PESSARIES: Pelvic Support for Wonder Women

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ANCC/AANP CONFLICT OF INTEREST DISCLOSURE

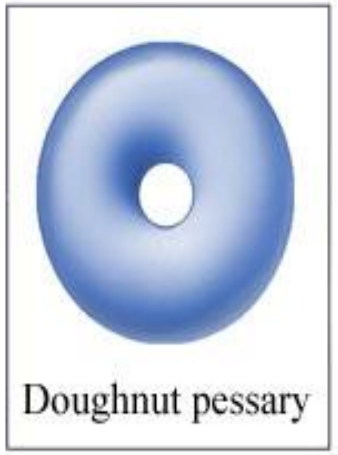
I do **NOT** have any relevant relationships to disclose.

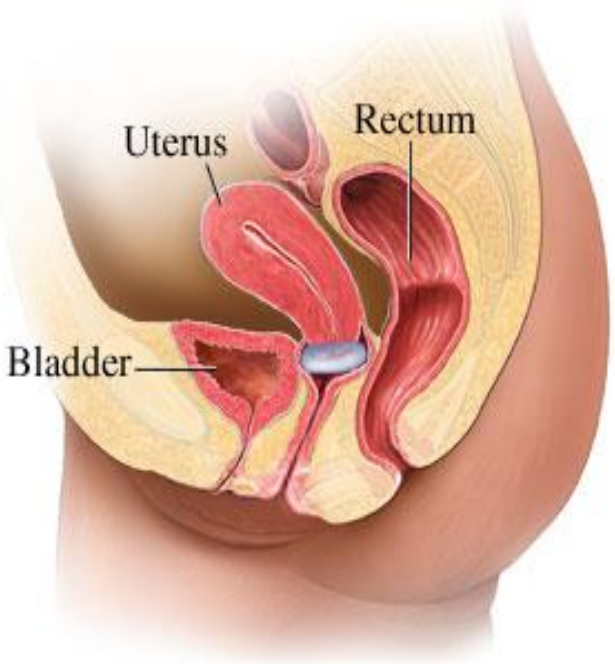
LEARNING OUTCOMES

- State the indications and contraindications for pessary use.
- Discuss common types of pessaries, practical tips for fitting and follow-up care for the continence nurse through case scenarios.

- **Pessary-What is it?**
  - An intravaginal device made of silcone, acrylic, latex or rubber that supports the vaginal walls, pelvic organs or urethrovesical junction!

  - **First-line, low risk**
    - ACOG, 2007





Pessary History

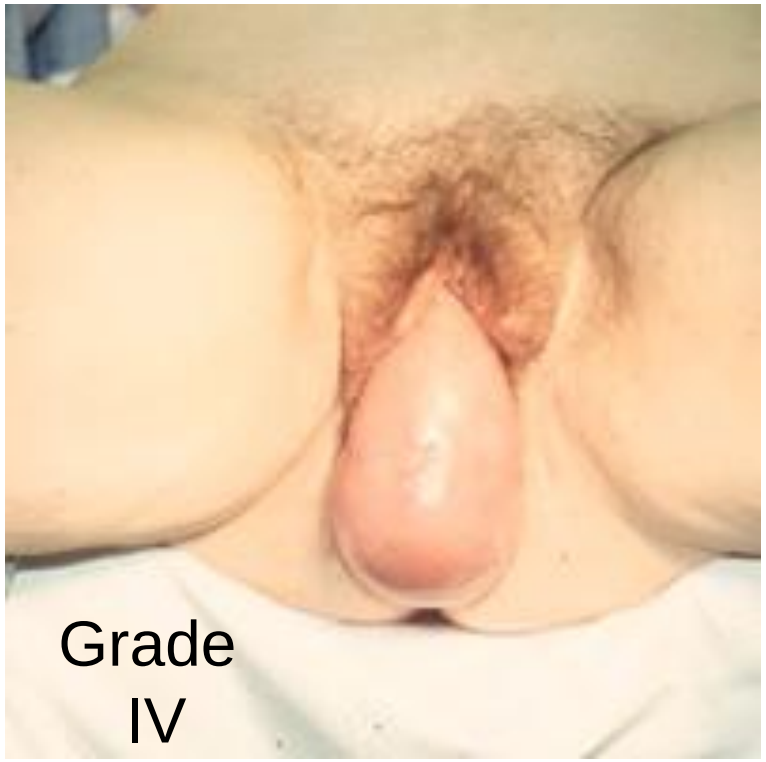
- Dates to the time of antiquity
- Materials used
  - Fruit
  - Pottery
  - Metal
  - Porcelain

Characteristics-Now

- Pliable, flexible, long-lasting, non-absorbent
- Non-allergenic, non-carcinogenic
- Washable, can be sterilized via autoclave, cold sterilization or boiled

Shah, Sultan & Thakar, 2006

- **Pessary: Indication for Use**
  - relief of symptoms
  - delay surgery
  - surgical avoidance
  - diagnostic tool for SUI and clarify surgical outcome
  - prevent progression of POP



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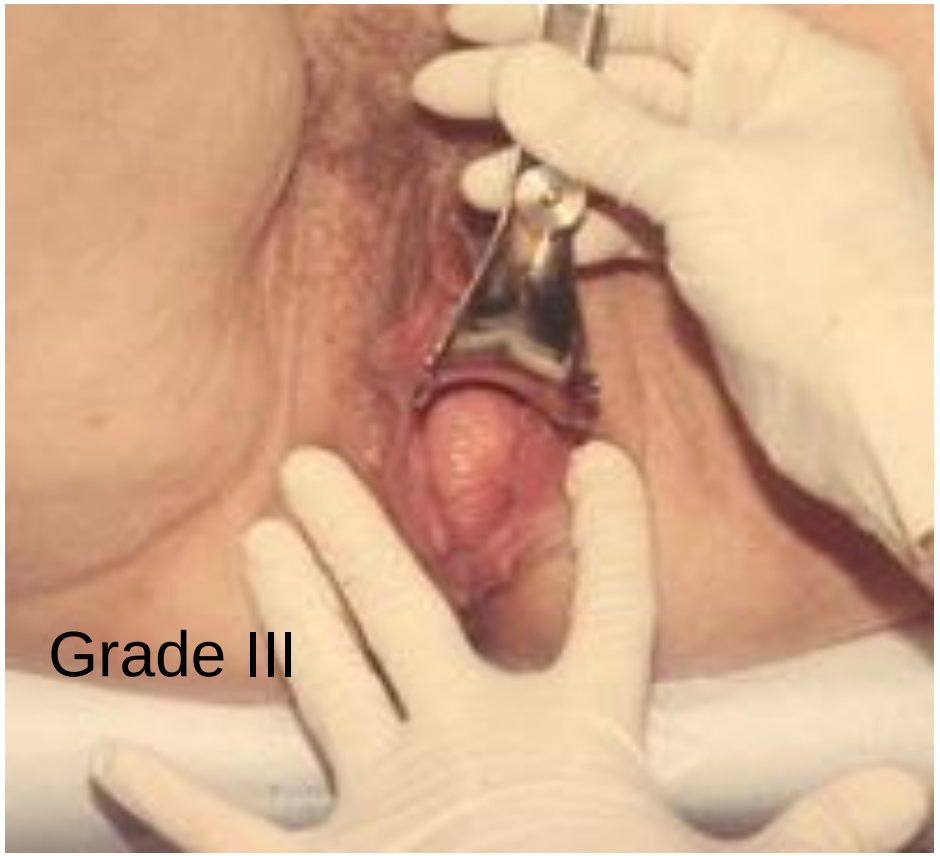
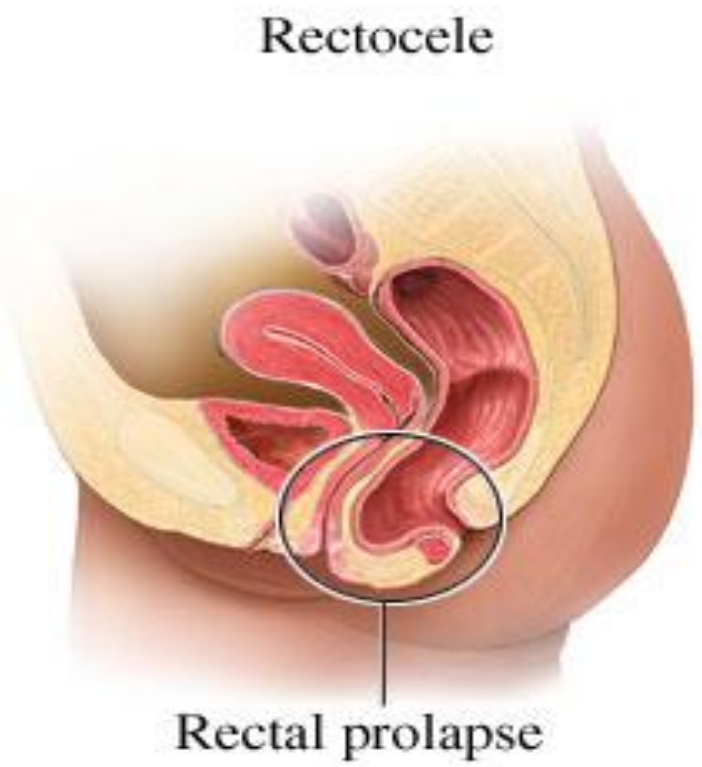
Atnip & O'Dell, 2012. Urol Nsg;32(3).

