URINARY INCONTINENCE IN THE GERIATRIC FEMALE POPULATION

Rudy M. Tovar, MD, FACOG
Female Pelvic Medicine & Reconstructive Surgery
Division of Gynecologic Subspecialties
Department of Obstetrics & Gynecology
University of Kentucky

Objectives

- Discuss the prevalence and risk factors for urinary incontinence (UI) amongst elderly women
- List the contributing factors for urinary incontinence
- Define the common types of urinary incontinence
- Discuss the initial work-up in the initial assessment of urinary incontinence
- Discuss management plans for the treatment of urinary incontinence

Urinary Incontinence among the elderly

- 11 to 34% of older men
- 17% to 55% of older woman
- DM doubles the risk of severe urinary incontinence
- Estimated that between 26-61% of community-dwelling women seek care for urinary incontinence

Urinary Incontinence: Prevalence

- Prevalence increases with age
  - 3% among women 25-34 years old
  - 7% among women 55-64 years old
  - 43-77% of women living in nursing homes
  - Ranges 10-38% among individuals with cognitive impairment/dementia

Urinary Incontinence: Prevalence

- Annual incidence rate of UI is 3.3%
- Annual remission rate of UI is 6.2%
  - Weight gain and transition to menopause are associated with persistence of UI
- Estimated 26 to 61% of community-dwelling women seek care for urinary incontinence

UI: Impact on Life

- Impacts on Health
  - Quality of life
  - Sexual dysfunction
  - Morbidity
  - Increased caregiver burden

Urinary Incontinence—Risk factors

- Obesity
- Parity
- Mode of delivery
- Family history
- Age
- Ethnicity/race
- Others: smoking, excessive caffeine use, DM, stropker, depression, fecal incontinence, vaginal atrophy, h/o genitourinary surgery, high-impact activities, impaired functional status, recurrent UTIs, h/o childhood enuresis

Urinary Incontinence: Causes

- Vaginal atrophy
- Systemic causes
  - Neurologic disorders
  - Cancer
- Reversible causes
  - Medications
  - Alcohol/caffeine intake
  - Constipation/stool impaction
  - UTI
- Functional incontinence
- Cognitive impairment

Contributing Factors to UI

Drugs and Drinks
Infection
Atrophic Urethritis
Psychological - Depression, Delirium
Endocrine - Diabetes, Hypercalcemia
Restricted Mobility
Stool Impaction

Contributing Factors to UI

Drugs
Infection
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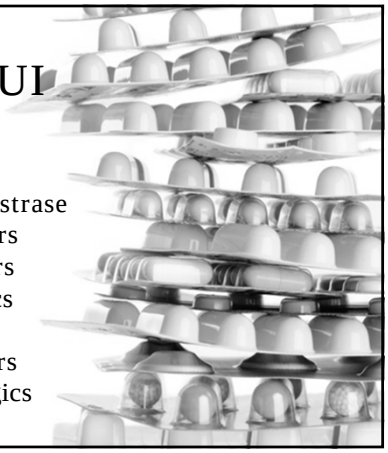
Drugs & UI



Sedatives
Acetylcholinestrase Inhibitors
ACE inhibitors
Antipsychotics
Diuretics
Alpha Blockers
Anticholinergics
Narcotics

Contributing Factors to UI

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Contributing Factors to UI

Drugs and Drinks
Infection
Atrophic Urethritis
- Recurrent UTIs
- Menopause

Psychological - Depression, Delirium
Endocrine - Diabetes, Hypercalcemia
Restricted Mobility
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Contributing Factors to UI

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Contributing Factors to UI

Drugs and Drinks
Infection
Atrophic Urethritis
Psychological - Depression, Delirium
Endocrine - Diabetes, Hypercalcemia
Restricted Mobility
- Restraints, Pain

Stool Impaction

Contributing Factors to UI

Drugs and Drinks
Infection
Atrophic Urethritis
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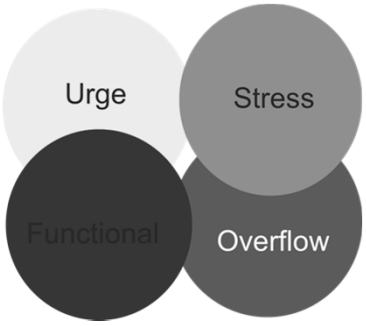
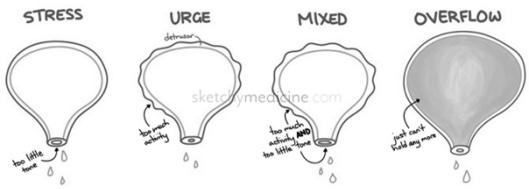
Urinary Incontinence: Types



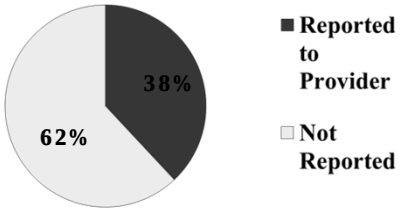
Types of Urinary Incontinence

- Stress incontinence
  - Loss of urine with a stressor (cough, laugh, sneeze)
- Urgency incontinence
  - Loss of urine with urgency
- Mixed Incontinence
  - Both stress and urge related, often seen with prolapse
- Overflow incontinence
  - Can occur with weakened detrusor muscle or with obstruction

