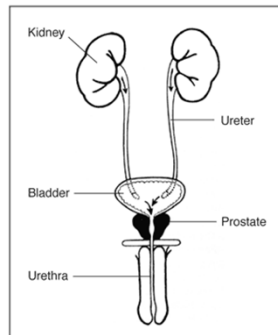


BPH

Definition: Growth of the prostate that can cause urinary symptoms in men.



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BPH

All men report changes in their urinary symptoms as they get older.

The severity of the symptoms is not predictable, and not always related to the prostate size.

Many other factors such as fluid intake, caffeine consumption, life stresses, sleep habits, etc. can affect urinary symptoms.

Medication treatment for BPH has variable success.

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BPH

How we measure the severity of BPH:

- Questionnaires
 - International Prostate Symptom Score
- Urinary Flow Rate
- Post Void Residual Urine
- Urodynamics

These are all clinical tests done in the Urologist's office.

They help define the severity of the problem and can predict the benefits of treatment. Bother is an important determinant of treatment

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INTERNATIONAL PROSTATE SYMPTOM SCORE

1. Incomplete emptying
2. Frequency
3. Intermittency
4. Urgency
5. Weak stream
6. Straining
7. Nocturia
8. Quality of life/bother

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VOIDING DIARY

Assesses fluid intake and urinary output

Volume

Frequency

Associated urge

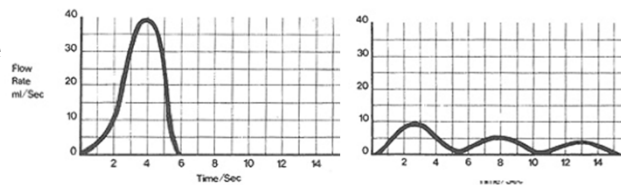
Any incontinence

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UROFLOW AND POST-VOID RESIDUAL

Urinary Flow Rate



Post Void Residual

Ideal
<100 cc (3 oz)

Concerning
>200-250 cc

Urodynamics

- Measures contractility and compliance
- Identifies men with overactive bladder
- Documents bladder outlet obstruction
- Not routinely necessary

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OTHER EVALUATION

Laboratory evaluation

- Creatinine not routine
- Urinalysis
- Urine culture not routine
- PSA pending shared decision-making process

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BPH: BEHAVIORAL INTERVENTIONS

Avoidance of bladder irritants

- Coffee/tea/soda
- Alcohol
- Tobacco
- Certain foods

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BPH: BEHAVIORAL INTERVENTIONS

Decrease fluids

- Target 1 L urine output
- Decrease fluids at night

Bladder training

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BPH: MEDICATIONS

| Alpha blockers: relax smooth muscle in bladder neck and prostate | | | | | |
|--|-----------|-------------|-----------|-----------|-----------|
| Trade: | Uroxatrol | Flomax | Cardura | Rapaflo | Hytrin |
| Generic: | Alfuzosin | Tamsulosin | Doxazosin | Silodosin | Terazosin |
| Dosing | 10, 15 mg | 0.4, 0.8 mg | 1-8 mg | 8 mg | 1-10 mg |

| 5-alpha reductase inhibitors: decrease size of prostate | | |
|---|-------------|-------------|
| Trade: | Proscar | Avodart |
| Generic: | Finasteride | Dutasteride |
| Dosing | 5 mg | 0.5 mg |

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BPH: MEDICATIONS

Side Effects

- Alpha blockers: dizziness, nasal congestion, headaches, weakness, decreased semen, concerns with cataract surgery
- 5-ARI: sexual dysfunction, prostate cancer?

May take 3 weeks to 6 months to see benefit, although most men benefit within 3 weeks.

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BPH: CAMS

No dietary supplement, phytotherapeutic agent, or non-conventional therapy is recommended for management of BPH

Saw palmetto, stinging nettle

- No evidence for effectiveness compared with placebo

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BPH : SURGERY

Absolute Indications

- Urinary retention on BPH medications
- Bleeding due to BPH
- Recurrent infections due to poor emptying
- Bladder stones
- Kidney damage due to prostate blockage

Relative Indications

- Symptoms not improved by medication

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BPH : SURGERY

Goal: Increase the size of the channel through the prostate.