Types of POP-Rectocele





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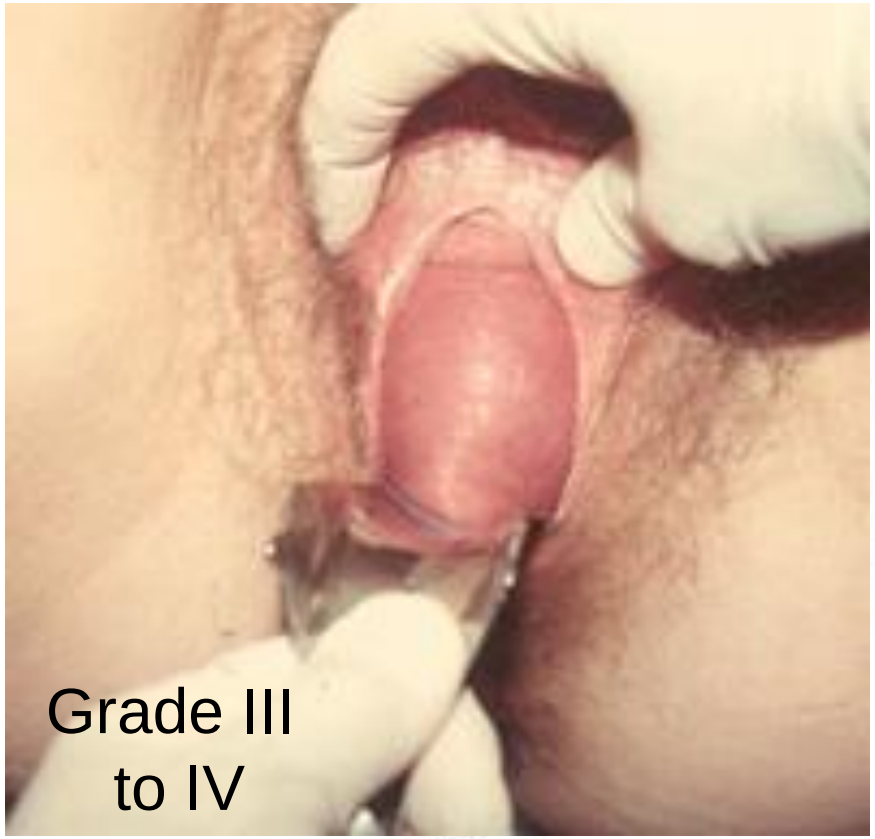
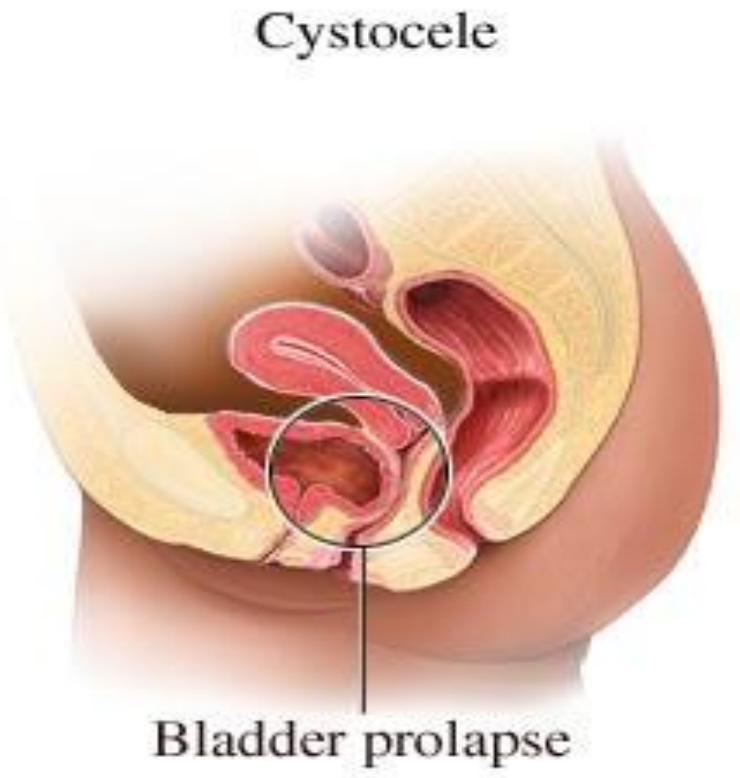
Types of POP-Cystocele





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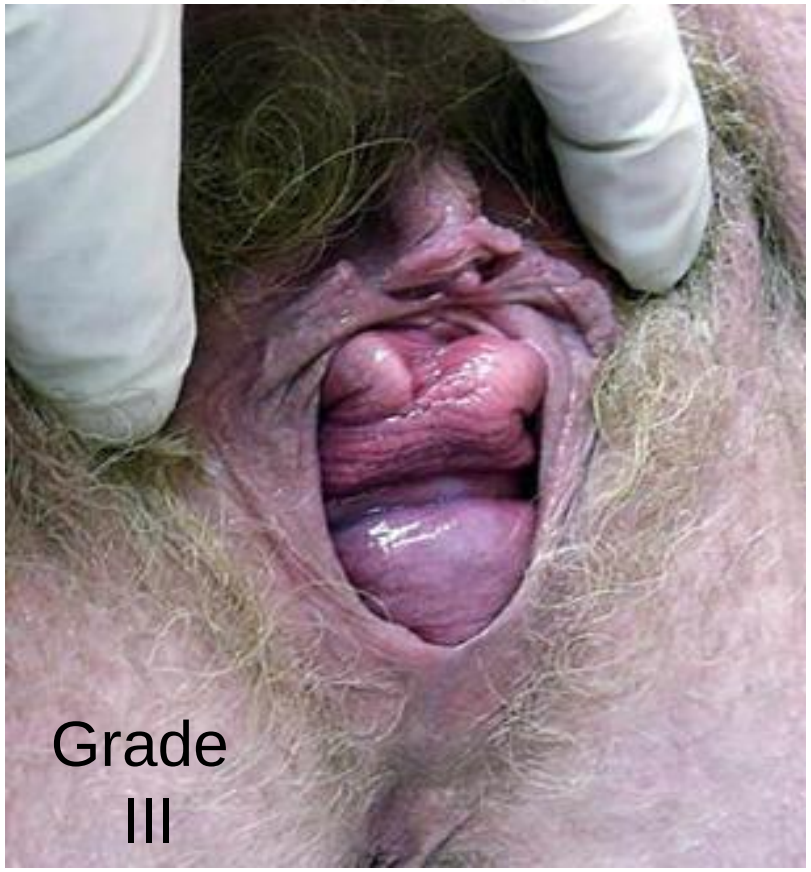
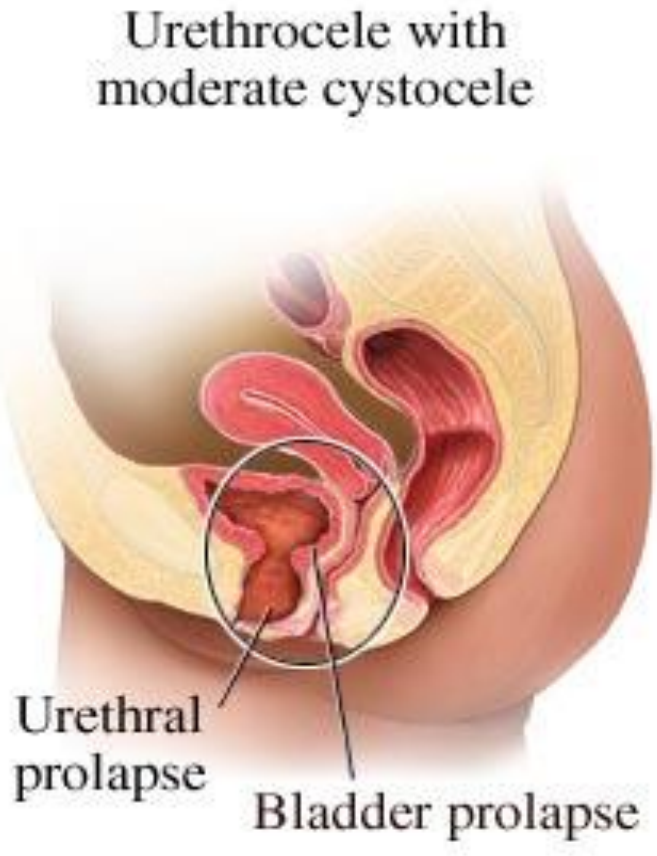
Type of POP-Urethrocele





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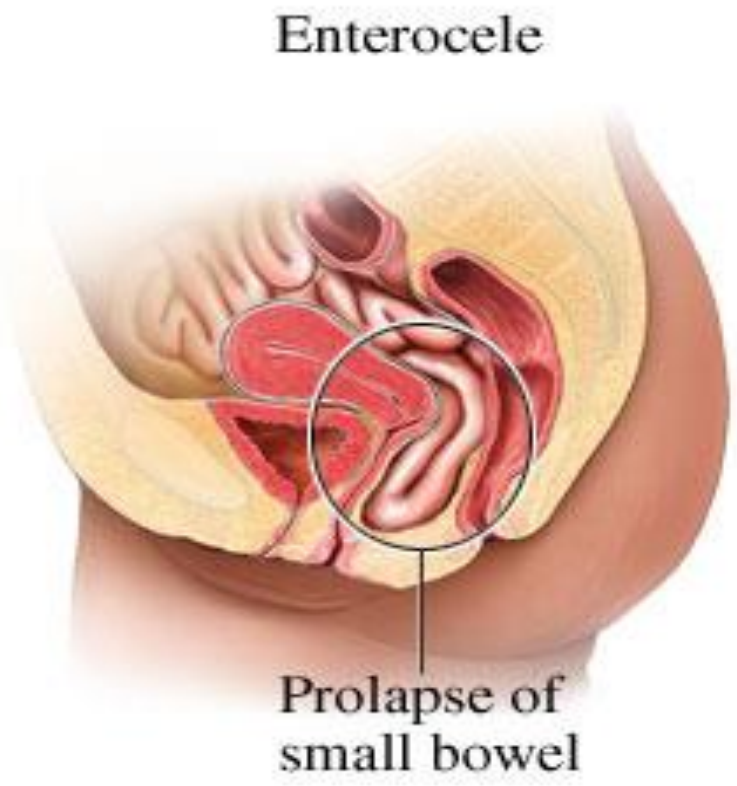
Type of POP-Enterocele



