UROGYNECOLOGY SIM LAB: PESSARY STATION

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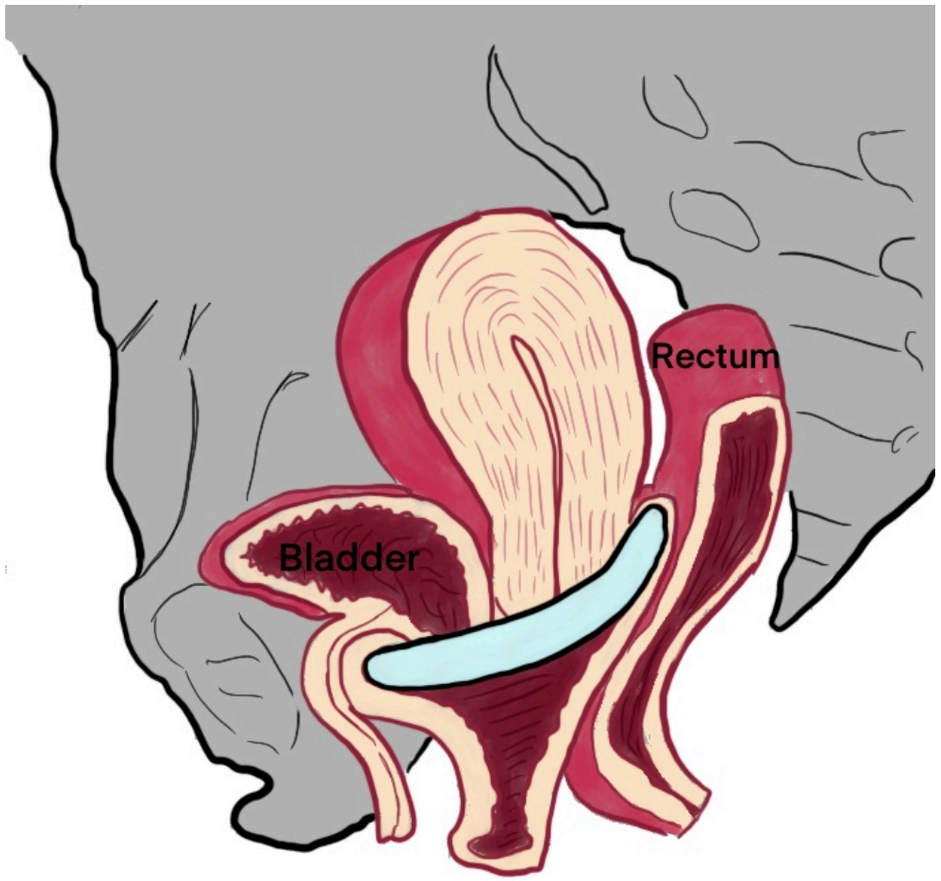
Pessary

- Device inserted into vagina
  - To support prolapsing vaginal walls
  - Or to improve urinary incontinence
- Material: medical grade silicone or inert plastic
  - Silicone makes pessary inert → ↓ odour, ↓ allergic reaction



Benefits and Drawbacks

Benefits	Drawbacks

• Minimally invasive
  • Avoids risks of surgery
  • No time off work or recovery time
  • No pain
  • Similar satisfaction and improved pelvic floor function with pessary for prolapse compared to surgery
• Highly successful, high satisfaction rates when fitted properly
• Low risk of complications, complications are usually minor
• Immediate relief of symptoms
• Low cost
• Patient can self-manage
• May be used in patients who
  • Have not finished child-bearing
  • Non-surgical candidates
  • Do not wish to have surgery
  • Awaiting for surgery (temporary treatment)
• Decrease erosions due to large prolapse
• May have a role in preventing progression of prolapse
• May be used in sexually active women → may enhance sexual activity and satisfaction
	• May need to learn how to self-care unless care is provided in a clinic

Indications

- **SOGC: pessary should be considered 1st line treatment for all women presenting with POP and/or SUI**
- Used for both diagnostic and therapeutic purposes
    - Diagnostic: unmask latent/occult SUI pre-op, determine whether reduction of prolapse improves symptoms
    - Therapeutic: to relieve symptoms of POP or SUI

Indications

Indications:

- **Pelvic organ prolapse (POP) (most common)**
  - Relief of symptoms
    - Used to relieve lower urinary tract symptoms due to POP (bulge symptoms, difficulty emptying bladder, urgency), improve defecatory symptoms, improve activity, general health
  - May be used in patients who
    - Have not finished child-bearing
    - Non-surgical candidates
    - Do not wish to have surgery
    - Awaiting for surgery (temporary treatment)
  - **Pre-op evaluation of prolapse → use pessary or do urodynamics with and without pessary**
    - **Unmasks latent/occult SUI:** used to identify patients who can develop SUI post-op
      - Poor sensitivity
      - High specificity (93%)
      - No latent SUI: high NPV (91-98%) for post-op continence
    - To determine whether reduction of prolapse will improve symptoms → indication of post-op voiding dysfunction
- **Stress urinary incontinence (SUI)**
  - Provide modest improvement in obstructive, irritative, and SUI
- **Pregnancy**
  - Prolapse
  - Urinary retention due to incarcerated uterus
  - Cervical incompetence (not recommended by SOGC)

Types of Pessary

- Most commonly used and studied: ring, Gellhorn

PESSARIES FOR PROLAPSE

Pessaries for Prolapse

Support Pessaries	Space-occupying Pessaries
• Placed in the posterior fornix and above posterior aspect of pubic symphysis and/or pelvic floor • Physically support and elevate superior vagina • Supported by pubic symphysis	• Used for severe prolapse, wider introitus (≥3-4 fingers) • Occupy space that is larger than the introitus • Cube brings vaginal walls towards the midline (creates a suction between vaginal walls and pessary) • Gellhorn both occupies space that is larger than the introitus and brings vaginal walls towards midline
• **Ring (+/- diaphragm/support)** • **Shaatz** • Hodge	• **Gellhorn** • Cube • Donut • Inflatoball

Success

Prolapse:

- Depends on adequate fit, patient satisfaction, patient education, ability to care for pessary (by patient or caregiver), and ability to follow-up
- 71-90% of patients can be successfully fitted with pessary
- If patients are successful at 4 weeks, most continue to use at 5yrs!
    - Sexual activity is not a predictor for discontinuation of pessary
    - Pts who had reconstructive pelvic surgery in the past were more likely to continue pessary use
- Symptom relief:
    - Bulge: 70-90%
    - Pressure: 29-49%

