

MANAGEMENT OF BENIGN PROSTATIC HYPERPLASIA

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ABSTRACT

Patients with benign prostatic hyperplasia (BPH) have several options for treatment. The therapeutic choice is influenced by the severity of bladder outlet obstruction, symptoms and complications such as urinary retention, urinary tract infection, bladder stones or renal obstruction.

THERAPEUTIC OPTIONS

The therapeutic options available to the patient with symptomatic and/or obstructive BPH are:

- 1) Watchful waiting
- 2) Medication
- 3) Minimally invasive therapy
- 4) Surgery.

WATCHFUL WAITING

Patients who are suitable for watchful waiting are those who do not have significant bladder outlet obstruction or high residual urine volume. In addition, their symptom severity is mild i.e. 8 or less, out of a maximum of 35 points on the international prostatic symptom score (IPSS). The degree of bother is assessed by the quality of life (QOL) score. These patients are counselled to modify their lifestyle, with fluid control and avoidance of caffeine, particularly in the evenings. They do not get any medication for their BPH.

MEDICATIONS

The use of medical therapy for BPH would be indicated for patients with significant bladder outlet obstruction or moderate to severe symptoms (9 –19 or 20 and above, out of 35 points on the IPSS questionnaire). These patients would not have complications of BPH.

Medications consist of 2 main types: alpha-blockers and 5-alpha reductase inhibitors (5-ARIs).

Alpha-blockers such as terazosin and alfuzosin, work by blocking the alpha-adrenergic receptors in the smooth muscle of the prostate and bladder neck. This reduces the dynamic obstruction of the bladder outlet, by relaxing the smooth muscle in the prostate and bladder neck. Symptom improvement is evident within a few days of initiating therapy.

5-ARIs reduce the degree of hyperplasia in the prostate. This is mediated by preventing the conversion of testosterone to

dihydrotestosterone; the latter stimulates prostatic growth. Currently available 5-ARIs include finasteride and dutasteride. Such drugs work better in bigger prostates, which are enlarged above 30 to 40 grams (prostate size of 3 fingerbreadths and above, on digital rectal examination). The efficacy of 5-ARIs is seen 3 months after initiation of therapy. Clinical trials demonstrated the reduction of acute urinary retention and need for prostate surgery in the long term.

Combination therapy using both alpha-blockers and 5-ARIs has been shown to have long-term efficacy for BPH patients with significantly enlarged prostates and urinary obstruction.

Herbal products such as saw palmetto gained popularity in recent years. The mechanism of action is not clear although they provide symptomatic relief for BPH symptoms. Clinical studies have not shown objective improvement with these preparations.

MINIMALLY INVASIVE THERAPY

There are a few minimally invasive modalities, which are performed on an outpatient, day surgery basis, under local anaesthesia. These include:

- 1) Transurethral needle ablation of prostate (TUNA)
- 2) Transurethral microwave thermotherapy (TUMT)

These procedures are ideally suited for the symptomatic BPH patient, who is not fit or prefers not to have surgery.

SURGERY

The indications for prostate surgery include:

- 1) Chronic urinary retention
- 2) Repeated acute urinary retention
- 3) Severe bladder outlet obstruction
- 4) Bladder stone
- 5) Frequent urinary tract infection
- 6) Recurrent prostatic haematuria
- 7) Failure of medical therapy.

Transurethral resection of prostate (TURP) has been the gold standard for BPH surgery in the past few decades to now. TURP provides durable long-term relief of bladder outlet obstruction due to BPH. At times, the urologist may perform an incision rather than resection (transurethral incision of prostate TUIP) for milder prostatomegaly. Open prostatectomy is very rarely performed nowadays, following experience and refinement of the transurethral technique and instruments in recent years.

Recent techniques such as Holmium laser enucleation of prostate and plasmakinetic resection have comparable short-term efficacies to TURP, whilst the durability of these modalities over the longer term is being assessed.

COMPLICATIONS OF TREATMENT

With alpha-blocker therapy, some patients may experience headaches, nasal congestion, giddiness and retrograde ejaculation. 5-ARIs may result in reduction of libido and erectile dysfunction, 4% in the 1st year of treatment, declining to 1% at 4 years.

Minimally invasive therapy such as TUNA and TUMT can cause transient dysuria and difficulty in micturition.

TURP results in retrograde ejaculation in 65-98% of patients. Acute complications include blood loss requiring blood transfusion (4-6%), urinary tract infection (3-5%) and transurethral resection syndrome (TUR syndrome, less than 1%). Over the long term, there is a 1-2% incidence of urethral stricture and bladder neck stenosis. Up to 3% of patients may have difficulty in voiding after surgery; this is mainly due to bladder muscle weakness as a result of detrusor hypotonia. Prostatic re-growth occurs in 5% of patients over the 5 to 10 years.

FOLLOW UP

BPH patients are followed up with symptom review (IPSS and QOL score) and uroflowmetry with post-void residual urine measurement.

Patients with mild BPH, who are managed by watchful waiting, can be reviewed annually. As for patients who are on medical therapy, the review intervals can be 3 to 6 months. These 2 groups of patients can be co-managed by the family physician and the attending urologist.

Following prostate surgery, patients are seen at their postoperative visit at about 1 to 2 months. The majority of patients will then be discharged from the clinic. A minority of patients may require follow up for various reasons such as persistent symptoms from BPH-associated detrusor instability or poor voiding from detrusor hypotonia.

SUGGESTED READING

1. MOH Clinical Practice Guidelines on Lower Urinary Tract Symptoms Suggestive of Benign Prostatic Hyperplasia, Jan 2005.
2. EAU 2004 Guidelines on Assessment, Therapy and Follow Up of Men with Lower Urinary Tract Symptoms Suggestive of Benign Prostatic Obstruction, European Urology 46 (2004) 547-54.
3. Fast Facts on Benign Prostatic Hyperplasia, 4th edition, 2002.

LEARNING POINTS

- o The therapeutic choice in BPH is influenced by the severity of bladder outlet obstruction, symptoms and complications.
 - o Patients who are suitable for watchful waiting are those who do not have significant bladder outlet obstruction or high residual urine volume.
 - o The use of medical therapy for BPH would be indicated for patients with significant bladder outlet obstruction or moderate to severe symptoms.
 - o Minimally invasive therapy are ideally suited for the symptomatic BPH patient, who is not fit or prefers not to have surgery.
 - o Transurethral resection of prostate (TURP) has been the gold standard for BPH surgery in the past few decades to now.
 - o Complications can occur with each of the modalities of treatment.
 - o Follow up of the patient is essential.
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