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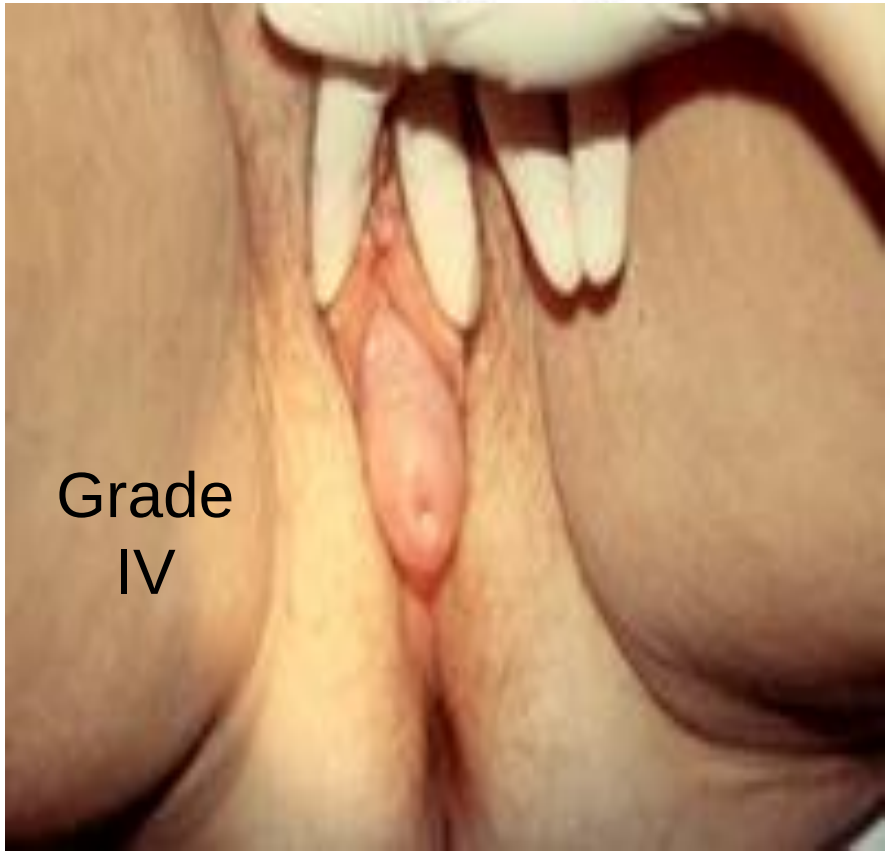
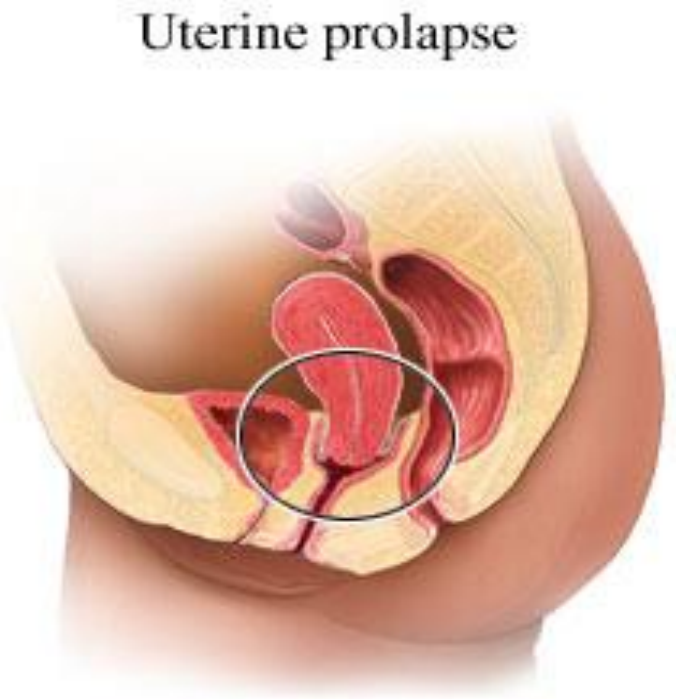
Type of POP-Uterine Prolapse





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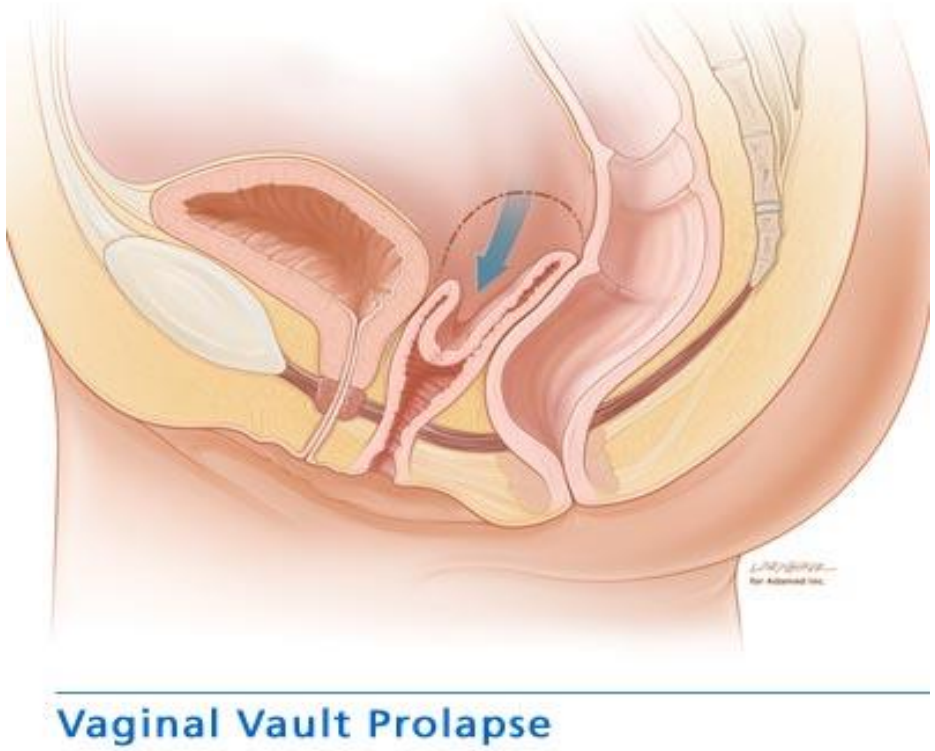
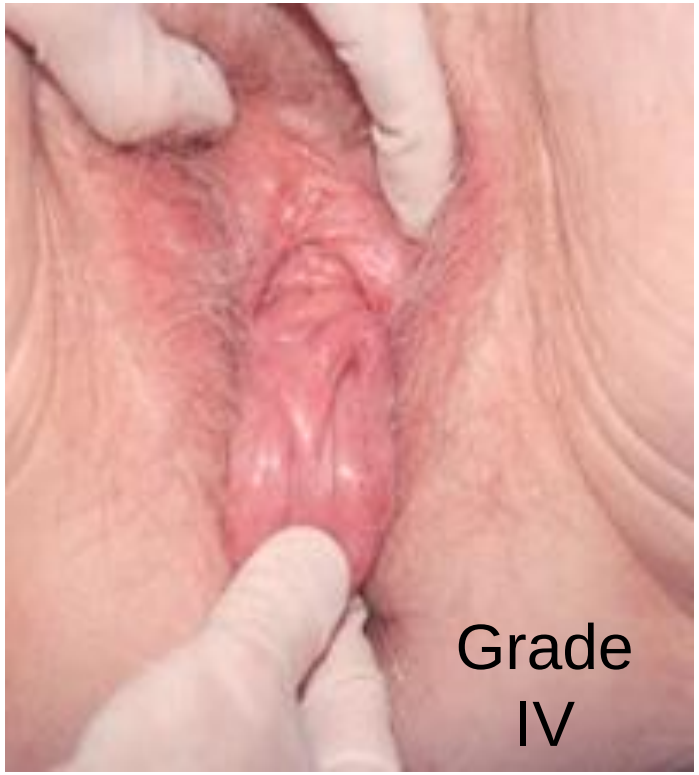
Types of POP-Vaginal Vault





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Signs & Symptoms of POP

- Palpable bulge
- Sensation of ‘falling out’
- Pelvic pressure/pain
- Low back ache
- Urinary urgency, frequency, incomplete emptying- UTI’s
- Urinary Incontinence
- Painful intercourse
- Cervical ulcer or irritation
- Constipation with incomplete evacuation
- Fecal or gas incontinence
- Manual reduction of prolapse to urinate or defecate

Atnip & O’Dell, 2012. Urol Nsg;32(3).

Risk Factors for POP

- Multiparity/vaginal delivery
- Obesity
- Caucasian
- Hysterectomy
- Post menopausal
- Constipation
- Smokers*
- Manual labor*

Hendrix et al, 2002. WHI. Am J Obstet Gynecol. 186(6):1160-1166

Etiology

Disruption of the 2 supporting systems of the pelvic floor

1) levator ani muscles
2) endopelvic fascia
    - Neuromuscular damage to pelvic floor muscles
        - Pudendal nerve damage-can not be repaired
        - Endopelvic fascia disruption-can be repaired

Other Factors

- Increase intra-abdominal pressure
    - Chronic coughing, bearing down, obesity
- Metabolic abnormality/genetic predisposition
    - Loss of estrogen
    - race

Severity Index

Baden-Walker System

- Clinical assessment of the degree of vaginal, uterine descent
- Grade 1-4
- Easy, more subjective
- Procedentia- uterus outside of introitus
  - Baden & Walker, 1972

POP-Q System

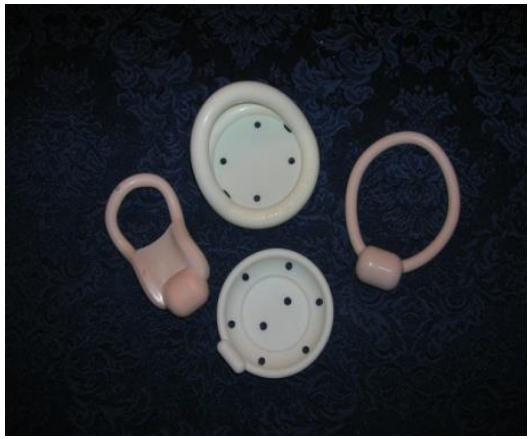
- Quantitative grading system that measures the position of fixed vaginal points in relation to the hymenal ring
- Take time & expertise
- Good to use for research

