

TITLE: Evaluation of the participation of *Ureaplasma parvum* in the etiopathogenesis of spontaneous abortion

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ABSTRACT:

Abortion is a public health problem that mainly affects developing countries. Spontaneous abortion occurs in 10 to 15% of pregnancies and could be associated with several infectious agents. *U. parvum* is associated with infections of the genitourinary tract including intrauterine infection, chorioamnionitis, preterm labor and miscarriage. The prevalence of *U. parvum* is directly associated with the geographical area, socioeconomic level and number of sexual partners. Therefore, it becomes important to check its prevalence associated with miscarriage. The study was conducted at the Public Health Foundation of Vitória da Conquista with women who presented spontaneous abortion and the control group with women who evolved with normal vaginal delivery. Samples of cervical mucus and placental chorion were collected to identify *U. parvum* using qPCR assay. For statistical analysis used IBM SPSS®, EpiInfo and GraphPad Prism software. Odds Ratio (OR) was calculated for the evaluation of risk factors associated with infection, and variables with a value of $p < 0.05$ were considered significant. A total of 89 women with spontaneous abortion and 20 women with normal gestation participated in the study. The prevalence of *U. parvum* in the cervical mucus (CM) was 76.4%, and in the placental cavity was 66.3%. A 5.9-fold chance was observed for the occurrence of abortion in women with *U. parvum* in the placental chorion. Statistical differences were observed for the microbial load of *U. parvum* in the placental chorion of women with abortion compared to women with normal delivery. Moreover, *U. parvum* also was associated with age less than 29 years. We conclude that *U. parvum* infection in the cervical mucus in pregnant women can ascend to the placental region and trigger spontaneous abortion. It is important the initial investigation of the presence of this microorganism early in prenatal care to prevent gestational complications.

Keywords: Spontaneous abortion. *Ureaplasma parvum*. Urinary tract infections.

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