Vaginal & Vulvar Disorders

Shannon Voogt, MD

Associate Professor of Family & Community Medicine

University of Kentucky

Faculty Disclosure

- None

Educational Need/Practice Gap

Gap = Appropriately diagnose and manage vaginal and vulvar disorders without referral

Need = Discomfort/lack of experience with these disorders or with microscopy

Objectives

Upon completion of this educational activity, you will be able to:

- Describe the diagnosis and treatment of the most common causes of vulvar/vaginal
  - Discharge/vaginitis
  - Itching
  - Pain
- Perform a wet prep/KOH swab
- State the steps of a vulvar punch biopsy

Expected Outcome

- What is the desired change/result in practice resulting from this educational intervention?
- Increased comfort and confidence in managing vaginal and vulvar disorders in primary care

Case 1 - discharge

A 27-year-old patient comes to the clinic with concerns of 2 weeks of vaginal discharge and mild itching. She has never had this before. Last menstrual period was 10 days ago lasting 5 days, and the itching and irritation started prior to that and have continued. She has 4 lifetime male sexual partners, including a new partner 3 months ago. She uses condoms intermittently. She was treated for Chlamydia last year.

What is your next step?

Obtain urine gonorrhea, chlamydia, and treat empirically for yeast vaginitis

0%

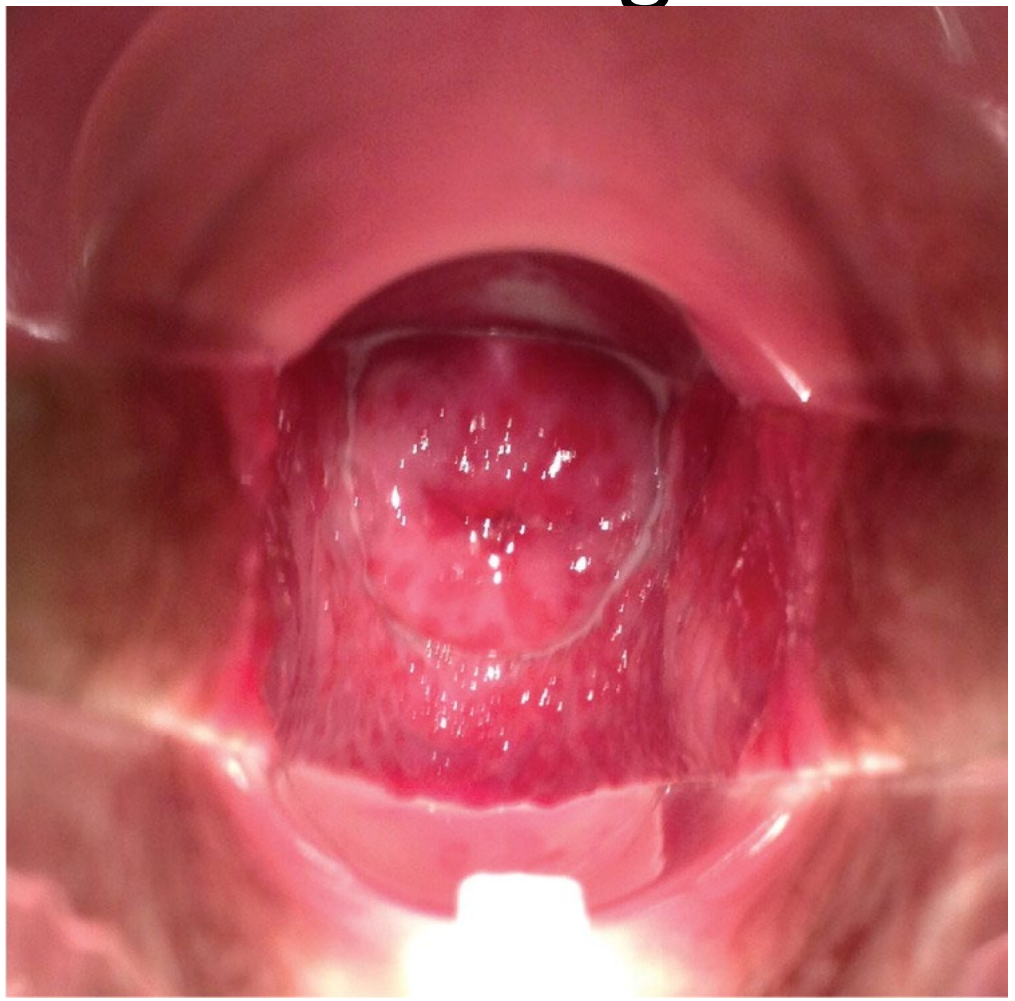
Obtain vaginal gram stain and culture

0%

Perform a physical exam

0%

Case 1 - discharge



Her vital signs are normal.

