Practical Talks for Family Docs

Diagnosis and Management of Urinary Incontinence in Women

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Faculty/Presenter Disclosure

Faculty: Dr. Yvonne Leong

Relationships with Financial Sponsors: None

I am not endorsing any product but acknowledge my professional bias towards local estrogen therapy.

I will be using brand names for products where there are no generic options.

Disclosure of Financial Support

This program has not received any financial or in-kind support.

Potential for Conflicts of Interest: None

Learning Objectives

After this session, attendees will be able to:

1. Identify multiple factors contributing to urinary incontinence in women based on history and physical
2. Implement treatment options that target such factors
3. Recognize indications for referral to urogynaecology or other specialties

IUGA/ICS Definitions

Stress Urinary Incontinence SUI

The complaint of any involuntary loss of urine on effort or physical exertion (e.g sporting activities) or on sneezing or coughing

Overactive Bladder OAB

Urinary urgency, usually accompanied by increased daytime frequency and/or nocturia, with urinary incontinence (OAB-wet) or without (OAB-dry), in the absence of urinary tract infection or other detectable disease

Haylen et al. *Int Urogynecol J*. 2010.

Management of Urinary Incontinence

Management of SUI	Management of OAB-wet (UUI)
Expectant ✗	Expectant ✗
Conservative ✓	Conservative ✓
Medical ✓	Medical ✓
Surgical ✓	Surgical ✗

When and How to Refer

- Many regional variances in practice
  - Gynaecology vs Urogynaecology vs Urology
- Indications for referral
  - Failure of conservative management
  - ?Pessary Fitting
  - Desire for surgical management

Stress Urinary Incontinence

Question 1

What statement regarding the management of stress urinary incontinence (SUI) is true?

A. Mid-urethral sling is first line management for SUI
B. Anti-incontinence pessaries are contraindicated in sexually active women
C. Pessary use can cause de novo or worsening SUI
D. Hormone replacement therapy is indicated for the management of SUI

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Physical Exam for Urinary Incontinence

- Inspection
  - Atrophy
  - Obvious prolapse
- Ask patient to cough and Valsalva
  - Cough stress test
  - Assessment of severity/grading of prolapse
- Reduce prolapse and repeat cough to identify latent/occult SUI

Conservative Management of SUI

- Pelvic Floor Muscle Therapy (PFMT)
  - Voluntary contractions of the pelvic floor
  - Manages SUI by improving strength of muscles surrounding urethra and bladder
    - Increasing urethral closure pressure
    - Reducing bladder neck hypermobility

Cochrane Database of Systematic Reviews

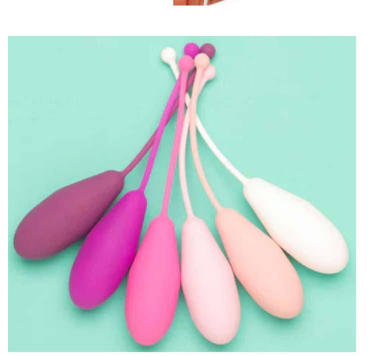
PFMT can cure or improve symptoms of SUI and all other types of UI.

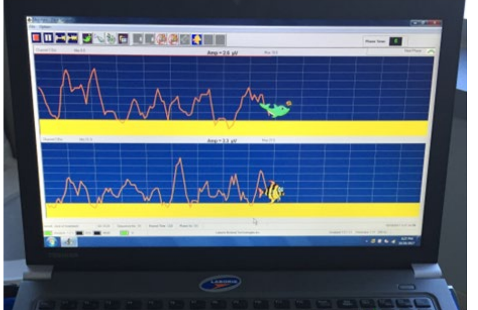
Pelvic floor muscle training versus no treatment, or inactive control treatments, for urinary incontinence in women (Review)

Dumoulin C, Hay-Smith EJC, Mac Habée-Séguin G

Conservative Management of SUI

- PFMT
  - Kegels exercises
  - Pelvic floor physiotherapy
  - Biofeedback
  - Vaginal weights





Kegels Exercises

Perform a pelvic exam to ensure the patient is contracting properly

- Instructions to patient
  - Squeeze like you’re trying to hold in gas, or hold in urine
  - Hold the squeeze for 5-10 seconds, then relax for 5-10 seconds, then repeat
  - Aim for 6-10 sets per day, 10 squeezes per set
  - Can be in any position (but not while voiding)
  - Can take several weeks-months of regular exercise before improvement
  - First line treatment for mild-moderate prolapse (and it works!)