Predictors of Success

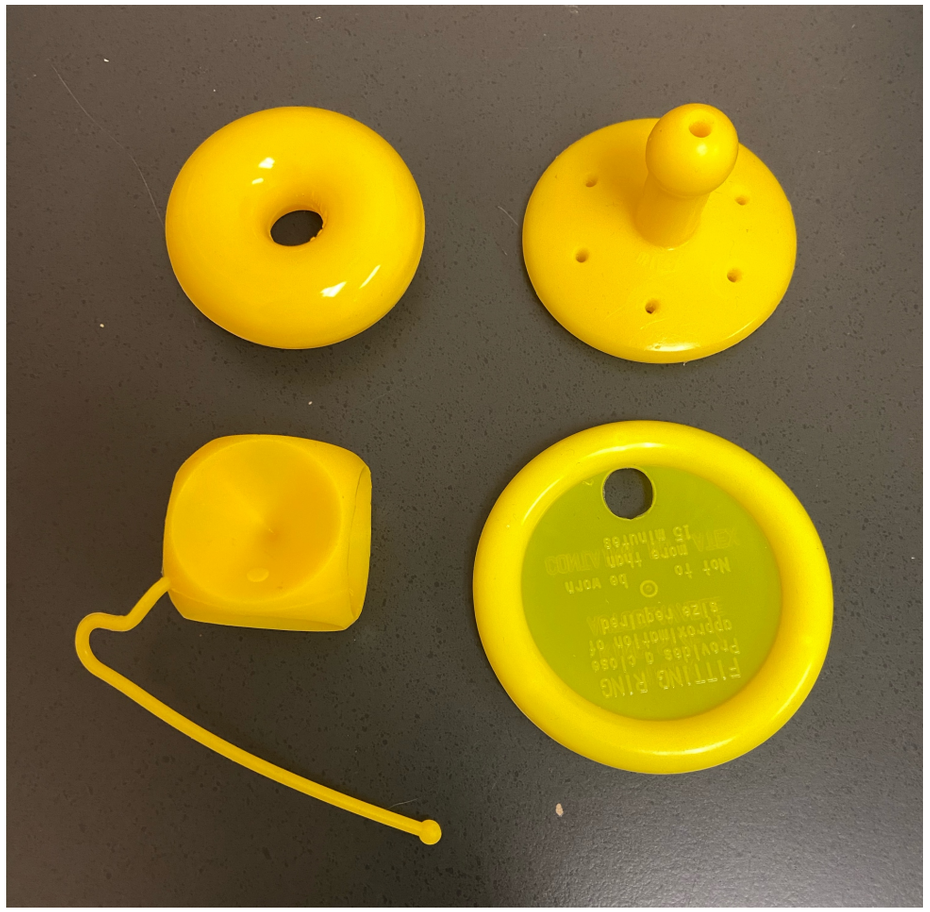
Predictors of unsuccessful fitting	Predictors of discontinuation
• Short vagina (<6cm) • Wide introitus (>4 finger breadths) • Rectocele • Hx vaginal surgery • Coexisting SUI	• Posterior wall prolapse • Younger (<65yo) • Urinary incontinence • Discomfort

Success depends on:

- Angle of pubic arch
  - More narrow → more likely to hold pessary
  - Wide → more likely to fall out

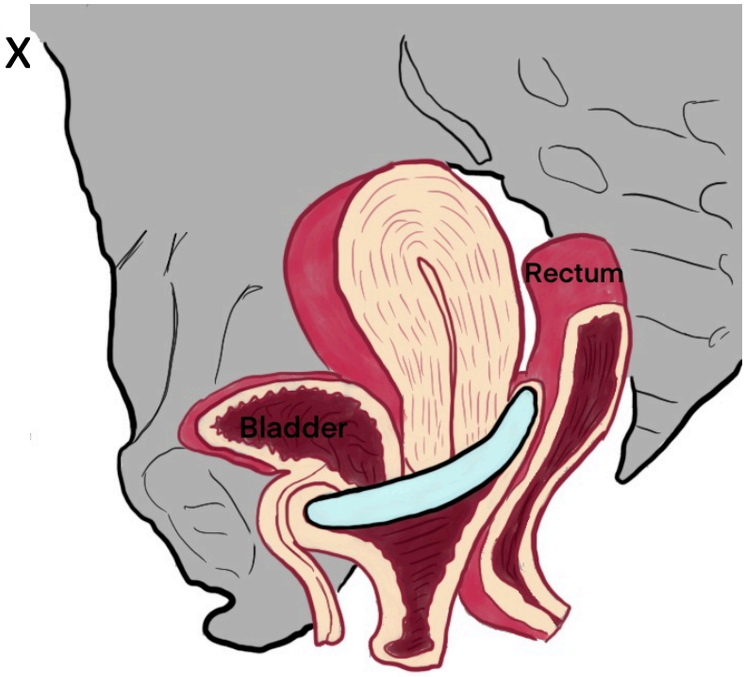
Most Common Pessaries for Prolapse

- Ring (most common)
- Gellhorn (2nd most common)
- Cube or donut



Ring Pessary +/- Diaphragm/Support

- Position: behind pubic symphysis anteriorly, behind cervix posteriorly
    - Diaphragm supports cervix, vaginal secretions drain through openings
    - Diaphragm is useful for anterior vaginal wall prlapse
- Easy to insert and remove
- No difference in symptom relief or satisfaction between ring and Gellhorn pessaries



Uses

- Best for grade 1 and 2 prolapse
- May be used in severe prolapse if there is adequate perineal body present to keep pessary in place