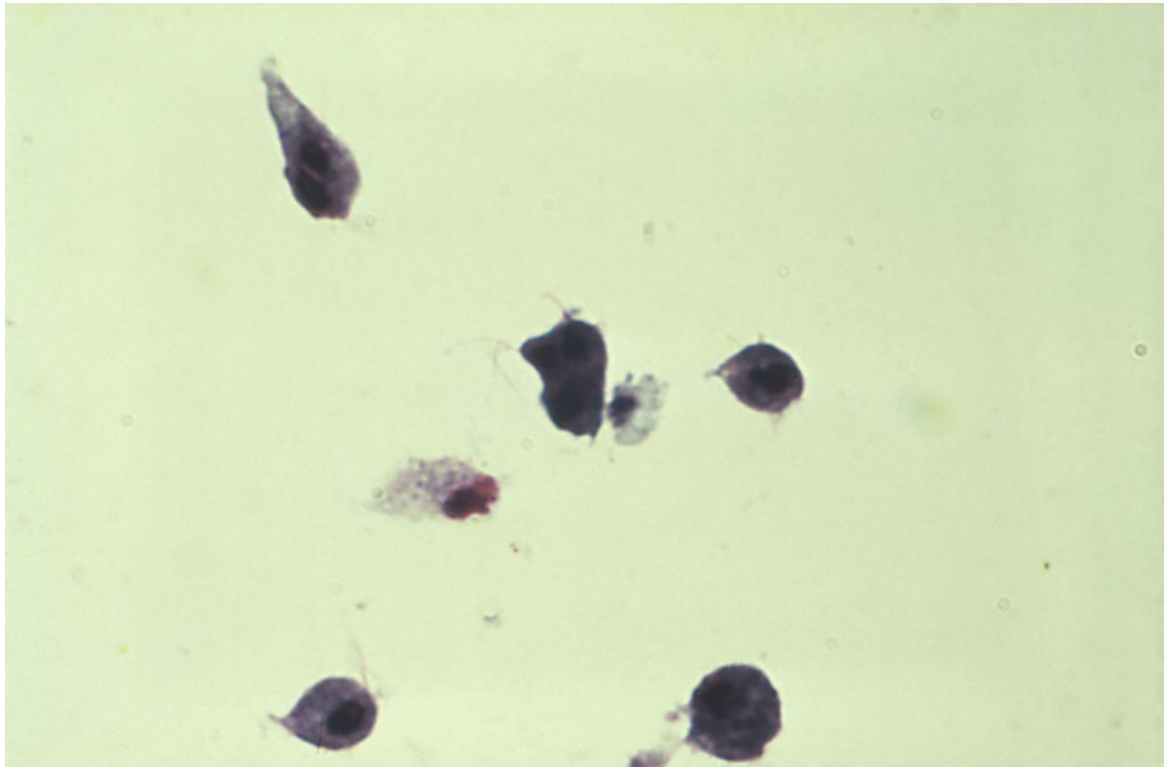
No abdominal pain.

Her exam demonstrates copious foul-smelling discharge. Speculum exam is pictured.
She has no cervical motion tenderness.

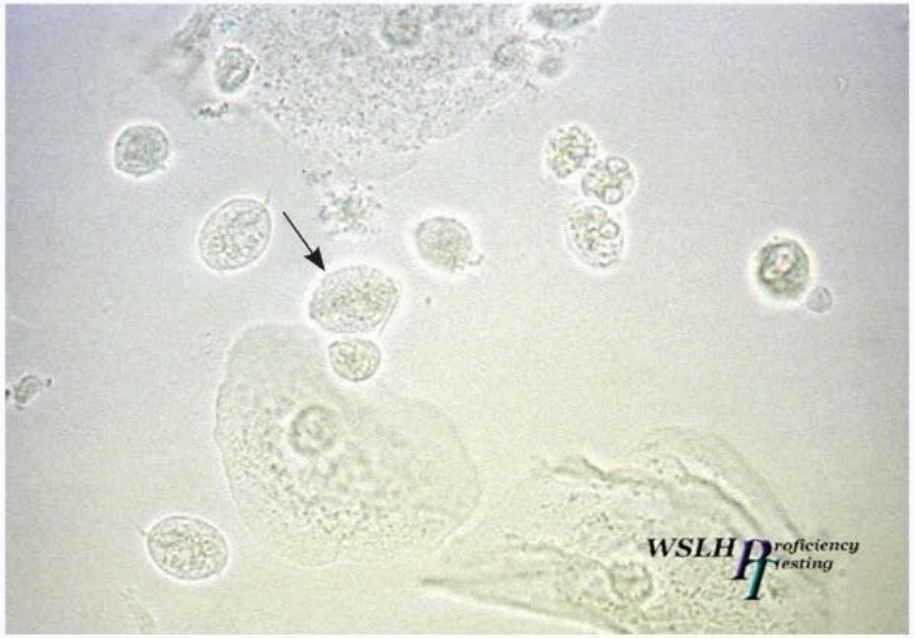
What is your next step?

A. Obtain wet prep/KOH
B. Obtain trichomonas PCR
C. Obtain Gonorrhea/Chlamydia PCR
D. All of the above

Wet prep pictured



What is your management?



