Trichomonas vaginalis Testing and Screening in a High-Risk Population: Is This a Glimpse Into the Future?

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(See the Major Article by Muzny et al on pages 834–41.)

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Trichomonas vaginalis (TV) is often referred to as the “neglected” sexually transmitted infection [1–3]. Although the estimated annual incidence of TV in the United States and worldwide exceeds that of chlamydia and gonorrhoea combined, there are no established screening, surveillance, or control programs for men or women [4, 5]. Currently, the Centers for Disease Control and Prevention (CDC) sexually transmitted disease (STD) treatment guidelines recommend TV screening for all human immunodeficiency virus (HIV)–infected women when care is initiated, then at least annually, and TV testing for all symptomatic women presenting with vaginal discharge [6]. The CDC guidelines also recommend that screening be considered for asymptomatic women at high risk for infection, such as those with new or multiple sex partners, those with a history of STDs, or women in high-prevalence settings. In the 2014 UK national guideline on the management of TV, testing is recommended for symptomatic women and for men who are TV contacts [7]. This guideline also recommends that testing be considered for men with persistent urethritis. There are no TV screening recommendations in the UK guideline either.

The diagnostic sensitivity of TV detection has increased tremendously as TV detection has progressed from wet mount (sensitivity of 50%–65%) to the highly sensitive TV nucleic acid amplification tests (NAATs; sensitivity of 95%–100%). Currently there are 2 commercially available US Food and Drug Administration–cleared TV NAATs on the market, and others are on the horizon [8–10]. Having these TV NAATs available on multiple platforms will lead to widespread availability and use, allowing for many unanswered questions about TV infection to be addressed. This new information could potentially lead to removal of the TV designation as the “neglected” sexually transmitted infection [1].

In this issue of Clinical Infectious Diseases, Muzny and colleagues present a retrospective analysis of the implementation of routine TV testing and screening using a NAAT at the Jefferson County Health Department STD Clinic in Birmingham, Alabama [11]. The objectives of the study were to determine if there was added benefit to implementing routine TV testing and to determine the correlates of TV infection in their clinic population. Endocervical, urethral, or urine specimens from 6335 men and women were tested using a TV NAAT. The prevalence of TV was 27% in women and 9.8% in men. One-third of women who tested positive by wet mount and one-third who tested positive by NAAT were found to be asymptomatic. In addition, the prevalence of TV based on wet prep was 19.6%, whereas that based on NAAT was 27%. These data lead one to conclude that TV infections would have been missed in one-third of women in the absence of TV testing and screening.

Using these data as an example, control of TV infection in a population would never be accomplished using a diagnostic method that missed 30% of women with the infection. This 30% of women would have had encounters with medical providers, yet TV infection would have gone undetected and untreated. Is it good clinical practice to miss this tremendous opportunity when TV NAATs are available and recommended treatment is fairly inexpensive and administered as a single dose?

Muzny et al also demonstrate that correlates of TV infection in both men and women were age >40 years and African American race. The recognition of high TV infection rates in patients who are...
older than those who traditionally have high rates of Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (GC) is very interesting. The authors state that this is perhaps due to accumulating infections caused by lack of detection of the organism. This is quite probable in that the duration of TV infection is thought to be months to years [12].

The authors go on to state that the majority of their clinic patients are African American (86% of patients in the analysis), and that this may have influenced the finding that being of African American race was a correlate of infection. Presented as a potential weakness or bias in the study, the authors’ acknowledgement of this tremendous health disparity should actually be viewed as a tremendous strength and opportunity to address a health disparity in the African American community of Birmingham. Detecting and treating previously missed TV infections that would have continued to be transmitted in the community has great potential to decrease the burden of TV infection in their community over time.

Another health disparity noted in the study was the TV prevalence in women of 27% vs 9.8% in men. The authors suggest that this may in part be due to the high rates of spontaneous clearance of TV that have been noted in men [12, 13]. Unfortunately, spontaneous clearance in such high rates has not been demonstrated in women. This alone is an important reason to implement TV screening and treatment for women, especially those in high-risk settings. When this approach is coupled with screening and treatment of men who have not spontaneously cleared their infection, a further decrease in the TV burden in the community could potentially occur.

Recently there have been several discussions, debates, and renewed interest in making TV reportable. This has led to a proverbial “line in the sand” being drawn between those who support and those who oppose this proposal [14–16]. Hoots et al thoroughly presented the 7 criteria for making an infection reportable [14]. Whereas TV infection met the criteria of frequency, disparity, and communicability, it lacked the criteria of severity, costs for public health importance, preventability, and public interest. TV NAAT availability can directly assist with answering the scientific and epidemiological questions, but these tests can only assist with meeting the missing public interest criterion to an extent. Past experience with CT, GC, HIV, and syphilis has demonstrated that tremendous public interest was generated when the medical community disseminated information and educated the public about these infections through traditional media outlets, social media, and other avenues. There is little doubt that the same will prove true with TV infection. Lack of public interest cannot be determined when there is lack of public knowledge.

In this very nicely presented analysis of one of the first STD clinics to implement routine TV testing and screening, there are 2 missing pieces of information. The first is the process that went into the decision to implement the testing, and the second is information regarding the laboratory costs associated with adding TV NAAT to the GC and CT NAAT platform. Both of these pieces of information would be of tremendous help to those exploring the implementation of TV testing and screening in their clinics and laboratories, especially those serving high-risk populations.

The Jefferson County Health Department STD Clinic and the Alabama State Public Health Laboratory are to be commended for the implementation of routine TV NAAT screening and testing in their clinic. It is clear that the criteria for TV reporting will not be met in the near future, but that is not necessary for the implementation of screening and treatment of TV infection on an individual, clinic or community level. Unfortunately, it is even quite possible that TV infection may never fulfill all 7 criteria for reporting with the subsequent development of screening, surveillance, control, and treatment programs. If this is eventually the case, then the implementation of routine TV NAAT screening and testing at the Jefferson County STD Clinic is indeed “a glimpse into the future.”

Note
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References
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