Types of Urinary Incontinence



Urinary Incontinence: Treatment Seeking

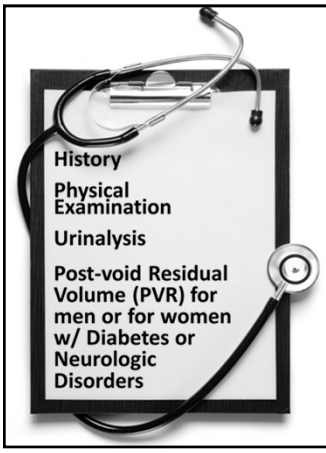


Why Don't People Get Help?

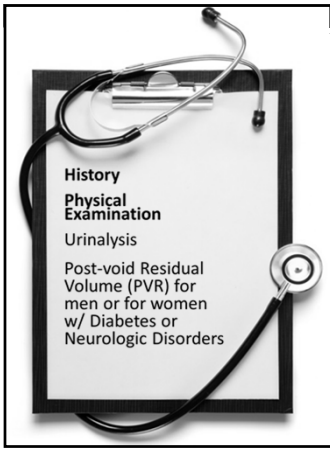
- Not bothered by it… yet
- I'm not incontinent - it's getting better
- It's a normal part of bearing children
- It's a natural part of growing older
- I'm too old
- Incontinence is not treatable
- I just can't tell my doctor

Urinary Incontinence

You GOTTA ASK!



Evaluation of Incontinence



Evaluation of Incontinence

History

Onset, Duration, Course, Severity, Impact, Type(s), Systemic symptoms, voiding diary, prior treatments

Urinary Incontinence: History & Physical

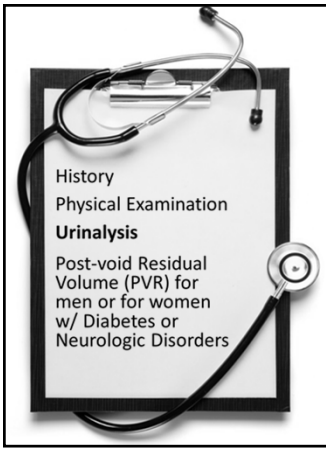
Do you accidentally leak urine with:

1. Physical activity like coughing, sneezing, lifting, or exercising?
2. A feeling of sudden need to pass urine that did not allow you to get to the toilet fast enough?

Exam – Recommendations from none to pelvic/rectal

Urinary Incontinence: Physical Exam

- Examination
  - Look for
    - Vulvovaginal atrophy
    - Pelvic masses
    - Pelvic organ prolapse
    - Loss of urine during exam
    - Vulvovaginitis a/w urinary leakage



Evaluation of Incontinence

Urinary Incontinence: Lab Testing

- Laboratory tests
  - Urinalysis
    - Urine culture if UA suggest infection
  - Urine cytology if hematuria
- Clinical tests
  - Cough stress test
  - Postvoid residual
  - Urodynamic testing
  - Urethral mobility evaluation

Evaluation of Incontinence

Postvoid residual

- < 50 mL = normal
- 50-100 = borderline
- >100 = elevated

Urinary Incontinence: Treatments

- Modifiable risk factors
  - AND/OR
- Behavioral modification
- Pharmacologic therapy
- Surgical intervention

Behavioral Modification

- Fluid Management
  - Assess volume
  - Assess types of beverages consumed
- Weight loss
- Treat constipation
- Pelvic floor muscle therapy
  - Pelvic floor muscle strengthening, or kegels
  - Pelvic floor physical therapy
    - Helps patient correctly kegel
    - Can facilitate bladder training
    - Often uses biofeedback
- Improve access to bathroom

Fluid Management

- Assess Fluid Intake of the patient
  - Patient recall
  - Diary
    - Voiding diary of 3 days is sufficient
- Normalize intake to 50-70oz/day
- Reducing excess fluid intake can reduce both stress and urge incontinence

Fluid Intake & Urinary Incontinence

- Many older patients attempt to control incontinence by restricting their fluid intake
- Helpful at certain times, such as before church
- Restricting overall fluid intake risks dehydration.
- Although it may seem counterintuitive, it is usually advisable to encourage consumption of at least 6 eight-ounce glasses of fluid each day.

Drinks contributing to UI

- Caffeine
- Alcohol
- Artificial Sweeteners

Caffeine & Urinary Incontinence

- Caffeine, in addition to being a diuretic, has also been reported to be a bladder irritant for many patients.
- Caffeine increases detrusor (bladder) pressure and is associated with detrusor instability.