Fluconazole 150 mg daily 0%

Azithromycin 1000 mg once 0%

Ceftriaxone 1 gram IM 0%

Metronidazole 500 mg twice daily 0%

Clindamycin 500 mg four times daily 0%

Trichomonas

- Prevalence rates 2% and equal among young or older women
- Causes vulvar pruritus, burning, profuse discharge, rancid odor, and post-coital bleeding
- Can also be asymptomatic (80%)
- Diagnosis is with NAAT swab (vaginal, some labs have urine)
- Treatment: Metronidazole 500 mg BID x 7 days
- Treat EVEN if asymptomatic or if on pap/UA/etc.
- Treat partners
- Test of cure: 3 months

Case 2 – discharge

45-year-old comes to clinic out of concern for increased vaginal discharge and odor. There is mild itching and an odor that is worse after intercourse. Her last menstrual period was 2 weeks ago. She has one sexual partner. Her symptoms are similar to a yeast infection she had in the past. She recently took antibiotics due to a sinus infection. She has a Paragard for contraception.

What is your next step?

Treat empirically with fluconazole 0%

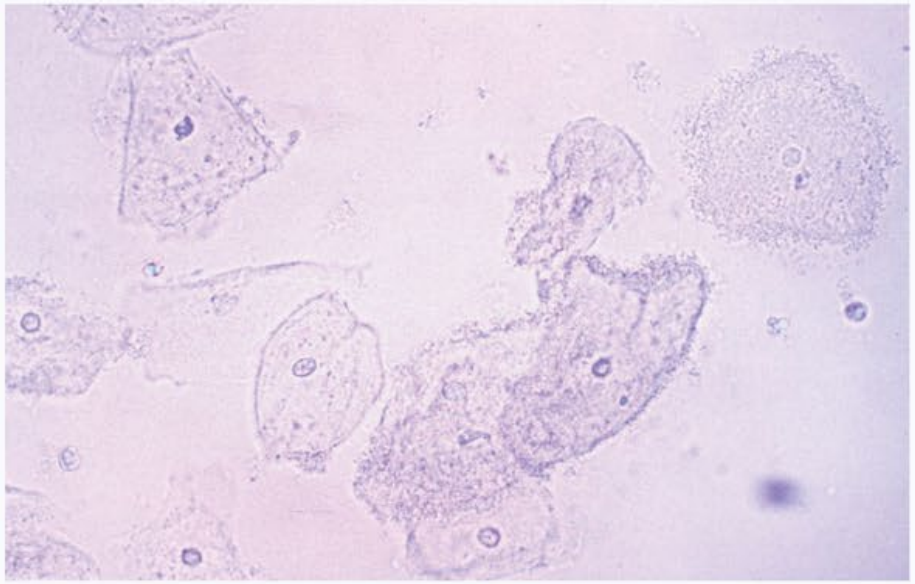
Treat empirically with metronidazole 0%

Obtain urine gonorrhea/chlamydia 0%

Perform wet prep/KOH 0%

Perform vaginal gram stain/culture 0%

Wet prep: What is your diagnosis and management?



Fluconazole 150 mg daily 0%

Azithromycin 1000 mg once 0%

Ceftriaxone 1 gram IM 0%

Metronidazole 500 mg twice daily 0%

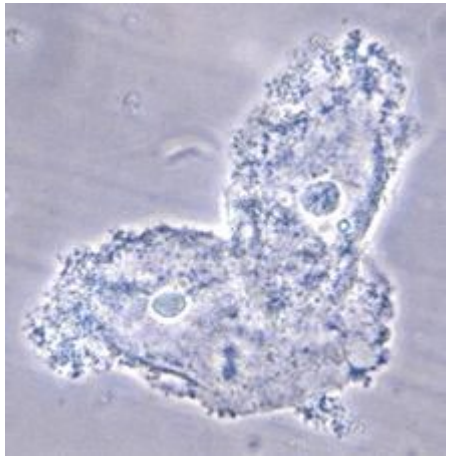
Clindamycin 500 mg four times daily 0%

Bacterial vaginosis

- “Dysbiosis”
- Loss of lactobacilli and increase in facultative and anaerobic bacteria (*Gardnerella vaginalis)*
- Fishy odor, thin, gray-white discharge
- Increases risk of acquiring STI’s
- Increased in copper IUD
- Diagnosis is by Amsel Clinical Criteria or DNA probe for *G. vaginalis*
- Pap smears do NOT reliably diagnose

BV – Amsel Criteria

- Need at least 3:
  - Homogenous, thin, white or gray discharge coating vaginal walls
  - Presence of at least 20% clue cells on wet mount
  - Vaginal fluid pH >4.5
  - Positive whiff test (odor after addition of KOH to discharge)



BV - treatment

- Metronidazole 500 mg BID x 7 days OR
- Metronidazole gel 0.75%, 5 grams intravaginal daily x 5 days OR
- Clindamycin cream 2%, 5 grams intravaginal x 7 days
- Alcohol is OK with metronidazole
- Probiotics may prevent recurrent infections and may offer some treatment benefit
- Recurrent – use vaginal Metronidazole twice a week for 3+ months, also some use boric acid vaginally daily x 3 weeks and then after intercourse, or Metronidazole 2 grams monthly

Case 3: Chronic itching/discharge

A 35-year-old comes in with recurrent vaginal itching and discharge for the last year. She reports her symptoms originally began with itching, burning, and white discharge. She was treated with fluconazole and her symptoms resolved for 2-3 weeks, then returned. She then treated again with two doses, and her symptoms abated for about a month or two. Then she was treated with Metronidazole with a little improvement. She comes in today complaining of continued itching and discharge.