Techniques

- Urolift procedure (no median lobe)
- Transurethral incision - TUIP (small prostate)
- Transurethral resection - TURP ("roto-rooter")
- Laser: holmium laser enucleation, Greenlight laser vaporization
- Open or robotic surgery - very large prostates

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BPH : SURGERY

Outcomes: At least 75 - 80% of men improve in their symptoms and uroflow / residual

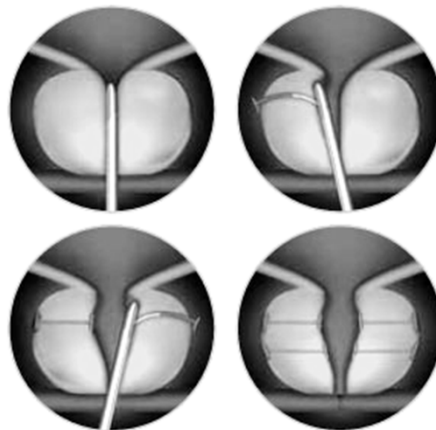
Risks: bleeding, decreased semen, scar tissue (3-5%), incontinence (long-term < 1%), re-growth of BPH (5-8% within 5 years), new impotence (rare), bladder injury (rare)

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BPH : SURGERY

Goal: Increase the size of the channel through the prostate.

Urolift procedure



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BPH : FAILED SURGERY

Bladder Failure

- Long term blockage can result in bladder failure
- Diabetes or neurological disorders

Incomplete tissue removal

- Prostate too big for technique selected

Delayed healing from the procedure

Symptoms were not due to BPH

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OTHER SOURCES OF URINARY SYMPTOMS

BPH usually causes *voiding* lower urinary tract symptoms

Weak force of stream

Hesitancy

Long voiding times

Intermittency

Incomplete emptying

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OTHER SOURCES OF URINARY SYMPTOMS

Storage lower urinary tract symptoms

Urinary frequency

Urinary urgency

Urge urinary incontinence

Dysuria

Nocturia

Usually suggest *overactive bladder*.

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OTHER SOURCES OF URINARY SYMPTOMS

Management of overactive bladder

Behavioral

Diet

Caffeinated beverages

Alcohol

Timing of fluid intake

Bladder training

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OAB: MEDICATIONS

| | | | |
|--|-------------|-------------|----------------------------|
| Anticholinergics: relax smooth muscle in bladder neck and prostate | | | |
| Trade: | Ditropan* | Detrol* | Toviaz Sanctura |
| Generic: | Oxybutynin | Tolterodine | Fesoterodine Trospium |
| Trade: | VESicare | Enablex | |
| Generic: | Solifenacin | Darifenacin | |

| | | |
|----------------|--------------------------|-------------------------|
| Others | | |
| Trade/Generic: | Imipramine | Mirabegron/Mybertriq |
| Mechanism | Tricyclic antidepressant | Beta-adrenergic agonist |

* Available in short and long-acting preparations

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OAB MANAGEMENT IN MEN

Challenge of using bladder relaxants in patients with elevated PVR

Concordance of BPH and OAB

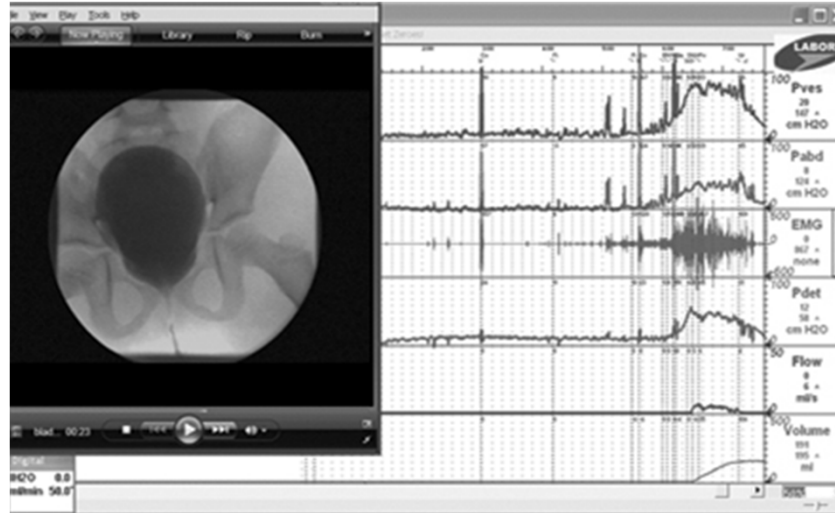
Elderly population

Multifactorial nature of *nocturia*

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URODYNAMICS



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URODYNAMICS

Used in men for clarification of symptom source and candidacy for intervention

- Confirm bladder outlet obstruction
- Evaluate bladder contractility
- Evaluate bladder capacity and compliance

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CASE 1

62M with h/o recurrent skin SCC
Twin with spermatic cord liposarcoma
Presented with urinary retention
Cr 3.8, baseline 0.9
CT KUB with impressive bladder
distention, B hydronephrosis

