HOT TOPICS IN UROLOGY

Incontinence, Overactive Bladder, UTI’s and Prostatic Problems

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Objectives

• Learn how the urinary system works and when to come see a physician
Overview of the urinary system

- Kidney
- Ureter
- Bladder
- Prostate
- Urethra
Normal bladder function
When is the bladder a problem?

- Bladder is affecting quality of life
- Increase bladder sensitivity can signal problems
- Recurrent UTI can signal underlying health problems
## Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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<tr>
<td><strong>Urge Incontinence</strong></td>
<td>Involuntary leakage accompanied by or immediately preceded by urgency OAB “wet”</td>
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<td><strong>Increased daytime frequency</strong></td>
<td>Patient considers that he / she voids too often by day</td>
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<td><strong>Urgency</strong></td>
<td>Sudden compelling desire to pass urine that is difficult to defer</td>
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<td><strong>Warning time</strong></td>
<td>Time from first sensation of urgency to voiding, either voluntary or involuntary</td>
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<td><strong>Nocturia</strong></td>
<td>Complaint that the individual has to wake at night one or more times to void</td>
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Overactive Bladder: Impact on Quality of Life

- A public wetting accident is an embarrassing symptom. Both “wet” and “dry” individuals fear they may leak.

- Urgency and incontinence cause people to adopt lifestyle changes and coping behaviors.

- Incontinence episodes.

Recognizing the Symptoms of Bladder Dysfunction

- Frequent urination during day and/or night
- Blood and/or blood clots in urine
- Sudden urge to urinate
- Burning, painful urination
- Weak urine flow
- Sensation the bladder is not empty after urination
- Inability to urinate
- Trouble stopping and starting of flow
How are urinary problems evaluated

- Medical History
- Physical Exam*
  - Urinary Testing
    - Urine analysis
    - Peak urinary flow (QMAX) testing
    - Post-void urine volume testing
- Self Evaluation of Symptoms
Mechanisms of bladder symptoms

- Obstruction
  - Enlarged prostate
  - Stricture disease
  - Neuromuscular dysfunction

![Normal Prostate](image1)
![Enlarged Prostate](image2)
Mechanisms of bladder symptoms

- Bladder instability
  - “Overactive bladder”
  - Infectious causes
  - Foreign bodies and cancers
  - Underlying neurologic diseases
  - Bladder compliance changes from obstruction

- Urologic evaluation is necessary to distinguish these causes
Urinary Incontinence

- Urinary incontinence affects:
  - 13 million Americans
  - Both men and women are affected in large numbers
  - Can be an aspect of aging
- New treatment options can restore and may improve their active lifestyle.
Myths About Urinary Incontinence

- Normal part of aging
- Nothing can be done
- Surgical treatment is invasive
- Catheters and daily management products are the best solutions
Classification of Incontinence

- **Stress**
  - Loss of urine when the abdomen is under physical stress

- **Urge**
  - Sudden, strong urge to urinate combined with a sudden, uncontrollable leakage of urine
Other Types of Incontinence

- Neurogenic
  - Inability to control bladder function due to nervous system injury or damage
- Overflow
  - Frequent or constant dribble of urine
Stress Incontinence

- Pelvic muscles are not strong enough to keep the opening of the bladder neck closed
  - Under physical stress, you leak urine
Stress Incontinence
Causes of Stress Incontinence

- Child birth
- Aging
- Weak pelvic floor muscles
- Previous pelvic surgery
Treating Incontinence

- Behavior Modification Techniques
- Drug Therapy
- Injectable Agents
- Catheters/Absorbent Products/Mechanical Devices
- Surgery
  - Suspension
  - Sling
  - Artificial Sphincter
Behavior Modification

- Self management program
  - Kegel technique
  - Pelvic muscle exercises
- Bladder training/retraining
- Timed voiding
Drug Therapy

Ditropan XL
(oxybutynin chloride)
Once-a-day
Extended-release tablets 5, 10, 15 mg

Detrol LA
Half a billion and going strong!

VESIcare
(solifenacin succinate)
tables

NorthBay Healthcare
Compassionate Care, Advanced Medicine, Close to Home.
Daily Maintenance Products

- Absorbent Pads
- Self-Catheterization
- Pessaries
Durasphere® EXP Injectable bulking agent

- Carbon coated beads in a water base carrier gel that is injected into the urethra.
- Helps close the bladder opening to reduce incontinence
- More than one treatment maybe necessary in half of patients 4-6 months after first treatment
Surgical Treatment

- Minimally invasive
- Long term results
- No longer dependent on daily maintenance products
- Corrects stress incontinence by supporting the bladder neck and urethra in their natural position

- End Result: After a sling procedure most women can once again regain control of their bladder
About the procedures

• The sling holds the urethra in its proper position, which corrects stress incontinence

