

# Urology Tips and Pearls

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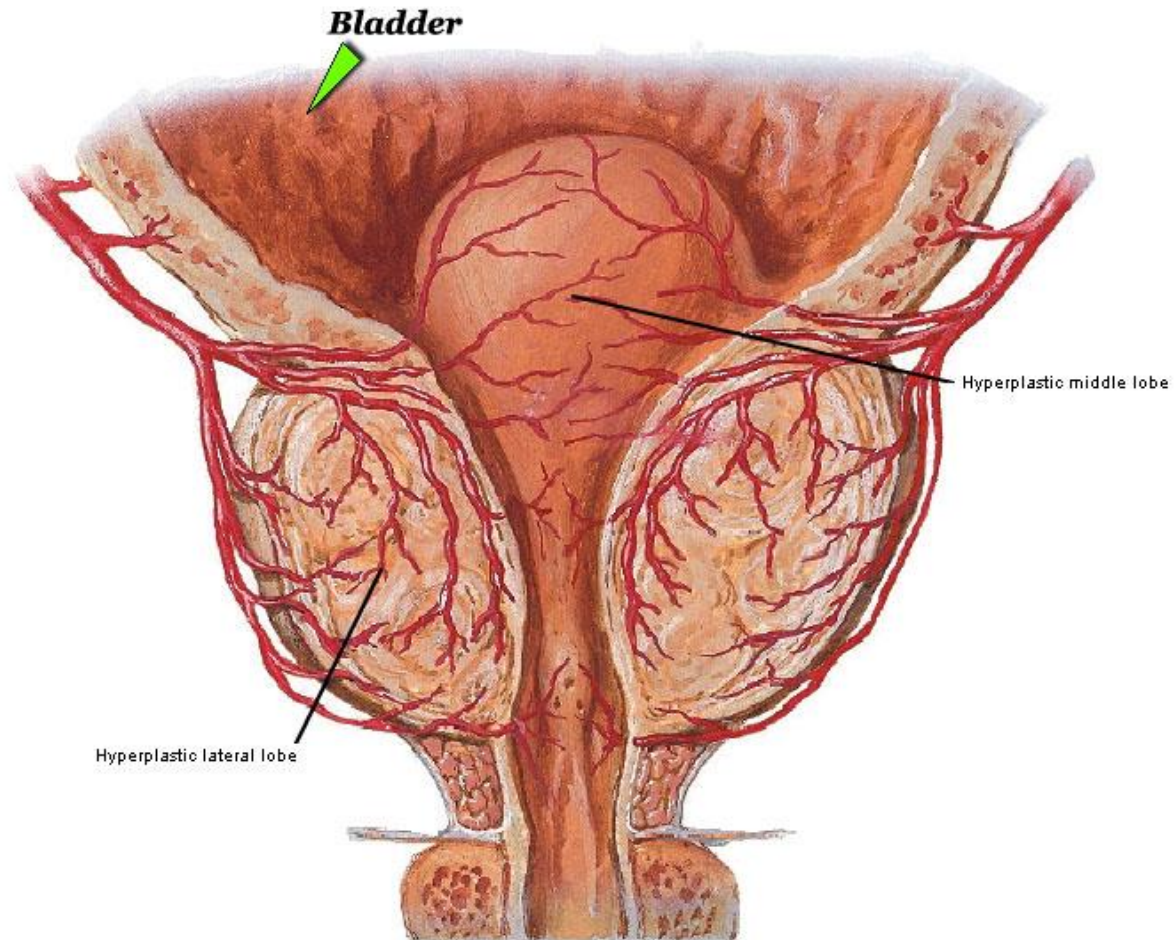
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I have no disclosures

# Objectives

- You will be able to thoroughly evaluate a patient for BHP, start medical therapy, know when to refer to a Urologist.
- You will understand how to evaluate and manage microscopic and gross hematuria.
- Recurrent UTI can be a frustrating problem. You will be able to consistently evaluate, manage and know when to refer patients.
- You learn the guidelines from the American Urologic Association regarding prostate cancer screening.

# BPH



- Mr. Cantpee, 65 yo M complains of “having to go every little while.” Symptoms have been present for a “long time.”
- PMHx: DM2, controlled
- FamHx: no history of prostate cancer
- SoCHx: denies tob/ETOH/drugs



- Does he have a storage problem or an outlet problem?
- What are his risk factors for urinary problems?

