118. For *C. glabrata* vulvovaginitis that is unresponsive to oral azoles, topical intravaginal boric acid, administered in a gelatin capsule, 600 mg daily, for 14 days is an alternative *(strong recommendation; low-quality evidence)*.
119. Another alternative agent for *C. glabrata* infection is nystatin intravaginal suppositories, 100 000 units daily for 14 days *(strong recommendation; low-quality evidence)*.
120. A third option for *C. glabrata* infection is topical 17% flucytosine cream alone or in combination with 3% AmB cream administered daily for 14 days *(weak recommendation; low-quality evidence)*.
121. For recurring vulvovaginal candidiasis, 10–14 days of induction therapy with a topical agent or oral fluconazole, followed by fluconazole, 150 mg weekly for 6 months, is recommended (*strong recommendation; high-quality evidence)*.

Evidence Summary

Vulvovaginal candidiasis can be classified as either uncomplicated, which is present in about 90% of cases, or complicated, which accounts for only about 10% of cases, on the basis of clinical presentation, microbiological findings, host factors, and response to therapy [514]. Complicated vulvovaginal candidiasis is defined as severe or recurrent disease, infection due to non-*albicans* species, and/or infection in an abnormal host. *Candida albicans* is the usual pathogen, but other *Candida* species can also cause this infection.

A diagnosis of vulvovaginal candidiasis can usually be made clinically when a woman presents with symptoms of pruritus, irritation, vaginal soreness, external dysuria, and dyspareunia, often accompanied by a change in vaginal discharge. Signs include vulvar edema, erythema, excoriation, fissures, and a white, thick, curdlike vaginal discharge. Unfortunately, these symptoms and signs are nonspecific and can be the result of a variety of infectious and noninfectious etiologies. Before proceeding with empiric antifungal therapy, the diagnosis should be confirmed by a wet-mount preparation with use of saline and 10% potassium hydroxide to demonstrate the presence of yeast or hyphae and a normal pH (4.0–4.5). For those with negative findings, vaginal cultures for *Candida* should be obtained.

A variety of topical and systemic oral agents are available for treatment of vulvovaginal candidiasis. No evidence exists to show the superiority of any one topical regimen [515, 516], and oral and topical antifungal formulations have been shown to achieve entirely equivalent results [517]. Uncomplicated infection can be effectively treated with either single-dose fluconazole or short-course fluconazole for 3 days, both of which achieve >90% response [517, 518]. Treatment of vulvovaginal candidiasis should not differ on the basis of human immunodeficiency virus (HIV) infection status; identical response rates are anticipated for HIV-positive and HIV-negative women.

Complicated vulvovaginal candidiasis requires that therapy be administered intravaginally with topical agents for 5–7 days or orally with fluconazole 150 mg every 72 hours for 3 doses [54, 514]. Most *Candida* species, with the exception of *C. krusei* and *C. glabrata*, respond to oral fluconazole. *Candida krusei* responds to all topical antifungal agents. However, treatment of *C. glabrata* vulvovaginal candidiasis is problematic [514, 516]. The most important decision to make is whether the presence of *C. glabrata* in vaginal cultures reflects colonization in a patient who has another disease, or whether it indicates true infection requiring treatment. Azole therapy, including voriconazole, is frequently unsuccessful [519]. A variety of local regimens have sometimes proved effective. These include boric acid contained in gelatin capsules and nystatin intravaginal suppositories [520]. Topical 17% flucytosine cream can be used alone or in combination with 3% AmB cream in recalcitrant cases [520, 521]. These topical formulations, as well as boric acid gelatin capsules, must be compounded by a pharmacist for specific patient use. Azole-resistant *C. albicans* infections are extremely rare. However, recent evidence has emerged documenting fluconazole and azole class resistance in women following prolonged azole exposure [522].

Recurrent vulvovaginal candidiasis, defined as ≥4 episodes of symptomatic infection within one year, is usually caused by azole-susceptible *C. albicans* [514, 523]. Contributing factors, such as diabetes, are rarely found. Treatment should begin with induction therapy with a topical agent or oral fluconazole for 10–14 days, followed by a maintenance azole regimen for at least 6 months [523–525]. The most convenient and well-tolerated regimen is 150 mg fluconazole once weekly. This regimen achieves control of symptoms in >90% of patients [523]. After cessation of maintenance therapy, a 40%–50% recurrence rate can be anticipated. If fluconazole therapy is not feasible, topical clotrimazole cream, 200 mg twice weekly, clotrimazole vaginal suppository 500 mg once weekly, or other intermittent oral or topical antifungal treatment is recommended [526, 527].

XVI. What Is the Treatment for Oropharyngeal Candidiasis?

Recommendations

122. For mild disease, clotrimazole troches, 10 mg 5 times daily, OR miconazole mucoadhesive buccal 50 mg tablet applied to the mucosal surface over the canine fossa once daily for 7–14 days, are recommended *(strong recommendation; high-quality evidence)*.
123. Alternatives for mild disease include nystatin suspension (100 000 U/mL) 4–6 mL 4 times daily, OR 1–2 nystatin pastilles (200 000 U each) 4 times daily, for 7–14 days *(strong recommendation; moderate-quality evidence)*.
124. For moderate to severe disease, oral fluconazole, 100–200 mg daily, for 7–14 days is recommended *(strong recommendation; high-quality evidence)*.
125. For fluconazole-refractory disease, itraconazole solution, 200 mg once daily OR posaconazole suspension, 400 mg twice daily for 3 days then 400 mg daily, for up to 28 days,

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