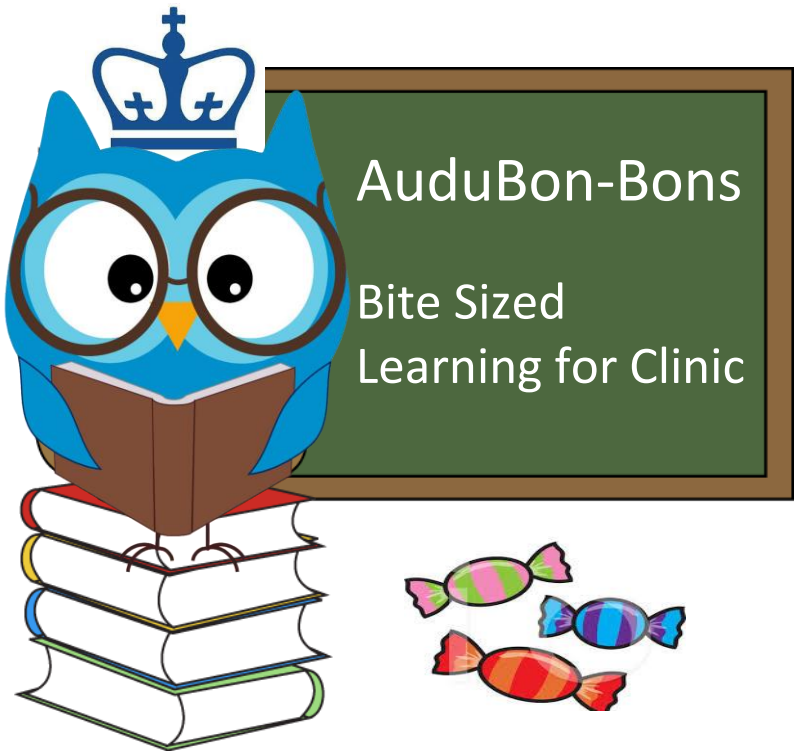
VULVOVAGINITIS



Week 63

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SDH and .phrase slides by Chloé Altchek, MS4

Reading Assignment:
ACOG Practice Bulletin #215
Vaginitis in Nonpregnant Patients

LEARNING OBJECTIVES

- To understand how to perform an evaluation for patients with symptoms of vaginitis
- To understand how to diagnose bacterial vaginosis, vulvovaginal candidiasis, and trichomoniasis
- To understand how to treat bacterial vaginosis, vulvovaginal candidiasis, and trichomoniasis

CASE VIGNETTE

- Ms. Pica Zon, a 37yo G3P3003 woman presents to clinic with vulvar redness, itching, and thick white discharge for the past week.

FOCUSED HISTORY

What elements of the patient's history are most relevant?

- **PMH:** HTN, HLD, T2DM
- **PSH:** CS x3
- **POBH:** Term CS x3
- **PGYNH:** **Regular menses Q28 days lasting 6 days. Denies history of STIs or abnormal paps. Up to date on pap. Last STI screening 5 years ago. Sexually active with mutually monogamous male partner for 10 years. Denies vulvar or vaginal issues prior to this week. Denies dyspareunia.**
- **MEDS:** Lisinopril, Simvastatin, Metformin
- **ALL:** NKDA
- **FH:** T2DM, CAD
- **SH:** Lives with husband and children. Denies tob, drug, etoh use. Denies IPV. Works as a teaching assistant. Accepts blood products.

PERTINENT PHYSICAL EXAM FINDINGS

What elements of the patient's physical exam are most relevant?

- **General:** Well appearing woman, VSS
- **Vulva:** **Erythematous** external female genitalia. No lesions
- **Vagina:** **Erythematous** mucosa. **Thick white discharge**
- **Cervix:** No lesions. No CMT
- **Uterus:** NT. Anteverted. Not enlarged
- **Adnexae:** NT. No masses palpable
- **Clinic Microscopy 10x: Branching and budding pseudohyphae with 10% potassium hydroxide, lactobacillus present**

CAUSES OF VULVOVAGINITIS

What are the most common causes of vulvovaginitis?