Conservative Management of SUI

- Anti-incontinence pessaries (Knobbed pessaries)
  - Ring (with support) with knob
  - Incontinence dish (with support)
  - Incontinence ring
  - Gehrung with knob
- Referral for Fitting

Conservative Management of SUI

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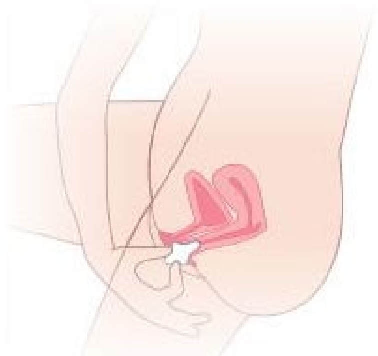

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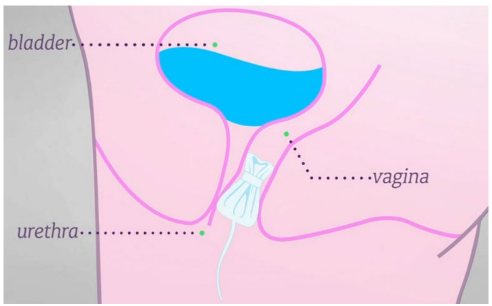


Medical Management of SUI

- Vaginal estrogen
  - Up-regulates alpha-adrenergic receptors, improving sphincter tone, increasing maximal urethral closure pressure
  - Decreases detrusor overactivity
  - Increases maximum cystometric capacity
  - Reduces mucosal atrophy, improving urethral mucosal coaptation
  - Often used as an adjunct to other therapies in postmenopausal women

Rahn et al. *Obstet Gynecol*. 2012.

Medical Management of SUI

- Duloxetine (off-label)
  - SNRI which increases bladder capacity and sphincteric muscle activity via alpha-1 adrenergic and 5-HT2 receptors
  - Indicated for SUI management in Europe
  - Studies show mild-moderate improvements but with higher incidence of side effects
- Imipramine (off-label)
  - Early studies showed increasing urethral closure pressure
  - Kornholt 2019 – double-blind RCT showed no difference from placebo regarding increasing urethral closure pressure

What can FPs do for SUI?

- Encourage/assist with weight loss if overweight
- Manage exacerbating factors for SUI
    - Treat coughs – smoking cessation, asthma management, GERD management
    - Treat sneezes – allergy medications
- Discuss 3 management options
    - Teach and follow-up on Kegels
    - Refer to pelvic floor physiotherapy
    - Refer to Urogynaecology/GYN for pessary fitting or surgery

Urge Urinary Incontinence

Exacerbating Factors for UUI

- Pelvic organ prolapse
- Neurogenic factors
  - Focal – stroke, spinal cord injury, spinal stenosis
  - Disseminated – multiple sclerosis, Parkinson's
- Diabetes
- Medications (diuretics, anticholinergic effects, opioids, NSAIDs, CCBs)
- Obesity
- Mobility
- Fluid Intake
- Nocturnal UUI – OSA, peripheral edema

Conservative Management of UUI

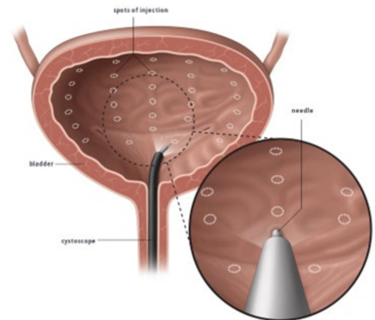
- Behaviour modification
  - Limit fluids, decrease caffeine (bladder diary)
  - Timed toileting
    - Fixed time interval for voiding, eg. q2-3h
  - Double voiding
    - Techniques to improve bladder emptying
  - Kegels
    - Manages UUI by suppressing bladder contractions through a spinal reflex

