

The contribution of common genital mycoplasmas to genital symptoms and clinical signs in women

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Background:

Testing and reporting of *Mycoplasma hominis* (MH), *Ureaplasma urealyticum* (UU) and *Ureaplasma parvum* (UP) frequently occurs due to their inclusion in multiplex-PCR assays during sexually transmitted infection (STI) screening. However, their contribution to disease and symptoms in non-pregnant women and the need for treatment has not been established. We conducted a study to determine if MH, UU and UP were associated with specific genital symptoms and signs in non-pregnant women in order to inform clinical practice.

Methods:

Women attending Melbourne Sexual Health Centre were recruited between April 2017-2019. Women completed a questionnaire regarding sexual practices and symptoms. Symptomatic women underwent examination. Women were assessed for bacterial vaginosis (BV) and vulvovaginal candidiasis, and tested for MH, UU, UP, and four non-viral STIs using a commercial multiplex-PCR. Logistic regression was used to identify risk factors associated with MH, UU and UP, and to investigate if their detection was independently associated with any symptom/sign.

Results:

A total of 1,272 women were included in analyses. MH was detected in 29%(95%CI:27-32) of women, UU in 32%(95%CI:29-34) and UP in 72%(95%CI:69-74). In adjusted analyses, MH, UU and UP were associated with increasing number of sexual partners in the previous 12-months ($P<0.001$). MH and UU were associated with concurrent BV ($P<0.001$ and $P=0.013$, respectively). MH was independently associated with vaginal discharge and odour ($P<0.001$), vaginal pH>4.5 ($P<0.001$) and presence of clue cells ($P<0.001$). UU and UP were not associated with any symptom or sign.

Conclusion:

We report that MH, UU and UP were common amongst non-pregnant women and are likely to be acquired sexually. Only MH was associated with specific clinical

characteristics, and these were manifestations of the syndrome of BV. Our findings do not support routine testing for MH, UU or UP, and indicate that diagnosing BV has more clinical value than detecting MH alone.

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