Treatment Options for POP

- Surgical Repair
  - Laparoscopic* vs. Vaginal Repair
  - http://www.gyndr.com/pelvic_organ_prolapse.p
- Non-surgical Options *
  - PME –pelvic muscle exercises
  - Behavioral Modification
  - Local Hormone Replacement Therapy
  - Space-occupying Devices ie pessary

Space-occupying Devices

- Pessary
    - ie Evacare -Personalmed, Milex -CooperSurgical, Bioteque -Bioteque of America, & Artisan Medical



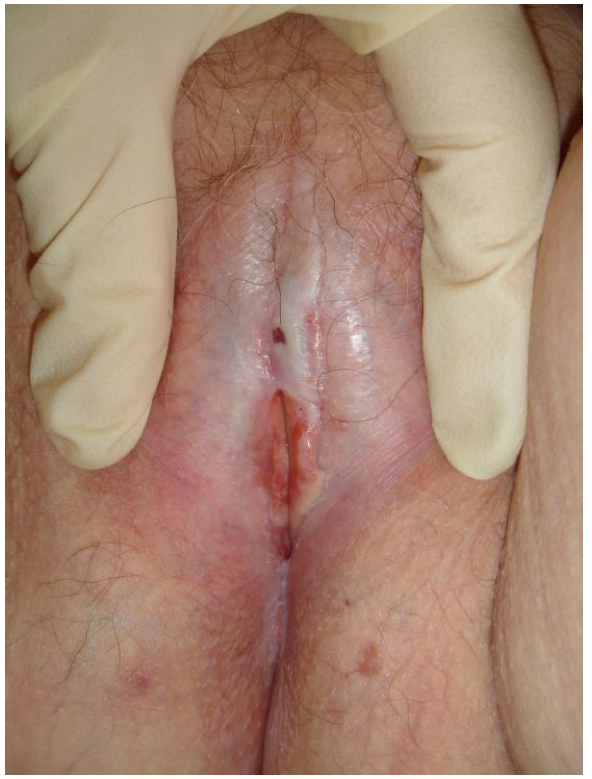
Who is a candidate for a Pessary?

- Non-surgical candidate
- Need for Symptom relief until surgery
- Conservative management while in childbearing years
- Adequate vaginal length to accommodate a pessary

Nyguyen & Jones (2005). JWOCN 32(4).

Contraindications to a Pessary

- Active Vaginal or urinary tract infection
- Severe atrophy of vaginal tissues
    - See preparation of vaginal tissues
- Current Vaginal erosion
- Pessary makes incontinence Worse
- Inability to follow up with HCP
- Inability to retain the device



Lichen sclerosis Atrophicus

Nyguyen & Jones (2005). JWOCN 32(4).

Can I Place a Pessary?

WOC Nurse who has training in pessary fitting and maintenance

- Check State board of nursing for scope of practice limitations
- Recommend letter from supervising physician that documents your ability on file
- May bill ‘incident to’ physician/APN if they are present, follow ups only, initial fitting done by physician or APN

Can I Fit a Pessary?

APN WOC

- Mentorship with other APN/HCP who performs
- CE Courses
- Films, Articles, Videos
- Start simple i.e. incontinence ring or dish
- Bill for the E & M & procedure pessary fitting

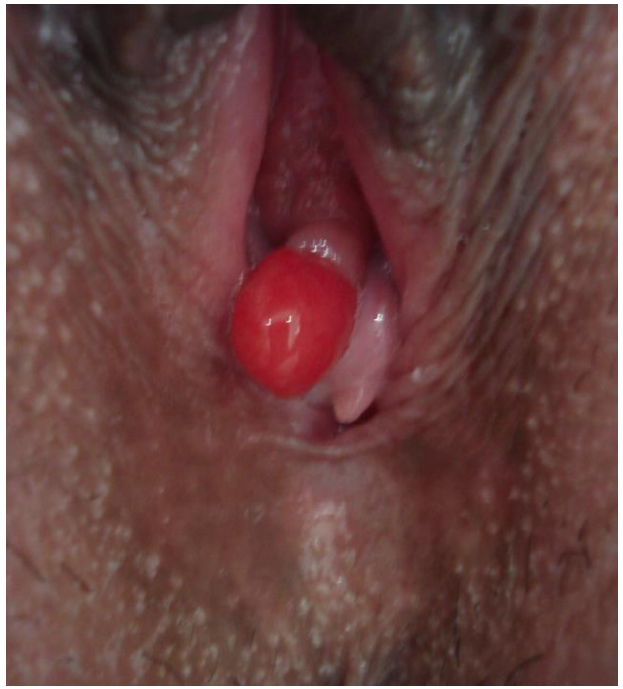
Vaginal Prep if Atrophic

Why local estrogen if menopausal?

- Prepare tissues for a foreign object, reduces discomfort
- Lower vaginal pH- reduce risk of BV & UTI
- Better blood flow, increase moisture, suppleness
    - Less problem with Abrasion, Erosion, Discharge

Contraindications

- Undiagnosed vaginal bleeding
- Recent DVT, untreated thrombolytic disease
- Breast Ca- obtain permission with oncologist
    - Serum estradiol levels before treatment & during



Steele et al, 2016.Urological Nursing, 36(2), 59-65.

North American Menopause Society, 2010
O'Dell & Atnip, 2012. Urol Nsg;32(3).NAMS, 2010

Successful Pessary Fitting

Patient-Related Factors

Success Rates 63-86%

- Older, higher parity, less severe prolapse, no hx of pelvic surgery
- Vaginal Estrogen
  - Higher satisfaction

Negative Factors

- Prior prolaspe surgery and hysterectomy
- <6cm of Vaginal Length &/or 4 finger breaths genital hiatus

Preference

- self touch, self-remove

Lifestyle

- sexually active, self-care

Ability

- Arthritis
- Obesity
- Physical or cognitive impairment

*Atnip & O'Dell, 2012. Urol Nsg;32(3).

Successful Pessary Fitting

Pessary-Related Factors

Functional Design

- **Basic support**
  - Introital integrity +
- **Self-retaining**
  - Introital Laxity
- **Added urethral support**
  - Knob added behind symphysis

- No specific shape or size fits all
- Best pessary style
  - Manufacture guidelines
  - Expert opinion
  - Product availability
  - Patient preference
  - Trial & Error

*Atnip & O'Dell, 2012. Urol Nsg;32(3).

Successful Pessary Fitting

Provider Preference

- Prefer limited pessary selection
- Rings for apical and anterior support issues
- Doughnuts with introital support but posterior defects
- Gellhorns for severe prolaspe
  - Most difficult to remove

Provider Experience & mentorship

- Choice of stock, styles

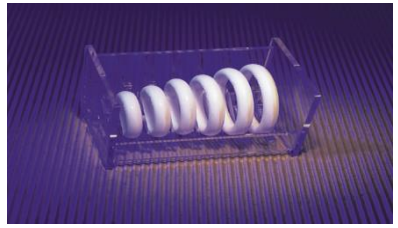
Sizing based upon experience

- Art &
- Reliance on Trial & Error

*Atnip & O'Dell, 2012. Urol Nsg;32(3).

Pessary Fitting Steps

1. Review & Re-familiarize
2. Empty bladder/bowels
3. If prolapse, reduce
4. Assess length & Width
5. Select size & shape
6. Insert pessary obliquely and posterior vaginal wall



7. Cough and bear down in lying/standing position

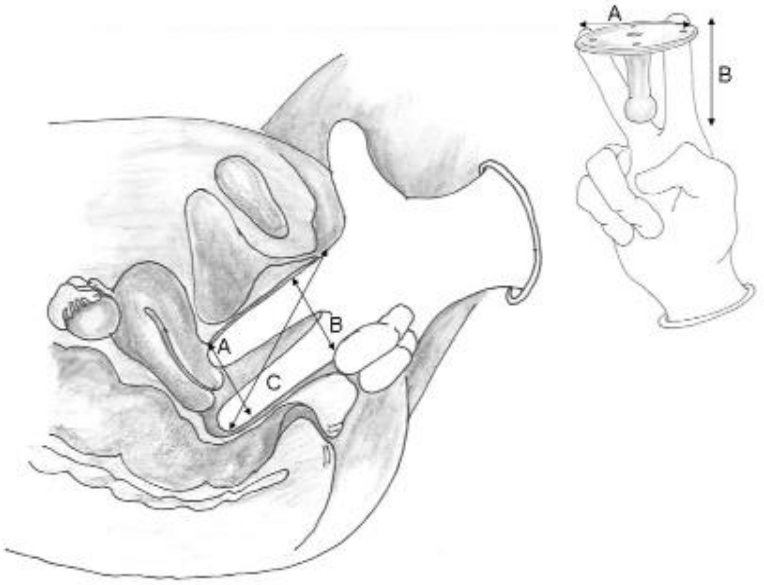


Figure from Atnip & O'Dell, 2012. Urol Nsg;32(3).

Pessary Fitting Steps

8. Simulate Activities
    - Walking, bending, squatting
    - Use toilet

9. Educate on insertion & removal with return demo & exam

10. Repeat fitting process if uncomfortable, pessary dislodged, or leakage with exertion
    - Record types and sizes of pessaries used if + or poor fit

11. Discharge Education & Follow UP

Atnip & O'Dell, 2012. Urol Nsg;32(3).

Pessary Fitting Pearls

1.Prepare vagina
- Tx atrophy, tenderness
- Lidocaine jelly
- Vaginal irrigation

2.Prepare Patient
- Visual aids, ed. materials
- Toilet

3.Common Pessary Stock

4.Post-fitting testing
- Hat receptacle
- Find Comfort Zone
- Return Demo

5.Refitting
- Weight gain or loss
- Dental floss for ease of retrieval
- Try different positions for ease of placement & retrieval

6.Pessary Tracking

5.Art- Trial & Error

Atnip & O'Dell, 2012.
Urol Nsg;32(3).