# Ask about these symptoms. Always.

<u>Obstructive symptoms</u>	<u>Irritative symptoms</u>
<ul style="list-style-type: none"><li>• Feeling of incomplete emptying</li><li>• Intermittency of stream</li><li>• Hesitation</li><li>• Decreased force of stream</li><li>• Straining to void</li></ul>	<ul style="list-style-type: none"><li>• Nocturia x _____</li><li>• Urgency</li><li>• frequency</li></ul>

Concern for incomplete empty, retention, incontinence, ARF, diabetes?

**GET a POST VOID RESIDUAL VOLUME!**



# RED FLAGS



i.e. indications for  
referral to Urology

- Gross **hematuria**
- Urinary **incontinence**
- Recurrent **UTIs**
- Bladder **stones**
- Recurrent/persistent **Urinary retention**
- **Hydronephrosis**
- **Renal insufficiency** due to BPH







# Pearls



- Severity of urinary symptoms does not correlate with prostate size.  
(Size is not important)
- Severity of urinary symptoms does not correlate with degree of bladder outlet obstruction.

# Initial evaluation

➤ Mr. Cantpee complains of:

Decreased force of stream, nocturia x 5, urgency, frequency, occasional intermittency.

➤ Denies:

straining, sensation of incomplete empty, dysuria or hematuria.

➤ He may have "LUTS attributed to BPH"

What else do you want to know?

What do you want to do now?



# Other considerations

## Take the history:

- $\alpha$ -agonist (pseudoephedrine)
- Anticholinergics (oxybutynin, tolterodine, etc)
- Caffeine, spicy foods, acidic foods
- Alcohol
- Overall fluid intake
- Diuretics in the evening

# Initial evaluation

Urinalysis

PSA in selected patients

Post void residual in selected patients

Digital rectal exam- size of prostate, nodules, firmness

3 day voiding diary, if there is predominant significant nocturia.

# Management

- In the absence of Red Flags:
- If patient is not “bothered” by the symptoms, treatment is not indicated.
- Treatment is optional



# Management

- Phytotherapy (saw palmetto)
- MOA is unknown
- **Not recommended as a standard therapy**
- May have therapeutic benefit

# Management

- Alpha-adrenergic blockers
  - (tamsulosin, doxazosin, alfuzosin, terazosin...)
  - Appear to have **equal effectiveness**
  - Doxazosin is cheap, requires dose titration
  - **Be careful with elderly.** They pass out...get a full cardiac work up....
  - Tell you patients about **ejaculatory dysfunction** and “**dizziness**” (**orthostatic hypotension**)

# Management

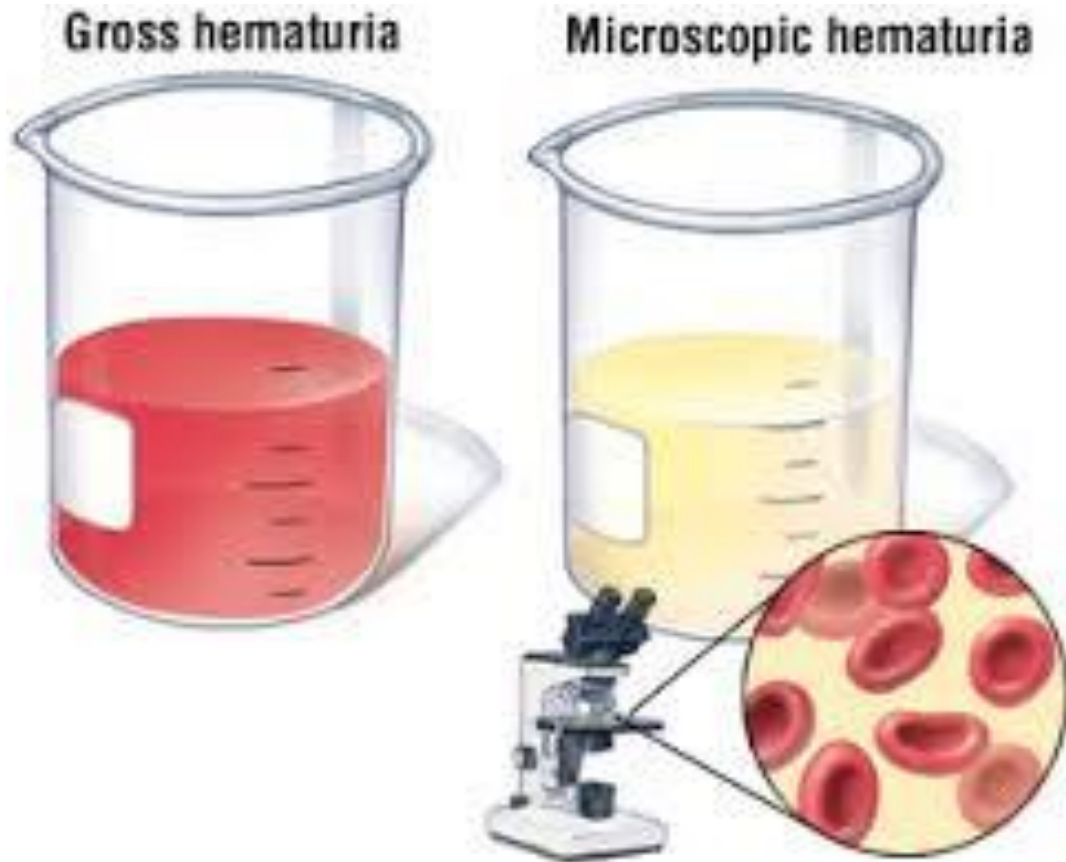
- 5 $\alpha$ -reductase inhibitors
  - (finasteride, dutasteride)
  - Reduces **prostate volume** by 20-25% in 6-12 months
  - **Decreases PSA by 50%**
    - Don't use this to treat elevated PSA!
  - Tell patients about impotence, decreased libido, decreased ejaculate, gynecomastia (all <5%)