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CASE 1

Urinary retention and AKI
Foley catheter until definitive
intervention
Underwent TURP
Voided POD 1, now doing well with Cr
maintained at 1.0 18 months after
surgery

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CASE 2

75M with urge urinary incontinence

Has tried doxazosin, tamsulosin, and oxybutynin with no improvement

Main complaints are urinary urgency, daytime urinary frequency, nocturia

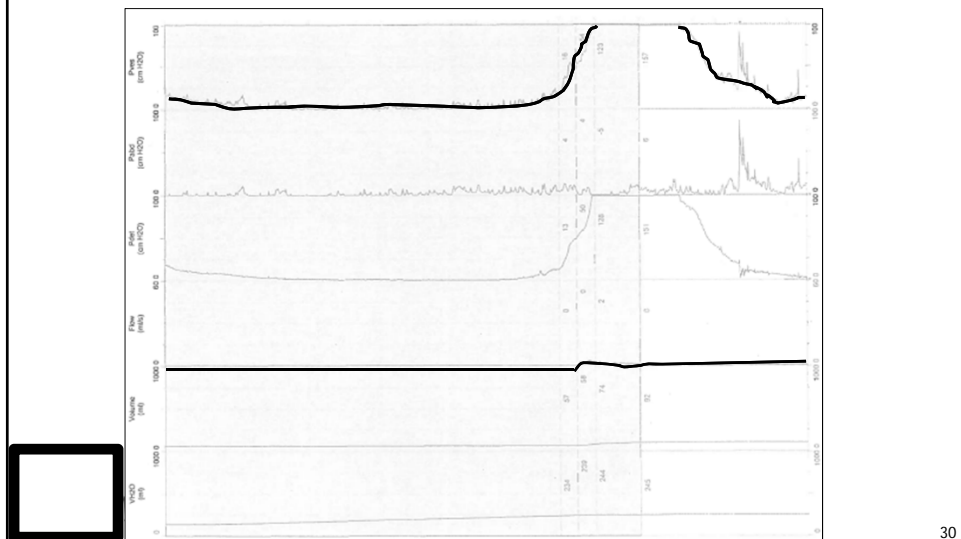
Also with weak FOS, long voiding times, hesitancy

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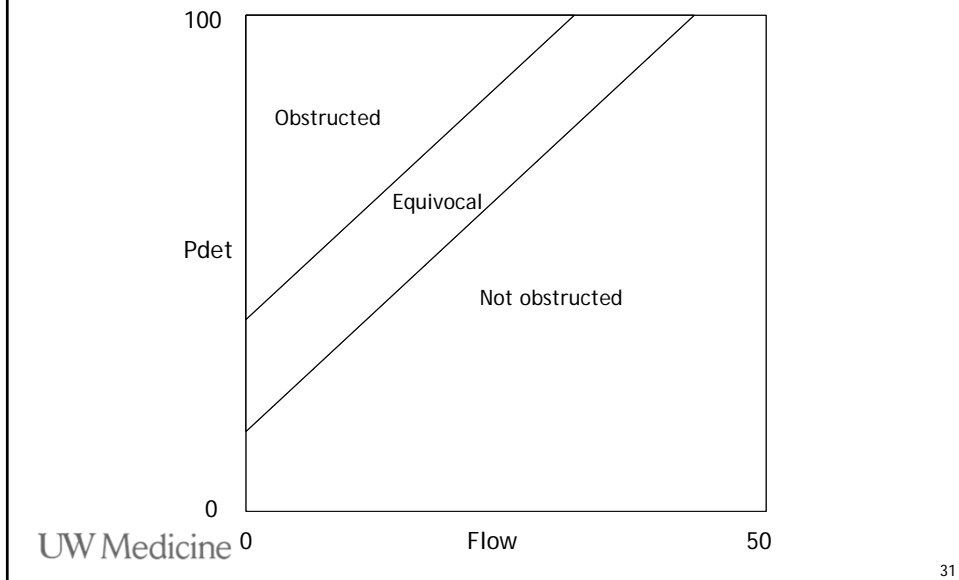
CASE 2

Trial of VESIcare with no improvement



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CASE 2



CASE 2

Underwent TURP

Visually obstructing lateral lobes and high bladder neck

Doing well on oxybutynin alone with rare UI

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BPH : PERSONAL PREFERENCES

- An initial trial of alpha blockers for LUTS is reasonable, keep expectations moderate.
- 5-ARIs can be used in addition to alpha blockers for men with larger prostates, after discussion about prostate cancer risk.
- Surgery should be offered upfront and is indicated at any time with reasonable indications.
- Need to be mindful of other sources of urinary symptoms in men.

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ANY QUESTIONS?

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