

Signature of Real-Time PCR In detection of Trichomonas Vaginalis Infection And Its Association With Human Papillomavirus Genotype 16, 2023

ABSTRACT

Background: Infection with *Trichomonas vaginalis* (TV) is the most prevalent non-viral sexually transmitted infection in the world.

Objectives: to look into the incidence of TV infection and its association with Human Papillomavirus (HPV) in a sample of Egyptian females.

Methods: 96 Egyptian females suspected for trichomoniasis were involved in our study. Vaginal washouts and cervical (cytobrush) samples were obtained from all patients and examined for *T. vaginalis* by direct wet mount, modified Diamond's culture medium, and real-time PCR.

Cervical (cytobrush) samples were examined for HPV using real-time PCR. **Results:** Out of 96 patients, 28 (29%) was positive for *T. vaginalis* by real-time PCR. HPV was detected in 33 patients (34.4%); 31 cases (32.3%) were infected with HPV of genotype 16, whereas only two cases (2.1%) had genotype 18 infection. Significant association was found between TV and HPV infection [Odds ratio (OR)=10.58; 95% confidence interval (CI), 3.819 – 29.29; $p < 0.001$].

Conclusion: When it comes to diagnose trichomoniasis in a susceptible population, real-time PCR is more reliable than traditional standard approaches. A significant association between TV and HPV infection was found. Further research into the processes by which these two organisms interact at the cellular level could be revealed.