Ring Pessary +/- Diaphragm

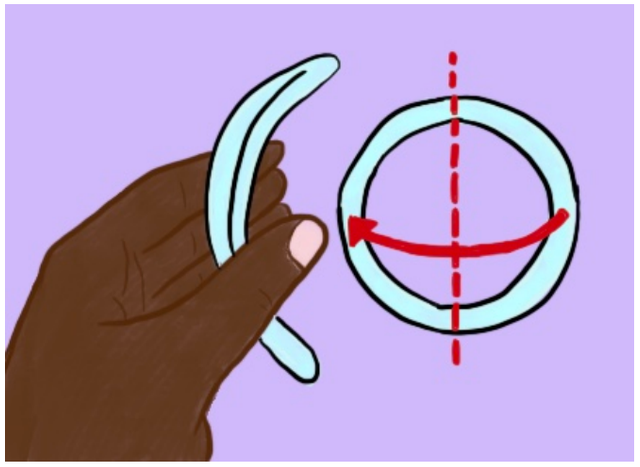
Insertion

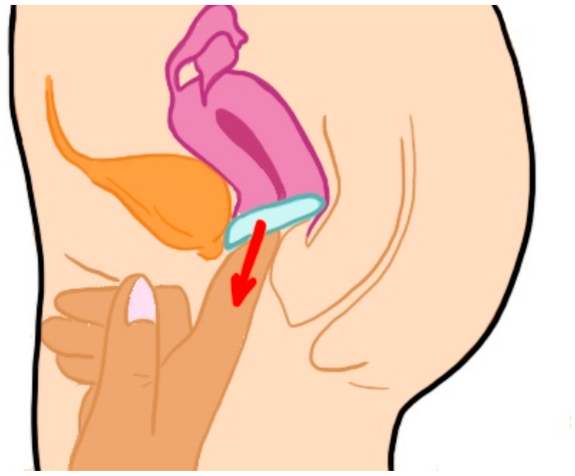
- Fold pessary (like a taco!)
- Place lubricant onto pessary's leading edge or at the introitus
- Separate labia apart
- Insert pessary, direct towards sacrum
- Unfold above pelvic floor, anterior edge is behind pubic symphysis
- Ensure proper placement
  - Anteriorly: Finger breadth between pessary's leading edge and pubic symphysis
  - Above: cervix
  - Lateral: Finger breadth between pessary and lateral vaginal wall
  - Valsalva: pessary stays in place

Removal

May use unwaxed dental floss

- Insert 2nd and middle finger into vagina
- Grasp ring's leading edge
- Bring ring towards introitus
- Grasp pessary with thumb and index finger, remove pessary

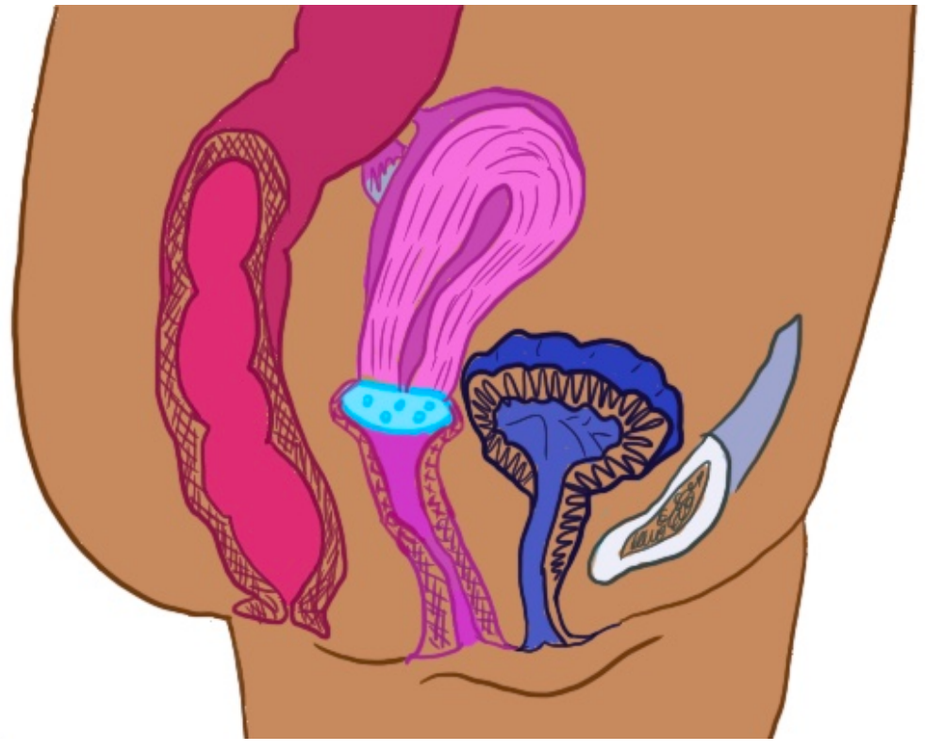




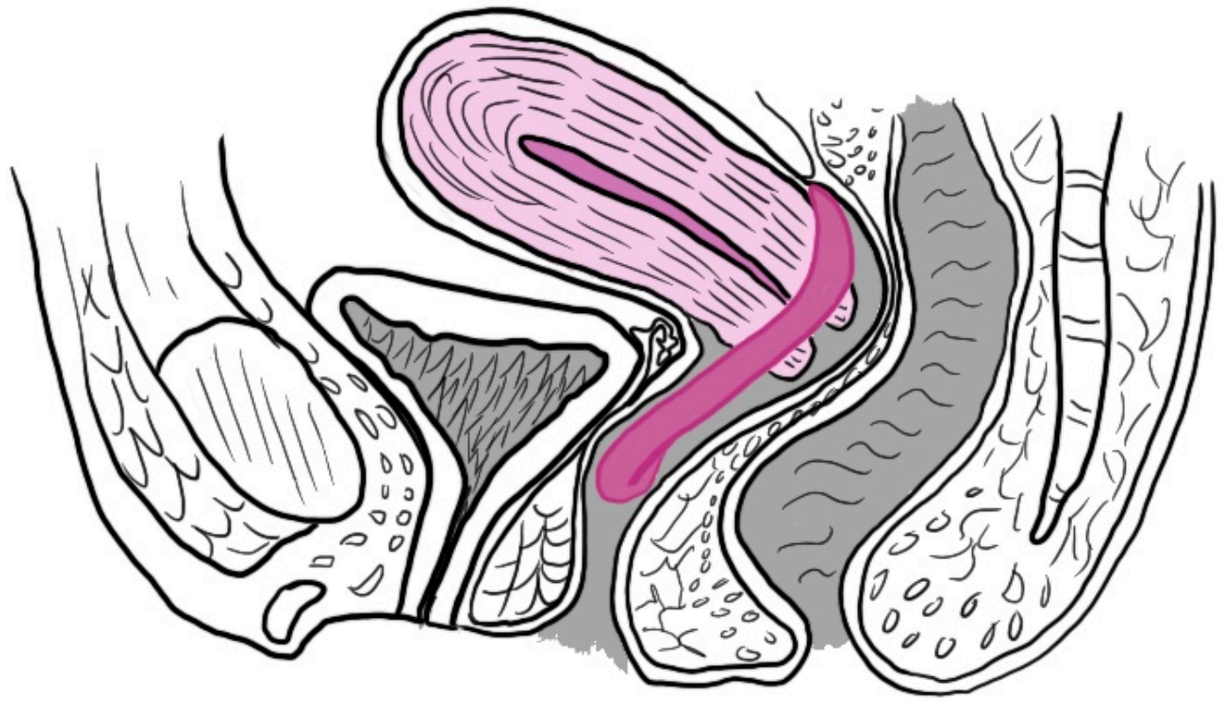
Shaatz Pessary

Insertion:

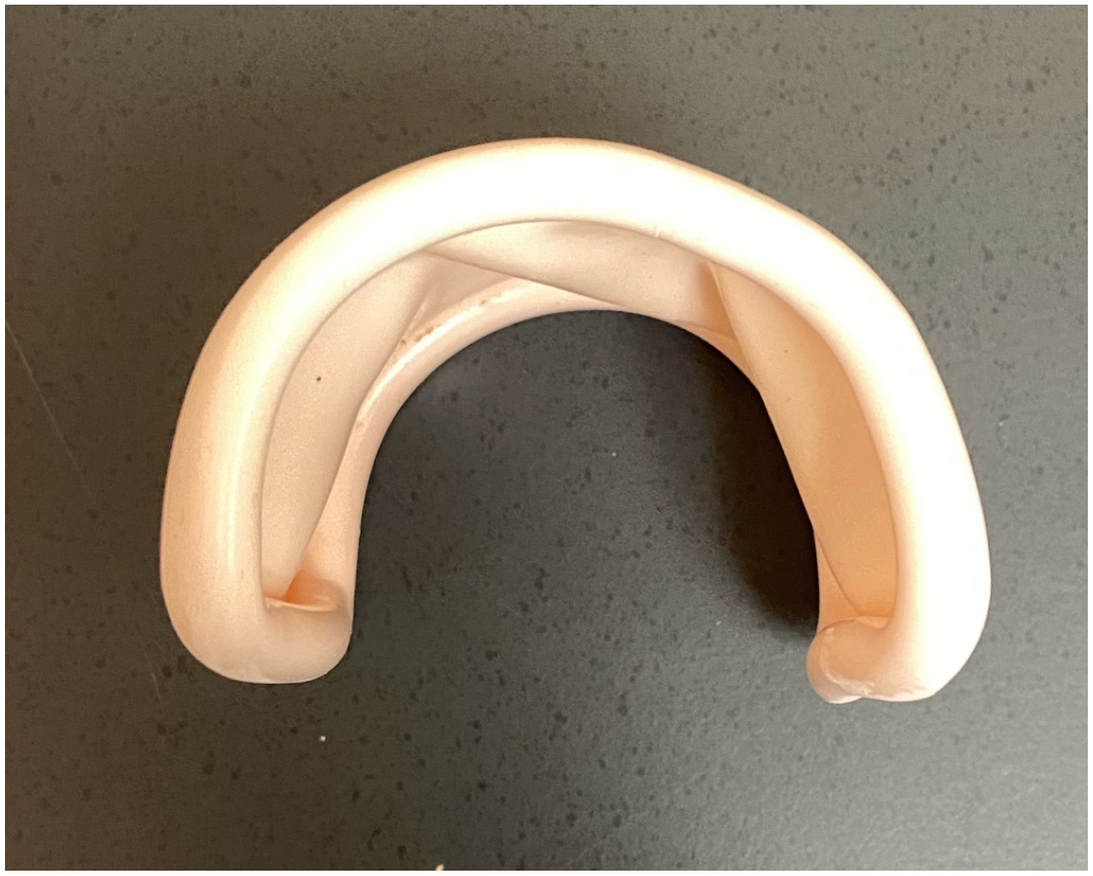
- Convex portion is placed anteriorly

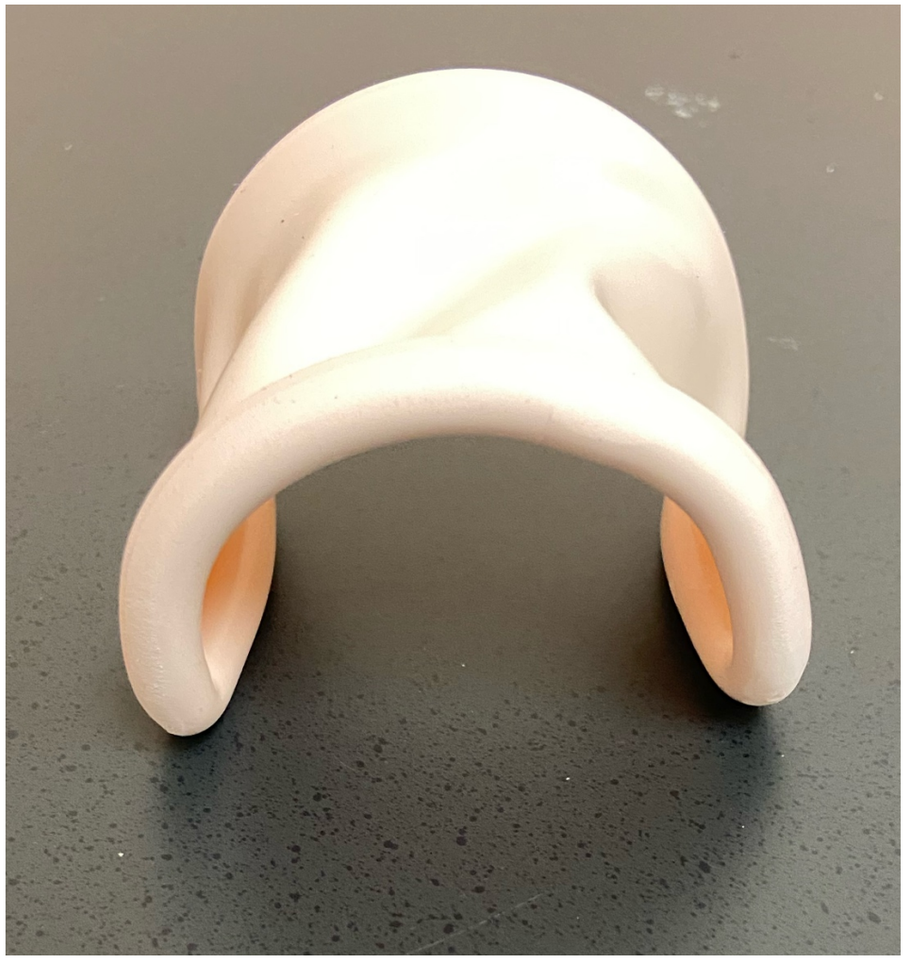


Hodge Pessary



Gehrung Pessary





Cube Pessary

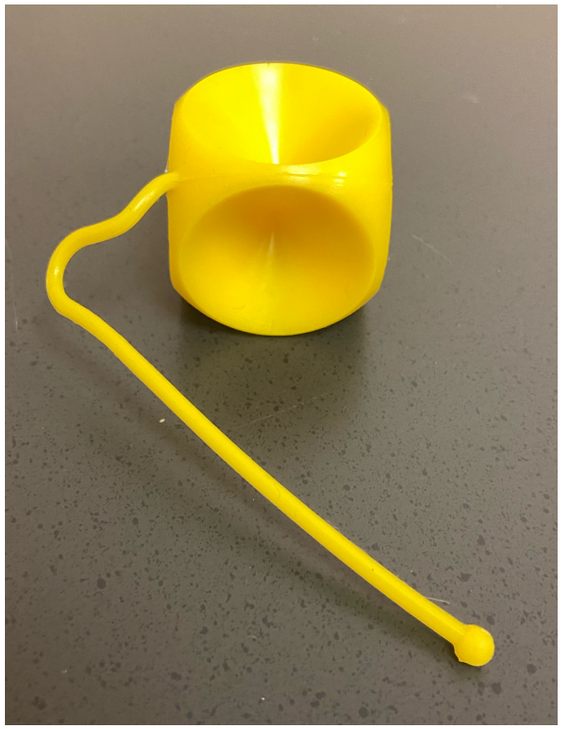
- Brings vaginal walls towards the midline (creates a suction between vaginal walls and pessary)
- Needs more frequent follow-up than q3m (change q few days to q few weeks)
    - More discharge trapped in suction cup