Blank Diary

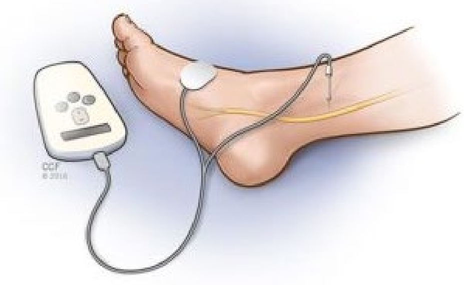
Date	Drink		Urine		Leakage		
Time	Type	How much (mls)	Volume of Urine (mls)	How Urgent 0-3 3= most urgent	Leakage with Urgency	Leakage with activites	Pad change

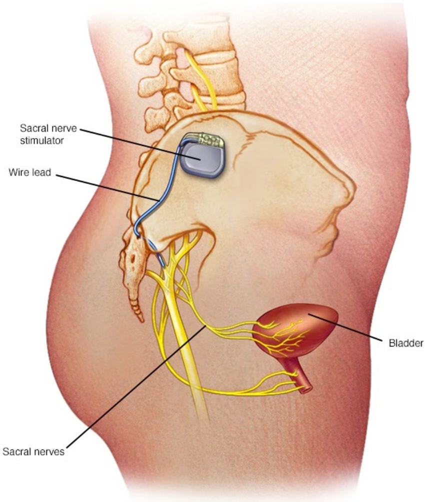
Medical Management of UUI

- Medication
- Intravesical Botox



- Posterior tibial nerve stimulation, Sacral neuromodulation





Overactive Bladder Medications

- Anticholinergics
  - Oxybutynin (IR, ER)
  - Tolterodine (IR, ER)
  - Fesoterodine
- M3 selective antimuscarinics
  - Solifenacin
  - Darifenacin
- Quaternary amine antimuscarinic
  - Trospium
- Beta 3 agonist
  - Mirabegron
- Anticholinergic + calcium-modulation
  - Propiverine

Consider checking post-void residual before initiating medication (retention/impaired emptying are absolute/relative contraindications)

Question 2

What percentage of patients who were prescribed anticholinergic overactive bladder medication are still taking the drug 1 year later?

A. 20%
B. 40%
C. 60%
D. 80%

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High treatment failure with anticholinergic medication which worsens with time

Proportion of Patients on Anticholinergics (%)

100	
90	
80	
70	
60	
50	
40	
30	
20	
10	
0	

0 73 146 219 292 365 438 511 584 657 730

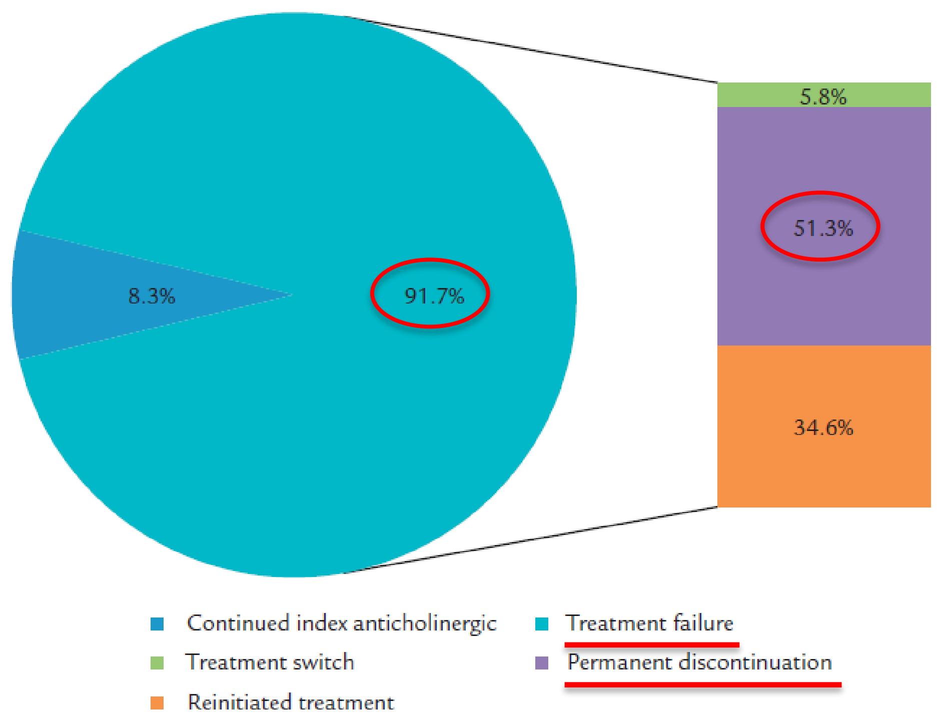
Time (days)

