



Published in final edited form as:

Sex Transm Dis. 2012 September ; 39(9): 739. doi:10.1097/OLQ.0b013e318264248b.

Prevalence of Urethral *Trichomonas vaginalis* in Black and White Men Who Have Sex With Men

Colleen F. Kelley, MD, MPH,

Division of Infectious Diseases Department of Medicine Emory University School of Medicine Atlanta, GA Department of Epidemiology Rollins School of Public Health Emory University Atlanta, GA

Eli S. Rosenberg,

Department of Epidemiology Rollins School of Public Health Emory University Atlanta, GA

Brandon M. O'Hara,

Department of Epidemiology Rollins School of Public Health Emory University Atlanta, GA

Travis Sanchez, DVM, PhD,

Department of Epidemiology Rollins School of Public Health Emory University Atlanta, GA

Carlos del Rio, MD, and

Division of Infectious Diseases Department of Medicine Emory University School of Medicine Atlanta, GA Hubert Department of Global Health Rollins School of Public Health Emory University Atlanta, GA

Patrick S. Sullivan, DVM, PhD

Department of Epidemiology Rollins School of Public Health Emory University Atlanta, GA

To the Editor:

Trichomonas vaginalis (TV) is a common nonulcerative sexually transmitted infection (STI) that has been associated with increased acquisition of human immunodeficiency virus (HIV) infection in women.^{1,2} Nucleic acid amplification testing for TV is more sensitive than traditionally used methods of detection, such as wet preparation or culture, and can facilitate the diagnosis of TV infection in both men and women.³ The prevalence of TV is estimated at 3.1% for US women, with black women being disproportionately affected by TV with a prevalence of 13.3%.⁴ Prevalence estimates among men are variable and reported between 3% and 17% for men attending STI clinics and as high as 72% for male partners of females diagnosed with vaginal TV.⁵⁻⁸ However, data on racial disparities among men are lacking. The incidence of HIV among black men who have sex with men (MSM) is at least 2 to 3 times that of white MSM, and differences in the prevalence of STIs are thought to contribute to disparities in HIV incidence among black and white MSM.^{9,10} However, the limited data available suggest that TV is a rare cause of urethral and rectal infection in MSM.^{8,11,12} Given its potential implications for disparities in HIV transmission among MSM, we assessed TV prevalence among community- recruited black and white MSM in the southeast.

The Emory Involvement study is currently enrolling a longitudinal cohort with plans to eventually enroll approximately 1000 MSM. The study is designed to examine individual-, dyadic-, and community-level factors that may explain disparities in HIV and STI incidence between black and white MSM. MSM aged 18 to 39 years, regardless of HIV serostatus, who reported having sex with another male in the previous 3 months and not being in a mutually monogamous relationship were recruited from community-based venues and via the internet in Atlanta, GA, surveyed, and tested for urethral TV as part of a standard battery

of STI tests. MSM were not queried for symptoms of STI before testing. The presence of TV in urine specimens was assessed using a real-time polymerase chain reaction test that was developed and validated in our Center for AIDS Research Clinical Virology Core laboratory with sensitivity and specificity of 100% and 99.6%, respectively, and a limit of detection of <0.2 organisms per reaction or 40 copies/mL.¹³

Between July 2010 and February 2012, a total of 319 black MSM (42.0% HIV positive) and 281 white MSM (14.6% HIV positive) were tested for urethral TV at their first InvolveMENT study visit. No man refused TV testing, and 100% of urine specimens were adequate for analysis. None of the urine specimens from black (exact 95% confidence interval, 0%–0.94%) or white (exact 95% confidence interval, 0%–1.06%) MSM tested positive for urethral TV. Given these results, we have discontinued all TV testing in our study.