    - Higher risk of erosion

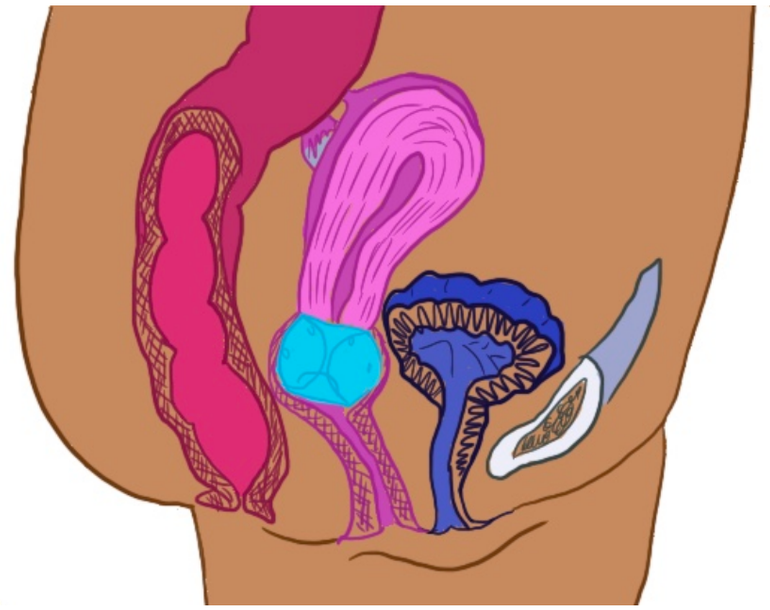
Uses

- Severe prolapse
- Narrowed vagina (ex. Previous surgery) since pessary takes up less space

Insertion

- Size: ½ width of vagina
- Compress edge that is introduced into vagina, push up and backwards

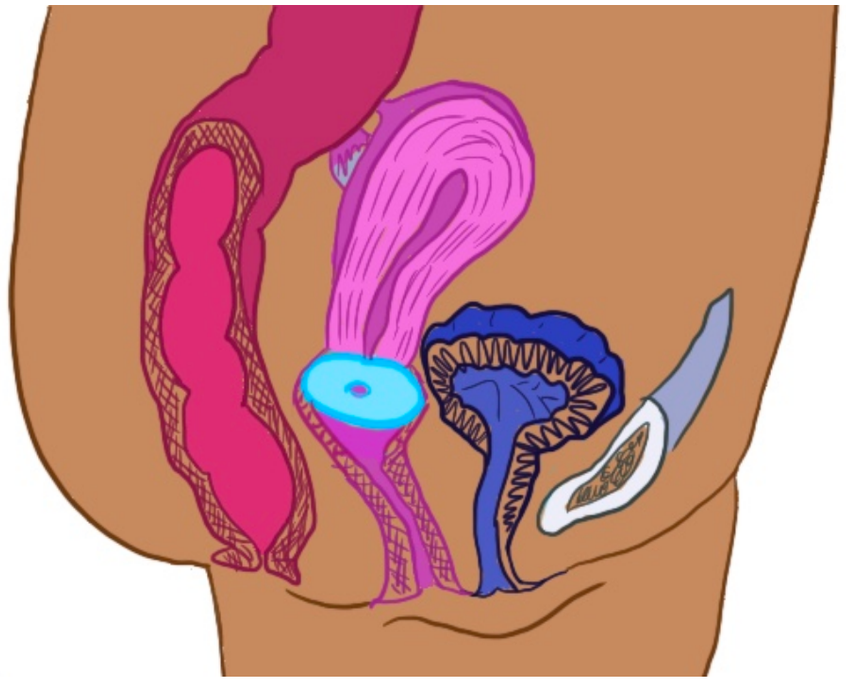




Doughnut Pessary

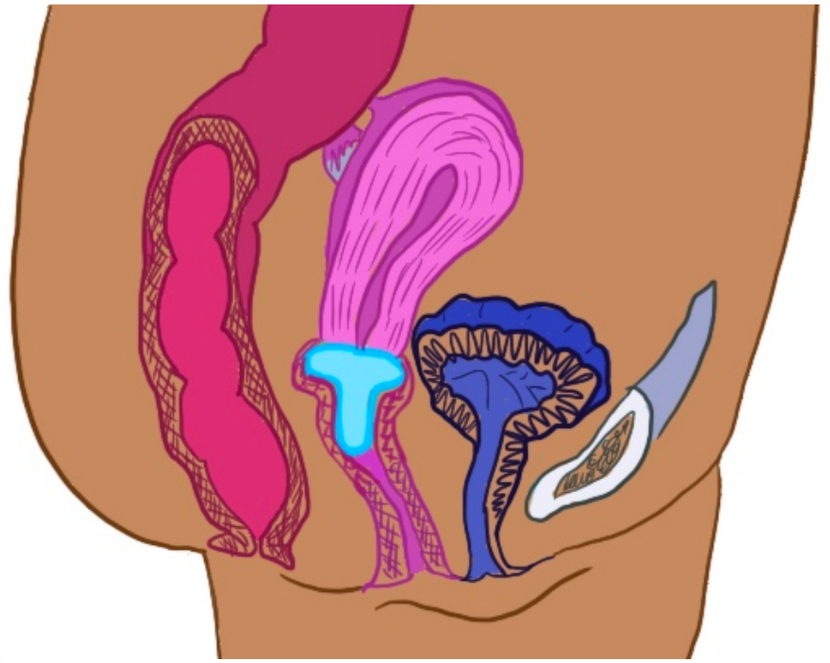
- Creates diameter larger than the genital hiatus