Class: Topical Estrogen Therapy
Premarin®,Estrace®,Estring®, Vagifem®

- **Goal**
  - reduce uro-genital symptoms (urgency, frequency, dysuria, dyspareunia) in post menopausal women
- **Dosage: Vaginally**
  - Topical cream: o.5-2 gms nightly vaginally for 2 weeks then ↓ 2-3 Xs wk.
  - Slow-release estradiol ring q 3 mo.
  - 10mcg tablets nightly X 2 wk

- **Pharmacodynamics**
  - restores the vaginal epithelium, normalizes pH environment and micro-flora in the vagina.

- **Side Effects:** sore breasts, spotting, abd. Cramps, distention, nausea, HA, ↑ BP, Mood changes, libido changes, candidiasis

NOTE: Estriol 0.05% cream: Compounding pharmacies

Class: Topical Estrogen Therapy

Pharmacokinetics

- **Metabolized:** liver, enterohepatically recirculated; converted to active estrogen metabolites incl. estrone
- CYP34A substrate
- CYP1A2 inhibitor, weak
- CYP2A6 inducer, minor; UGT 1A4 inducer

Pharmacokinetics

- Pregnancy Cat. **X**
- Thrombogenic effects

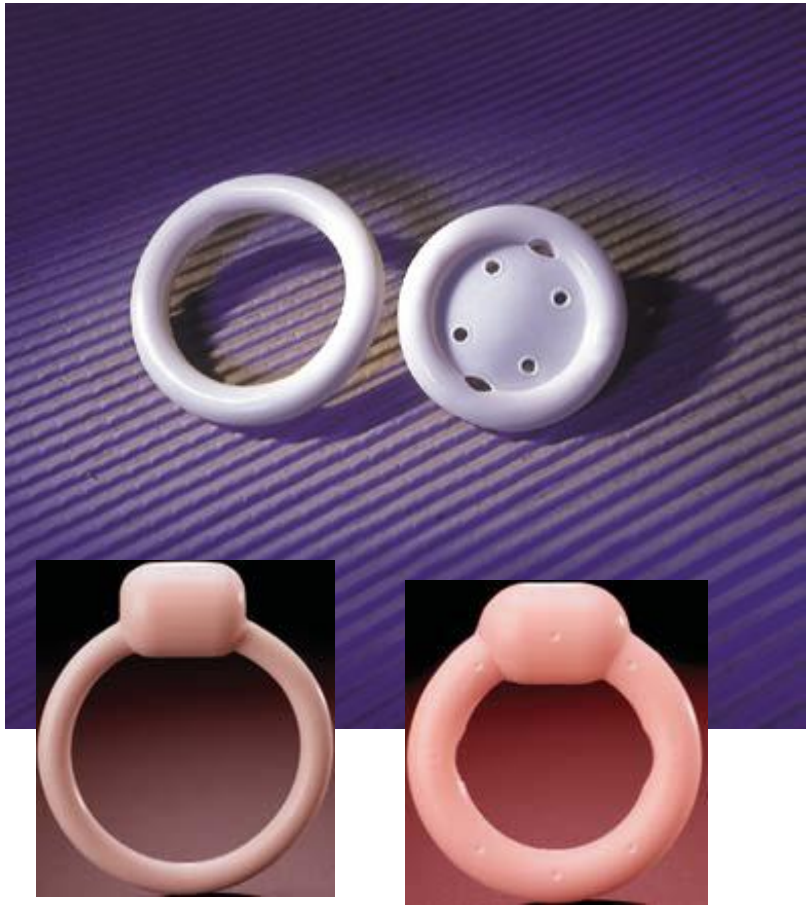
Assortment of Pessary Shapes

Needs Introital Support

Self Supporting for Severe POP

UVJ Support For SUI

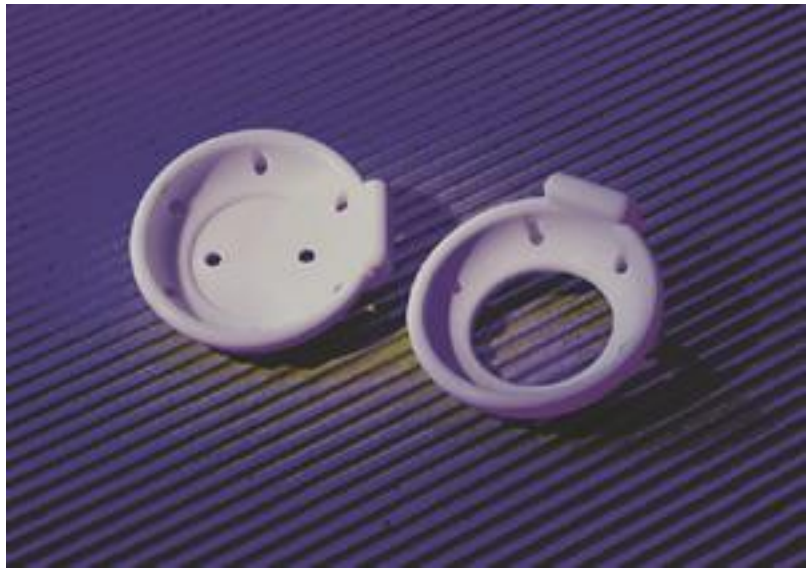
Photo from Atnip & O'Dell, 2012. Urol Nsg;32(3).

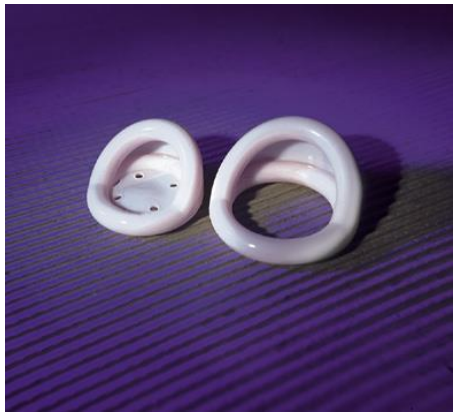


- **Basic Support Pessary**
  - Ring, Ring with support
  - 1st & 2nd Degree prolapse,
- **Ring with knob & support**
  - Stress UI
  - Easy insert & removal
  - May become expelled easy if not enough support ie large cystocele

-79% of women in a study were fitted with a ring.
-Size 3,4,5 most common.

Wu et al (1997). Obstetr Gynecol, 90(6):990-94



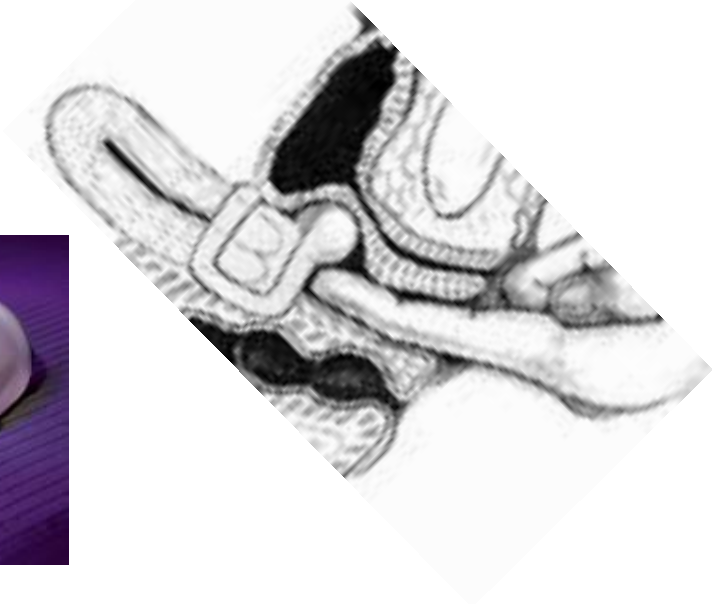


- Dish with or without support
  - Stress UI
  - Mild/mod cystocele
  - Easy insertion and removal
- Marland with or without support
  - SUI with significant hypermobility, deep pubic notch

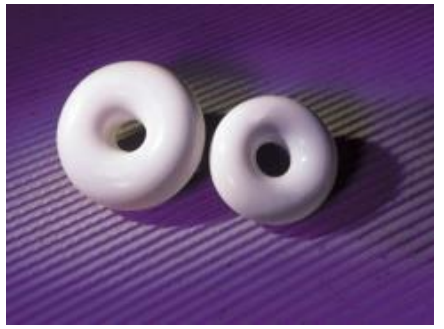
- **Narrow Introitus**
  - Hodge with support or with a knob (lever)
    - Long narrow vagina's
    - SUI
    - Mild cystocele
  - Oval
    - Narrow vagina's
    - Mild/Mod. cystocele

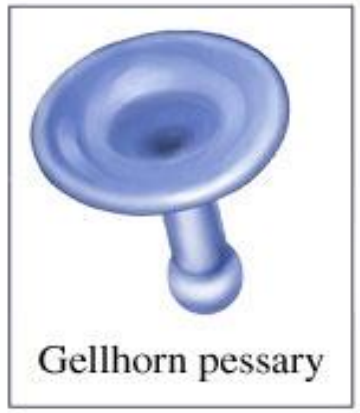
Cystocele & Rectocele

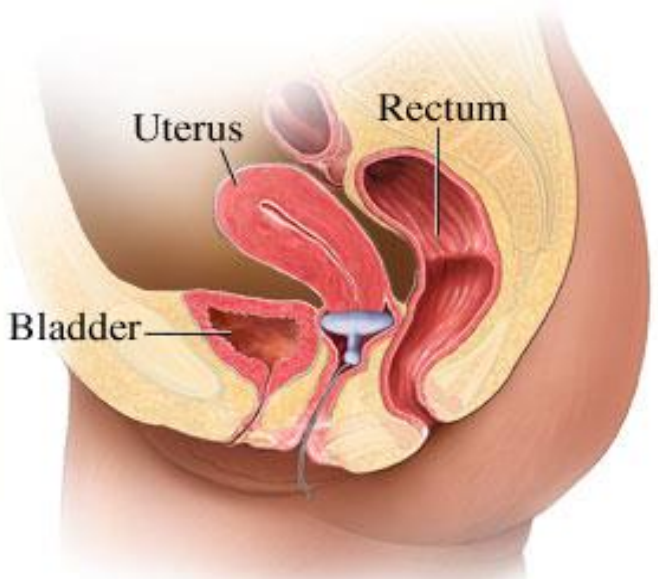
- Geghrung
  - Anterior support & thins posteriorly
  - Add knob for SUI



- Large Introitus
  - Doughnut- space occupying
  - Shaatz







Self Retaining Pessary Everything is falling out!

