STRESS URINARY INCONTINENCE EVALUATION

Week 50

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Reading Assignment: Pearls of Exxcellence, “Evaluation of Stress Urinary Incontinence”
LEARNING OBJECTIVES

• Understand what the pertinent evaluation of a patient with suspected stress urinary incontinence entails
CASE VIGNETTE

A 24 yo G4 P2022 woman presents for evaluation of urinary incontinence.

Upon questioning, she reports a 5 month history of worsening UI. She reports loss of a small volume of urine whenever she sneezes or coughs. She uses a pantiliner daily due to incontinence. She denies any dysuria, vaginal discharge, bulge symptoms, or other symptoms.
FOCUSED HISTORY

What parts of the patient’s history are most important?

- **PMH**: Denies
- **PSH**: Denies
- **OBHx**: 2 x FT NSVD (last delivery 6 months prior), 2 medical abortions
- **GynHx**: Denies STIs, abnormal paps, fibroids, cysts
- **FH**: None
- **SH**: No toxic habits, single, lives with children, unemployed, denies IPV
- **Meds**: None
- **All**: None
PERTINENT PHYSICAL EXAM FINDINGS

**Vitals:**  *BP 124/70, P 80, Ht 165 cm, Wt 80 kg, BMI 29.4 kg/m\(^2\)*

**Gen:** NAD

**Genitourinary:**
- NEFG; normal urethral meatus and bladder; normal cervix, uterus, adnexae
- Normal sensation; +anal wink
- No prolapse noted
- Normal muscle tone with Kegel, 4/5
- No urethral hypermobility, displacement angle of 5 degrees
- +Cough stress test (bladder filled to 300 mL sterile water) while supine and standing
- Post-void residual: 100 mL
- Urinalysis: negative
BACKGROUND

- **Urinary incontinence**: Involuntary loss of urine; 3 type-stress, urge, mixed
  - Affects 25% of young women, 44-57% of middle-aged/postmenopausal women
  - 75% of older women experience some degree of UI
  - Only 45% of women with UI symptoms seek care
- **Stress urinary incontinence**: Involuntary loss of urine on effort, physical exertion, sneezing, or coughing that is bothersome to the patient and frequently affects quality of life
  - 15.7% of adult women; highest incidence in women 45-49 yo
  - 77.5% report symptoms as bothersome, depends on severity of SUI
  - QoL: UI associated with depression and anxiety, social isolation; affects sexual health; increases risks of vaginal and perineal infections
PATHOPHYSIOLOGY

• Stress UI:
  • Urethral hypermobility
    • Insufficient support from pelvic musculature and vaginal tissues
    • Causes: Chronic pressure (chronic cough, obesity, chronic constipation); trauma (childbirth)
  • Intrinsic sphincter deficiency
    • Abnormal intrinsic urethral muscle tone, leading to SUI even with minimal elevations in intraabdominal pressure
    • Causes: neuromuscular damage, women w/ history of multiple urologic surgeries
### Differential Diagnosis

<table>
<thead>
<tr>
<th>Genitourinary</th>
<th>Types of Urinary Incontinence</th>
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</thead>
<tbody>
<tr>
<td>Filling and storage disorders</td>
<td>- Chronic urinary retention</td>
</tr>
<tr>
<td>- Urodynamic SUI</td>
<td>- Coital UI</td>
</tr>
<tr>
<td>- Detrusor overactivity (Idiopathic, neurogenic)</td>
<td>- Continuous UI</td>
</tr>
<tr>
<td>- Mixed types</td>
<td>- Extraurethral UI</td>
</tr>
<tr>
<td>Fistula (vesical, ureteral, urethral)</td>
<td>- Functional UI</td>
</tr>
<tr>
<td>Infectious (UTI, vaginitis)</td>
<td>- Insensible UI</td>
</tr>
<tr>
<td>Congenital (Ectopic ureter, epispadias)</td>
<td>- Mixed UI</td>
</tr>
<tr>
<td>Nongenitourinary</td>
<td>- Nocturnal enuresis</td>
</tr>
<tr>
<td>Functional (neurologic, cognitive, psychologic, physical impairment)</td>
<td>- Occult SUI (after reduction of POP)</td>
</tr>
<tr>
<td>Environmental</td>
<td>- OAB</td>
</tr>
<tr>
<td>Pharmacologic</td>
<td>- Postmicturition leakage</td>
</tr>
<tr>
<td>Metabolic</td>
<td>- Postural UI</td>
</tr>
<tr>
<td></td>
<td>- SUI</td>
</tr>
<tr>
<td></td>
<td>- UUI</td>
</tr>
</tbody>
</table>
EVALUATION

6 basic parts to evaluation (ACOG/AUGS)

1. History
2. Urinalysis
3. Physical Examination
4. Demonstration of stress incontinence
5. Assessment of urethral hypermobility
6. Measurement of postvoid residual urine volume
EVALUATION - HISTORY

Detailed urologic history
- Type of incontinence, triggers, frequency, severity, pad use, effects on ADLs
- Storage issues
  - i.e. nocturia, urgency, overflow incontinence
- Emptying/voiding symptoms
  - i.e. hesitancy, slow stream, intermittency, straining to void, spraying of stream, feeling of incomplete emptying, need to revoid immediately, post-micturition leakage, position-dependent void, dysuria
- Validated questionnaires can be used
  - i.e. Urogenital Distress Inventory, UDI; Incontinence Severity Index, ISI