She has a history of diabetes with last A1C of 8.5%. She takes Metformin, Glipizide, and Empagliflozin. She has no sexual partners.

What is your next step?

Treat empirically with another course of fluconazole

0%

Consider stopping empagliflozin

0%

Treat with weekly fluconazole for 6 months

0%

Perform a wet prep and fungal culture

0%

All of the above

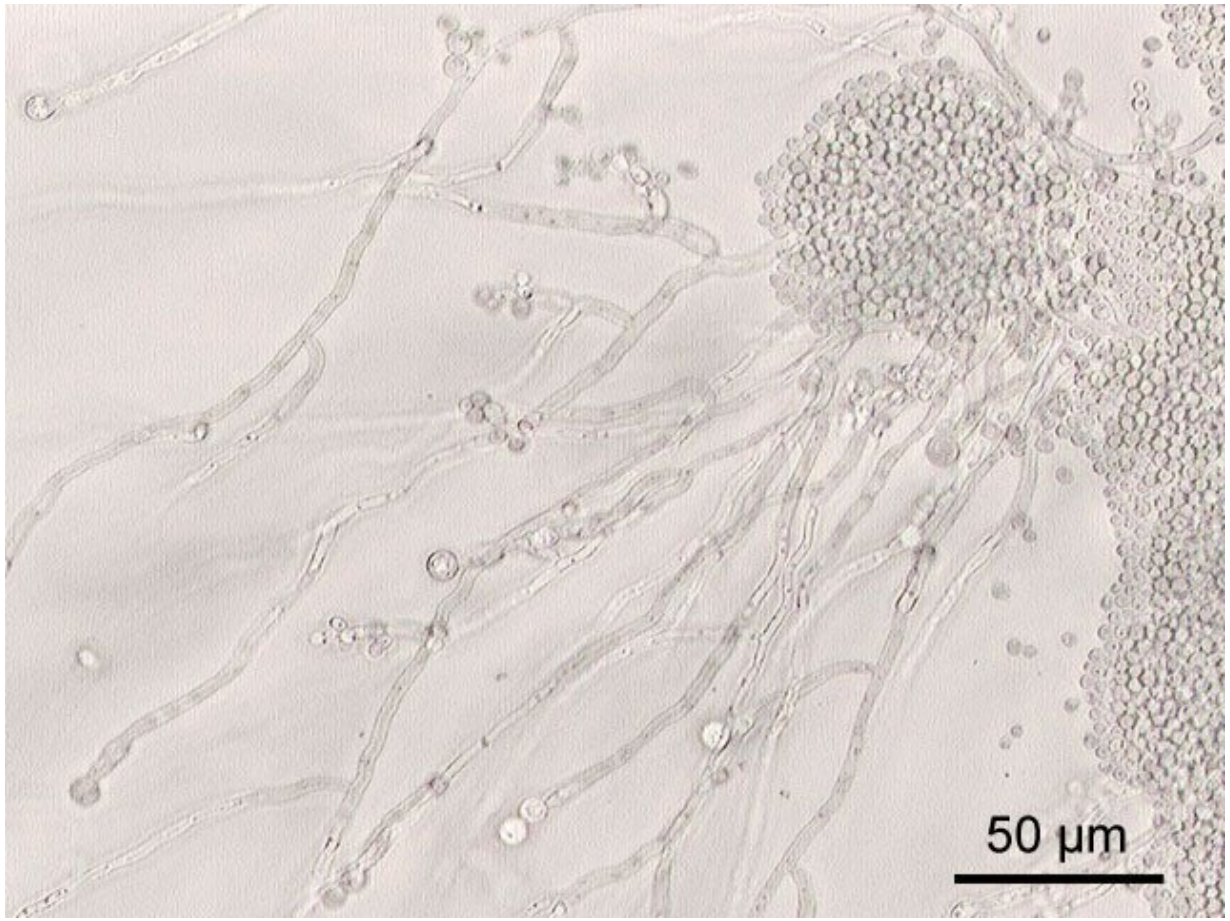
0%

On exam, there is irritation and erythema and scant white discharge of the vaginal canal. KOH smear is pictured: What is your diagnosis?