- Gellhorn- may need ring forceps to remove
- Cube- excellent support in all directions
  - Caution on removal and ulceration formation
  - Can order very small

Pessary Fitting Pearls

Does it fit?

- Trial with Valsalva lying, standing, jumping
- Can she urinate with it in?
- Leakage or dislodgement
  - Back to the drawing board

When do you punt?

Pessary Follow Up

Manufacturers recommendation & Expert opinion (variable)

- 24 & 72 hours later & Q few months
- Observational Study- 2 wks post fitting, Q 3 months for 1 yr; Q 6 mo there after
- 1-2 weeks post fitting; 1 month, 3-6 months then annually (JoAnn's)
  - Every 3-4 months for self-retained pessaries maintenance

Atnip & O'Dell, 2012. Urol Nsg;32(3).

Pessary Self-Care Options

Removal Intervals Between Visits:

- Regularly (nightly, weekly, monthly) and re-insert post-cleansing
- Regularly removed and leave out overnight
- Occasionally out (for intercourse, cleaning, temporary discomfort)
- Occasionally in (for increased activity or sporting event, as with incontinence pessary)

Pessary Cleaning

- Remove, wash with soap and water, rinse, and re-insert

Atnip & O'Dell, 2012.
Urol Nsg;32(3).

Pessary Self-Care Options

- **Genital Cleansing with Pessary in Place or Removed**
  - Cleanse external genitals only with bath or shower
  - Insert acidifying douche, gel, or prescribed medication

- **Enhancing Regular Follow Up**
  - Develop an informed consent for patients to sign; retain a copy and give a copy to the patient
  - Schedule follow-up visits before the patient leaves the office
  - Suggest use of a Med-alert bracelet for cognitively impaired women as a Reminder to care providers
    - Replace pessary 1-2 years or if damaged

Atnip & O'Dell, 2012.
Urol Nsg;32(3).

Pessary Care Options

Mandatory Education- JoAnn's Pearls

- When to remove? Nightly at first, advance to 1-2x week, or patient preference
- Never uncomfortable
- Never foul vaginal discharge/odor
- Leakage starts again
- Sexual considerations- remove or not?

Urgent/Emergent Care Needs

- As above & pain, bleeding, retention of stool and urine

Atnip & O'Dell, 2012.
Urol Nsg;32(3).

Pessary Care Options

- **Prevention of Complications**
  - Vaginal Acidification
  - Vaginal Moisturizers
  - Vaginal Estrogen for urogenital atrophy

- **Complications**
  - ↑Pelvic Pressure, Pain
  - Obstructive Elimination
  - Bleeding, abrasion or erosion
  - Abnormal Discharge & Odor

Atnip & O'Dell, 2012.
Urol Nsg;32(3).

Vaginal Moisturizers

- Bio-adhesive polymer
  - OTC
  - Polycarbophil
    - Replens, Noveon, Rephresh
- Acidifying & water carrying qualities
- Adheres to vaginal epithelial tissue until shed
- ↑Intracellular electrolyte & water volume

- Enhances blood flow due to vasodilatation
- Temporal relief of vaginal dryness
  - Less effective than vaginal estrogen
  - Biglia et al, 2010
- Non-polymer products
  - Silicone, pectin, glycerin, propylene glycol, hydroxyethyl cellulose

Atnip & O'Dell, 2012. Urol Nsg;32(3).

Vaginal Acidification

- **Vaginal Acidification**
  - pH3.5-4.5 pre-menopausal
  - Alkaline environment supports ↑ bacterial growth
  - No data to support Universal recommendation
  - May have increase discharge/odor with pessary use

- **Acidification Options**
  - Vinegar & water douche
    - Contraindicated in pre-menopausal females
    - ¼ c. vinegar with 1 c. water-weekly (Atnip, 2009)
  - Acidifying gel
    - Triethanolamine, hydroxy-quinolone sulfate, sodium lauryl sulfate in glycerine base (Trimosan ™)
      - CooperSurgical

Atnip & O'Dell, 2012.
Urol Nsg;32(3).

Urogenital Atrophy

- Low estrogen levels
- Thinning of epithelial lining
- Loss of elasticity
- Dryness
- Contraction of introitus
- Reduced vascularity
- Reduced transudate
  - Freedman, 2008

Factors that Contribute Atrophy

- Post-menopausal
- Smoking (↑ estrogen metabolism)
- SERMS (Selective Estrogen Receptor modulators)

- ↑ Discomfort & risk for mechanical tissue damage with pessary use

Atnip & O'Dell, 2012. Urol Nsg;32(3).

Complication Management Options

1. **Increased pelvic pressure, pain, or obstruction of elimination (urine/feces)**
   - Pessary removal, with re-fitting, or decision to proceed to alternate treatment (observation or surgery).

2. **Bleeding, mechanical irritation, or erosion**
   - Evaluate need for endometrial biopsy.
   - Consider initiation of vaginal estrogen use if appropriate.
   - Consider biopsy of erosions or lesions that persist despite intervention.
   - Remove pessary and re-evaluate in 2 to 4 weeks.
   - Remove pessary and re-fit with alternate shape or size of pessary to moderate points of pressure.

Atnip & O'Dell, 2012. Urol Nsg;32(3).

Mechanical Injury from A) Ring, B) Gellhorn, and C) Cube Pessaries

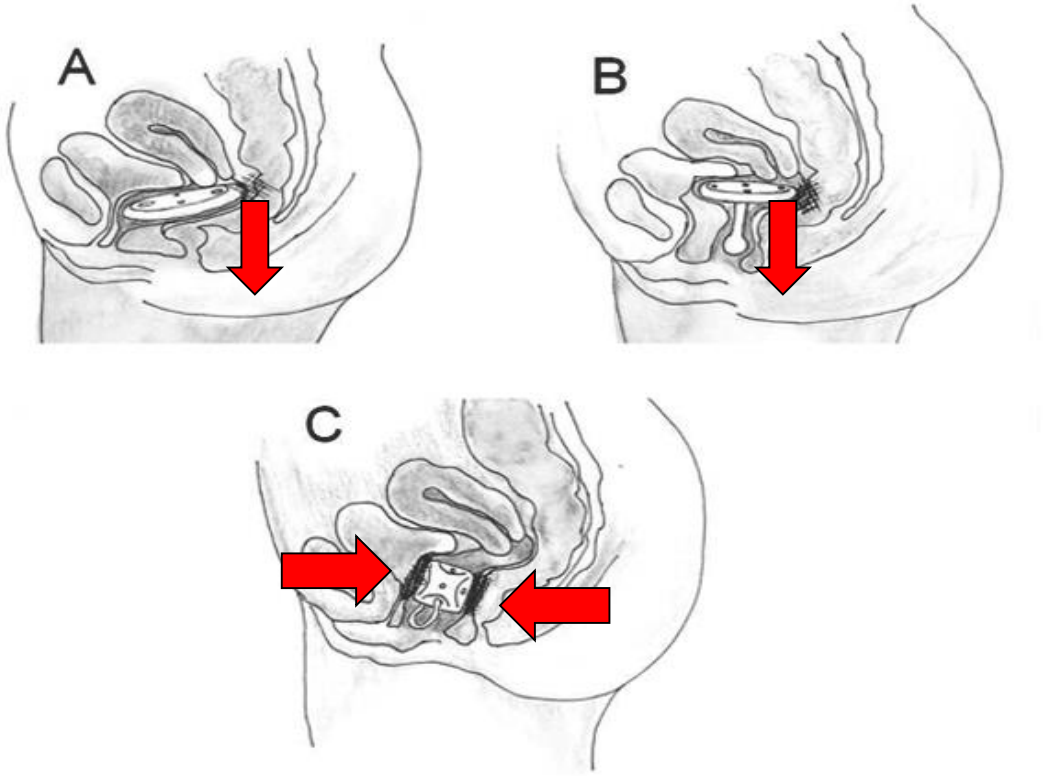


Figure from Atnip & O'Dell, 2012. Urol Nsg;32(3).

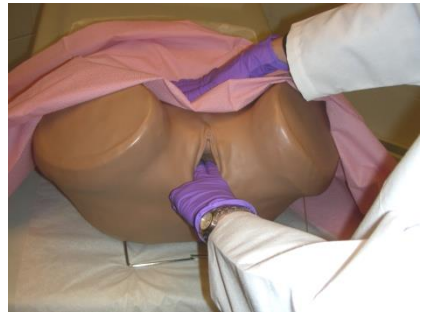
Complication Management Options

Vaginal Odor or Unusual Discharge

- Rule out erosion.
- Decrease intervals between pessary removal and cleansing.
- Acidify the vagina (using appropriate vaginal moisturizers or topical estrogen).
- Treat any identified specific vaginal infection.
- Consider replacing or sterilizing pessary.

Careful vaginal exam

- look for mechanical abrasion, erosion
- Check pH
- Perform microscopy
  - Use antimicrobials/antifungal if symptomatic



Atnip & O'Dell, 2012. Urol Nsg;32(3).

