

after treatment for VVC should be evaluated clinically and tested. Unnecessary or unapproved use of over-the-counter preparations is common and can lead to a delay in treatment of other vulvovaginitis etiologies, which can result in adverse outcomes. No substantial evidence exists to support using probiotics or homeopathic medications for treating VVC.

Follow-Up

Follow-up typically is not required. However, women with persistent or recurrent symptoms after treatment should be instructed to return for follow-up visits.

Management of Sex Partners

Uncomplicated VVC is not usually acquired through sexual intercourse, and data do not support treatment of sex partners. A minority of male sex partners have balanitis, characterized by erythematous areas on the glans of the penis in conjunction with pruritus or irritation. These men benefit from treatment with topical antifungal agents to relieve symptoms.

Special Considerations

Drug Allergy, Intolerance, and Adverse Reactions

Topical agents usually cause no systemic side effects, although local burning or irritation might occur. Oral azoles occasionally cause nausea, abdominal pain, and headache. Therapy with the oral azoles has rarely been associated with abnormal elevations of liver enzymes. Clinically important interactions can occur when oral azoles are administered with other drugs (1141).

Complicated Vulvovaginal Candidiasis

Diagnostic Considerations

Vaginal culture or PCR should be obtained from women with complicated VVC to confirm clinical diagnosis and identify non-*albicans* *Candida*. *Candida glabrata* does not form pseudohyphae or hyphae and is not easily recognized on microscopy. *C. albicans* azole resistance is becoming more common in vaginal isolates (1144,1145), and non-*albicans* *Candida* is intrinsically resistant to azoles; therefore, culture and susceptibility testing should be considered for patients who remain symptomatic.

Recurrent Vulvovaginal Candidiasis

Recurrent VVC, usually defined as three or more episodes of symptomatic VVC in <1 year, affects <5% of women but carries a substantial economic burden (1146). Recurrent VVC can be either idiopathic or secondary (related to frequent antibiotic use, diabetes, or other underlying host factors). The pathogenesis of recurrent VVC is poorly understood, and the majority of women with recurrent VVC have no apparent

predisposing or underlying conditions. *C. glabrata* and other non-*albicans* *Candida* species are observed in 10%–20% of women with recurrent VVC. Conventional antimycotic therapies are not as effective against these non-*albicans* yeasts as against *C. albicans*.

Treatment

Most episodes of recurrent VVC caused by *C. albicans* respond well to short-duration oral or topical azole therapy. However, to maintain clinical and mycologic control, a longer duration of initial therapy (e.g., 7–14 days of topical therapy or a 100-mg, 150-mg, or 200-mg oral dose of fluconazole every third day for a total of 3 doses [days 1, 4, and 7]) is recommended, to attempt mycologic remission, before initiating a maintenance antifungal regimen.

Oral fluconazole (i.e., a 100-mg, 150-mg, or 200-mg dose) weekly for 6 months is the indicated maintenance regimen. If this regimen is not feasible, topical treatments used intermittently can also be considered. Suppressing maintenance therapies are effective at controlling recurrent VVC but are rarely curative long-term (1147). Because *C. albicans* azole resistance is becoming more common, susceptibility tests, if available, should be obtained among symptomatic patients who remain culture positive despite maintenance therapy. These women should be managed in consultation with a specialist.

Severe Vulvovaginal Candidiasis

Severe VVC (i.e., extensive vulvar erythema, edema, excoriation, and fissure formation) is associated with lower clinical response rates among patients treated with short courses of topical or oral therapy. Either 7–14 days of topical azole or 150 mg of fluconazole in two sequential oral doses (second dose 72 hours after initial dose) is recommended.

Non-*albicans* Vulvovaginal Candidiasis

Because approximately 50% of women with a positive culture for non-*albicans* *Candida* might be minimally symptomatic or have no symptoms, and because successful treatment is often difficult, clinicians should make every effort to exclude other causes of vaginal symptoms for women with non-*albicans* yeast (1148). The optimal treatment of non-*albicans* VVC remains unknown; however, a longer duration of therapy (7–14 days) with a nonfluconazole azole regimen (oral or topical) is recommended. If recurrence occurs, 600 mg of boric acid in a gelatin capsule administered vaginally once daily for 3 weeks is indicated. This regimen has clinical and mycologic eradication rates of approximately 70% (1149). If symptoms recur, referral to a specialist is advised.