

The Urological Society of India guidelines on management of benign prostatic hyperplasia/benign prostatic obstruction (Executive summary)

INTRODUCTION

These guidelines have been drafted by the Urological Society of India benign prostatic hyperplasia/obstruction ((BPH//BPO) guidelines panel and address management of BPH/BPO. The guidelines are intended for urologists and the recommendations are updated till January 2021. These will remain valid until the next update or for a maximum period of 5 years. The guidelines should not be regarded as a rigid clinical pathway for every patient and are not intended to replace clinical judgment. These guidelines should not be viewed as legal standards of care. This executive summary includes some salient aspects of the guidelines and the guideline statements. The complete guidelines document can be accessed from the Urological Society of India website at www.usi.org.in.

METHODS

A nonsystematic review of the literature available on the subject on Medline and Google Scholar was performed. Results of many of the studies and meta-analyses were combined in a simple narrative fashion. The available articles were reviewed by the panelists and evidence was extracted. The articles published from India and pertaining to the Asian subpopulation were analyzed along with the world literature. Systematic cost analysis of different treatment modalities was not performed. The recommendations are graded (GR) as strong where an action should or should not be undertaken because net benefit or net harm is substantial; moderate/optional where an action may or may not be undertaken because net benefit or net harm is equivocal; and conditional/selective when net benefit or net harm of taking an action is justified only in selective circumstances.

DIAGNOSTIC WORK-UP

1. Medical history: Take a complete medical history from men with lower urinary tract symptoms (LUTS)^[1] (GR strong)
2. Symptom assessment: American urological association symptom index^[2] is the most commonly used symptom score in India and is recommended for routine use (GR strong)
3. Visual Prostate Symptom Score^[3] may be used in illiterate patients (GR optional)
4. Use bladder diary (for three or more days)^[4] in men with storage predominant symptoms (GR strong)
5. Perform physical examination and DRE in evaluation of males with LUTS
6. Do urinalysis in evaluation of males with LUTS. Urinalysis helps in identifying issues such as urinary tract infection, diabetes mellitus, and hematuria. It is cheap and easily available. The panel recommends routine use of urinalysis in men with LUTS (GR strong)
7. Serum prostate-specific antigen (PSA) test is optional in evaluation of males with LUTS suspected to be due to BPH. Serum PSA should be done: if it is going to change the management plan, if life expectancy is more than 10 years, and if diagnosis of prostate cancer would alter the management plan^[5] (GR strong)
8. Assessment of renal function should be done if renal function impairment is suspected on history and clinical examination, in presence of hydronephrosis, when surgery is contemplated for BPH, and if a patient has diabetes or hypertension^[6] (GR strong)
9. Perform uroflowmetry in the initial evaluation of male LUTS^[7] (GR conditional/selective)
10. Measure PVR in men with LUTS. Perform ultrasound for upper tracts in men with LUTS (GR conditional/selective)
11. Perform prostate ultrasound for prostate size if it will change the medical management (GR Optional)
12. Perform prostate ultrasound before deciding the surgical management in BPH (GR Strong)
13. Urethrocystoscopy is not routinely advocated in the initial workup of BPH. Perform urethrocystoscopy in men with LUTS if it may change the plan of action or before minimally invasive or surgical therapy for BPH. Perform urethrocystoscopy for diagnosis of bladder outlet obstruction when urodynamics (UDS) testing is not available or not feasible (if there is diagnostic uncertainty and surgical therapy is contemplated)^[8] (GR conditional/selective)
14. Perform urethrocystoscopy in men with LUTS if they have hematuria, suspected stricture, or suspected bladder cancer (GR strong)
15. Perform UDS in men with LUTS if there are specific indications for evaluation of underlying pathology, after unsuccessful invasive treatment of BPH, when voided volume <150 ml, and bothersome voiding symptoms with Q_{max} >10 ml/s; men with bothersome voiding

symptoms with PVR >300 ml; men >80 years with bothersome voiding symptoms when invasive treatment is planned; and men <50 years with bothersome voiding symptoms when invasive treatment is planned^[9] (GR: conditional/selective).

CONSERVATIVE MANAGEMENT

1. Offer watchful waiting for men with non-bothersome mild-to-moderate symptoms (GR strong)
2. Offer lifestyle advice to all men with LUTS (GR strong).

PHARMACOLOGICAL MANAGEMENT

Alpha-blockers

1. Offer alpha-blockers to men with moderate-to-severe LUTS. Alpha-blockers can be prescribed irrespective of prostate volume^[10,11] (GR strong)
2. Alpha-blockers, especially tamsulosin, might be avoided in patients scheduled for cataract surgery in the near future till the cataract surgery is performed^[12] (GR conditional)
3. Use alpha-blockers for three or more days prior to trial of voiding without catheter in acute retention due to BPH^[13] (GR optional).