# Management

- Anticholinergics (oxybutynin, tolterodine...)
  - May be used alone or in combo with  $\alpha$  blocker for irritative voiding symptoms
    - In patients **WITHOUT** elevated post-void residual!
  - Close follow up after starting this med
    - To evaluate for urinary retention
  - Tell patients about **dry mouth, constipation, AMS** in elderly.

# Microscopic hematuria



# Microscopic hematuria

“Pee Pee ON TTTTHIS. Mmmm”

**P**eriod

**P**rostate (BPH, prostate cancer, prostatitis)

**O**bstruction

**N**ephritis

**T**rauma (foley, MVC, GSW)

**T**umor (renal, urothelial, prostate, urethral)

**T**uberculosis

**T**hrombosis (renal vein)

**H**ematologic (sickle cell, anticoagulation, bleeding disorders)

**I**nfection/Inflammation (radiation)

**S**tones

**M**eds (Pyridium, Bactrim, nitrofurantoin, rifampin, phenytoin...)

# Microscopic hematuria

- Your screening office dipstick is positive for Heme, in the absence of other symptoms (dysuria, urgency, frequency, pain, F/C...)
- You're concerned about micro hematuria.
- What do you do next?

# Microscopic hematuria

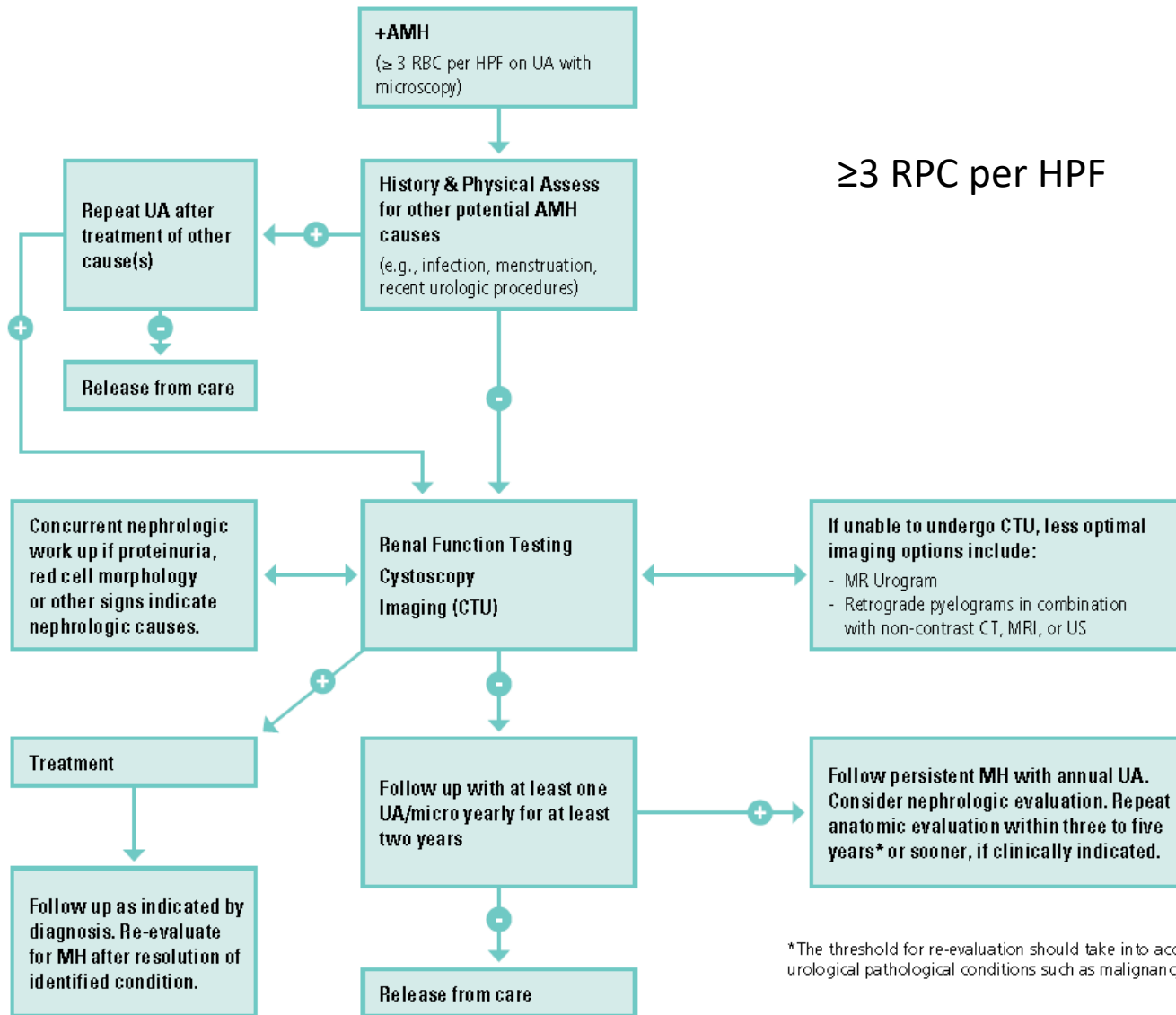


- If your screening office dipstick is positive for Heme, in the absence of other symptoms (dysuria, urgency, frequency, pain, F/C...)
