Late recurrence of resistant *Trichomonas vaginalis* vaginitis: relapse or re-infection?

M Kanno, J D Sobel

**CASE REPORT**

A 30 year old white woman presented to the vaginitis clinic at the University Health Center-Detroit Medical Center in October 1999, with complaints of a malodorous vaginal discharge, vaginal "tawness," and burning for 4 months. The patient was first diagnosed with vaginal trichomoniasis in June 1999 by her primary care physician and had received five courses of metronidazole 500 mg orally twice daily, the longest duration of therapy was for 10 days. Her husband was treated with 3 day and 7 day courses of metronidazole. She admitted to having another sexual partner who had not received treatment with metronidazole. Her last course of metronidazole was 1 month before her presentation. There was no history of other sexually transmitted diseases. Her husband was experiencing dysuria at the time she presented to our clinic. There was no information about the other sexual partner. She was taking oral contraceptives, and did not use condoms consistently with either partner. She used vinegar and water for vaginal cleansing.

On examination, there was vulvar erythema, oedema, and excoriations. On speculum examination, the vaginal wall was erythematous, oedematous, and with abnormal secretions. The pH of the vaginal fluid was 5–6, and the amine test was positive. On wet preparation, there were numerous polymorphonuclear cells and motile trichomonads. There were no clue cells, yeast blastophores, or hyphae. She had abnormal vaginal flora. She was culture positive for *T vaginalis*, and the MIC to metronidazole was >100 µg/ml (the MIC of the control strain was 3 µg/ml). She was treated with tinidazole for 2 weeks, with 2 g daily orally and 1 g per vagina daily. Her husband was not treated with metronidazole since they had parted and they were not in contact.

She was evaluated at 1 week following therapy. There was improvement of symptoms, the vaginal pH was 4.3, the amine test was negative, and there were no trichomonads seen on wet preparation. There was increase in the number of lactobacilli seen on Gram stain.

She was re-evaluated at 5 weeks at which time she was symptom free; examination of the external genitalia and speculum examination were normal. Vaginal pH was 4.3, and there were no trichomonas seen. Cultures for *trichomonas* were negative.

She remained entirely symptom free until July 2000, when she presented to her primary care provider with vaginal discharge. Motile trichomonads were detected in the wet preparation from vaginal fluid, so she was treated with metronidazole 1 g orally for 7 days. She presented to our clinic in August 2000 with continued symptoms of malodorous vaginal discharge and vaginal pruritis despite treatment with metronidazole. She had no further contact with her husband. She had not been sexually active until June 2000, when she had one contact with her original extramarital partner who had never been treated. On examination, there was severe vulvar inflammation, vestibulitis, purulent vaginal discharge with a pH of 6.0, and inflammation of the ectocervix. Wet preparation revealed numerous polymorphonuclear cells, numerous motile trichomonads, and mixed vaginal flora. Culture for *trichomonas* was positive, and the MIC to metronidazole was >100 µg/ml. She responded well to a 2 week course of tinidazole at 3 g orally daily. The patient remained symptom free after 8 weeks, with normal findings on examination. Repeat cultures were not obtained.

**DISCUSSION**

Resolution of symptoms, negative microscopy and vaginal cultures, the long symptom free period (9 months) following treatment with tinidazole demonstrate clinical and microbiological cure. Tinidazole, like metronidazole, is a 5-nitroimidazole with activity against protozoa. In vitro studies indicate that tinidazole minimum lethal concentration levels are lower than those of metronidazole, but clinically at equivalent dosing it has been shown to have efficacy against *trichomonas* that is equal to metronidazole. In comparative studies, tinidazole in both single dose and multiple dose regimens has been shown to be equivalent to metronidazole.

The recurrence of symptoms, and the clinical and microbiological evidence of acute *trichomonas* vaginitis after one sexual contact with the untreated partner suggest the likelihood of...
re-infection rather than relapse from the previous infection. High level metronidazole in vitro resistance is extremely rare (1 in 2000–3000 cases of vaginal trichomoniases). This supports the small chance of relapse after tinidazole therapy.

Men who are chronic carriers of TV in their urethras may be the link to the chain of continuous transmission. Krieger et al show that spontaneous resolution and prolonged asymptomatic carriage can occur in men with trichomoniases. In another study, Krieger also showed that 11% of 447 men attending an STD clinic had *T. vaginalis* in the urethra, but only 54% were symptomatic. Clinical diagnosis of TV urethritis is a challenge because the majority of patients are asymptomatic, and demonstration of TV by microscopy in male genital or urine samples is difficult. Failing to treat the second sex partner of our patient is likely to have increased the chances of subsequent transmission and re-infection. Whether male chronic carriers of TV are more likely to have metronidazole resistant strains is not known, and is an area for further investigation.

**Authors’ affiliations**

M Kanno*, Division of Infectious Diseases, Department of Medicine, Detroit Medical Center, Harper Hospital, Detroit, Michigan, USA

J D Sobel, Wayne State University School of Medicine

---

**CHESTER CHRONICLES**

Oscar Wilde said the only chances in life you regret are the ones you didn't take. I don't know if I'd go that far, but like the best of the Irish I enjoy the odd flutter.

It was your average quiet MSSVD evening at the Royal Society of Medicine in London. The young Irish doctor, Dr Concepta Merry, had just presented a paper outlining the complexities of anti-HIV therapy compliance among the Dublin drug addicts. Now, I had done some locums in Dublin in the early 1990s. (I have always found that doing a locum back in the old green sod is a perfect antidote to the misplaced nostalgia that can develop in Irish exiles.) So when she was explaining the difficulties, I could empathise fully. When the time came for questions, I just couldn't resist sharing my experience of compliance in this group, with the assembled mass. I made the comment that in my Dublin experience, there were two patterns of compliance among the druggies. One pattern was where they did not take their drugs at all and the other pattern was where they didn't take them at all, at all!

I then sat down wondering why on earth I constantly try and torpedo my career with comments made purely out of mischief. However, after the initial few seconds of bewilderment, the audience responded to the humour and the atmosphere lightened. This levity even continued through the next talk which was an excellent discourse on the acquisition by UK people of sexually transmitted infections while on holiday abroad. Again at question time, the legendary Dr Robbie Morton drew himself up to his full hierarchical greatness. He said “as through his gravity he has ascended, so through his levity, I have descended”!

Come on lads, let's keep in the humour—it's a great antidote.

Colm O'Mahony

Countess of Chester Hospital NHS Trust, Chester CH2 1UL, UK; dr.o.mahony@coch.nhs.uk

---

**REFERENCES**


---

*Currently at Johns Hopkins University, Division of Infectious Diseases

Correspondence to: Jack Sobel; jsobel@intmed.wayne.edu

Accepted for publication 29 November 2002