21.6%

14.1%

Chancellor et al. *Clin Ther*. 2013.

Anticholinergic Medication Compliance



Chancellor et al. *Clin Ther*. 2013.

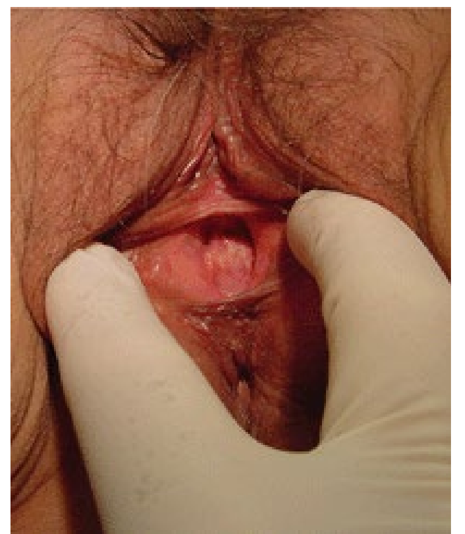
Why do OAB meds treat symptoms unsatisfactorily?

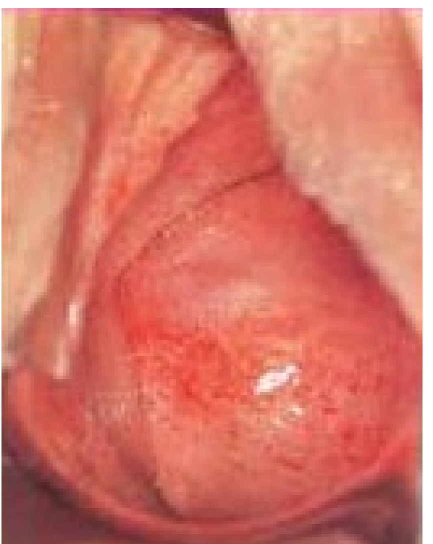
- Not addressing behavioural/lifestyle factors
- Presence of exacerbating comorbidities
- Wrong diagnosis
  - Underactive bladder (AKA voiding dysfunction)
  - Genitourinary syndrome of menopause

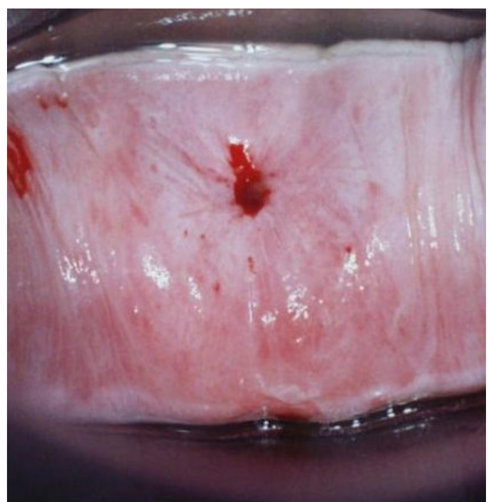
Genitourinary Syndrome of Menopause (GSM)