Yeast vaginitis 0%

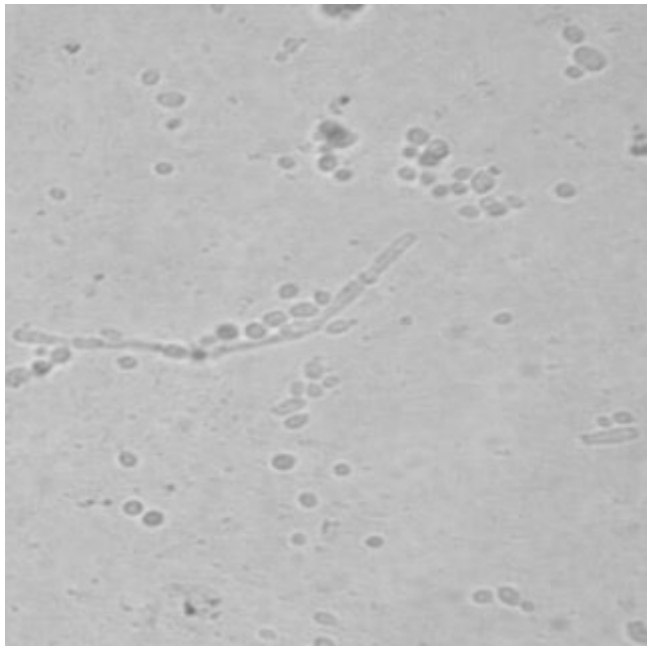
Bacterial vaginosis 0%

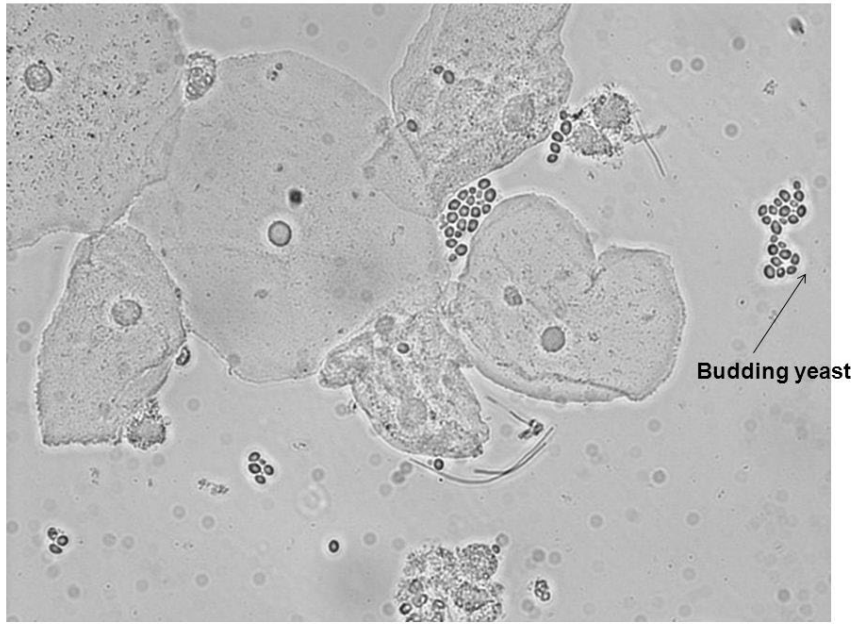
Trichomoniasis 0%



Candida vulvovaginitis

- Most are caused by *C. albicans*
- Discharge (thick, white), dysuria, dyspareunia
- Wet prep/KOH: Pseudohyphae, budding yeast
- Recurrent = 3+ per year separate infections





Candida vulvovaginitis treatment

- Treat only if symptomatic
- Topical antifungal (clotrimazole, miconazole, etc) OR Fluconazole 150 mg single dose
- Recurrent: Treat for topical or oral for 10-14 days followed by fluconazole 150 mg weekly x 6 months
- Pregnancy: Topical azole x 7 days

- *Probiotics improve long-term cure rates

Vulvovaginitis

- Pruritus, erythema and/or irritation, usually with discharge
- The most common Gyn diagnosis in primary care
- Top 3 causes are infectious:
  - BV 50%
  - Candida 20%
  - Trich 20%
- The remaining causes are atrophic, irritant, or inflammatory
- Also consider cervicitis (discharge coming from above)

Wet Prep and KOH Smear

https://vulvovaginaldisorders.org/microscopy/principles-of-vaginal-microscopy-ph-and-koh-testing/

A common case

A 65-year-old woman presents to the office with 6 months of vaginal discomfort, itching, and slight discharge. She has been to urgent care every 2 weeks for this issue and has been given multiple courses of antibiotics and fluconazole with no improvement or only brief improvement. She has occasional urinary urgency. UA is negative.

What is your next step?

Perform repeat course of fluconazole

0%

Obtain vaginal gram stain and culture

0%

Perform a gynecologic exam

0%

Refer to gynecology

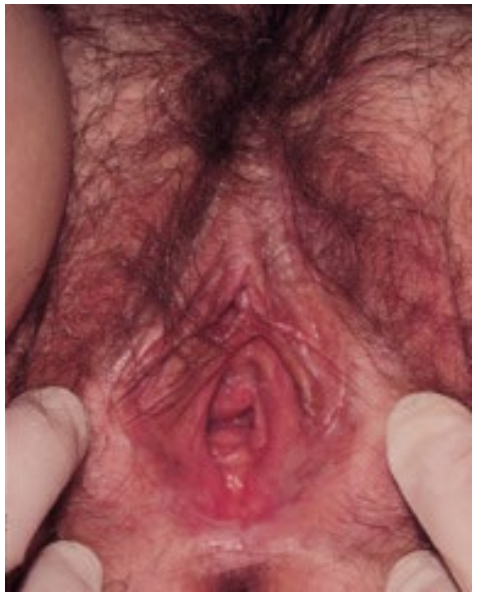
0%

On exam, the patient is noted to have a small vaginal vault and significant discomfort on exam. Speculum exam is shown below. What is your treatment?

