LUTS, BOO and BPH
Deciphering male urinary complaints

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Ambulatory Chief Lecture
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Learning Objectives
• Understand the different in terminologies.
• Develop a system of evaluation for urinary complaints.
• Explain three different treatment modalities.
• Know indications for referral to urology.

Case I
• 52yo male
• PMH: DM, HTN, HLD, chronic pain (on norco), migraines
• Complains of nocturia and urgency, worsened after taking flomax.
• Mild difficulty initiating stream

Case II
• 65yo male
• PMH: ankylosing spondylitis, HTN, chronic pain (only recently on norco), depression
• Sx: nocturia, difficulty initiating stream, decreased strength of stream
• On terazosin for four years, started after episode of prostatitis.

The prostate
• Periurethral, central and transition zones sites of BPH enlargement
• Peripheral zone directly palpated on DRE

Some terminology
• Lower Urinary Tract Symptoms “LUTS”
  • Refers to storage (frequency, nocturia) and voiding (hesitancy, decreased stream, PVR) symptoms
  • Benign Prostatic Hypertrophy “BPH”
  • Histological diagnosis of overgrowth of prostatic epithelial and stromal cells, “nodular hypertrophy”
  • Benign Prostatic Enlargement – presumptive dx from exam
  • Bladder Outlet Obstruction “BOO”
    • Generic term for all forms of bladder obstruction
  • Benign Prostatic Obstruction “BPO”
    • Obstruction has been proven by flow rates or knowledge of enlarged prostate with decreased flow.
The Symptoms

- Urinary frequency
- Nocturia (2x+ a night)
- Urgency
- Incomplete emptying
- Weak stream
- Intermittency
- Straining

Differential

- BPO
- Overactive bladder
- Prostatitis
- Bladder or renal cancer (hematuria)
- Neurogenic bladder (increased sphincter tone)
- Prostate Cancer

Goals of Treatment

1. Quality of life
2. Possibly avoid complications in the future

Medical History

- Instrumentation: Foley placement, cystoscopy
- Medications
  - Decongestants – stimulate alpha receptors
  - Antihistamines – lower parasympathetic tone
  - TCAs – Anticholinergic effects
  - Opiates – retention
  - Diuretics – exacerbate urinary sx
- Comorbid conditions
**The maligned serum PSA**

- > 1.6 ng/ml in 50s
- > 2.0 ng/ml in 60s
- > 2.3 ng/ml in 70s
- 70% sen/spec for prostate size ≥ 40ml

**2.**

- > 2.3 ng/ml in 70s

- 70% sen/spec for prostate size ≥ 40ml
- **if over 10 – refer to urology**
- 4-10 -> repeat in 8 weeks

**Think of the anatomy and Sx**

- Primarily urgency symptoms?
- Obstructive symptoms? – stream, hesitancy
- Evidence of prostatic enlargement? (exam, PSA)

**Cases**

I: 52yo man with frequency, and urgency, AUA-SI: 14 (moderate), (almost no hesitancy, straining, weak stream)

II: 65yo male, on terazosin, with nocturia, hesitancy

**α-blockers**

- Non-selective (older)
  - Doxazosin (Cardura)
  - Terazosin (Hytrin)
- Selective
  - Tamsulosin (Flomax)
  - Alfuzosin

**5-α reductase**

- Dutasteride
- Finasteride (Proscar)

- Decrease size of prostate, consider adding if evidence of BPO
- 3-6mo to see full effect
- Need to double PSA labs in the future
MTOPS study and combAT trial showed significant benefit for combination α-blocker + 5α-reductase medication for LUTS with an obstructive component.

4yr endpoints: progression to urinary obstruction, need for prostate surgery and symptom relief.

Anticholinergic

- Useful if sx are primarily irritative
- A post-void residual is recommended prior to initiating therapy.
- Oxybutynin (2-5mg) and tolterodine (1-2mg)
- Newer agents: solifenacin, darifenacin, trospium

Lifestyle

- Decrease fluid intake (particularly if polyuria is primary sx – desmopression as final line)
- Avoid bladder irritants
- Increase physical activity

When to refer to urology?

- Moderate to severe obstructive and/or irritative symptoms. Are the symptoms severe enough that the patient would want to consider surgery on the prostate to relieve the symptoms? Is the AUA Symptom Score greater than 15?
- Moderate to severe symptoms with post-void residual (PVR) 25% of bladder capacity or greater than 100cc – noted on imaging studies, when available.
- Prostatism associated with a urinary tract infection
- Hydronephrosis due to BPH
- Bladder calculi
- Obstructive symptoms associated with urinary incontinence
- Hematuria

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References