  - You **NEED** to order a **microscopic urinalysis**.
  - No need to treat or order further testing or place referrals until your have confirmed hematuria on micro U/A....
  - Why? False positives on dip.
    - Ex. myoglobinuria, hemoglobinuria, povidone/iodine contamination, concentrated **urine**, menstrual **blood**, rigorous exercise

# Diagnosis, Evaluation and Follow-up of AMH



≥3 RPC per HPF



\*The threshold for re-evaluation should take into account patient risk factors for urological pathological conditions such as malignancy.



# Gross Hematuria



Painless, otherwise asymptomatic, gross hematuria should not be treated with antibiotics.

There is a 10-15% risk of GU malignancy.

CT Urogram and Cystoscopy are needed

Referral to Urology

# Recurrent UTI

- Not clearly defined
  - I intervene when:
    - > 4-6 UTI per year,
    - if patient is getting pyelonephritis or sepsis
    - If MDRO is developing
- HISTORY is KEY!
  - Symptoms?
  - Positive cultures? And correlation with symptoms
  - Risk factors?
  - Is it actually recurrent, or could it be persistent?



- Mrs. Burns, 65 yo W with complaints of “always having a urine infection. It just keeps coming back.”
- PMHx: DM2, uncontrolled
- SocHx: denies tobacco/ETOH/drugs



- Is she actually having UTIs?
- What are her risk factors for UTI?