5-Alpha-Reductase Inhibitors (5ARI)

1. Offer 5-alpha-reductase inhibitors (5ARIs) to patients with moderate-to-severe LUTS with prostatic enlargement^[14-16] (GR Strong)
2. Inform patients about the delayed onset of action (3–6 months)^[17] (GR strong)
3. Do not use 5ARI in patients with LUTS without prostatic enlargement (GR strong).

Combination therapy (alpha-blockers and 5-alpha-reductase inhibitors)

1. Offer combination therapy (alpha-blocker +5 ARI) to all men with moderate-to-severe symptoms and large prostates (>30 g or >40 g) and poor flow rates, i.e., men with a high risk of disease progression^[18] (GR strong)
2. Inform patients about the ability of this treatment to reduce the disease progression and risk of sexual side effects (GR strong)
3. Offer combination therapy to men with a high risk of progression where follow-up is likely to be poor (GR conditional/selective)
4. Consider discontinuation of alpha-blocker after combination therapy of 6 months or more^[19] (GR: conditional/selective).

Other agents

1. Use antimuscarinic agents (either alone or in combination with alpha-blockers) in patients with predominant storage symptoms. Initial combination of alpha-blockers with antimuscarinic agents is preferable in men with

moderate-to-severe LUTS with predominant storage symptoms^[20] (GR strong)

2. Avoid antimuscarinic agents in men with PVR >150 mL (GR Conditional/Selective)
3. Phosphodiesterase 5 inhibitors may be offered to men who have moderate-to-severe LUTS, especially in younger men with low body mass index^[21] (GR conditional/selective)
4. Phosphodiesterase 5 inhibitors should not be used in patients using nitrates and potassium channel openers, patients with unstable angina pectoris and recent myocardial infarction, and patients with significant hepatic and renal insufficiency (GR strong)
5. Beta-3 agonists may be offered to men who have moderate-to-severe LUTS, especially in men presenting predominantly with bladder storage symptoms (GR optional)
6. In the absence of convincing evidence on the use of phytotherapy, Ayurvedic and Homoeopathic medicines, the panel does not recommend the use of these agents (GR selective).

SURGICAL TREATMENT

The standard indications for surgical therapy are renal insufficiency secondary to BPH, refractory urinary retention secondary to BPH, recurrent UTIs, recurrent bladder stones due to BPH, gross hematuria due to BPH, LUTS attributed to BPH refractory medical treatment, and LUTS attributed to BPH in a patient unwilling to use other therapies.^[22]

1. Surgery should be offered as a primary modality for patients presenting with complications arising secondary to BPH such as renal insufficiency, refractory urinary retention, recurrent urinary tract infections, recurrent bladder stones, and gross hematuria (GR strong)
2. Surgery shall be offered as an alternative to patients presenting with moderate-to-severe LUTS who failed to respond to medical management and who are not tolerant or compliant to medical management (GR optional)
3. Open prostatectomy shall be offered for treatment of moderate-to-severe LUTS in men with prostate size >80–100 ml if endoscopic enucleation techniques are not available or are deemed unsuitable for the patient^[23,24] (GR selective)
4. Transurethral resection of prostate (TURP) should be offered to treat moderate-to-severe LUTS in men with prostate size 30–80 ml^[25] (GR strong)
5. Transurethral incision of prostate should be offered to treat LUTS in men with prostate size <30 ml, in absence of a median lobe^[26] (GR strong)
6. Bipolar TURP may be offered to treat moderate-to-severe LUTS in men with prostate size 30–80 ml based on equipment availability, surgeon's experience, and patient's choice^[27] (GR optional)

7. Holmium laser enucleation of prostate (HoLEP) should be offered to treat moderate-to-severe LUTS in men as size-independent modality as an alternative to TURP. HoLEP is especially beneficial offered to treat moderate-to-severe LUTS in men with prostate size >80 ml. HoLEP is an endourological alternative to open surgery^[28,29] (GR strong)
8. Green light LASER (80 W, 120 W, 180 W, KTP, and LBO) vaporization of prostate may be offered to treat moderate-to-severe LUTS in men with prostate size <80 as an alternative to TURP. Green light LASER vaporization of prostate may be offered to treat moderate-to-severe LUTS in men receiving antiplatelet therapy.^[30] (GR optional)
9. Diode laser vaporization/enucleation of prostate may be offered to treat moderate-to-severe LUTS in men as an alternative to TURP (GR optional)
10. Thulium LASER (Tm: YAG) enucleation of prostate should be offered to treat moderate-to-severe LUTS in men as size-independent modality as an alternative to HoLEP and TURP^[31,32] (GR strong)
11. Thulium LASER (Tm: YAG) vaporization of prostate may be offered to treat moderate-to-severe LUTS in men with prostate size <80 ml. ThuVEP/ThuVAP may be offered to the patients receiving anticoagulation (GR optional)
12. Panel feels that prostatic stents and prostatic urethral lift are optional, intraprostatic botulinum injections are not recommended. Panel recommends to wait for consolidated data on aquablation, minimally invasive simple prostatectomy, TIND, water vapor therapy (Rezüm), and prostatic artery embolization before any recommendation as a guideline statement.

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