Complication Management Options

- Local Vaginal Estrogen is **more** effective than systemic in relieving symptoms
  - Promotes epithelial cell growth and maturation
  - Promotes normal re-colonization with lactobacilli
- Enhances blood flow,
- Acidifies, Reduces pH
- Increases vaginal wall thickness & elasticity,
- Enhances sexual response
- Not the same **risk** factors or **benefits** as systemic estrogen

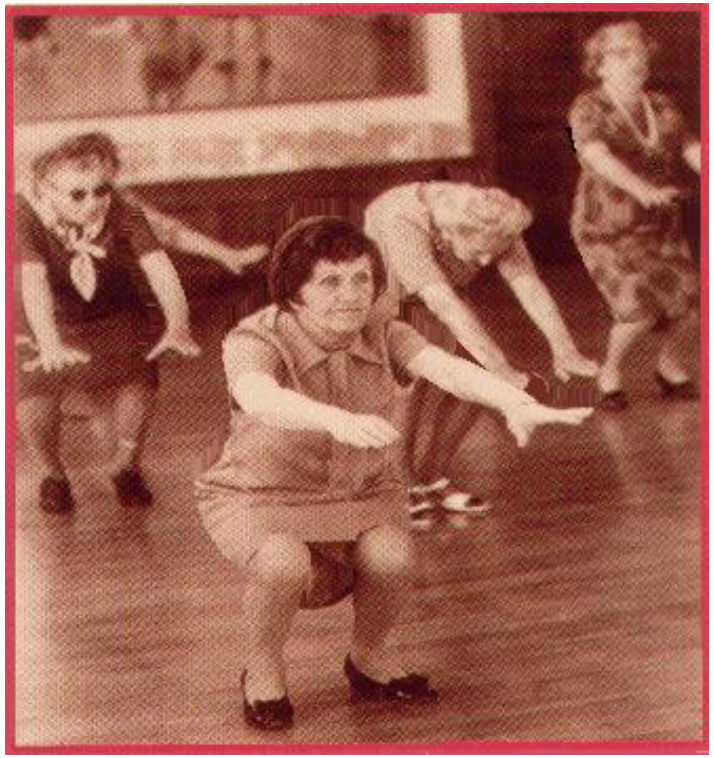
North American Menopause Society, 2010

Professional Practice Issues: Is it Worth My Time?

- **E & M Code-** Level 3 Office 99203- $102.01
  - Dx codes: N81.10-15 cystocele, rectocele, urethrocele
  - SUI female N39.3
  - Incomplete emptying R39.14

Fee schedule info: https://www.cms.gov/apps/physician-fee-schedule/search/search-criteria.aspx

- **Procedure Codes**
  - 57160-insertion of pessary ($59.75)
  - 57150- vaginal irrigation ($45.74)
  - 51798-Bladder Scan
    - ($11.59)
  - Supply
    - A4562 ($50.27-67.03)
- **Revenue- $219.00**



Key: Patient needs to be motivated and able to perform PME

Future Research Needed!!

- Effect of PME & Pessary use
- Role of pessaries in preventing prolaspe progression
- Design of pessary, aides for insertion/removal
- Study of normal aging of older female genitalia (85+ yrs)
- Collection of data regarding 20+ year use
- Prevention and treatment of vaginal atrophy
  - Use of SERMs & DHEA
- List goes on…..

Case Study #1 Jane Doe

32 y/o childbearing female

- Leaks with coughing, jumping, playing with kids & SEX
- Sensation of incomplete emptying of bladder
- Guards activities
- No UTI's history
- No constipation
- More children anticipated
- Wants help!!

Brain Teaser: Diagnosis?

Most likely type of Urinary Incontinence?

1. Stress UI
2. Mix UI
3. Nocturnal Polyuria
4. Urge UI/OAB

Which treatment Option?

1. PFMT
2. Medications
3. Pessary
4. Surgery

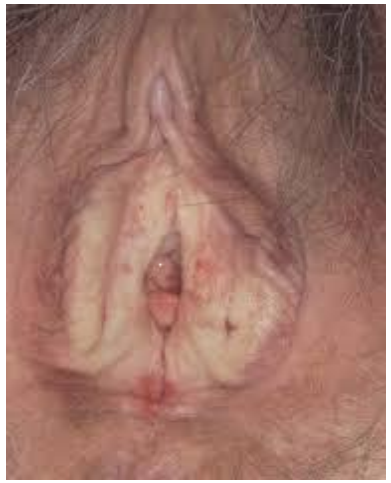
Case Study #2 –Marie

74 y/o female

- multiple co-morbidities
  - DM, Charcot foot, CAD, Neuropathy, Venous disease, DVTs, Asthma, CFS, Glaucoma
- 20+ yr. Hx of UI; UTIs frequent
- Leakage with minimal activity
- Pad use 6-8+, saturated

- Surgery: hysterectomy, Ant. vaginal & bladder repair (‘81)
- Large capacity bladder
- Incomplete emptying
- IAD/atrophic/
- Intense itching
- 27 Medications
- Some fecal seepage

Marie's (74 y/o) Focus PE



Abdomen

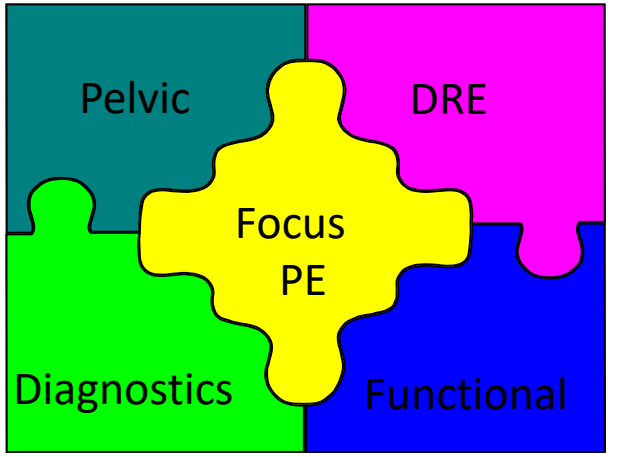
- WNL

Pelvic

- urethral hypermobility
- + cough stress test
- Atrophic: labia minora missing, cigarette paper like tissue
- No IAD
- Grade 2 rectocele, weak EAS

Diagnostics

- UA WNL
- PVR of 200mL (25%)
- Simple CMG: 1st 350mL, 2nd 500, full 600 mL; no DI

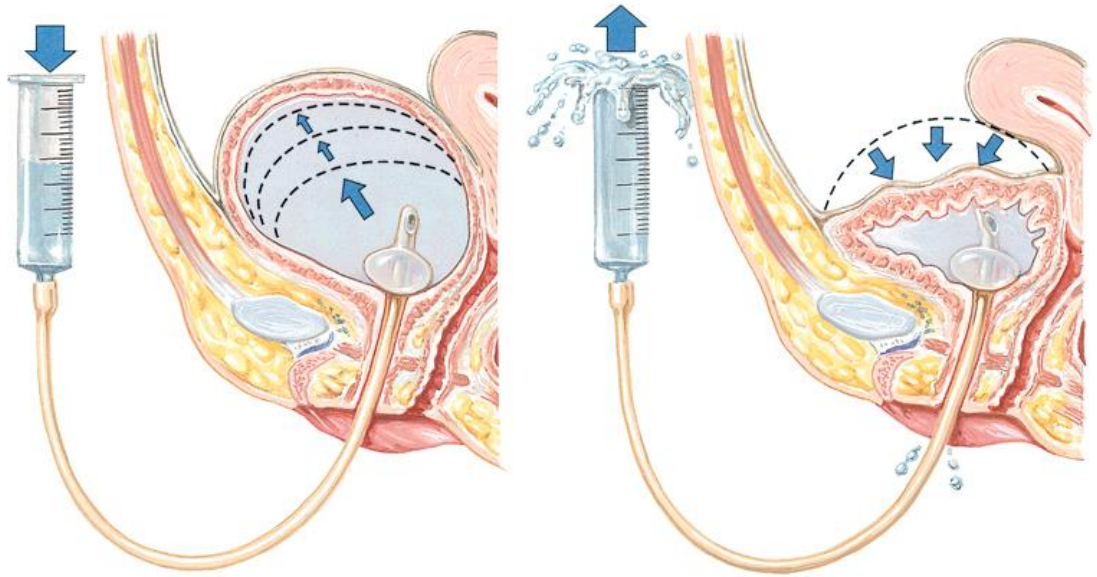


Simple Cystometrogram (CMG)

Provides information regarding bladder

- Capacity
- Sensory awareness of fullness
- Compliance
- Stability

Assist with decision making on type of UI



Brain Teaser: Diagnosis?

Most likely type of Urinary Incontinence?

1. Stress UI
2. Mix UI
3. Nocturnal Polyuria
4. Urge UI/OAB

Which treatment Option?

1. PFMT
2. Medications
3. Pessary
4. Surgery

Secondary Diagnosis for Marie

1. Flatus Incontinence
2. Lichen Sclerosis Atrophicus
3. Urogenital atrophy

Results: Case Study #2 –Marie

74 y/o female

- multiple co-morbidities
- 20+ yr. Hx of UI, UTIs
- **Pad use 6-8+, saturated**
- Large capacity bladder
- Incomplete emptying
- IAD/atrophic/intense itching
- 27 Medications
- Some fecal seepage

Results:

- **Fitted with #3 Ring with support & knob**
- **Topical Vag. estrogen continued**
- **Return 1 week**
- **Reports NO LEAKAGE!**
- **Bowel program: fiber, PMFT, probiotic**
- **Lichen Sclerosis**
  - **Topical steroid**
    - **Itching resolved**