![Diagram of bladder, pubic bone, and sling]
Urinary tract infections

• Rare bacterial UTI in women do not warrant invasive work up
  • Behavioral interventions such as
    • Wiping front to back
    • Avoiding excessive urine holding
    • Post coital voiding
    • Good hydration

• A male UTI usually signals underlying pathology and workup is indicated
Urinary tract infections

• Investigations for recurrent UTI can include:
  - Histories
  - Examinations
  - Cystoscopy (looking in the bladder)
  - Imaging (ultrasound of urinary organs)

• Treatments can range from fixing an underlying problem:
  • Stones, enlarged prostate, post menopausal vaginal changes

• Treatment can include prevention:
  • Suppressive antibiotics, urine acidification, hydration, timed voiding
Prostate Problems

- Obstruction
  - Enlarged prostate
  - Stricture disease
  - Neuromuscular dysfunction

- Prostate size does not correlate with degree of obstruction or severity of symptoms.
Enlarged Prostate Treatment Options

- Watchful Waiting
- Medication
- Minimally Invasive Therapy
  - Heat/Microwave (TUMT)
- Surgical Therapy
  - TURP (Transurethral Resection of the Prostate)
  - GreenLight™ Laser Therapy
Treatment Options

Medication Alpha-Blockers (e.g. Flomax® and Uroxatral®)¹

Characteristics

- Intended for men with mild to severe symptoms¹³
- No surgery required¹⁶,¹⁷
- Work almost immediately¹

* When daily dosages are taken as directed

Side Effects**

- Sudden drop in blood pressure can occur¹⁶,¹⁷
- Headache¹⁶,¹⁷
- Dizziness and/or fainting¹⁶,¹⁷
- Weakness¹⁶ or Fatigue¹⁷
- Congestion¹⁶
- Painful erection¹⁷ or abnormal ejaculation¹⁶

** Side effects ≥ to 2%
### Treatment Options

**Medication 5-Alpha Reductase Inhibitors** (e.g. Avodart® and Proscar®)

#### Characteristics
- Intended for men with demonstrable prostatic enlargement\(^1\)
- Avodart® inhibits prostate enlargement by 85-90% after 2 weeks and 94% average after 2 years.\(^*\)
- Proscar® inhibits prostate enlargement by 70% after 4 years.\(^*\)
- No surgery required\(^{14,15,1}\)
- No drug interactions with other medications\(^{14,15}\)

\(^*\) When daily dosages are taken as directed

#### Side Effects
- Erectile dysfunction (ED)/Impotency\(^*\)
- Lowered sexual drive/libido\(^*\)
- Ejaculation disorders\(^*\)
- Lowers Prostate Specific Antigen (PSA) levels up to 50%; can interfere with prostate cancer detection\(^1,14,15\)

\(^*\) Side effects ≥ to 2%
Minimally Invasive Therapy
Transurethral Microwave Therapy (TUMT)

Characteristics

• Intended for men with moderate to severe symptoms\textsuperscript{13}
• Non-surgical procedure\textsuperscript{13}
• Outpatient capability\textsuperscript{13}
• Lack of sexual side-effects\textsuperscript{13}
• Can be performed without anesthesia\textsuperscript{18}
Treatment Options

Surgical Therapy
GreenLight™ Laser Therapy
*Uses a laser to vaporize away the prostate tissue*

Characteristics
- Intended for men with moderate to severe symptoms\(^\text{25}\)
- Over 500,000 patients treated worldwide\(^\text{21}\)
- Done in an outpatient setting\(^\text{22}\)
- Provides long-lasting symptom relief\(^\text{22,23}\)
- Significant, immediate urine flow improvement after the procedure\(^\text{23}\)
Laser Therapy Pre and Post-Op

Pre-Op

Immediate Post-Op

3 Months Post-Op
Prostate Cancer

- PSA blood test and digital rectal exam annual screening tests to evaluate for prostate cancer

- Diagnosis does necessarily equate to treatment, *some cancers will not progress*
Prostate Specific Antigen

• Positive screening followed by biopsy
  - In-office procedure with a local anesthetic.
  - Takes ten minutes with minimal discomfort
Prostate Cancer Incidence

![Graph showing prostate cancer incidence rates by ethnicity from 1990 to 2000.](chart)

- **Black**
- **Hispanic**
- **American Indian/Alaska Native**
- **Asian/Pacific Islander**

Deaths per 100,000

Prostate Cancer Incidence

- Prostate Cancer now tops all male cancer diagnosis in U.S. 234,460/year
- 91% have localized disease
- Since 1995, approximately 2,600,000 US men diagnosed with prostate cancer, and nearly 375,000 men lost their lives to this disease
Summary

- Urinary problems can often be easily evaluated and corrected leading to improved quality of life

- Modern treatments for prostate disease are minimally invasive with excellent results

- Annual prostate check ups are easy and may be lifesaving
Thank you - Questions?

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