- Fluconazole 0%
- Metronidazole 0%
- Clindamycin cream 0%
- Estrogen cream 0%
- Vaginal moisturizers 0%

GSM (atrophic vaginitis)

- Occurs post-menopausal and any time estrogen is suppressed (Tamoxifen therapy, breastfeeding)
- Thin, pale mucosa, loss of rugae, introital narrowing, urethral caruncle, resorption of labia minora
- Treat with vaginal moisturizers weekly, lubricants during intercourse, vaginal estrogen (SOR B)
- Can also use intravaginal prasterone which is an androgen, or ospemifene (SERM)



Vaginal estrogen

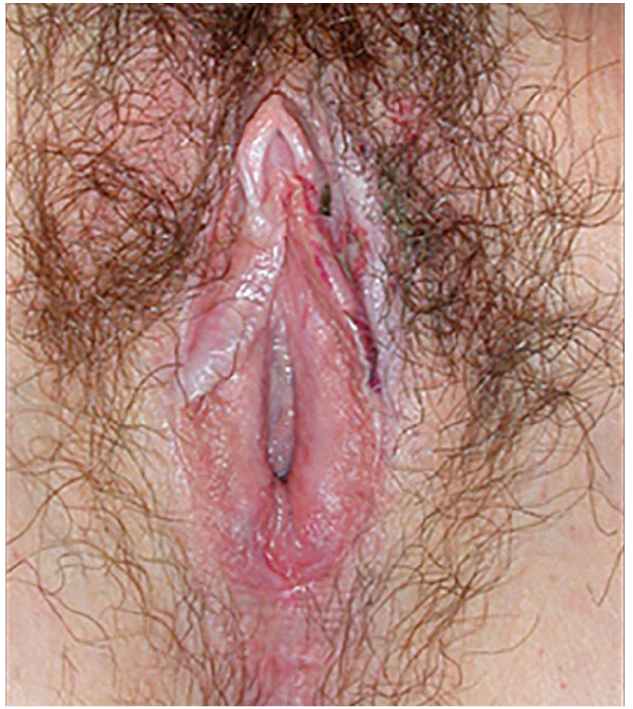
TABLE 1

Vaginal Estrogen Preparations and Recommended Dosing

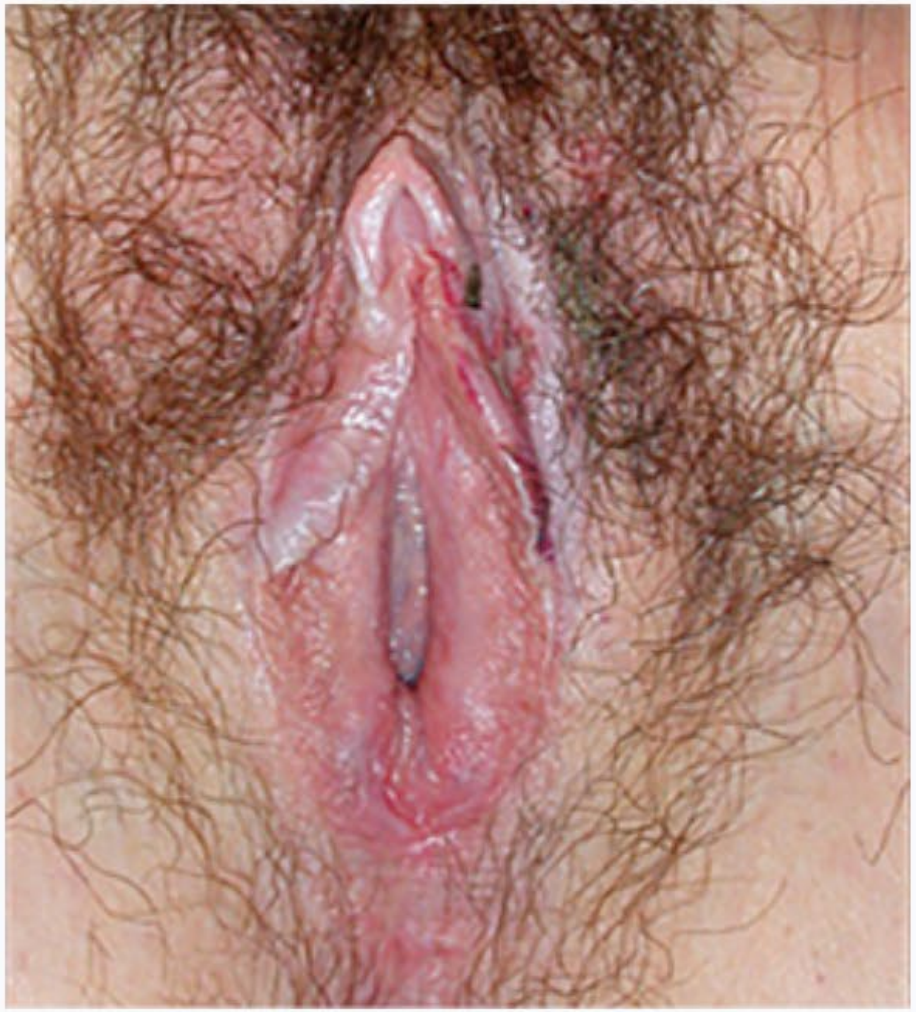
Preparation	Common formulations	Dosing
Vaginal creams		
Conjugated estrogen (Premarin)	0.625 mg per 1 g of cream	Apply 0.5 to 2 g of cream intravaginally once per day for 21 days, then stop for seven days or apply 0.5 g intravaginally twice per week (generally start with 0.5-g dose)
Estradiol (Estrace)	100 mcg per 1 g of cream	Apply 0.5 to 4 g of cream intravaginally once per day for two weeks, then reduce to 0.5 g twice per week
Vaginal tablet		
Estradiol (Imvexxy, Vagifem, Yuvafem)	Vagifem and Yuvafem: 10 mcg per tablet Imvexxy: 4 or 10 mcg per tablet	Insert tablet into vagina once per day for two weeks, then reduce to twice per week
Vaginal ring		
Estradiol (Estring)	2-mg ring, released as 7.5 mcg per day over 90 days	Insert ring into vagina; replace every 90 days