# Recurrent UTI



- Asymptomatic bacteriuria is a positive culture (if appropriately collected) in the **absence** of signs and symptoms of infection.
- More common in **women and older patients**.
  - Also in, diabetes,
    - SCI,
    - neurogenic bladder,
    - indwelling foley,
    - Clean Intermittent Catheterization.
- **In most circumstances, screening and treatment of asymptomatic bacteriuria is not recommended.**
- **WHY?**

# Recurrent UTI



## Factors that may increase risk:

- Uncontrolled diabetes
- Postmenopausal status
- Urinary retention
- Urine incontinence
- Immunosuppression
- Pelvic organ prolapse
- Bladder outlet obstruction
- Kidney stone
- Hygiene
- Sexual activity
- IUD or spermicide

# Recurrent UTI

## Factors that may increase risk:

- Specific receptors on urothelial cells
  - Host factors, rather than behavioral/environmental factors or pathogenicity of the organism, may be the main determinant of colonization
  - Certain women may be more prone to recurrent infections because the bacteria may adhere more to the vaginal and buccal epithelial cells, than in other women.
  - A genotypic trait

# Management



- Address the risk factors first
- If patient has
  - neurogenic bladder,
  - urinary retention,
  - kidney stones,
  - vesicoureteral reflux,
  - anatomical anomalies,
  - enterovesical fistula
- REFER TO UROLOGY FOR FURTHER EVALUATION.

Hopefully after addressing the risk factors, frequency of UTI is decreased, but patient still having recurrent UTIs:

- Methenamine (1 gm BID, need to acidify urine)
- Intravaginal estrogen (Vagifem, Premarin, Iutera...)
- Cranberry (evidence is weak, dose unknown)
- d-mannose (anecdotal)
- AS A LAST RESORT: prophylactic antibiotics. WHY?



# Pearls



- Remember not to treat asymptomatic bacteriuria.
  - Exceptions: pregnancy, GU surgery
- Symptoms with negative culture
  - dysuria, genital burning/irritation- may be due to atrophic vaginitis, do an exam, vaginal estrogen
  - Urgency/frequency- may be due to OAB, constipation, caffeine, other dietary factors
  - Pelvic/bladder pain- may be due to interstitial cystitis, pelvic floor muscle spasm, constipation...





# Pearls



- **Gross hematuria, in the absence of UTI symptoms, is NOT a UTI.**
- *DON'T treat with antibiotics.*
- **DO order a CT UROGRAM and refer to Urology.**

# Screening and Early detection of Prostate Cancer

- Men under 40:
  - There is a very low prevalence of clinically detectable prostate cancer, no evidence demonstrating benefit of screening
- Recommend against screening

# Screening and Early detection of Prostate Cancer

- Men age 40-54 at average risk:
  - There is a very low prevalence of clinically detectable prostate cancer, no evidence demonstrating benefit of screening
  - Recommend against screening
- Men age 40-54 at higher risk
  - AA race, family history
  - Screening is individualized

# Screening and Early detection of Prostate Cancer

- Men age 55-69
  - Benefit the most for screening
  - Shared decision-making
  - After consideration of PSA level and shared decision-making, men may opt to screen for prostate cancer every two years or more, instead of annual
  - This may further reduce over diagnosis and false positives.

# Screening and Early detection of Prostate Cancer

- Men age 70+, or any man with less than 10-15 years life expectancy
  - No screening recommended
  - Unless the man is in excellent health

# The End

- Thank you!

- History may reveal causes or comorbidities such as cardiovascular disease (including hypertension, atherosclerosis, or hyperlipidemia), diabetes mellitus, depression, and alcoholism. Related dysfunctions such as premature ejaculation, increased latency time associated with age, and psychosexual relationship problems may also be uncovered. Most importantly, a history can reveal specific contraindications for drug therapy. Additional risk factors include smoking, pelvic, perineal, or penile trauma or surgery, neurologic disease, endocrinopathy, obesity, pelvic radiation therapy, Peyronie's disease, and prescription or recreational drug use.

- Oral phosphodiesterase type 5 inhibitors, unless contraindicated, should be offered as a first-line of therapy for erectile dysfunction.
- Generic sildenafil
- Canadian, Mexican, Indian pharmacies



- Patients who have failed a trial with phosphodiesterase type 5 (PDE5) inhibitor therapy should be informed of the benefits and risks of other therapies, including the use of a different PDE5 inhibitor, alprostadil intra-urethral suppositories, intracavernous drug injection, vacuum constriction devices, and penile prostheses.

- The management of erectile dysfunction begins with the identification of organic comorbidities and psychosexual dysfunctions; both should be appropriately treated or their care triaged. The currently available therapies that should be considered for the treatment of erectile dysfunction include the following:Â oral phosphodiesterase type 5 [PDE5] inhibitors, intra-urethral alprostadil, intracavernous vasoactive drug injection, vacuum constriction devices, and penile prosthesis implantation. These appropriate treatment options should be applied in a stepwise fashion with increasing invasiveness and risk balanced against the likelihood of efficacy.