

# Lecture 7: Candidiasis and Trichomoniasis

## . Candidiasis

### Introduction to Candida

- Caused by **yeasts of the Candida genus**, most commonly **Candida albicans**.
  - Morphological forms:
    - **Budding yeast**: active candida infection
    - **Pseudohyphae**: elongated budding yeasts with constrictions. seen in candida vaginitis
    - **Hyphae**: filamentous with *septae in serum* (not constrictions).
  - **Normal commensal** in:
    - Skin
    - Mucosal surfaces
    - GI and GU tracts
  - Pathogenic when:
    - Local flora disrupted
    - Mucosal damage
    - Immunity is weakened
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## . Vulvovaginal Candidiasis (VVC)

### Pathophysiology

- Candida exists in **balance with gram + Lactobacillus spp.** in vaginal flora.
- Overgrowth occurs due to:
  - **Immune suppression**
  - **Microbiome imbalance**
- Infection arises when **pseudohyphae** invade vaginal epithelium → inflammation.

## Risk Factors

- **Antibiotics , High estrogen levels:** pregnancy, hormone therapy ,**Diabetes mellitus** ,**Immunosuppression**

## Clinical Features

- **Pruritus** (itching), can cause scratching.
- **Discharge:** typically **thick, white, "cottage cheese"-like**; sometimes thin/watery.
- **Erythema**, edema → **dysuria, dyspareunia** (painful intercourse).**odorless**

## Diagnosis and Tests

### ✓ Clinical Diagnosis:

- **Thick white discharge**
- **Vulvar/vaginal erythema**

### ✓ Tests:

- **KOH Wet Mount:**

Shows: **budding yeast, pseudohyphae, and hyphae.**

- **Vaginal pH:** stays **normal (4.0 - 4.5)**. see pseudohyphae
- **Culture:** not always diagnostic (Candida is normal flora).if + not = found

### ✓ Germ Tube Test:

- **Incubation in serum at 37°C for 2–3 hrs**
- **+ve test = C. albicans** (produces **true hyphae** without constrictions)
- Differentiates from **C. tropicalis** and **C. glabrata**

## Treatment of VVC no need to treat partners

- **Fluconazole (oral)**

## . Trichomoniasis

### Cause

- **Trichomonas vaginalis: motile, flagellated protozoan**
- Sexually transmitted
- Infects **squamous epithelium**: vagina, urethra, cervix, prostate

### Risk Factors

- Unprotected sex ,Multiple partners ,History of STIs

### Women - Clinical Presentation

- **Frothy, greenish-yellow, malodorous discharge**
- Pruritus
- Dysuria, frequency
- Dyspareunia
- Postcoital bleeding from "**strawberry cervix**" (capillary hemorrhages)

### Diagnosis of Trichomoniasis

#### ✓ Tests

- **1-NAAT (Nucleic Acid Amplification Test):**
  - **Gold standard**
  - Detects DNA/RNA of T. vaginalis (high sensitivity + specificity)
- **2-Wet mount microscopy:**
  - **Flagellated, motile, pear-shaped trophozoites**
  - Sensitivity ~50–70%, not reliable alone → confirm with NAAT if negative

### Treatment of Trichomoniasis

➤ **Treat both patient and sexual partners, even if asymptomatic**

Women: **Metronidazole** 500mg orally - twice\day for 7days

Men: **Metronidazole** 2g orally – single dose

### Tests to Remember:

- **Candida:** KOH wet mount, vaginal pH, germ tube test
- **Trichomonas:** NAAT (gold standard), wet mount (flagellated trophozoites)

### Quick rev.

Feature	<i>Candida albicans</i>	<i>Trichomonas vaginalis</i>
<b>Organism type</b>	Yeast	Protozoan
<b>Morphology</b>	Budding yeast, pseudohyphae	Flagellated trophozoites
<b>Discharge</b>	Thick white "cottage cheese" odorless	Frothy, greenish-yellow Bad odor
<b>pH</b>	Normal (4.0–4.5)	↑ (>4.5)
<b>Diagnosis</b>	KOH prep, germ tube test	NAAT, wet mount
<b>Treatment</b>	Fluconazole	Metronidazole