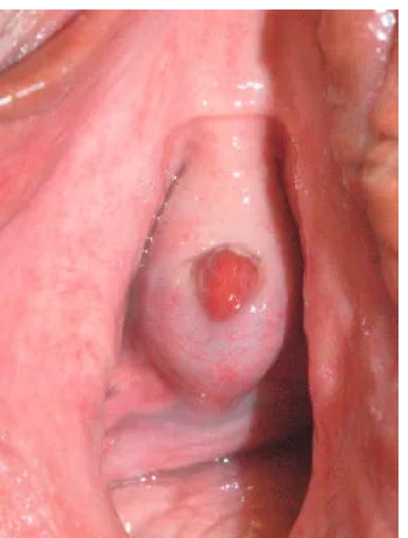
- AKA vulvovaginal atrophy, urogenital atrophy, atrophic vaginitis
- Group of signs and symptoms related to decreased estrogen
  - Genital – vulvar/vaginal dryness, burning, dyspareunia
  - Urinary – dysuria, urgency, frequency, incontinence
  - Other symptoms – pressure, heaviness, suprapubic cramping
  - Signs – pallor, petechiae, contact bleeding, discharge, vaginal shortening/narrowing, shrinkage of labia, urethral caruncle, loss of elasticity, etc

Genitourinary Syndrome of Menopause (GSM)









Review

Vaginal Estrogen for Genitourinary Syndrome of Menopause

A Systematic Review

David D. Rahn, MD, Cassandra Carberry, MD, Tatiana V. Sanses, MD, Mamta M. Mamik, MD, MS, Renée M. Ward, MD, Kate V. Meriwether, MD, Cedric K. Olivera, MD, MS, Husam Abed, MD, Ethan M. Balk, MD, MPH, and Miles Murphy, MD, for the Society of Gynecologic Surgeons Systematic Review Group

- Improved urinary complaints with use of vaginal estrogen
  - Dysuria and urinary urgency
  - Frequency or nocturia
  - SUI and UUI
  - UTI

Vaginal Estrogen

- Cream
  - Conjugated equine estrogen – Premarin
  - Estrone – Estragyn
- Vaginal suppository
  - 17β-estradiol tablet – Vagifem
  - 17β-estradiol softgel insert – Imvexxy
- Ring
  - 17β-estradiol ring – Estring

Question 3

Which of the following is/are complication(s) associated with use of vaginal estrogen therapy?

A. Breast Cancer
B. Pulmonary Embolus
C. Endometrial Cancer
D. All of the above
E. None of the above

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E. None of the above

Breast Cancer Res Treat (2012) 135:603–609
DOI 10.1007/s10549-012-2198-y

EPIDEMIOLOGY

Local estrogen therapy and risk of breast cancer recurrence among hormone-treated patients: a nested case–control study

Isabelle Le Ray · Sophie Dell'Aniello ·
Franck Bonnetain · Laurent Azoulay ·
Samy Suissa

- Population-based retrospective cohort study using a nested case–control analysis of women on tamoxifen or aromatase inhibitor (AI)
- Concurrent use of tamoxifen or AIs with vaginal estrogen was not associated with an increased risk of breast cancer recurrence (adjusted RR: 0.78, 95 % CI 0.48–1.25).

Menopause: The Journal of The North American Menopause Society
Vol. 26, No. 4, pp. 431-453
DOI: 10.1097/GME.0000000000001221
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REVIEW ARTICLE

A systematic review of the efficacy and safety of vaginal estrogen products for the treatment of genitourinary syndrome of menopause

Colton Biehl, BS, Olivia Plotsker, and Sebastian Mirkin, MD

- No major safety findings and few reports of serious adverse events
- Not associated with an increased risk of endometrial hyperplasia or endometrial cancer (5 cases/7580 users = 0.07%)

Menopause: The Journal of The North American Menopause Society
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DOI: 10.1097/GME.0000000000000956
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Breast cancer, endometrial cancer, and cardiovascular events in participants who used vaginal estrogen in the Women's Health Initiative Observational Study

Carolyn J. Crandall, MD, MS,[1] Kathleen M. Hovey, MS,[2] Christopher A. Andrews, PhD,[3] Rowan T. Chlebowski, MD, PhD,[4] Marcia L. Stefanick, PhD,[5] Dorothy S. Lane, MD, MPH,[6] Jan Shifren, MD,[7] Chu Chen, PhD,[8] Andrew M. Kaunitz, MD,[9] Jane A. Cauley, DrPH,[10] and JoAnn E. Manson, MD, DrPH[11]

