

# ASSOCIATION BETWEEN *MYCOPLASMA GENITALIUM* AND PRETERM BIRTH IN PREGNANT WOMEN IN SOUTH AFRICA: PROSPECTIVE COHORT STUDY

## Authors

Gigi RMS<sup>1,2</sup>, Mdingi MM<sup>2</sup>, Jung H<sup>3</sup>, Mensah E<sup>3</sup>, Bütikofer L<sup>4</sup>, Babalola C<sup>5</sup>, Muzny CA<sup>6</sup>, Taylor CM<sup>7</sup>, van de Wijgert JHHM<sup>8</sup>, Medina-Marino A<sup>9</sup>, Klausner JD<sup>5</sup>, Peters RPH<sup>2,3,10</sup>, Low N<sup>1</sup>

<sup>1</sup>Institute of Social and Preventive Medicine, University of Bern, Bern, Switzerland,

<sup>2</sup>Research Unit, Foundation for Professional Development, East London, South

Africa, <sup>3</sup>Department of Medical Microbiology, University of Pretoria, Pretoria, South

Africa, <sup>4</sup>CTU Bern, Department of Clinical Research, University of Bern, Bern,

Switzerland, <sup>5</sup>Department of Population and Public Health Sciences, Keck School of

Medicine, University of Southern California, Los Angeles, California, USA, <sup>6</sup>Division

of Infectious Diseases, University of Alabama at Birmingham, Birmingham, Alabama,

USA, <sup>7</sup>Department of Microbiology, Immunology, and Parasitology, Louisiana State

University Health Sciences Center, New Orleans, Louisiana, USA, <sup>8</sup>Julius Center for

Health Sciences and Primary Care, University Medical Center, Utrecht, Utrecht

University, Utrecht, Netherlands, <sup>9</sup>Department of Psychiatry, Perelman School of

Medicine, University of Pennsylvania, Philadelphia, Pennsylvania, USA, <sup>10</sup>Division of

Medical Microbiology, University of Cape Town, Cape Town, South Africa

## Background:

*Mycoplasma genitalium* during pregnancy has been reported to be associated with preterm birth. Few studies are prospective or from resource-limited settings. This study aimed to investigate *M. genitalium* among pregnant women and its association with preterm birth in South Africa.

## Methods:

We conducted a cohort study in East London. Women were enrolled at <27 weeks of gestation, confirmed by ultrasound. A vaginal swab was tested for *M. genitalium* by PCR at the end of the study. Testing for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* was done on-site (GeneXpert, Cepheid) with treatment for women with a positive result. Birth outcome was collected through postnatal visits, birth records and phone calls. Gestational age at birth was analysed in days and as preterm birth (<37 weeks). We conducted univariable and multivariable regression analyses, adjusting for age, educational level, azithromycin exposure and HIV status.

## Results:

From March 2021 to October 2023, 604 pregnant women were enrolled. To date, complete data are available for 370 women, with 355 live births. Of these 92/355 (25.9%) women were living with HIV and at enrolment, median gestation was 14 weeks (interquartile range 10-19). There were 27/355 (7.6%, 95% CI 5.2 to 11.0) women with *M. genitalium* and 53 preterm births (14.9, 11.5 to 19.2 per 100 live births; 2/27 with *M. genitalium* versus 51/328 without). Comparing women with *M. genitalium* to those without, crude mean gestational age at birth was 1.23 days later (-3.34 to +5.81) and adjusted 1.02 days later (-3.99 to +6.03). Risk ratios were: crude 0.48 (0.12 to 1.85); adjusted 0.46 (0.12 to 1.81).

## Conclusion:

In this prospective cohort study in a South African population, *M. genitalium* in pregnancy, controlling for potential confounding, was not associated with shorter gestation or with the proportion of preterm birth. The association between *M. genitalium* and adverse birth outcomes requires further research.

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