Order Panel:	Benign Prostatic Hyperplasia (BPH)/ Lower Urinary Tract Symptoms (LUTS)		
Date approved:		Last Review:	5/10/2022
Reviewers:	Lowder	Next Review:	5/10/2024
References:	Benign Prostatic Hyperplasia (BPH) Guideline - American Urological Association (auanet.org)		
OSQ codes:	521005, 521006, 251007, 521008, 521009, 521010, 521011, 521012		

Patient presents with bothersome lower urinary tract symptoms (LUTS):

Initial evaluation

- History
- Physical Exam
- International Prostate Symptom Score (If calculator built into EPIC then link to that would be great)
- Perform UA

Initial treatment

- Behavioral/lifestyle modifications
- Medical therapy
- Referral to Urology to discuss procedural options

Follow up evaluation

- Evaluate 4-12 weeks after initialing treatment
- Repeat IPSS
- Consider Post Void Residual (PVR)
- Refer for Urodynamic studies

Follow up treatment

- If no improvement and/or intolerable side effects should undergo further evaluation and consider change in medical management or surgical intervention.

Labs

- UA with microscopy and reflex culture

Imaging

- Post Void Residual

Referral

- Ref Urology

Treatment Options

Alpha Blocker - (choice of alpha blocker should be based on patient age and comorbidities, and different adverse event profiles (e.g., ejaculatory dysfunction [EjD], changes in blood pressure)). (Grade A) When initiating alpha blocker therapy, patients with planned cataract surgery should be informed of the associated risks and be advised to discuss these risks with their ophthalmologists. (Expert Opinion)

- Alfuzosin 10 mg daily.
- Doxazosin 1 mg daily. (Initiate with 1 mg daily in AM or PM. May double the dose every 1-2 weeks up to 8 mg daily based on patient response and tolerability. Max 8 mg daily.)
- Doxazosin 2 mg daily.
- Doxazosin 4 mg daily.
- Doxazosin 8 mg daily.
- Doxazosin (extended release) 4 mg daily in AM.
- Doxazosin (extended release) 8 mg daily in AM. (may titrate based on response and tolerability after 3-4 weeks.)
- Silodosin 8 mg daily with a meal.
- Tamsulosin 0.4 mg daily
- Tamsulosin 0.4 mg 2 PO daily. (if response is inadequate after 2-4 weeks, may increase to 0.8 mg daily. If therapy is discontinued or interrupted for several days restart at 0.4 mg daily)
- Terazosin 1 mg daily at bedtime. (Initiate with 1 mg daily. May titrate every few week based on response and tolerability. Maximum of 20 mg daily)
- Terazosin 2 mg daily
- Terazosin 5 mg daily
- Terazosin 10 mg daily
- Terazosin 10 mg 2 PO daily.

5-Alpha Reductase Inhibitor - For the purpose of symptom improvement, 5-ARI monotherapy should be used as a treatment option in patients with LUTS/BPH with prostatic enlargement as judged by a prostate volume of > 30cc on imaging, a prostate specific antigen (PSA) > 1.5ng/dL, or palpable prostate enlargement on digital rectal exam (DRE). (Grade B)

- Dutasteride 0.5 mg daily
- Finasteride 5 mg daily

Phosphodiesterase-5 Inhibitor - For patients with LUTS/BPH irrespective of comorbid erectile dysfunction (ED), 5mg daily tadalafil should be discussed as a treatment option. (Grade B)

- Tadalafil 5 mg daily

Combination Therapy

- 5-ARI in combination with an alpha blocker should be offered as a treatment option only to patients with LUTS associated with demonstrable prostatic enlargement as judged by a

prostate volume of > 30cc on imaging, a PSA >1.5ng/dL, or palpable prostate enlargement on DRE. (Grade A)
    - Dutasteride/Tamsulosin 0.5 mg/0.4 mg daily. About 30 minutes after the same meal each day.
- Anticholinergic agents, alone or in combination with an alpha blocker, may be offered as a treatment option to patients with moderate to severe predominant storage LUTS. (Grade C). A PVR should be obtained and the usual precautions for the use of anticholinergic medications (e.g., gastric emptying/ GI motility issues, narrow angle glaucoma) should be followed. Furthermore, there have been recent publications suggesting an association between use of anticholinergic drugs and increased risk of dementia in patients over 55.[193,194] The side effects, especially in patients over 70, can be significant and the benefits and risks of treatment should be carefully weighed and discussed with the patient and family. (medications listed are only ones mentioned in AUA guideline)
    - Solifenacin 5 mg daily
    - Solifenacin 10 mg daily
    - Tolterodine (extended release) 4 mg daily
    - Fesoterodine 4mg daily
    - Fesoterodine 8mg daily
    - Oxybutynin (extended release) 10 mg daily

- Beta-3-agonists in combination with an alpha blocker may be offered as a treatment option to patients with moderate to severe predominate storage LUTS. (Grade C)
    - Mirabegron 50 mg daily
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- Clinicians should not offer the combination of low-dose daily 5mg tadalafil with alpha blockers for the treatment of LUTS/BPH as it offers no advantages in symptom improvement over either agent alone. (Grade C