

Detection of *Treponema pallidum* at asymptomatic oral, anal, and vaginal sites in men and women reporting sexual contact with syphilis

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Background:

This study aimed to investigate *Treponema pallidum* polymerase chain reaction (PCR) positivity at oral, anal, and vaginal sites among individuals reporting sexual contact with a partner with syphilis.

Methods:

In this prospective, cross-sectional study of syphilis contacts, all individuals had an oral rinse and oral swab collected for *T. pallidum* testing by PCR between November 2018 and March 2020. Additionally, men who have sex with men (MSM) had an anal swab and women had a vaginal swab for PCR regardless of the presence of lesions. Any lesions were swabbed for PCR. Syphilis serology was performed.

Results:

Of the 407 individuals (364 MSM, 22 heterosexual men, and 21 women) in the study, 42 contacts (10%) were diagnosed with early syphilis. 19 (45%) tested positive by PCR from any anatomical site, with all having positive serology. Among these 19 cases, 9 cases (4 women and 5 men) did not have symptoms of syphilis. Among the 9 cases without symptoms, 3 women tested positive by PCR from the vagina; 3 men tested positive by PCR from the anus; and 2 women and 3 men tested positive by PCR in the oral cavity. 3 women had no prior syphilis serology.

Conclusion:

T. pallidum was detected at oral, anal, and vaginal sites in the absence of symptoms among sexual contacts of syphilis. In several cases which would conventionally be staged as latent syphilis of unknown duration, PCR detection at these asymptomatic mucosal sites suggested these were early syphilis infections.

Disclosure of Interest Statement:

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