

Vaginal yeast infections during pregnancy

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ABSTRACT

QUESTION My pregnant patients often present with symptomatic vaginal yeast infections. Are the medications commonly used for the management of yeast infections safe to use during pregnancy?

ANSWER Existing data indicate that exposure to oral and topical antifungals, topical antiseptics, or corticosteroids during pregnancy is not associated with increased risk of major malformations. Topical azole antifungals are the recommended treatment during pregnancy for at least 7 days owing to increased efficacy. Topical corticosteroids can be used for symptomatic relief.

RÉSUMÉ

QUESTION Il arrive souvent que des patientes enceintes me consultent pour des infections vaginales symptomatiques à levures. Les médicaments habituellement utilisés pour le traitement des infections à levures sont-ils sans danger durant la grossesse?

RÉPONSE Les données actuelles indiquent que l'exposition aux antifongiques topiques ou par voie orale, aux antiseptiques topiques ou aux corticostéroïdes durant la grossesse n'est pas associée à un risque accru de malformations importantes. On recommande comme traitement pendant la grossesse des antifongiques topiques azolés pendant au moins 7 jours étant donné leur plus grande efficacité. Les corticostéroïdes peuvent être utilisés pour le soulagement des symptômes.

Vulvovaginal candidiasis (VVC), often referred to as a yeast infection, is a common gynecologic ailment, affecting 3 out of 4 women in their lifetimes.¹ More than 40% of affected women will have 2 or more VVC episodes,^{2,3} and infection occurs more frequently in pregnant women. It is believed that higher estrogen levels and higher glycogen content in vaginal secretions during pregnancy increase a woman's risk of developing VVC.⁴ As VVC is so common in women during their childbearing years, it is important to understand the pathology of this disease as well as the safety or risks of drugs used to treat it during pregnancy.

Vulvovaginal candidiasis is caused by overabundant growth of yeast cells, belonging to the *Candida* species, in the vaginal mucosa. *Candida albicans* infection occurs in the vast majority (80% to 90%) of diagnosed VVC cases, while infection with other species, such as *Candida glabrata* or *Candida tropicalis*, occurs less frequently.⁵ With adequate pharmacotherapy and avoidance of contributing factors (eg, douching, wearing tight pants), VVC and associated symptoms resolve in a short period of time. There are several treatment options for *Candida* infection, such as antifungals and antiseptics, with corticosteroids as a useful addition for pruritus and erythema.

Antifungals

Antifungal agents commercially available for the treatment of VVC in Canada include the following: imidazole

antifungals (eg, butoconazole, clotrimazole, miconazole), triazole antifungals (eg, fluconazole, terconazole), and polyene antifungals (eg, nystatin). These agents are available in oral and topical formulations. The topical formulations of imidazole and triazole antifungals, collectively known as azole antifungals, are considered the therapy of choice during pregnancy owing to the safety data collected from animals as well as humans. Prospective and observational studies involving the use of topical antifungals did not reveal an increased risk of major malformations when mothers were exposed any time during pregnancy, and the authors considered them generally safe.⁶ Systemic absorption of these topical medications is minimal, posing little risk of transfer to the unborn baby. Azole therapy should be recommended for 7 days instead of a shorter duration because of improved treatment success.^{7,8}

Oral fluconazole should be considered as a second-line therapy to treat VVC. There have been case reports in which fluconazole has been associated with major malformations, but only at higher doses (≥ 400 mg/d).^{9,10} There is no increased risk of major malformations associated with short-term use of 150 mg of fluconazole to treat VVC.¹¹

Topical nystatin is a safe alternative to azole antifungals that has been extensively studied in the first trimester of pregnancy. As nystatin has negligible systemic absorption, no associated risk of major malformations

has been observed in numerous trials.⁶ The recommended dose of nystatin during pregnancy is 100 000 units intravaginally once daily for 2 weeks.¹


Antiseptics

Boric acid has been studied in the treatment of VVC. Although it is not commercially available, boric acid is an alternative to the antifungal agents. There is little published information regarding the safety of boric acid in humans. A recent retrospective case-control study from Hungary suggested a weak association between boric acid exposure during pregnancy and major malformations, but the association did not reach statistical significance.¹² Unless the vaginal epithelium is severely excoriated, only a limited amount of boric acid is systemically absorbed¹³; therefore, in most cases the amount absorbed through the vaginal mucosa is minimal and exposure risk to the unborn fetus is theoretical. The typical dose of boric acid is 600 mg intravaginally per night for 14 consecutive nights.¹⁴

Corticosteroids

Symptoms such as itchiness and redness commonly occur in VVC, and topical corticosteroids can be prescribed to alleviate these acute symptoms. The safety of corticosteroid use during pregnancy has been discussed in a previous Motherisk Update.¹⁵ A meta-analysis conducted by Park-Wyllie et al, combining 5 prospective human studies, found that for mothers who were exposed to oral corticosteroids, there was a non-significant increased odds ratio for total major malformations. There was a small but statistically significant increased risk of cleft palate compared with controls (odds ratio 3.35, 95% confidence interval 1.97 to 5.69).¹⁶ For topical corticosteroids, approximately 3% of the dose applied onto the skin is systemically absorbed.¹⁷ Two population-based studies found no increased risk of major malformations in the babies of mothers who used topical corticosteroids during pregnancy.^{18,19}

Conclusion

It is important to treat VVC infections in pregnant women, and there are safe medications that can be used. Topical azole antifungals are well studied, commercially available, and do not require a physician's prescription. Seven days of therapy is highly recommended, as shorter duration of treatment is associated with treatment failures. Alternatives to topical azoles include topical nystatin and oral fluconazole. Topical nystatin or oral fluconazole should be used if a patient cannot use topical azole antifungals. For symptomatic relief of redness or itchiness, short-term use of a low-potency topical corticosteroid is considered safe to use in pregnancy. 

Competing interests
None declared

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MOTHERISK

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