- **Bacterial vaginosis** 22-50%
- **Vulvovaginal candidiasis** 17-39%
- **Trichomoniasis** 4-35%
- Undiagnosed 7-72%

What are other etiologies of vulvovaginitis?

- Vulvar skin diseases, desquamative inflammatory vaginitis, genitourinary symptoms of menopause

EVALUATION OF VULVOVAGINITIS

What is the recommended initial evaluation for patients with symptoms of vulvovaginitis?

- Complete medical **history**
- Physical **examination** of the vulva and vagina
- **Clinical testing** of vaginal discharge
  - pH testing, KOH “whiff test,” and microscopy

BACTERIAL VAGINOSIS

Background:

- Most common cause of abnormal vaginal discharge in patients of reproductive age
- Not a true infectious or inflammatory state
  - Change in normal microbiome of the vagina with an overgrowth of facultative anerobic organisms and lack of lactobacilli
- Rarely occurs in patients who have not been sexually active

How do you treat bacterial vaginosis?

Condition	Recommended Treatment Regimens
Bacterial vaginosis	Metronidazole, 500 mg orally twice daily for 7 days* or Metronidazole gel 0.75%, one full applicator (5 g) intravaginally, once a day for 5 days* or Clindamycin cream 2%, one full applicator (5 g) intravaginally at bedtime for 7 days

How do you make the diagnosis of bacterial vaginosis?

Condition	Symptoms/Discharge	Examination Findings	pH Level	Microscopy/KOH Test Results	Diagnostic Tests
Bacterial vaginosis	Increased thin, watery, white-gray vaginal discharge often with fishy odor. Most are asymptomatic.	Thin, white-gray homogenous discharge	More than 4.5	Clue cells (more than 20%), no PMNs, a positive KOH "whiff" test result. Decreased or absent lactobacilli and increased cocci, and small curved rods	Recommended: • Amsel criteria • Gram stain with Nugent scoring Alternative: • FDA-approved commercial tests

Vaginitis in Nonpregnant Patients. ACOG Practice Bulletin No. 215. American College of Obstetricians and Gynecologists. Obstet Gynecol 2020;135:e1-17.

VULVOVAGINAL CANDIDIASIS

Background:

- Represents inflammation and infection of the vagina with *Candida* species
- Second most common cause of vaginitis
- 29-49% of females report at least one lifetime episode
- Uncommon in prepubescent and postmenopausal women

How do you make the diagnosis of vulvovaginal candidiasis?

Condition	Symptoms/Discharge	Examination Findings	pH Level	Microscopy/KOH Test Results	Diagnostic Tests
Vulvovaginal candidiasis	Normal-appearing discharge or thick, white vaginal discharge, pruritus, burning, dyspareunia and dysuria	Thick, white, curd-like vaginal discharge. In severe vulvovaginal candidiasis, erythema, edema, excoriations, and fissures may be present.	3.5–4.5	Branching pseudohyphae, budding pseudohyphae (10x), or spores (40x) with 10% potassium hydroxide. Mature squamous cells, rare PMNs, bacteria dominated by lactobacillus	Recommended: • Microscopy • Yeast culture Alternative: • FDA-approved commercial tests

How do you treat uncomplicated vulvovaginal candidiasis?

