



Should the length of treatment for trichomoniasis in women be reconsidered?

Yes. Authors of a meta-analysis found that women who received a single 2-g dose of metronidazole were 1.87 times (95% confidence interval [CI], 1.23–2.82; $P < .01$) more likely to experience a treatment failure than women who received multidose therapy ranging from 200 to 500 mg, two to three times daily, over 5 to 7 days.

Howe K, Kissinger PJ. Single-dose compared with multidose metronidazole for the treatment of trichomoniasis in women: a meta-analysis. Sex Transm Dis. 2017;44(1):29–34.

► EXPERT COMMENTARY

► **Patrick Duff, MD**, is Associate Dean for Student Affairs and Professor of Obstetrics and Gynecology in the Division of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology, University of Florida College of Medicine, Gainesville.

Both the Centers for Disease Control and Prevention and the World Health Organization currently recommend that patients with trichomoniasis be treated with a single 2-g oral dose of metronidazole.¹ Following treatment, the reported rates of repeat infection or persistent infection range from 5% to 31%. Repeat infection rates may be even higher in HIV-infected patients.

Repeat infections presumably result from a failure to treat the patient's sexual partner(s) or from the patient's exposure to a new partner. Persistent infections, however, may be the result of inadequate primary therapy, even though inherent resistance of the organism to metronidazole is quite rare. To date, no single study has shown that single-dose therapy is inferior to multidose

therapy, but most of these studies lack sufficient power to completely exclude the possibility of a type-2 statistical error.² To compare single-dose with multidose therapy for trichomoniasis in a more systematic manner, Howe and Kissinger conducted a meta-analysis, which was recently published in *Sexually Transmitted Diseases*.

Details of the study

The investigators conducted a comprehensive literature search using Embase, Medline, and ClinicalTrials.gov; 6 articles were included in the final results, 4 of which were randomized controlled trials. Approximately 1,300 participants were included in the 6 trials. All of the patients in the single-dose treatment arms received a 2-g dose of metronidazole. In the multidose treatment arms for 2 studies the participants received metronidazole 250 mg orally 3 times daily for 7 days, and for 2 studies the dose was 200 mg 3 times daily for 7 days. The fifth study employed a 500-mg oral dose of metronidazole twice daily for 7 days. The final study used a 400-mg oral dose twice daily for 5 days. The key study end point was treatment failure.

Howe and Kissinger demonstrated that women who received the single 2-g dose were 1.87 times (95% CI, 1.23–2.82; $P < .01$) more likely to experience a treatment

FAST TRACK

Consider treating women infected with trichomoniasis with a multidose (vs single dose) regimen of metronidazole (500 mg orally twice daily for 7 days)

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failure compared with women who received a multidose regimen. When the one study that focused only on HIV-infected women was excluded from analysis, the results were similar. The relative risk of treatment failure was 1.80 (95% CI, 1.07–3.02; $P < .03$).

Study limitations

The results of this meta-analysis are interesting and provocative. However, the analysis has several important limitations. Five of the 6 studies were published many years ago (1971, 1972, 1979, 1980, and 1982). The most recent study was published in 2010. The investigators used 4 different multidose regimens, with metronidazole doses ranging from 200 mg to 500 mg and duration of therapy ranging from 5 to 7 days. Four of the six investigations used saline microscopy as the definitive diagnostic test of treatment failure. Compared with culture or DNA testing, microscopy is not as accurate. Moreover, the timing of retesting varied in the studies, and some apparent treatment failures actually may have been due to reinfection. In addition, the studies did not consistently track the adequacy of treatment of the sexual partner. 🚫

WHAT THIS EVIDENCE MEANS FOR PRACTICE

To be sure, we would benefit from a new comparative study that included a large sample size, a consistent multidose regimen, rigorous treatment of the sexual partner(s), and more sophisticated diagnostic testing to define treatment failure. Pending the publication of such a study, however, I plan to alter my practice pattern and treat infected patients with a multidose regimen of metronidazole. I favor the regimen of 500 mg orally twice daily for 7 days because it is effective against both trichomoniasis and bacterial vaginosis, which is a common co-infection.

The twice-daily regimen is more convenient than the thrice-daily regimen and is not much more expensive than the single-dose regimen (\$13 vs \$4, <http://www.goodrx.com>). I will reserve the single 2-g dose of metronidazole for patients in whom treatment adherence is likely to be a problem or for patients in whom an immediate response to treatment is imperative (eg, a patient with preterm premature rupture of membranes or preterm labor).

>> PATRICK DUFF, MD

References

1. Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines, 2015. *MMWR Recomm Rep*. 2015;64(RR-03):1–137.
2. Howe K, Kissinger PJ. Single-dose compared with multidose metronidazole for the treatment of trichomoniasis in women: a meta-analysis. *Sex Transm Dis*. 2017;44(1):29–34.