Insertion
- Compress as the pessary is inserted



Gellhorn Pessary

- Concave disk rests against cervix/vaginal cuff; stem is above introitus
  - Stem= device removal
  - Concave disk= suction to support vaginal apex
- Both creates suction between pessary and vaginal wall and creates diameter larger than the genital hiatus
- Has increased risk of erosion



Uses
- Modest/severe prolapse
- Complete procidentia

INCONTINENCE PESSARIES

Incontinence Pessaries

Incontinence Pessaries
• Have extra support anteriorly • Stabilize urethra: elevate and constrict urethra   • Decreases downwards excursion or funneling of urethrovesical junction → provides support to bladder neck • Increase urethral resistance • Variable success → depends on degree of prolapse, other factors
• **Ring with diaphragm/support and incontinence knob** • Incontinence ring • Incontinence dish • Uresta device

Pessaries for Incontinence

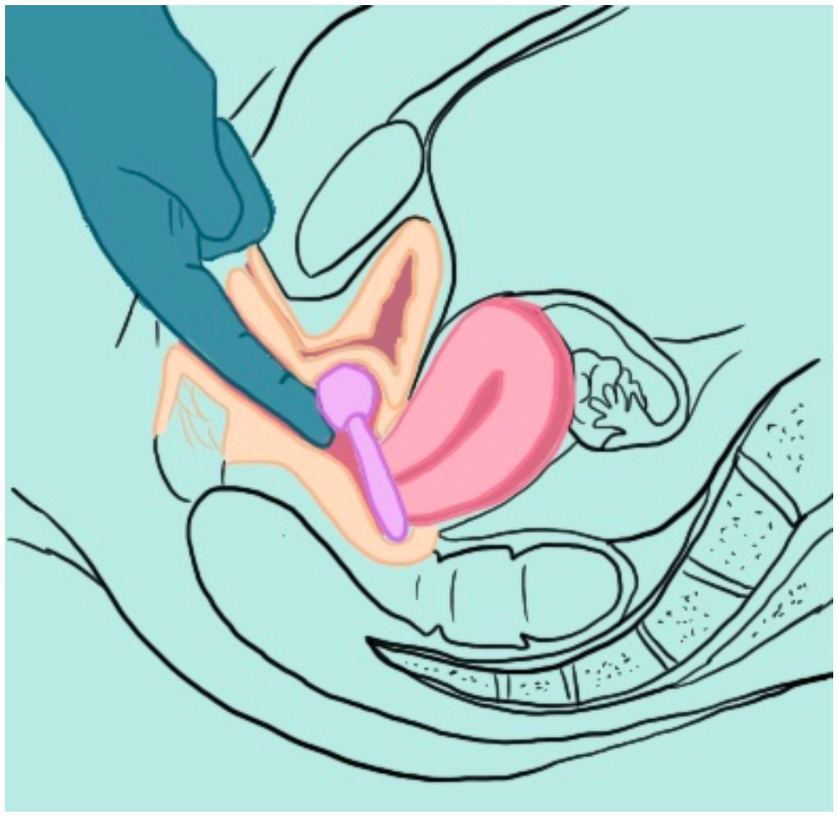
- Modest improvement in urinary obstructive, irritative, and stress symptoms
- Not enough evidence to compare pessaries for incontinence to other treatments (ex. Pelvic floor physio)
- No studies have examined use in pregnancy

Pessary vs behavioural therapy for SUI

- Success is 40% for pessary, 49% for behavioural therapy at 3m
- Pts with behavioural therapy have higher treatment satisfaction and more pts have no bothersome incontinence symptoms

Ring with Continence Knob

- More effective than no treatment for SUI → decreases # of incontinence episodes, improves QOL
  - 80% have improvement in incontinence, 20% dry
  - Initially: 60-92%
  - 6m: 55%
  - Low continuation by 1 year: 16%
  - Another study: 59% continent at 11m



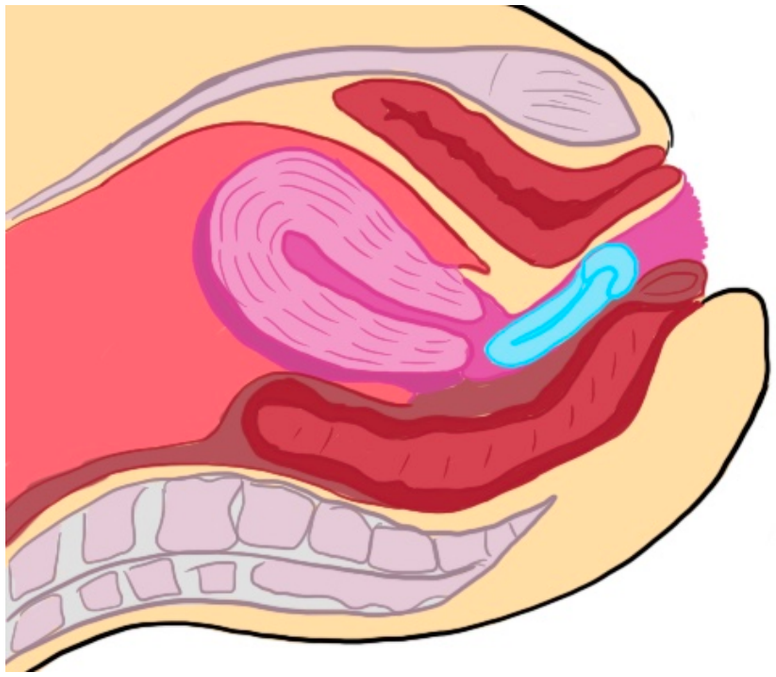
Insertion:
- Place like ring for prolapse
- Once pessary is opened, knob is facing the sidewall → rotate ¼ turn for knob to be under mid-urethra

Reasons for discontinuation:
- Persistent incontinence
- Pessary falling out
- Pain
- Bleeding

