PESSARIES: Pelvic Support for Wonder Women

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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 silicone, 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


©Women’s Surgery Center
http://www.gyndr.com/pelvic_organo_prolapse.php
Types of POP-Rectocele

Grade III

©Women’s Surgery Center
http://www.gyndr.com/pelvic_organs_prolapse.php
Types of POP-Cystocele

Grade III to IV

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http://www.gyndr.com/pelvic_organ_prolapse.php
Type of POP-Urethrocele

Grade III

http://www.gconstantine.co.uk/Images_files/image014.jpg
Type of POP-Enterocele

Grade IV

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http://www.gyndr.com/pelvic орган_прылapse.php
Type of POP-Uterine Prolapse

Grade IV

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http://www.gyndr.com/pelvic_orgon_prolapse.php
Types of POP-Vaginal Vault

Grade IV

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http://www.gyndr.com/pelvic
_organ_prolapse.php
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

Risk Factors for POP

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

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.php

• 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

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
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


North American Menopause Society, 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 prolapse 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 prolapse
  - Most difficult to remove

Provider Experience & mentorship

- Choice of stock, styles

Sizing based upon experience

- Art &
- Reliance on Trial & Error

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

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: 0.5-2 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
  • 1\textsuperscript{st} & 2\textsuperscript{nd} 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.

• 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

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

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

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

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

Vaginal Acidification

• **Vaginal Acidification**
  - pH 3.5-4.5 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, hydroxyquinolone 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

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.

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

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

• **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

Future Research Needed!!

- Effect of PME & Pessary use
- Role of pessaries in preventing prolapse 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.....

Key: Patient needs to be motivated and able to perform PME
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 prolapse
• 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 2\textsuperscript{nd} 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 Overflow 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.
References


References


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Pessary Companies


Coding & Billing Helpers

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