Case Study #3: Esther

92 y/o female referred due to severe UI by PHN

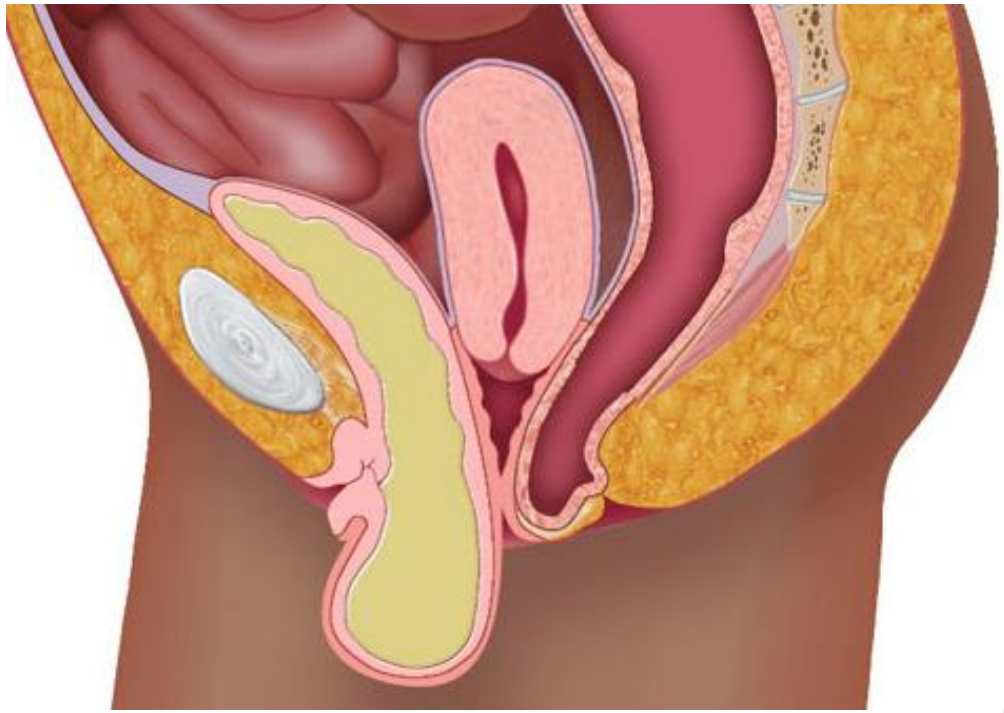
- Describes large bulge hanging from vagina past 8 years
- Uses 4-5 briefs a day
    - Usually soaked
- PCP stated non-surgical candidate!
- Lives alone, cognitively intact!

Focus PE

- Larger than a softball prolaspe
- Constant leakage
- Tissue in poor condition
- Unable to catheterize for PVR, scan shows 0cc

What's next?

Grade 4 Cystocele



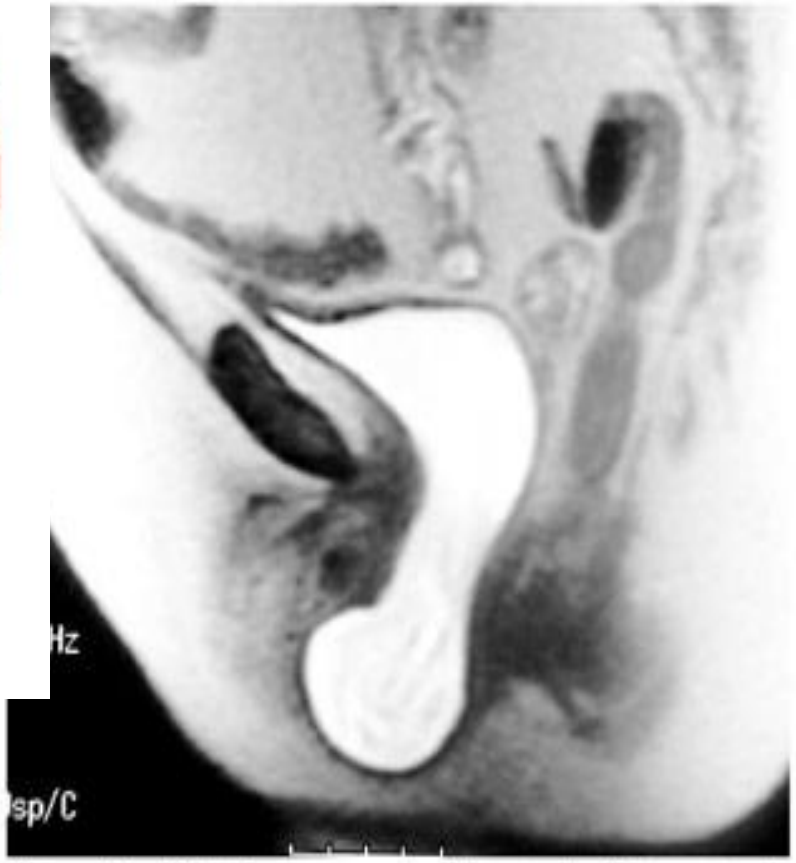


Figure 3 *– MRI showing a grade IV cystocele. Note rectum is clearly visualized.*

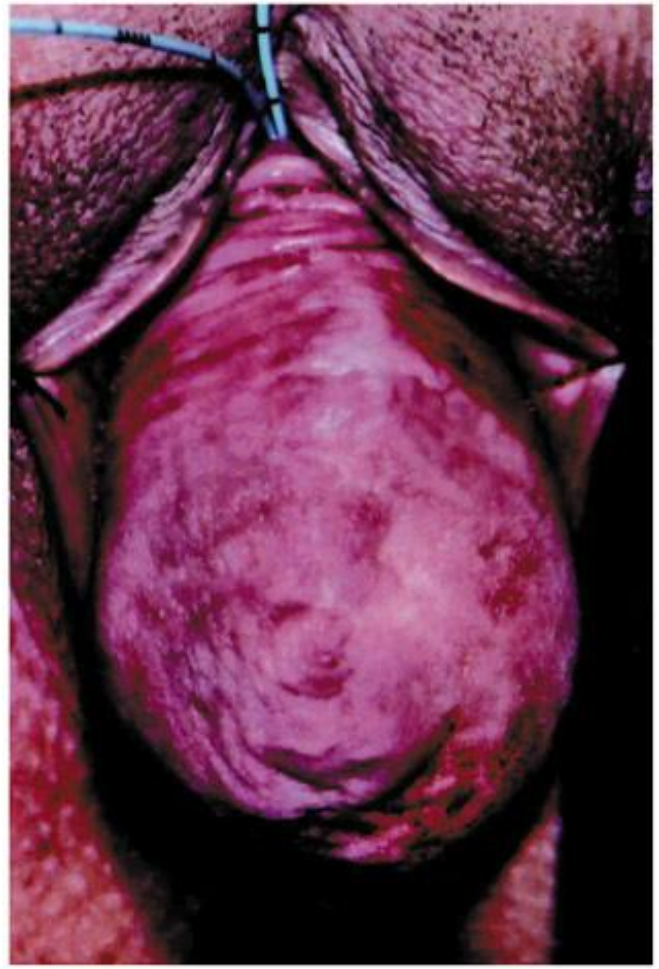
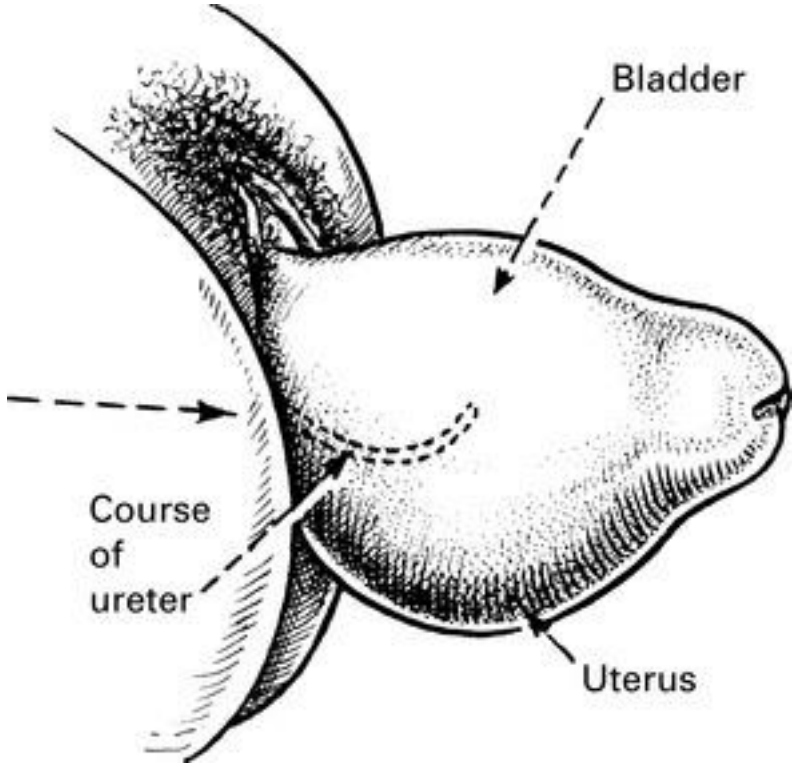


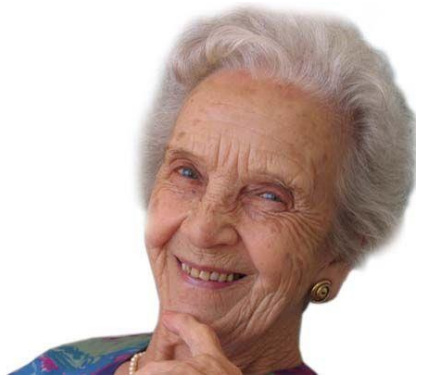
Figure 1 *– Cystocele. Ureteral meatus were catheterized in the beginning of the surgery.*



Procidentia

Total prolapse of the bladder and uterus to the outside of the body

Brain Teaser: Diagnosis?



Most likely type of Urinary Incontinence?

1. Stress UI
2. Mix UI
3. Urge UI/OAB
4. Overflow UI/Retention
5. Neurogenic bladder

Secondary Dx's

- ❖Grade 4 Cystocele- fissures
- ❖Procidentia
- ❖Severe Urogenital atrophy

Brain Teaser: Treatment?

Which 2nd Line treatments?

1. Surgery
2. Urethral Insert
3. Pessary
4. Topical Estrogen

First Line Treatments

- PFMT
- Double Voiding
- Toilet Program

Case Study#3: Esther's Results

92 y/o female referred due to severe
Over flow UI

- Fitted with Gellhorn Pessary
- Topical Estrogen
- F/U q 3 months for Pessary removal, cleaning, vaginal exam X10 yrs
- No complications
- Uses 1 Brief day & Night
- Able to void every 2-3 hours.

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