I can’t stop itching!

A 55-year-old woman presents with chronic vaginal and vulvar itching. She states it is very difficult to control the scratching. She has had multiple courses of fluconazole without improvement. Exam shows the following: Irritated, with white discoloration and thinning of labia, fusing of labia minora to majora.



What is your next step?



Treatment with vaginal estrogen 0%

Treatment with vaginal clindamycin 0%

Obtain punch biopsy 0%

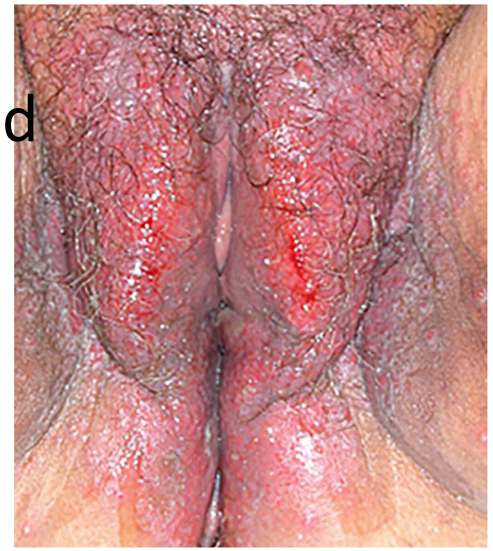
Swab for wet prep/KOH 0%

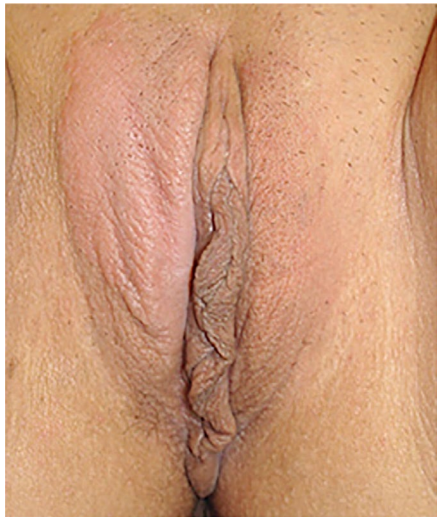
Lichen sclerosus

- Chronic inflammatory dermatitis - VERY itchy
- Epithelial thinning, inflammation, thin white plaques in a “figure 8” pattern, loss of vulvar architecture
- Treat with high-potency topical steroid (Clobetasol 0.05%) twice daily until regression (1-2 months), then use 1-2 times per week
- Biopsy worst area at diagnosis and then clinically examine every 6 months
- Monitor for SCC development

The other lichens

- Lichen planus
- T-cell mediated autoimmune
- Bright red patches with hyperkeratotic border
- Treat with high potency steroid ointment twice a day, as well as intravaginal hydrocortisone suppositories
- Vagina can scar closed





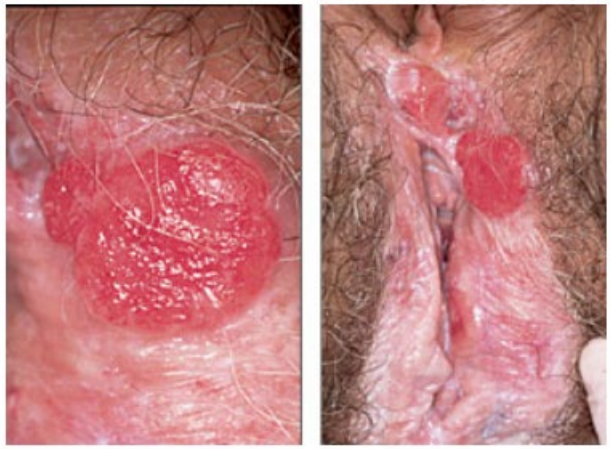
- Lichen simples
- Itch-scratch cycle
- A/w allergies/dermatitis
- Leathery skin changes
- Use moderate potency steroids and antihistamine or amitriptyline to control nighttime itching

