated
- Whilst not normally life threatening, prostatitis can impact considerably on a man’s quality of life

**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

**Diagnosis**

**Medical history**
- Urinary symptoms
- Pain

**Symptoms of prostatitis**
- Dysuria – painful urination
- Urgent need to urinate
- Frequent urination
- Painful ejaculation
- Lower back pain

**Investigations**

Digital rectal examination (DRE): prostate tenderness or swelling
Prostate specific antigen (PSA) levels: elevated PSA levels
- 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
- With respect to management by the specialist, use of the following forms of treatment will vary according to the individual, their condition and the stage of their treatment
- Most patients at some stage in their treatment however will have antibiotic therapy

**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); causal treatment is difficult and cure is often not an option. Treatment focus is on symptom management, to improve quality of life.

**Medication options**

- **α-blockers**
  - Suited to patients with moderate/severe LUTS
- **All α-blockers** (Alfuzosin, Tamsulosin, Terazosin, Prazosin, Silodosin) have similar clinical efficacy and side-effects
- **Antibiotics** (not all antibiotics penetrate the prostate gland)
  - Recommend: Norfl oxacin, Ciprofl oxacin, Trimethoprim, Sulphamethoxazole/Trimethoprim, Erythromycin, Gentamicin
  - Young men with confirmed Chlamydia prostatitis:
    - Doxycycline (Vibramycin®)
- **Muscle relaxants**: Diazepam, Baclofen
- **Analgesics**
- **Non-steroidal anti-infl ammatory drugs**
- **5α-reductase-inhibitors**: Finasteride

**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
- Pelvic floor relaxation techniques
- Prostate massage
- Supportive therapy: biofeedback, relaxation exercises, acupuncture, massage therapy, chiropractic therapy and meditation
- Heat therapy

**Specialist 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 specialist follow-up depends on the patient’s progress
- Most specialists will refer back to the GP to monitor the progress of the patient
- The specialist will seek re-referral if the patient’s progress is not satisfactory
- A GP can refer if they do not feel comfortable in managing a relapse

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