Detailed medical history
- Common causes: DM, neurologic disorders
- Medications: diuretics, caffeine, narcotics, anticholinergic medications, antihistamines, psychotropic drugs, alpha—adrenergic agonists, calcium channel blockers
EVALUATION

Physical Exam and Simple Cystometry

• Assess for normal anatomy
  • i.e., rule out urethral diverticulum, ectopic ureter, fistula
• Assess for pelvic organ prolapse
• Assess for infection
• Urethral hypermobility
  • Q-tip test, 30 degree or greater displacement angle with Valsalva
• Cough stress test
  • Backfill bladder to 300 mL, test both supine and standing if –CST while supine
• Post-void residual
  • Normal is <150 mL

Urinalysis

• Rule out UTI
BRIEFLY: POP-Q

**Box 1. Stages of Pelvic Organ Prolapse**

Stages are based on the maximal extent of prolapse relative to the hymen, in one or more compartments.

**Stage 0:** No prolapse; anterior and posterior points are all ~3 cm, and C or D is between ~TVL and ~ (TVL – 2) cm.

**Stage I:** The criteria for stage 0 are not met, and the most distal prolapse is more than 1 cm above the level of the hymen (less than ~1 cm).

**Stage II:** The most distal prolapse is between 1 cm above and 1 cm below the hymen (at least one point is ~1, 0, or +1).

**Stage III:** The most distal prolapse is more than 1 cm below the hymen but no further than 2 cm less than TVL.

**Stage IV:** Represents complete procidentia or vault eversion; the most distal prolapse protrudes to at least (TVL – 2) cm.

Abbreviations: C, cervix; D, posterior fornix; TVL, total vaginal length.

SIMPLE VS. COMPLICATED SUI

Table 1. Basic Evaluation Findings for Uncomplicated Versus Complicated Stress Urinary Incontinence

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Uncomplicated</th>
<th>Complicated</th>
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</thead>
<tbody>
<tr>
<td>History*</td>
<td>Urinary incontinence associated with involuntary loss of urine on effort, physical exertion, sneezing, or coughing</td>
<td>Symptoms of urgency, incomplete emptying, incontinence associated with chronic urinary retention, functional impairment, or continuous leakage</td>
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<tr>
<td>Absence of recurrent urinary tract infection</td>
<td>Recurrent urinary tract infection†</td>
<td>Recurrent urinary tract infection†</td>
</tr>
<tr>
<td>No prior extensive pelvic surgery</td>
<td>No prior surgery for stress incontinence</td>
<td>Previous extensive or radical pelvic surgery (e.g., radical hysterectomy)</td>
</tr>
<tr>
<td>No prior surgery for stress incontinence</td>
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<td>Prior anti-incontinence surgery or complex urological surgery (e.g., vesicovaginal fistula repair)</td>
</tr>
<tr>
<td>Abnormal voiding symptoms</td>
<td>Abnormal voiding symptoms, hesitancy, slow stream, intermittency, or voiding, spraying of urinary stream, feeling of incomplete voiding, need to immediately revoid, postmicturition leakage, postmicturition urgency, and dysuria</td>
<td>Presence of voiding symptoms: hesitancy, slow stream, intermittency, or voiding, spraying of urinary stream, feeling of incomplete voiding, need to immediately revoid, postmicturition leakage, postmicturition urgency, and dysuria</td>
</tr>
<tr>
<td>Abnormal medical condition that can affect lower urinary tract function</td>
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<td>Presence of neurologic disease, poorly controlled diabetes mellitus, or dementia</td>
</tr>
<tr>
<td>Physical examination</td>
<td>Abnormal vaginal bulge beyond the hymen on examination</td>
<td>Symptoms of vaginal bulge or known pelvic organ prolapse beyond the hymen confirmed by physical examination, presence of genitourinary fistula, or vesica urinaria (e.g., vesical diverticulum)</td>
</tr>
<tr>
<td>Abnormal vaginal abnormality</td>
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<td>Abnormal vaginal abnormality</td>
</tr>
<tr>
<td>Urethral mobility assessment</td>
<td>Presence of urethral mobility</td>
<td>Absence of urethral mobility</td>
</tr>
<tr>
<td>Postvoid residual urine volume</td>
<td>Less than 150 mL</td>
<td>Greater than or equal to 150 mL</td>
</tr>
<tr>
<td>Urinalysis/urine culture</td>
<td>Negative result for urinary tract infection or hematuria</td>
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</tr>
</tbody>
</table>

**Complicated SUI may require multichannel urodynamics for further assessment**

*Complete list of the patient’s medications (including nonprescription medications) should be obtained to determine whether individual drops may be influencing the function of the bladder or urethra, which leads to urinary incontinence or voiding difficulties.
†Recurrent urinary tract infection is defined as three documented infections in 12 months or two documented infections in 6 months.
TREATMENT

• In a future lecture

Stay tuned....
TAKE-HOME POINTS

• SUI is a common condition that has significant effects on a patient’s quality of life.

• SUI can be divided into simple or complicated SUI.

• Minimum evaluation of SUI includes 6 parts: history, UA, physical exam, demonstration of SUI, assessment of urethral hypermobility, and measurement of postvoid urine volume.

• Further testing, such as multichannel urodynamic testing, may be useful in women with complicated disease.
BILLING AND CODING

Diagnoses:
  N39.3, Stress incontinence (female)

CPT Codes:
  Established outpatient visit: at least 99213 (higher if attending sees patient with you)
  New outpatient visit: at least 99203 (higher if attending sees patient with you)
EVIDENCE


