

## ***Mycoplasma Hominis* Increases the Risk for *Ureaplasma Parvum* Infection in Human Immunodeficiency Virus Infected Pregnant Women**

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### ABSTRACT

**Background:** *Mycoplasma hominis* and *Ureaplasma parvum* have been recently linked to sexually transmitted diseases and other conditions. There are a limited number of studies conducted in South African pregnant women which have assessed the prevalence and risk factors for genital mycoplasmas.

**Methods:** This study included 264 HIV infected pregnant women attending the King Edward VIII antenatal clinic in eThekweni, South Africa. DNA was extracted using the Pure Link Microbiome kit and pathogens were detected using the TaqMan Real-time PCR assays. The statistical data analysis was conducted in a freely available Statistical Computing Environment, R software, version 3.6.3 using the RStudio platform.

**Results:** The prevalence of *M. hominis* and *U. parvum*, was 215/264 (81.4%), and 203/264 (76.9%), respectively. In the *M. hominis* positive group, a significantly ( $p=0.004$ ) higher proportion, 80.5% tested positive for *U. parvum* infection when compared to 61.2% among the *M. hominis* negative. Of the *U. parvum* positive women, a significantly ( $p=0.004$ ) higher proportion of women (85.2%) tested positive for *M. hominis* when compared to 68.9% among the *U. parvum* negative. In the unadjusted and adjusted analysis, being *M. hominis* positive increased the risk for *U. parvum* by approximately 3 times more ( $p=0.014$ ) and 4-fold ( $p=0.008$ ), respectively.

**Conclusion:** This study showed a significant link between *M. hominis* and *U. parvum* infection. To date, there are a limited number of studies that have investigated *M. hominis* being a risk factor for *U. parvum* infection. Therefore, the data presented in the current study now fills in this gap in the literature.

**Keywords:** *Mycoplasma hominis*, *Ureaplasma parvum*, Human immunodeficiency virus

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