- Prospective observational cohort study, using data from the Women's Health Initiative Observational Study (n=45,663, median follow-up 7.2 years)
- No significant difference in risks of stroke, invasive breast cancer, colorectal cancer, endometrial cancer, and pulmonary embolism/deep vein thrombosis

Black Box Warning for Vaginal Estrogen

increased risk of endometrial cancer

EAM safely and effectively. See full

Initial U.S. Approval: 1946

WARNING: ENDOMETRIAL CANCER, CARDIOVASCULAR DISORDERS, BREAST CANCER and PROBABLE DEMENTIA

See full prescribing information for complete boxed warning.

Estroge

increased risks of stroke, DVT, pulmonary embolism (PE),

- T
- E
- The Women's Health Initiative (WHI) estrogen-alone substudy reported increased risks of stroke and deep vein thrombosis (DVT) (5.2)
- The WHI Memory Study (WHIMS) estrogen-alone ancillary study of WHI reported an increased risk of probable dementia in postmenopausal women 65 years of age and older (5.4)

increased risks of invasive breast cancer

- The WHIMS estrogen plus progestin ancillary study of WHI reported an increased risk of probable dementia in postmenopausal women 65 years of age and older (5.4)

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DOI: 10.1097/GME.0000000000001576
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NAMS Commentary

Workshop on normal reference ranges for estradiol in postmenopausal women: commentary from The North American Menopause Society on low-dose vaginal estrogen therapy labeling

JoAnn V. Pinkerton, MD, FACOG, NCMP,[1] James H. Liu, MD, NCMP,[2] Nanette F. Santoro, MD,[3] Rebecca C. Thurston, PhD,[4] Hadine Joffe, MD, MSc,[5] Stephanie S. Faubion, MD, MBA, FACP, NCMP, IF,[6] and JoAnn E. Manson, MD, DrPH, FACP, NCMP[7]

CONCLUSIONS

NAMS continues to request FDA to enact modifications in the estrogen therapy black box warning for low-dose vaginal estrogen formulations dosed within the postmenopausal estradiol reference ranges. Such modifications would include removal of the black box warning and replacement with cautions regarding the need for medical evaluation if postmenopausal bleeding or spotting occurs and for women to engage their oncologists in decision making if they have a prior estrogen-sensitive cancer.

Alternative GSM Treatments

- Vaginal DHEA, ospemifene, tibolone, CO2 laser, vaginal moisturizer
- Very little data regarding management of urinary symptoms of GSM

Table 3. Clinical Practice Guidelines

In Postmenopausal Women Looking for Alternate Treatments to Local Estrogen With	Guideline*	Intervention (Grade)†
Symptoms of urinary symptoms due to atrophy	We suggest	Ospemifene (B), tibolone (B), CO2 laser (B), erbium laser (B)

Casiano Evans et al. *Obstet Gynecol*. 2023.

What can FPs do for UUI?

- Encourage/assist with weight loss if overweight
- Discuss conservative management
  - Limit fluids, decrease caffeine, timed toileting, double voiding, Kegels
- Manage co-morbidities
  - Review medications – avoid diuretics, adjust diabetes medications to ensure tight control, etc, etc
  - Nocturia management – polysomnography for ?OSA, evening fluid restriction, management of PVD/CHF
- Check the PVR with refractory symptoms
- Consider medication
  - Vaginal estrogen
  - Anticholinergics/Beta-3 agonist

Final Words of Encouragement

- All you need is a thorough history and physical to assess urinary incontinence
- Consider all exacerbating factors and comorbidities
- Counsel patients regarding realistic expectations
- Many treatment options available

Learning Objectives

After this session, attendees will be able to:

1. Identify multiple factors contributing to urinary incontinence in women based on history and physical
2. Implement treatment options that target such factors
3. Recognize indications for referral to urogynaecology or other specialties

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Questions?