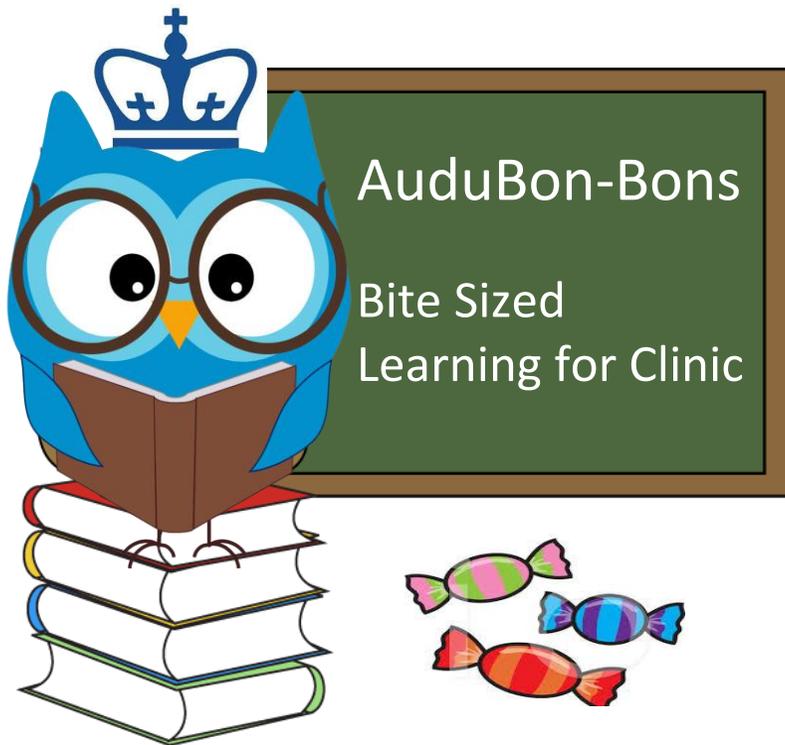


# STRESS URINARY INCONTINENCE EVALUATION

Week 50

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Reading Assignment: Pearls of Exxcellence,  
“Evaluation of Stress Urinary Incontinence”  
<https://www.exxcellence.org/pearls-of-exxcellence/list-of-pearls/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<sup>2</sup>*

**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

Differential Diagnosis	Types of Urinary Incontinence
<p>Genitourinary</p> <ul style="list-style-type: none"><li>- Filling and storage disorders<ul style="list-style-type: none"><li>- Urodynamic SUI</li><li>- Detrusor overactivity (Idiopathic, neurogenic)</li><li>- Mixed types</li></ul></li><li>- Fistula (vesical, ureteral, urethral)</li><li>- Infectious (UTI, vaginitis)</li><li>- Congenital (Ectopic ureter, epispadias)</li></ul> <p>Nongenitourinary</p> <ul style="list-style-type: none"><li>- Functional (neurologic, cognitive, psychologic, physical impairment)</li><li>- Environmental</li><li>- Pharmacologic</li><li>- Metabolic</li></ul>	<ul style="list-style-type: none"><li>- Chronic urinary retention</li><li>- Coital UI</li><li>- Continuous UI</li><li>- Extraurethral UI</li><li>- Functional UI</li><li>- Insensible UI</li><li>- Mixed UI</li><li>- Nocturnal enuresis</li><li>- Occult SUI (after reduction of POP)</li><li>- OAB</li><li>- Postmicturition leakage</li><li>- Postural UI</li><li>- SUI</li><li>- UUI</li></ul>



# 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

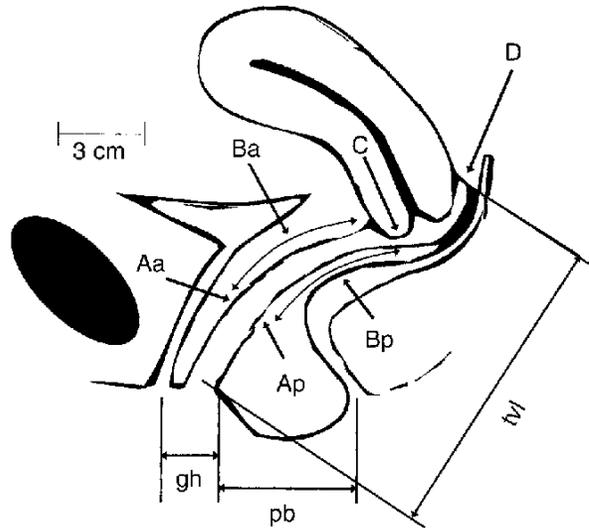
- Assess for normal anatomy
  - i.e., rule out urethral diverticulum, ectopic ureter, fistula
- Assess for pelvic organ prolapse
- Assess for infection
- Urethral hypermobility
  - Q-tip test, 30 degree or greater displacement angle with Valsalva
- Cough stress test
  - Backfill bladder to 300 mL, test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

## Urinalysis

- Rule out UTI



# BRIEFLY: POP-Q



Anterior wall <b>Aa</b>	Anterior wall <b>Ba</b>	Cervix or cuff <b>C</b>
Genital hiatus <b>gh</b>	Perineal body <b>pb</b>	Total vaginal length <b>tvL</b>
Posterior wall <b>Ap</b>	Posterior wall <b>Bp</b>	Posterior fornix <b>D</b>

## 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.

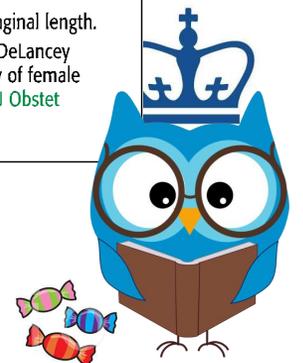
**Stage I:** The criteria for stage 0 are not met, and the most distal prolapse is more than 1 cm above the level of the hymen (less than  $-1$  cm).

**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. Data from Bump RC, Mattiasson A, Bo K, Brubaker LP, DeLancey JO, Klarskov P, et al. The standardization of terminology of female pelvic organ prolapse and pelvic floor dysfunction. *Am J Obstet Gynecol* 1996;175:10-7.



# SIMPLE VS. COMPLICATED SUI

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

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

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

\*A complete list of the patient's medications (including nonprescription medications) should be obtained to determine whether individual drugs may be influencing the function of the bladder or urethra, which leads to urinary incontinence or voiding difficulties.

<sup>†</sup>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

- Evaluation of uncomplicated stress urinary incontinence in women before surgical treatment. Committee Opinion No. 603. The American College of Obstetricians and Gynecologists. Obstet Gynecol 2014; 123:1403–7.
- Urinary incontinence in women. Practice Bulletin No. 155. American College of Obstetricians and Gynecologists. Obstet Gynecol 2015; 126:e66 – 81.
- Pelvic organ prolapse. Practice Bulletin No. 185. American College of Obstetricians and Gynecologists. Obstet Gynecol 2017;130:e234–50.
- Lukacz, E et al. Evaluation of women with urinary incontinence. Brubaker L and Schmader K eds. UpToDate, Waltham, MA: UpToDate, Inc <https://www.uptodate.com/contents/evaluation-of-women-with-urinary-incontinence>. Accessed September 2019.
- Po W. Evaluation of stress urinary incontinence. Pearls of Exxcellence. Gregg V ed. Exxcellence.org, Dallas, TX: The Foundation for Exxcellence in Women’s Health, Inc. <https://www.exxcellence.org/pearls-of-exxcellence/list-of-pearls/evaluation-of-stress-urinary-incontinence/> Accessed September 2019.