Incontinence Ring

- Flexible, adapts to shape of vagina

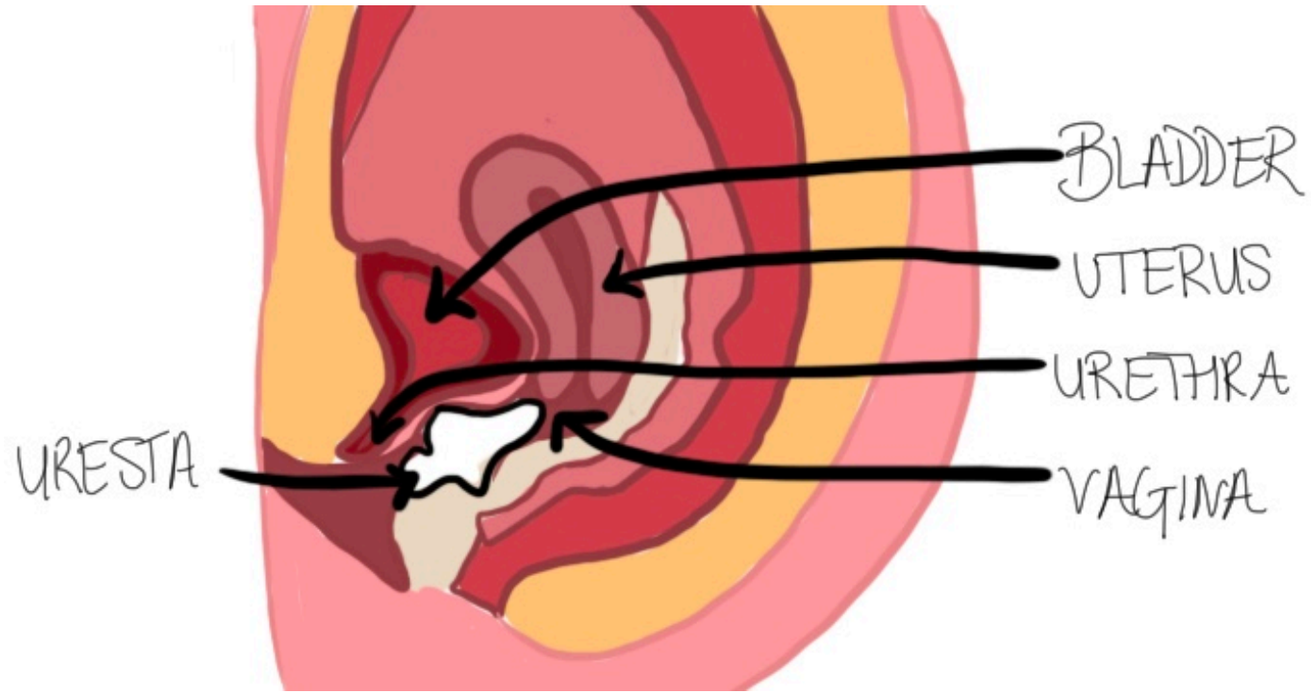
Insertion:
- Measure distance from posterior cul-de-sac to mid urethra
- Place ring in posterior cul-de-sac
- Center knob under mid-urethra



Incontinence Dish Pessary

Uresta Kit

- 50% continued at 1yr
- Improved incontinence: 34%
- Dry: 31%

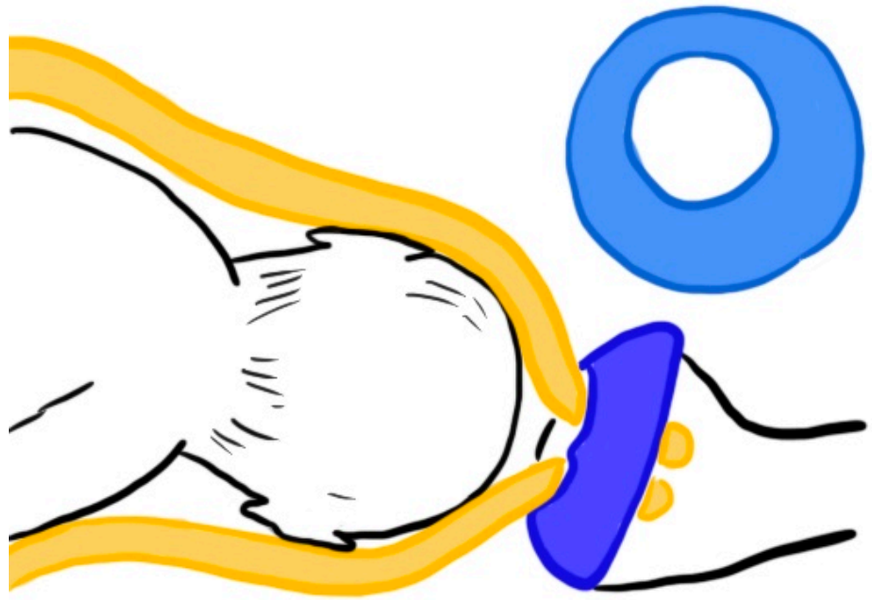


PESSARY FOR CERVICAL INCOMPETENCE

Pessary for Cervical Incompetence

Arabin pessary

- SOGC: use of pessary for prevention of PTB is **not recommended** until results of the trial below can be reproduced and safety is established
- Some benefit in preventing PTB in pts with cervical incompetence in pts with CL <2.5cm at 22w
  - ↓ PTB <34w from 27% to 6%
  - ↓ PPROM from 9% to 2%
  - ↓ composite neonatal outcome from 16% to 3% (mostly sepsis, RDS)
- Provides cervical length, does not allow cervix to dilate, holds cervix closed



PESSARY VISIT

General Principles

- Fit the largest size that can be comfortably worn
- If pt gains/loses weight, may need a different size of pessary
- Ask patient to let someone know they are using a pessary to avoid it being neglected (ex. If they have a stroke, mental health changes, hospitalization, etc.)

Type of pessary depends on:

- Stage and site of POP
- Hx hysterectomy
- Sexual activity
- Hormonal status

Pessary Fitting

- Urogyne Hx
- Lithotomy position, after emptied bladder and rectum
- Urogyne physical exam, urogenital atrophy
- Digital exam: assess vaginal length, width, pessary size, angle of pubic arch
    - Prolapse pessary- separate 2 fingers at the vault in the sagittal plane
        - Ex. 70 Shaatz (Falk)= 70mm width
    - Incontinence- measure distance from posterior cul-de-sac to mid urethra
- Place pessary
    - Apply local estrogen cream/lubricant to pessary's leading edge or introitus
    - Can attach dental floss to assist with removing difficult pessaries
    - Proper fit: cervix above pessary, barely slide finger between vaginal sidewall and lateral edges of pessary, not too tight against pubic symphysis
- Valsalva: dislodges an improperly fitted pessary
- Patient ambulates in clinic, squats, Valsalva, urinates
    - Proper fitted pessary: pt is not aware of presence of pessary
    - Able to walk, stand, cough, urinate without difficulty/discomfort
- +/- PVR to rule out obstruction