Condition	Recommended Treatment Regimens
Uncomplicated vulvovaginal candidiasis	**Over-the-counter intravaginal agents:** Clotrimazole 1% cream, 5 g intravaginally daily for 7–14 days or Clotrimazole 2% cream, 5 g intravaginally daily for 3 days or Miconazole 2% cream, 5 g intravaginally daily for 7 days or Miconazole 4% cream, 5 g intravaginally daily for 3 days or Miconazole, 100-mg vaginal suppository, one suppository daily for 7 days or Miconazole, 200-mg vaginal suppository, one suppository for 3 days or Miconazole, 1,200-mg vaginal suppository, one suppository for 1 day or Tioconazole 6.5% ointment, 5 g intravaginally in a single application **Prescription intravaginal agents:** Butoconazole 2% cream (single-dose bioadhesive product), 5 g intravaginally in a single application or Terconazole 0.4% cream, 5 g intravaginally daily for 7 days or Terconazole 0.8% cream, 5 g intravaginally daily for 3 days or Terconazole, 80-mg vaginal suppository, one suppository daily for 3 days **Oral agent:** Fluconazole, 150 mg orally in a single dose

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VULVOVAGINAL CANDIDIASIS

How do you classify uncomplicated versus complicated vulvovaginal candidiasis?

- **Uncomplicated** (presence of **ALL** the following):
  - Sporadic or infrequent episodes
  - Mild-to-moderate symptoms or findings
  - Immunocompetent patients
- **Complicated** (presence of **ANY** of the following):
  - Recurrent episodes (four or more per year)
  - Severe symptoms or findings
  - Non-*C albicans* candidiasis (suspected or proven)
  - Diabetes, immunocompromising conditions, debilitation, or immunosuppressive therapy

TRICHOMONIASIS

Background:

- Caused by an infection with the protozoan parasite *Trichomonas vaginalis*
- Most common non-viral STI in the USA
- 3-5 million cases annually
- Douching is modifiable risk factor
- Associated with PID, post-hysterectomy cuff cellulitis, HIV, and other STIs
- Because asymptomatic carriage can occur for prolonged periods of time, recent diagnosis not necessarily mean recent acquisition

How do you treat trichomoniasis?

Condition	Recommended Treatment Regimens
Trichomoniasis	Metronidazole, 500 mg orally twice a day for 7 days*

How do you make the diagnosis of trichomoniasis?

Condition	Symptoms/Discharge	Examination Findings	pH Level	Microscopy/KOH Test Results	Diagnostic Tests
Trichomoniasis	Yellow-to-green frothy vaginal discharge, abnormal vaginal odor, pruritus, irritation, and dysuria. More than half are asymptomatic.	Yellow, frothy vaginal discharge; vaginal or cervical-vaginal erythema with petechiae	More than 4.5	Motile trichomonads, abundant PMNs, bacteria with both bacillus and cocci, variable KOH "whiff" test results	Recommended: • NAAT Alternative: • FDA-approved commercial tests • Culture

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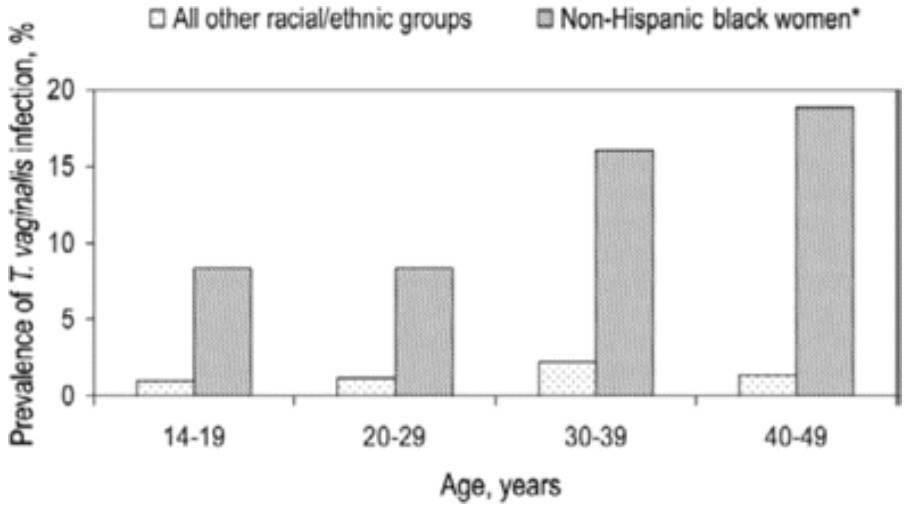
SOCIAL DETERMINANTS OF HEALTH

