

BENIGN PROSTATIC HYPERTROPHY

AGS Geriatric Evaluation and Management Tools (Geriatrics E&M Tools) support clinicians and systems that are caring for older adults with common geriatric conditions.

From the AMERICAN GERIATRICS SOCIETY

Geriatrics Evaluation & Management Tools

EPIDEMIOLOGY

Benign prostatic hypertrophy (BPH) develops in over half of men >60 years

SCREENING

If a man complains of new or worsening urinary incontinence or lower urinary tract symptoms (LUTS), then proceed with a thorough BPH evaluation

IRRITATIVE LUTS	OBSTRUCTIVE LUTS
<ul style="list-style-type: none"> Frequency Urgency Nocturia 	<ul style="list-style-type: none"> Hesitancy Intermittency Weak stream Incomplete emptying

DIFFERENTIAL DIAGNOSIS OF LUTS

- Diabetes mellitus
- Urinary tract infection (UTI)
- Sexually transmitted infections
- Neurologic disorders
- Kidney or bladder stones
- Anticholinergic or diuretic medications

HPI

- Obtain the American Urological Association Symptom Index (AUA SI) score
- AUA SI score available at <http://www.geriatricsatyourfingertips.org> (click on “Tools” then “Assessment Instruments”)

PAST MEDICAL HX

- Inquire about neurologic conditions that can affect the urological system
- Inquire about prior urologic, neurosurgical, orthopedic, or general surgery procedures that can affect innervation of the bladder or urethral sphincter

FAMILY HX

- Inquire about family history of first-degree relative with prostate cancer (as this may influence decision to screen for prostate cancer)
 - Screening for prostate cancer with annual prostate-specific antigen (PSA) measurement and digital rectal exam (DRE) remains a controversial topic, and guidelines from various task forces and societies differ
 - The U.S. Preventive Services Task Force concludes that there is insufficient evidence to assess the balance of benefits and harms of screening for prostate cancer in men < 75 years old, and it specifically recommends against screening in men ≥ 75 years old
 - The American Cancer Society and the American Urological Society recommend offering an annual PSA measurement and DRE to men ≥ 50 years old with at least a 10-year remaining life expectancy (begin at age 40 for men with an affected first-degree relative)

MEDICATIONS

- Thoroughly review patient’s medications (including over-the-counter); investigate whether they contribute to LUTS

PHYSICAL EXAM

- Abdominal exam
- Rectal exam documenting prostate size, tenderness, and nodularity

LABS/FURTHER TESTING

- Obtain a urinalysis (UA) to evaluate for UTI, hematuria, and glycosuria
 - Obtain a urine culture if UA demonstrates pyuria or hematuria
- Obtain a baseline serum creatinine to assess kidney function and the possibility of obstructive uropathy
- Check a postvoid residual (PVR) in patients with:
 - New or worsening urinary incontinence
 - Reports of incomplete emptying
 - New or worsening incontinence and/or LUTS and neurologic disease (eg, Parkinson’s, spinal cord injury, multiple sclerosis)
 - New or worsening incontinence and/or LUTS and history of procedures that can affect innervation of the bladder or urethral sphincter
- Refer to family history for information regarding PSA testing

NONPHAR-MACOLOGIC MANAGEMENT	INTERVENTIONS	RATIONALE	COMMENTS
	<ul style="list-style-type: none"> Encourage majority of fluids before 4 PM (to manage nocturia) Eliminate bladder irritants (caffeine, alcohol, nicotine) Avoid drugs that aggravate symptoms (anticholinergics) 	Factors outside the urinary tract contribute to urinary symptoms	<ul style="list-style-type: none"> Often sufficient management for mild symptoms Complements management for moderate to severe symptoms
EVALUATION OF RESULTS OF NONPHAR-MACOLOGIC MANAGEMENT	NO FURTHER TREATMENT NECESSARY IF PATIENT MEETS ALL OF FOLLOWING CRITERIA:		DISCUSS PHARMACOLOGIC AND/OR SURGICAL TREATMENT OPTIONS IF:
	<ul style="list-style-type: none"> AUA SI score ≤ 7 Symptoms not bothersome No UTI No known bilateral hydronephrosis No known bladder stones No hematuria attributable to prostate 		AUA SI score >7 and symptoms are bothersome
PHARMA-COLOGIC MANAGEMENT	INTERVENTIONS	RATIONALE	COMMENTS
	<p>α-Adrenergic antagonists</p> <ul style="list-style-type: none"> Selective for $\alpha 1$: prazosin, alfuzosin Long-acting, selective for $\alpha 1$: terazosin, doxazosin Long-acting, selective for $\alpha 1a$: tamsulosin, silodosin, alfuzosin 	Relaxation of the smooth muscle in hyperplastic prostate tissue, prostate capsule, and bladder neck decreases resistance to urinary flow	<p>Adverse effects:</p> <ul style="list-style-type: none"> Dizziness Mild asthenia Headaches Postural hypotension (reduced with careful dose titration) Rhinitis Abnormal ejaculation
	<p>5α-Reductase inhibitors</p> <ul style="list-style-type: none"> Finasteride Dutasteride 	Reduced tissue levels of dihydrotestosterone result in prostate gland size reduction	<ul style="list-style-type: none"> Most effective for men with prostates > 40 g Improvement may not be evident for up to 6 months
SURGICAL MANAGEMENT	INTERVENTIONS	RATIONALE	POSSIBLE INDICATIONS
	<ul style="list-style-type: none"> Transurethral resection of the prostate Transurethral incision of the prostate Open prostatectomy Transurethral vaporization of the prostate Stent placement 	Removal or expansion of periurethral prostate tissue reduces obstruction to urinary flow	<ul style="list-style-type: none"> Patient preference Dissatisfaction with medication Refractory urinary retention Renal dysfunction Bladder stones Recurrent UTI induced by BPH Hematuria clearly due to prostatic obstruction
REFERRAL	<ul style="list-style-type: none"> Patients with new or worsening LUTS and a history of lower urinary tract urological surgery or urethral trauma (traumatic catheterizations) should be referred to a urologist within 2 months Also refer patients with presumed BPH and: <ul style="list-style-type: none"> Bladder stones >1 episode of urinary retention Renal failure with hydronephrosis Recurrent UTI Gross hematuria or microhematuria (> 3 RBCs/high-power field on 2 of 3 UAs) and a negative urine culture 		