

Validation of wet mount microscopy against *Trichomonas* culture among women of reproductive age group in Western province, Sri Lanka

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Received 8 August 2014; received in revised form 25 August 2014; accepted 5 September 2014

Abstract. Wet mount microscopy is the most commonly used diagnostic method for trichomoniasis in clinical diagnostic services all over the world including Sri Lanka due to its availability, simplicity and is relatively inexpensive. However, *Trichomonas* culture and PCR are the gold standard tests. Unfortunately, neither the culture nor PCR is available for the diagnosis of trichomoniasis in Sri Lanka. Thus, it is important to validate the wet mount microscopy as it is the only available diagnostic test and has not been validated to date in Sri Lanka. The objective was to evaluate the validity and reliability of wet mount microscopy against gold standard *Trichomonas* culture among clinic based population of reproductive age group women in Western province, Sri Lanka. Women attending hospital and institutional based clinics were enrolled. They were interviewed and high vaginal swabs were taken for laboratory diagnosis by culture and wet mount microscopy. There were 601 participants in the age group of 15-45 years. Wet mount microscopy showed 68% sensitivity, 100% specificity, 100% positive (PPV) and 98% negative predictive values (NPV) ($P=0.001$, $\kappa=0.803$) respectively against the gold standard culture. The area under the ROC curve was 0.840. Sensitivity of wet mount microscopy is low. However it has high validity and reliability as a specific diagnostic test for trichomoniasis. If it is to be used among women of reproductive age group in Western province, Sri Lanka, a culture method could be adopted as a second test to confirm the negative wet mount for symptomatic patients.