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Trichomonas vaginalis

Trichomonas vaginalis is an anaerobic human parasitic protozoan with characteristic pear-shaped morphology and twitching motility which causes trichomoniasis. It is one of the most common non-viral STIs worldwide with ~ 160 million cases, particularly associated with those co-infected with HIV. Vertical transmission from mother to child is possible and non-sexual transmission is very rare. The incubation period is typically between 5-28 days however symptoms may appear years after infection and long-term carriage may also occur. As per the BASHH *Trichomonas vaginalis* 2021 guidelines:

In males, 15-50% of cases are asymptomatic. In symptomatic cases, common symptoms include urethral discharge, dysuria, and urethral discharge. Prostatitis and balanoposthitis may also occur but are less comment.

In females, 10-50% of cases are asymptomatic. Common symptoms include: vaginal discharge, vulval itching, dysuria, and offensive odour. Less common symptoms are low abdominal discomfort and vulval ulceration. Approximately 2% of female patients will have strawberry cervix appearance. 10-15% will have no abnormalities on examination.

Trichomonas vaginalis infection can have detrimental outcomes on pregnancy and is associated with preterm delivery and low birth weight. It may also predispose the mother to postpartum sepsis.

There is association between HIV and trichomoniasis with evidence that trichomonas infection may enhance HIV transmission. Additionally, there is an increased risk of *T. vaginalis* infection in those that are HIV positive.

Direct microscopy is often a practical option for diagnosis in a GUM clinic setting. Wet preps are used to identify white blood cells indicating inflammation and motile protozoan about 10-20 minutes after sample collection. However, the sensitivity of microscopy is only around 50-70%. Conventional culture methods are effective, but very slow and labour-intensive. Therefore, nucleic acid amplification tests (NAATs) are typically chosen for the detection of *T. vaginalis*.

Service users may wish to refer samples to us where *T. vaginalis* is suspected, in cases of undiagnosed non-gonococcal urethritis, or for STI screening. Testing contacts of positive patients and screening of asymptomatic women in geographical areas of high prevalence/or associated risk factors is also advocated by BASHH.

Our assay:

At Micropathology Ltd, a single-round PCR is used for the detection of *Trichomonas vaginalis* DNA. Our assay is UKAS accredited for testing genital swabs. Semen, ThinPrep, and male urine samples have also been validated but are not yet UKAS accredited. Female urine samples are accepted but are not recommended due to reduced sensitivity and possible presence of PCR inhibitors. Turnaround times are stated in the lab user handbook (available on our website: www.micropathology.com).

References:

Jackie Sherrard, Rachel Pitt, Kate Russell Hobbs, Michelle Maynard, Eleanor Cochrane, Janet Wilson and Craig Tipple (2022) British Association for Sexual Health and HIV (BASHH) United Kingdom national guideline on the management of Trichomonas vaginalis 2021. International Journal of STD & AIDS, 2022, 1–11