Our data confirm previous studies that suggested TV is not a common cause of urethral infection in MSM. Furthermore, our data add to existing data by showing that clinically important racial disparities in TV prevalence reported among heterosexuals are likely not present among MSM.^{8,11,12} Our data are limited in that our study was conducted in 1 geographic area (Atlanta, GA) among community-recruited MSM aged 18 to 39 years and may not be generalizable. For example, older MSM or MSM attending STI clinics may have a higher prevalence of TV infection. In addition, we did not assess men for symptoms of urethritis before testing for TV, and TV prevalence could be higher among MSM with symptomatic urethritis. Nonetheless, our data show that differences in TV prevalence by race are not likely to be an important driver of disparities in HIV transmission among black and white MSM. In addition, the inclusion of routine TV screening in asymptomatic, sexually active MSM for clinical or research purpose is likely to be of very low utility.

REFERENCES

1. Sexton J, Garnett G, Rottingen JA. Metaanalysis and metaregression in interpreting study variability in the impact of sexually transmitted diseases on susceptibility to HIV infection. *Sex Transm Dis.* 2005; 32:351–357. [PubMed: 15912081]
2. Van Der Pol B, Kwok C, Pierre-Louis B, et al. *Trichomonas vaginalis* infection and human immunodeficiency virus acquisition in African women. *J Infect Dis.* 2008; 197:548–554. [PubMed: 18275275]
3. Bachmann LH, Hobbs MM, Sena AC, et al. *Trichomonas vaginalis* genital infections: Progress and challenges. *Clin Infect Dis.* 2011; 53(suppl 3):S160–S172. [PubMed: 22080269]
4. Sutton M, Sternberg M, Koumans EH, et al. The prevalence of *Trichomonas vaginalis* infection among reproductive-age women in the United States, 2001–2004. *Clin Infect Dis.* 2007; 45:1319–1326. [PubMed: 17968828]
5. Schwebke JR, Hook EW III. High rates of *Trichomonas vaginalis* among men attending a sexually transmitted diseases clinic: Implications for screening and urethritis management. *J Infect Dis.* 2003; 188:465–468. [PubMed: 12870131]
6. Sena AC, Miller WC, Hobbs MM, et al. *Trichomonas vaginalis* infection in male sexual partners: Implications for diagnosis, treatment, and prevention. *Clin Infect Dis.* 2007; 44:13–22. [PubMed: 17143809]
7. Wendel KA, Erbedding EJ, Gaydos CA, et al. Use of urine polymerase chain reaction to define the prevalence and clinical presentation of *Trichomonas vaginalis* in men attending an STD clinic. *Sex Transm Infect.* 2003; 79:151–153. [PubMed: 12690140]
8. Joyner JL, Douglas JM Jr, Ragsdale S, et al. Comparative prevalence of infection with *Trichomonas vaginalis* among men attending a sexually transmitted diseases clinic. *Sex Transm Dis.* 2000; 27:236–240. [PubMed: 10782747]

9. Millett GA, Flores SA, Peterson JL, et al. Explaining disparities in HIV infection among black and white men who have sex with men: A meta-analysis of HIV risk behaviors. *AIDS*. 2007; 21:2083–2091. [PubMed: 17885299]
10. Millett GA, Peterson JL, Wolitski RJ, et al. Greater risk for HIV infection of black men who have sex with men: A critical literature review. *Am J Public Health*. 2006; 96:1007–1019. [PubMed: 16670223]
11. Francis SC, Kent CK, Klausner JD, et al. Prevalence of rectal *Trichomonas vaginalis* and *Mycoplasma genitalium* in male patients at the San Francisco STD clinic, 2005–2006. *Sex Transm Dis*. 2008; 35:797–800. [PubMed: 18607317]
12. Mayer KH, Bush T, Henry K, et al. Ongoing sexually transmitted disease acquisition and risk-taking behavior among US HIV-infected patients in primary care: Implications for prevention interventions. *Sex Transm Dis*. 2012; 39:1–7. [PubMed: 22183836]
13. Caliendo AM, Jordan JA, Green AM, et al. Real-time PCR improves detection of *Trichomonas vaginalis* infection compared with culture using self-collected vaginal swabs. *Infect Dis Obstet Gynecol*. 2005; 13:145–150. [PubMed: 16126499]