

Time	Patient Name	Age	Type	Notes
11:40 AM	Williams, James	68 M	FOLLOW-UP	Routine visit

*NOTE: This is not a real patient!

A 68-year-old AAM presents to clinic for a routine visit with a new complaint of frequent nighttime urination. He complains of daytime fatigue and sleepiness due to having to wake 4-5 times each night to urinate. After additional questioning, you ascertain that he is also having weak stream, incomplete emptying, and urinary frequency throughout the day. He states that he cannot tolerate these symptoms for much longer.

PMH:

HTN
Hyperlipidemia

Meds:

Lisinopril 10 mg daily
Amlodipine 5 mg daily
Rosuvastatin 5 mg daily

Soc Hx:

+ 25 PY tobacco
3 beers/week
No illicit drugs

ROS:

(-) dysuria or hematuria
(-) polydipsia or polyphagia
(-) weight loss

Exam:

VS: T 37.2 HR 75 BP 130/75 RR 14 SpO₂ 98% (RA) BMI 26
Gen: Healthy-appearing male in NAD
CV: Normal S1/S2, RRR, no M/R/G, no pedal edema
Resp: CTAB, mildly prolonged expiratory phase, no W/R/R
GI: Abdomen soft, NT/ND, NABS, no organomegaly
Neuro: CN II-XII intact, Motor strength 5/5, Sensation symmetric, DTR's 2+ throughout; normal gait and balance
DRE: Prostate mildly enlarged, homogeneous, smooth without nodules or tenderness; Rectal sphincter tone normal

Data:

Urinalysis: normal
PSA: 0.5 ng/mL (reference range < 4.01 ng/mL)

You leave the room to sign out to your attending and decide to print out an AUA symptom score for your patient to complete as he waits. He falls into the severe range.

What is the MOST APPROPRIATE next step in the management of this patient?

- Obtain a serum creatinine and transrectal ultrasound
- Start an alpha-blocker
- Start a 5-alpha-reductase inhibitor
- B and C
- Send patient to urology for further evaluation



Answers:

What is the MOST APPROPRIATE next step in the management of this patient?

- A. Obtain a serum creatinine and transrectal ultrasound
- B. Start an alpha-blocker**
- C. Start a 5-alpha-reductase inhibitor
- D. B and C
- E. Send patient to urology for further evaluation

Discussion Points:

1. The initial evaluation of a man with lower urinary tract symptoms (LUTS) should include consideration of **excess fluid and caffeine intake, diuretic use, and use of medications with anticholinergic side effects**. In some cases, symptoms may resolve simply by changing a diuretic antihypertensive to a non-diuretic agent.

Physical exam should include **digital rectal exam** to assess prostate size and consistency and to detect the presence of concerning features such as nodules or asymmetry. Neurologic exam should also be performed.

A **urinalysis** should be obtained to screen for UTI and identify hematuria, which could suggest urolithiasis or malignancy. A **PSA** measurement should also be obtained, as uncommonly, symptoms may be due to a bulky prostate cancer.

2. An AUA Symptom Index questionnaire can be used to determine the severity of symptoms. AUA Symptom Score of 1-7 is mild, 8-19 is moderate, and 20-35 severe. See sample patient questionnaire on the following page.
 - Watchful waiting is recommended for patients with **mild** or non-bothersome symptoms.
 - Medications should be offered to patients with **moderate-to-severe** or bothersome symptoms.
 - Consider counseling on behavior modifications, such as avoiding excess alcohol and caffeine, limiting late-night fluid intake, and double-voiding for more complete bladder emptying.

AUA Symptom Score

Patient Name: _____ Date: _____

Circle one number for each line.

	Not at all	Less than 1 in 5 times	Less than half the time	About half the time	More than half the time	Almost always
1. INCOMPLETE EMPTYING Over the past month, how often have you had a sensation of not emptying your bladder completely after you finished urinating?	0	1	2	3	4	5
2. FREQUENCY Over the past month, how often have you had to urinate again less than two hours after you finished urinating?	0	1	2	3	4	5
3. INTERMITTENCY Over the past month, how often have you found you stopped and started again several times when you urinated?	0	1	2	3	4	5
4. URGENCY Over the past month, how often have you found it difficult to postpone urination?	0	1	2	3	4	5
5. WEAK STREAM Over the past month, how often have you had a weak urinary stream?	0	1	2	3	4	5
6. STRAINING Over the past month, how often have you had to push or strain to begin urination?	0	1	2	3	4	5
7. NOCTURIA Over the past month, how many times did you most typically get up to urinate from the time you went to bed at night until the time you got up in the morning?	None 0	1 Time 1	2 Times 2	3 Times 3	4 Times 4	5 Times 5

Add the score for each number above and write the total to the right.

TOTAL: _____

QUALITY OF LIFE: If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that? Circle one.

Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible
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3. Alpha-blockers are effective for obstructive symptoms and act rapidly, often producing noticeable effects within 48 hours and full effects within 2-4 weeks. They are the best choice for this patient who requires immediate relief.

Doxazosin, terazosin, and alfuzosin are nonselective α -blockers, while tamsulosin more selectively antagonizes prostate α -1a adrenergic receptors. Nonselective α -blockers should be titrated to the highest effective dose that does not produce side effects. Side effects include orthostatic hypotension, fatigue, and dizziness.

4. 5- α -reductase inhibitors (finasteride, dutasteride) shrink prostate tissue and slow further growth, though it may take 6 months before symptoms improve. They may be considered in patients with obvious prostate enlargement, particularly when α -blocker monotherapy does not produce an adequate response or is not tolerated.

Most trials used prostate size > 30 g on ultrasound as inclusion criteria for 5- α -reductase inhibitor treatment. In practice, **PSA \geq 1.5 ng/mL may be used as a surrogate criterion for increased prostate size** in patients whom 5- α -reductase inhibitor therapy is being considered.

Side effects include decreased libido, erectile dysfunction, decreased ejaculation, and gynecomastia. **Also note that 5- α -reductase inhibitors reduce PSA levels by approximately 50% after 6 months.** This effect should be taken into account when interpreting PSA levels obtained for cancer detection. These agents may also increase the risk of higher grade cancer at the time of diagnosis; it is unclear if this reflects later diagnosis or true causation.

5. **Combination α -blocker and 5- α -reductase inhibitor therapy** may be considered for severe symptoms, cases of obvious prostate enlargement, and when maximal dose α -blocker monotherapy does not produce an adequate response.

Though efficacy is greater with combination therapy, increased side effects and cost should be considered, as many patients do not require treatment with two agents. In most patients, it is reasonable to assess response to a single agent before adding a second.

Though the patient in this case has symptoms that are severe, his lack of major prostate enlargement (PSA 0.5 ng/mL) further supports starting with α -blocker monotherapy, which is expected to provide immediate symptom relief, before considering intensification.

6. Further thoughts: If he develops symptoms of orthostatic hypotension, how would you manage him?

References:

Sarma AV, Wei JT. Clinical practice. Benign prostatic hyperplasia and lower urinary tract symptoms. *N Engl J Med*. 2012 Jul 19;367(3):248-57.

Full text: <http://www.nejm.org.proxy.library.emory.edu/doi/full/10.1056/NEJMcp1106637>

McVary KT, Roehrborn CG, Avins AL et al. Update on AUA guideline on the management of benign prostatic hyperplasia. *J Urol*. 2011 May;185(5):1793-803. Full text:

<http://www.sciencedirect.com.proxy.library.emory.edu/science/article/pii/S0022534711002242>