

Review: oral and intravaginal agents are equally effective for treatment of uncomplicated vulvovaginal candidiasis

Watson MC, Grimshaw JM, Bond CM, et al. *Oral versus intra-vaginal imidazole and triazole anti-fungal treatment of uncomplicated vulvovaginal candidiasis (thrush)*. *Cochrane Database Syst Rev* 2001;(1):CD002845 (latest version 23 Nov 2000).

QUESTION: Are oral and intravaginal antifungal agents equally effective, safe, and cost effective for treatment of uncomplicated vulvovaginal candidiasis (thrush)?

Data sources

Randomised controlled trials (RCTs) published in any language were identified by searching the Cochrane Controlled Trials Register (CENTRAL/CCTR), the Cochrane Collaboration Sexually Transmitted Disease Group Specialised Register of Controlled Trials, EMBASE/Excerpta Medica (1980 to January 2000), and Medline (January 1985 to May 2000). Reference lists of each trial were reviewed and UK manufacturers of antifungal agents were contacted.

Study selection

Trials were selected if they included women ≥ 16 years of age with mycologically confirmed uncomplicated vulvovaginal candidiasis and they compared ≥ 1 oral antifungal agent with an intravaginal antifungal agent.

Trials were excluded if they included only participants who were HIV positive, immunocompromised, pregnant, breast feeding, or diabetic.

Data extraction

Data were extracted on the type, dose, frequency, and duration of antifungal treatment; setting; participants; and outcome measures. Main outcomes were short and long term clinical cure rates. Secondary outcomes included mycological cure rates (smear or culture), incidence of adverse reactions, and cost effectiveness. Individual studies were assessed for methodological quality (random allocation, concealment of allocation, follow up, and blinding of outcome assessors).

Main results

17 RCTs reporting 19 comparisons were included in the analysis. The trials assessed 2 oral agents (fluconazole and itraconazole) and 4 intravaginal agents (clotrimazole, econazole, miconazole, and terconazole).

Meta-analyses were done using a random effects model; the denominator for analyses was the number of randomised patients who had positive cultures for yeast before antifungal treatment began. Length of follow up was classified as short term (5–15 d) and long term (2–12 wks). Oral and intravaginal antifungal agents did not differ for clinical cure at short term (9 comparisons, $n = 1247$, 80% *v* 80%) or long term (7 comparisons, $n = 836$, 83% *v* 82%) follow up or for mycological cure at short term (17 comparisons, $n = 2239$, 83% *v* 82%) or long term (14 comparisons, $n = 1711$, 72% *v* 66%) follow up. Sensitivity analyses based on all randomised participants, blinding, and proportion of patients followed up did not change the effect sizes for any of the outcomes.

11 trials reported on adverse reactions. Intravaginal agents were associated with local reactions such as irritation, burning, pruritis, and some systemic effects such as headache, whereas oral agents were associated with systemic effects such as gastrointestinal effects and headaches. Data were insufficient to compare the relative safety of oral and intravaginal agents. No trials of the relative cost effectiveness of oral and intravaginal agents were found.

Conclusions

Oral and intravaginal agents are equally effective in the treatment of uncomplicated vulvovaginal candidiasis. Insufficient data exist on adverse effects and cost effectiveness of the 2 types of treatment.

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COMMENTARY

Vaginitis is one of the most common disorders seen in clinical practice, accounting for over 10 million office visits annually.¹ Vulvovaginal candidiasis is the second most common cause of vaginitis. Few women in their lifetimes will escape the intense itching, burning, and general discomfort that accompanies this ubiquitous disorder.²

The findings of the review by Watson *et al* are clearly useful for nurses in primary care or women's healthcare settings. Both oral and intravaginal antifungals are equally effective in providing relief of clinical symptoms and laboratory cure in patients with vulvovaginal candidiasis. The review was well designed, using sound statistical techniques to summarise data from a variety of clinical trials.

However, issues peripheral to treatment effectiveness were not well considered in the primary studies. Firstly, adverse reactions to treatment were poorly reported for both modalities even though sequelae such as headache and nausea are often seen with the use of fluconazole, the major oral antifungal prescribed.³

Patient treatment preferences and practical issues such as cost and access to medication were not covered in detail. Although the oral antifungal drug is more expensive than the local treatment, women generally seem to prefer it.¹ However, because oral medication is not available over the counter as is intravaginal antifungal medication, the use of oral preparations may require a visit to a healthcare provider, which may delay treatment of a very uncomfortable disorder and substantially increase cost.

The decision to recommend intravaginal versus oral treatment for vulvovaginal candidiasis must be made in discussion with patients and must consider individual wants and needs. For example, this type of decision making must include, at least, time and financial constraints, health insurance status, perceived level of discomfort and immediacy of treatment need, and, after full discussion of costs, benefits and potential side effects of both types of medications, the patient's treatment preferences.

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- 1 Reef SE, Levine WC, McNeil MM, et al. 1993. *Clin Infect Dis* 1995;20:S80–90.
- 2 Quan M. Vaginitis: meeting the clinical challenge. *Clin Cornerstone* 2000;3:36–47.
- 3 Pearson L. *Nurse practitioner's drug handbook*. Third edition. Springhouse, PA: Springhouse Corporation, 2000.