

# Genital mycoplasma infection and spontaneous preterm birth outcome: a prospective cohort study

Giulia Cunha<sup>1</sup>, Larissa Bastos<sup>1</sup>, Stella Freitas<sup>1</sup>, Ricardo Cavalli<sup>1</sup>, and Silvana Quintana<sup>1</sup>

<sup>1</sup>Universidade de São Paulo Hospital das Clínicas da Faculdade de Medicina de Ribeirão Preto

June 29, 2021

## Abstract

**Objective** To determine the prevalence of genital mycoplasma infection and the risk of spontaneous preterm birth (sPTB) in asymptomatic pregnant women. **Design** Prospective cohort. **Setting** Public and private health services in Ribeirão Preto-SP, Brazil. **Population** 1.349 asymptomatic women with a singleton pregnancy at 20-25 weeks of gestation (WG) recruited between 2010 and 2011. **Methods** Baseline data was assessed using a questionnaire, in addition to cervicovaginal fluid and blood samples, to analyze lower reproductive tract infections (RTIs) and immune mediators, respectively. The association between variables and the risk of sPTB was evaluated using logistic regression analysis to estimate the odds ratios (ORs). **Main outcome measures** Genital mycoplasma infection and prematurity. **Results** The prevalence of the sPTB and genital mycoplasma was 6.8% and 18%, respectively. The infection was not a risk factor for sPTB (aOR 0.66; 95% CI 0.32-1.35), even when associated with bacterial vaginosis (BV). However, it was associated with a low socioeconomic status ( $p=0.0470$ ), cigarette use ( $p=0.0009$ ), number of sexual partners ( $p=0.0019$ ), and BV ( $p<.0001$ ). Regarding the risk factors associated with sPTB, previous history of PTB (aOR 12.06; 95% CI 6.21-23.43) and a cervical length [?] 2.5 cm (aOR 3.97; 95% CI 1.67-9.47) were significant. **Conclusions** The risk of sPTB was independently associated with the history of PTB and the cervical length but not with the genital mycoplasma infection. **Funding:** This work was founded by CNPq, FAPESP and CAPES. **Keywords:** Preterm birth, pregnancy, genital mycoplasma, bacterial vaginosis, risk factor

## Hosted file

Manuscript\_BJOG.docx available at <https://authorea.com/users/422615/articles/528308-genital-mycoplasma-infection-and-spontaneous-preterm-birth-outcome-a-prospective-cohort-study>

## Hosted file

Figure\_1.docx available at <https://authorea.com/users/422615/articles/528308-genital-mycoplasma-infection-and-spontaneous-preterm-birth-outcome-a-prospective-cohort-study>

## Hosted file

Table\_1.docx available at <https://authorea.com/users/422615/articles/528308-genital-mycoplasma-infection-and-spontaneous-preterm-birth-outcome-a-prospective-cohort-study>

## Hosted file

Table\_2.docx available at <https://authorea.com/users/422615/articles/528308-genital-mycoplasma-infection-and-spontaneous-preterm-birth-outcome-a-prospective-cohort-study>

## Hosted file

Table\_3.docx available at <https://authorea.com/users/422615/articles/528308-genital-mycoplasma-infection-and-spontaneous-preterm-birth-outcome-a-prospective-cohort-study>