VULVOVAGINAL CANDIDIASIS (VVC)

DEFINITION

Vulvar and/or intravaginal yeast infection most often caused by *Candida albicans*.

POTENTIAL CAUSES

*Candida albicans* is responsible for 90% of vulvovaginal candidiasis (yeast infections).

PREDISPOSING RISK FACTORS

- Pregnancy
- Antibiotic use
- Corticosteroid use
- Immunocompromised
- Diabetes
- HIV infection

TYPICAL FINDINGS

Sexual Health History

- May or may not have had sexual contact
- Client stated abnormal changes vaginal discharge
- Dyspareunia (usually at the vaginal introitus)
- Vulvar and/or intravaginal itch, irritation and/or burning
Physical Assessment

Offer sexually active women experiencing vulvar/vaginal symptoms (irritation/abnormal discharge) full STI screening which includes pelvic exam and cervical/vaginal swabs. Clinical signs of VVC may include:

- Erythema and edema of vulva and/or vagina
- Fissures, dryness or cracks to vulvar skin (e.g., labial folds)
- Vaginal discharge may appear white, clumpy, thick, or curdy
- Vaginal pH $\leq 4.5$

Diagnostic Tests

Vaginal wall swabs collected for:

- Depending on the agency lab kits and guidelines, the following diagnostic tests that may be used:
  - Vaginal smear on slides - sent to BC Public Health Microbiology Reference Laboratory (BC-PHMRL) - 2 slides for yeast, BV, *Trichomonas vaginalis* (*T. vaginalis*)
  - KOH wet mount (for yeast) and/or normal saline wet mount on slides - for BV and *T. vaginalis*, if onsite microscopy is available
  - Transport medium – for BV, yeast, and possibly *T. vaginalis*
  - *T. vaginalis* rapid antigen detection – only available at certain testing locations
- pH and KOH whiff test

Notes:

- If a client does not require or defers a pelvic examination, then a blind vaginal swab may be collected (by the client or the clinician).
- For more information on KOH whiff testing see: Safe Use of 10% Potassium Hydroxide in STI Screening located in the BCCDC Communicable Disease (CD) Manual Chapter 5: Sexually Transmitted Infections.

CLINICAL EVALUATION

The diagnosis of vulvovaginal candidiasis is made based on the health history and/or clinical findings.

- Positive lab results support a diagnosis for symptomatic clients. Because yeast can be a normal finding in vaginal flora, positive lab results for asymptomatic clients do not support diagnosis or treatment of VVC.
- Treatment may be offered based on clinical findings and/or physical assessment.
**Clinical Management for Vulvovaginal Symptoms**

**Client reported symptoms of vulvar and/or vaginal discharge, itch and/or irritation**

Sexual Health History & STI exam and diagnostic testing if indicated

On physical assessment, one of the following are identified:
- erythema and/or edema
- curdy/clumpy discharge

**YES**
- complete diagnostic tests as indicated
- if VVC is suspected, offer treatment

**NO**
- complete diagnostic tests as indicated
- wait for vaginal smear results

**Positive for Yeast:**
- diagnose VVC
- offer treatment

**Negative for Yeast, BV, or trichomoniasis:**
- if symptoms persist - refer to Physician or NP

**MANAGEMENT AND INTERVENTIONS**

**Goals of Treatment**
- Treat infection
- Prevent complications
TREATMENT OF CHOICE

Clients may purchase first choice treatments over-the-counter (OTC) and choose between the formulations in the treatment chart. Clients can refer to the package insert for proper application.

<table>
<thead>
<tr>
<th>Treatment for Vaginal Symptoms</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Choice</strong></td>
<td></td>
</tr>
<tr>
<td>Vaginal insert or oral treatment</td>
<td>1. Treat with 6 day vaginal insert regimen if client is concurrently receiving antibiotics.</td>
</tr>
<tr>
<td>Vaginal Insert:</td>
<td>2. Fluconazole should not be taken with grapefruit juice and is contraindicated in clients who have shown hypersensitivity to other azole drugs.</td>
</tr>
<tr>
<td>o clotrimazole (Canestan®) or miconazole (Monistat®) vaginal inserts or cream; insert as per package (for 3, 6 or 7 nights)</td>
<td>3. Fluconazole may be contraindicated when administered while the client is taking several types of medications.</td>
</tr>
<tr>
<td>OR</td>
<td>4. Miconazole may be contraindicated when taken with certain anticoagulants. Consult with a physician or NP for clients on anti-coagulant therapy.</td>
</tr>
<tr>
<td>Oral treatment:</td>
<td>5. Advise the client to read the medication package insert carefully prior to taking fluconazole and to consult with a pharmacist regarding medication reconciliation if they are taking other medications when purchasing fluconazole.</td>
</tr>
<tr>
<td><strong>Alternate Treatment</strong></td>
<td></td>
</tr>
<tr>
<td>Intravaginal capsules:</td>
<td>7. For clients who continue to experience symptoms of VVC after completion of first choice treatment (azole therapy), Boric Acid treatment intravaginally may be recommended. Treatment failure could be due to an infection with a non-albicans strain of yeast (e.g. Candida glabrata).</td>
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<tr>
<td>o boric acid 600 mg once per day for 14 days</td>
<td></td>
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</tbody>
</table>
### Treatment for External Symptoms

<table>
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<tr>
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<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Advise client to refer to medication package insert and to consult with pharmacist regarding medication reconciliation.</td>
</tr>
<tr>
<td></td>
<td>3. Miconazole may be contraindicated when taken with certain anticoagulants. Please consult with a physician or NP for clients on anti-coagulant therapy.</td>
</tr>
<tr>
<td></td>
<td>4. Advise client to continue with application of cream for at least 10 days even if symptoms begin to resolve earlier.</td>
</tr>
</tbody>
</table>

**Notes:**

- Clients who have experienced more than two VVC infections within 8 weeks should be referred to a physician or NP.
- There are mixed results regarding the benefit of oral probiotics in reducing recurrent vulvovaginal candidiasis and maintaining balanced vaginal flora. Although studies demonstrate the benefit of reducing episodes of bacterial vaginosis through ingestion of oral lactobacilli in yogurt, the same reduction in episodes of VVC is less apparent. However, some clients, especially those with recurrent VVC, may benefit from the oral ingestion live bacterial cultures such as those found in certain yogurts or in capsule form in addition to topical or oral antifungal treatment.

### PREGNANCY AND BREASTFEEDING

Refer to NP or physician.

### PARTNER COUNSELLING AND REFERRAL

Sexual partners do not require treatment unless they are experiencing symptoms.

### POTENTIAL COMPLICATIONS

- Recurrent VVC (4 or more episodes within one year)
- Severe VVC - extensive vulvar erythema, edema, excoriation or fissure formation
CLIENT EDUCATION

Counsel client:

- Sexual partners do not require treatment unless they are experiencing symptoms.
- Take all medication as directed.
- Regarding the side effects of medication.
- Oral antibiotics, corticosteroid use, HIV, and diabetes may cause yeast infections.
- Return if symptoms persist after treatment

CONSULTATION AND/OR REFERRAL

Consult physician or NP for the following:

- 4 or more episodes of VVC within one year – to access alternate treatment and/or rule out other potential infections/dermatological conditions.
- Clients have experienced more than two episodes of VVC within an 8 week time frame.
- severe VVC.
- pregnant or breastfeeding.

DOCUMENTATION

- VVC is not reportable.
- As per agency guidelines.
REFERENCES