DISPARITIES IN TRICHOMONIASIS RATES AND ASSOCIATED RISKS

Disproportionately **high rates of Black women have *T. vaginalis (TV)* infection** (13.3%), compared with White women (1.3%) and Mexican American women (1.8%)

T vaginalis increases both transmission and acquisition of HIV among women, and successful treatment for TV can reduce HIV genital shedding

Disparities are not associated with individual or population-level behavioral differences; rather they result from systemic, societal, and cultural barriers to STD diagnoses, treatment and preventive services



Prevalence of *T. vaginalis* among black women, compared with women from all other racial/ethnic groups, by age group

Control of *T vaginalis* may represent an important means of slowing HIV transmission, particularly among African Americans, in whom higher rates have been observed.

EPIC .PHRASE

BBonTVaginalis

Description: Trichomoniasis diagnosis/treatment and counseling

Exam and symptoms consistent with trichomoniasis, including ***[yellow to green frothy vaginal discharge, abnormal vaginal odor, pruritis, irritation, dysuria, vaginal/cervical-vaginal erythema with petechiae].
***Labs/microscopy/KOH/NAAT/culture confirm diagnosis.

Pt counseled that trichomoniasis is a sexually transmitted disease. Potential complications include pelvic inflammatory disease, increased risk of getting or spreading HIV, and preterm delivery in those who are pregnant. Treatment plan was discussed with the patient including metronidazole 500mg BID for 7 days for the patient ***[and partner]. Pt was advised that in order to avoid reinfection, all sex partners should get treated with antibiotics at the same time and the patient and partners should abstain from sex until pharmacological treatment has been completed and they have no symptoms. Pt counseled that latex condoms may lower the risk of getting trichomoniasis. Pt also advised to avoid the consumption of alcohol while taking metronidazole. All questions were answered.

CODING AND BILLING

- **ICD-10 Code**
  - N77.1
    - Vaginitis, vulvitis, and vulvovaginitis in diseases classified elsewhere
  - B37.3
    - Candidal vulvovaginitis
  - A59.9
    - Trichomoniasis, unspecified
  - **CPT Code**
    - 99214
      - Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three key components:
        - A detailed history; a detailed examination; medical decision making of moderate complexity.
        - Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs.
        - Usually, the presenting problem(s) are of moderate to high severity.
        - Typically, 25 minutes are spent face-to-face with the patient and/or family.

EVIDENCE

1. Diagnosis and management of vulvar skin disorders. ACOG Practice Bulletin No. 93. American College of Obstetricians and Gynecologists. Obstet Gynecol 2008;111:1243–53.
2. Vaginitis in nonpregnant patients. ACOG Practice Bulletin No. 215. American College of Obstetricians and Gynecologists. Obstet Gynecol 2020;135:e1-17.
3. Madeline Sutton, Maya Sternberg, Emilia H. Koumans, Geraldine McQuillan, Stuart Berman, Lauri Markowitz, The Prevalence of *Trichomonas vaginalis* Infection among Reproductive-Age Women in the United States, 2001–2004, *Clinical Infectious Diseases*, Volume 45, Issue 10, 15 November 2007, Pages 1319–1326, https://doi.org/10.1086/522532
4. Kissinger P, Adamski A. Trichomoniasis and HIV interactions: a review. *Sex Transm Infect*. 2013 Sep. 89 (6):426-33.
5. Centers for Disease Control and Prevention. Sexually Transmitted Diseases Treatment Guidelines, 2015. MMWR, 64(RR-3) (2015).