Chronic itching and discomfort

- Differential includes genitourinary syndrome of menopause (GSM), infection, lichen sclerosis, lichen simplex chronicus, lichen planus, and vulvodynia
- Diagnosis is mostly clinical, although biopsy should be performed to prove/monitor lichen sclerosis and lichen planus

Vulvar cancer

- Can be preceded by HPV or non-HPV (often lichen sclerosis)
- Itch-scratch cycle can lead to squamous hyperplasia



Invasive squamous cell carcinoma of nonhairy vulvar skin in a 79-year-old woman. The lesion arises in an area of lichen sclerosus related to longstanding, untreated pruritus.

Am Fam Physician. 2002;66(7):1269-1275

Vulvar punch biopsy

- Lidocaine 1-2% with epinephrine
- Choose area of most concern and some normal skin next to it
- Use 3-4 mm punch
- Punch down to the subcutaneous fat to ensure the entire dermis biopsied
- Remove with toothed pick-up and iris scissors
- Send in formalin
- Hemostasis with silver nitrate, drysol, or pressure. Can use an absorbable suture if desired
- The biggest mistake you can make is NOT doing a biopsy when you have a suspicion

Lots of pain

- A 25-year-old patient with type 1 diabetes presents to the hospital in DKA. She complains of severe vaginal pain. The ER provider tells you she has “white plaques” on her perineum and so has started fluconazole. When you see her the next day, she is in so much pain she is writhing in bed and requiring morphine.
- She has a new sexual partner in the last 1-2 months, does not use protection. She had a normal pap smear 2 years ago. Has never had an STI. LMP was 3 weeks ago.
- Her exam shows diffuse erythema on the perineum with diffuse vesicles and pustules.

What is the treatment?

Continue fluconazole

0%

Start Vancomycin

0%

Start Valacyclovir IV

0%

Start Acyclovir oral

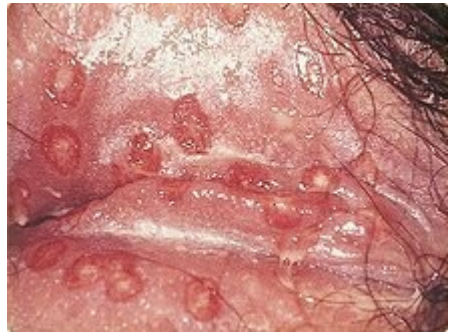
0%

Await results of swabs before beginning testing

0%

Genital herpes

- Primary herpes can be severe, may need IV therapy
- Confirm with PCR swab of lesion
- Do NOT order antibody testing unless clinical diagnosis is unclear and this would be helpful (not to be used for screening)
- Acyclovir 400 mg TID x 10 days OR
- Famciclovir 250 mg TID x 10 days
- OR Valacyclovir 1 gram BID x 10 days



Chronic pain

- A 22-year-old woman presents to the office with a 1-year history of vulvar burning, stinging, and irritation. She states she has significant issues having intercourse due to this and is fearful of pain. She denies rash, lesion, itching, or new soaps. She has some urinary urgency. She has a history of sexual trauma as a child.
- Exam shows no abnormalities, but patient has exquisite tenderness to slight touch of introitus. Cotton swab using light pressure elicits pain along both walls of the vagina.

What is your treatment?

Course of fluconazole

0%

Vaginal estrogen

0%

Pelvic floor therapy

0%

Diazepam as needed

0%

Vulvodynia

- Vulvodynia is vulvar pain lasting for more than 3 months without obvious etiology
- Most common cause of dyspareunia in pre-menopausal people
- Attributed to mucosal/nerve ending hypersensitivity and pain
- Treatment includes SSRIs, pelvic floor therapy/vaginal dilators, topical lidocaine (no evidence for use), acupuncture, possibly anticonvulsants
- Vesibulectomy may be required in severe cases

Other pain disorders

- Dyspareunia and vaginismus are now combined as “genitopelvic pain and penetration disorder”
- A lot of overlap with vulvodynia, but considered more of a muscular pain
- Treatments include pelvic floor PT, dilation, biofeedback

Important pearls

- Do not treat for BV without confirming Amsel criteria
- Probiotics are useful for both BV and candida – prevention and treatment
- Do an exam! (you never know what you will find)
- Do NOT perform vaginal gram stains and cultures (worthless)
- Consider alternative diagnoses in patients with chronic symptoms
- Do not be afraid to treat recurrent yeast or BV appropriately
- Offer pelvic floor therapy early to patients with genitopelvic pain
- Biopsy when lichen sclerosis or cancer is suspected

References

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