Local Estrogen

- Can be started before or at the same time as pessary fitting
- Effectiveness increases by 50% if prepare tissues first with local estrogen
- SOGC: common **but not essential** in postmenopausal women
    - Used to treat urogenital atrophy and prevent erosion/abrasions/ulcerations/granulation tissue → thickens vaginal mucosa to prepare for pessary insertion
- Vaginal cream is preferred

Hormonal:

- **Creams**- cheaper, more difficult to apply, adverse effects (itching, burning, spotting)
    - Premarin
    - Estragyn
    - Estriol cream
- **Pellet**- more expensive, fewer side effects
    - Vagifem (Estradiol vaginal tablet)

Follow-Up

- **SOGC: follow-up in 2-4 weeks after initial placement**
  - Assess satisfaction, whether another size/type is needed
- Most patients are able to self-manage at home
- Follow-up is important to avoid complications of neglected pessary

Pessary changes in office:

- If patient is unable/unwilling to do pessary changes at home
- Often for Gellhorn, cube, and donut pessaries
- Frequency
  - **SOGC: q3m**
    - **Cube pessary: <3m**
  - **SOGC: q6-12m if able to self-care**

Pessary changes at home:

- Remove pessary, wash with water or mild soapy water, replace
  - Can remove at night, replace in AM
- Frequency: every night to once per week
  - **SOGC: once per week**
  - **SOGC: cube pessary q few days to q few weeks**
- F/U in office q1yr

Pessary Change

History:

- Last pessary change
- Pelvic pain, vaginal bleeding, foul odour, vaginal discharge
- Recent weight changes

O/E:

- Remove pessary
- Wash pessary with plain soap and water
    - Use small cotton swab or cytobrush to clean the holes in Gellhorn and Shaatz pessaries
- **Speculum exam to examine vaginal epithelium:** erosions, abrasions, ulcerations, granulation tissue
    - Inspect posterior and lateral fornices of vagina → use large cotton swab(s) to move cervix side to side and push cervix and sidewalls apart
- Replace pessary, use lubricant/local estrogen
    - Can attach a string of dental floss to pessary to pull it out

PESSARY TROUBLESHOOTING

Pessary Complications

- Uncommon
  - Hanson et al. 2006: 88.5% had no complications
  - Contradicting Bai et al. 2005: 73% experience complications
- Usually minor
  - 70% of patients are satisfied with pessary and want to continue to use
- Major complications are rare!
  - 91% due to neglected pessary

Complications:

- **Vaginal discharge (most common)**
  - Physiologic
  - Bacterial vaginosis
  - Candidiasis
- Erosion (8.9%)
- Vaginal infection (2.5%)
- Pelvic pain
- Vaginal bleeding
- Foul odour
- Abrasions, ulcerations, granulation tissue
- Fistula (rare)- vesicovaginal, bowel
- Incarcerated pessary (rare)

Other issues:

- Pessary falls out
- Latent incontinence

Vaginal Bleeding

- Sign that pessary is irritating vaginal mucosa
  - Early sign of erosion, abrasion, ulceration, granulation tissue
- Endometrial biopsy if bleeding persists
- Ulcer biopsy if bleeding persists
  - **Consider vaginal CA in non-healing ulcer!!!**

Erosion

- 8.9% (2-9%)
- Pessary applies local pressure → focal devascularization → erosion

Clinical Presentation:

- Vaginal bleeding
- Foul odour, especially when changing pessary
  - If detect foul odour, perform speculum exam and move cervix side to side to examine vaginal walls
- Brown vaginal discharge
- Pelvic pain

Erosion

- Management
  - Remove pessary for 2-4 weeks until the area heals
  - +/- local estrogen (tablet/cream) (may resolve without)
  - Change pessary type or size to alleviate pressure points
- If persists
  - More frequent visits
  - Change pessary type/size
  - Biopsy ulcer +/- endometrial biopsy

Complications

• Neglected erosion can develop into
  • Ulcer
  • Fistula

Erosion Into Adjacent Organs

- VERY rare
    - Due to years of neglect
- Can erode into adjacent organs
  (ex. Bladder, rectum)

Pessary Ulcers

- Same appearance as prolapse ulcers
- Management
  - Remove pessary for 2-4 weeks until the area heals
  - +/- local estrogen (tablet/cream) (may resolve without)
  - Change pessary type or size to alleviate pressure points

Vaginal CA

- SOGC: vaginal CA is rarely associated with neglected pessary
- Consider if non-healing ulcer → biopsy ulcer!

Granulation Tissue

- Due to neglected pessary
- Management
  - Remove pessary for 2-4 weeks until the area heals
    - OR Change pessary type or size to alleviate pressure points
  - +/- local estrogen (tablet/cream) (may resolve without)

Vaginal Discharge and Odour

- Most common complaint
- Pessary traps vaginal secretions, obstructs normal vaginal fluid drainage
- Due to
    - Physiologic: pessary rubbing against vaginal walls
    - Bacterial vaginosis → malodorous discharge
    - Candidiasis

Bacterial Vaginosis

- Increased rates of BV
  - 32% in pessary users vs 10% in pessary non-users
- Local estrogen has no protective effect

Vaginal Discharge and Odour

- Reassure that discharge is physiological if not BV or Candidiasis
- Remove pessary more frequently (at night), remove overnight, wash, reinsert the next day
- Douche with warm water
- **Timo-San vaginal gel (oxyquinoline sulfate gel) 1-2 times per week**
    - Helps restore and maintain normal vaginal acidity, decrease odour-producing bacteria
- **Replens**
- **BV: metronidazole (PO or PV)**
- **Candidiasis:** antifungal
- Keep pessary removed during treatment
    - No evidence that this makes a difference

Pessary Falls Out

- Patient to bring current pessary to the appointment
- Change size or type of pessary
- If ring falls out or does not relieve prolapse → switch to stiffer pessary (Gellhorn, Shaatz, cube)
- Avoid straining and contipation

Pelvic Pain

- Not normal
- Pessary size is too large, may be pressing tightly against pubic symphysis → change size or type of pessary

Latent Incontinence

- Patient develops incontinence after being fitted with a prolapse pessary
- Management
    - Use incontinence pessary instead of prolapse pessary

Rectovaginal Fistula

- VERY rare with proper use
- After years of neglect

PESSARY CARE

Pessary Care

- There are no clear guidelines for pessary care
- Give pt instructions for removal and self-care

Intercourse with Pessary

- Can be sexually active with
  - Ring
  - Shaatz
- Need to remove for intercourse
  - Cube
  - Donut
  - Gellhorn

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