Changes in UI after Bariatric Surgery

- Pre- Op BMI:
  Mean 48.1 ± 6.76
  Range 40 to 77
- 12 Months Post-Surgery BMI:
  Mean 34.9 ± 6.33
  Range 25-58
- Prevalence of UI decreased from 66.3% before surgery to 37.0% at 12 months ($p < .001$)

Weight Loss & Urinary Incontinence

- RCT, N = 338 overweight and obese women with > 9 incontinence episodes/week
- Intensive 6 mo wt loss program vs. structured educational program
- Both groups received a UI self-help booklet
- Average weight loss of 17 lb (vs 3 lb)
- Reduced incontinence episodes 47% (vs 28%)

Behavioral Treatments for Incontinence

- Improve bladder control through systematic changes in patient behavior and teaching skills for preventing urine loss
  - Reduce incontinence and frequency including nocturia
  - Avoid side-effects of drug therapy

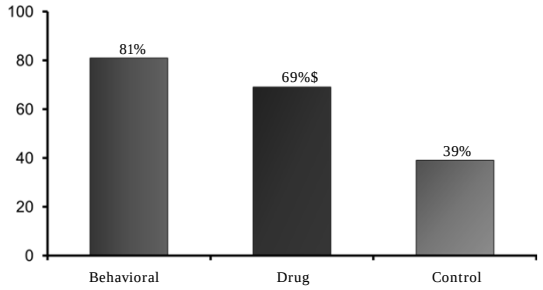
Behavioral Treatments for Incontinence

- Pelvic floor muscle training
- Home practice of exercises
  - Increase duration of contraction over time
  - 15 in a row, 3 times a day
- Bladder Control Techniques
- Self-Monitoring w/ bladder diaries

Urge Suppression Strategy

- Do NOT rush to the toilet
- Stop and stay still
- Squeeze pelvic floor muscles
- Relax rest of body
- Concentrate on suppressing urge
- Wait until the urge subsides
- Walk to bathroom at normal pace

Effectiveness of Behavioral Training for Urge Incontinence in Women



Burgio et al. *JAMA.* 1998;280:1995-2000

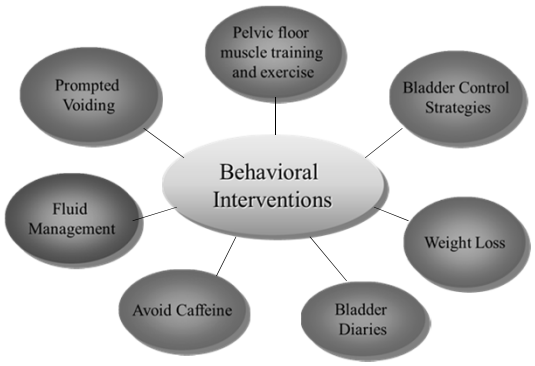
Other Behavioral Strategies

Urge Prevention
- Squeeze as you get out of a chair, the bed or a car

Stress Strategy
- Squeeze before you sneeze (or cough or lift)

Post Void Dribbling Strategy
- Squeeze after voiding

Double voiding
- Attempts to more completely empty bladder by doubling the effort



Pharmacotherapy of Urge Incontinence

- Antimuscarinic Receptor Blockers
  - Oxybutynin – generic, Ditropan XL, Oxytrol patch (OTC), Gelnique (topical gel)
  - Tolterodine – Detrol
  - Solifenacin – VESIcare
  - Trospium – Sanctura
  - Darifenacin – Enablex
  - Fesoterodine - Toviaz

Pharmacotherapy of Urge Incontinence

Beta 3 Receptor Agonists
- Mirabegron (Myrbetriq)
  - Approved by FDA August 2012
  - Side effects
    - Elevations in BP
    - Tachycardia
    - Nasopharyngitis
    - Urinary tract infection
    - Headache

Case Study

- 78 year old woman who leaks urine when trying to make it to the bathroom (the last few months).
- Work up
  - Hx – Wearing 2 pads per day. Has gained about 20 pounds in the last 6 months (moved into independent housing with meals). Now stable, switched to diet soda.
  - Physical: unremarkable
  - UA: WNL
  - PVR: 36 mL
- Diagnosis?
- Treatment Options?

Case Study

- 75 year old woman who leaks small amounts of urine when she coughs or sneezes (for years) or when trying to make it to the bathroom (the last few months – and has been large volume at times).
- Type(s) of Urinary Incontinence?
- Treatment Options?

82 year old
Brought in by daughter with worsening incontinence over the past couple of months, with loss of urine on the way to bathroom.

Contributing factors?

PMH:
Diabetes
HTN
Dementia
OA in knees

Medications:
Aspirin
Metformin
Donepezil - new
HCTZ - new

Diet:
4 diet drinks w/ caffeine daily

Spot Glucose:
225

Urinalysis:
2+ glucose, otherwise negative

Exam:
unremarkable

Case Study: Treatment

- Manage diabetes
  - Optimize FSBS
- Improve access to the toilet
- If dementia plays a factor, work on prompted timed voiding
- Physical therapy can assist with bladder training and urge suppression

Overall Conclusions

- Incontinence is common and should be part of health screening.
- Incontinence has a very negative impact on quality of life
- Treatment of incontinence can be very complex and often requires a coordinated effort
- Behavioral therapy is effective for urinary incontinence and should be first line treatment along with reducing exacerbating factors.
- Medical and surgical treatments are often effective but can often be improved with behavioral therapy