Abstract (poster session)

**Waddlia chondrophila: a role in human miscarriage**  
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Background: Waddlia chondrophila, an intracellular bacterium first identified in bovine abortion, is also suspected to be associated with human adverse pregnancy outcomes. Indeed, a serological association was found between the presence of anti-Waddlia antibodies and human miscarriage. However, direct demonstration of Waddlia in human placenta or vaginal samples has not yet been reported. Methods: To confirm this observation, we collected placenta, vaginal swabs and sera from women with and without miscarriages. Serologies as well as PCR and immunohistochemistry were performed on these samples. Results: Serological analysis confirmed an association between presence of Waddlia IgG antibodies and miscarriage with a prevalence of 23.2% among patients with miscarriage and 14.6% among patients without miscarriage (p-value=0.044). Six patients exhibited presence of Waddlia IgM antibodies, without statistical significance between miscarriage's and control's groups. A total of 32 patients exhibited a positive PCR in placenta (n=11) or in vaginal swabs (n=21). Moreover, immunohistochemistry revealed the presence of Waddlia in 3 placentas, two of them being from patients with miscarriage. In multivariate logistic regression models, only ethnicity remains associated with serological evidence of Waddlia infection. Waddlia IgG positive serology was not associated with contact with animal, age, social status or Chlamydia trachomatis seropositivity. Conclusions: These results strongly suggest a role of Waddlia chondrophila in human miscarriage. Diagnosis and treatment of Waddlia infection might help prevent miscarriage, the most frequent complication of human pregnancy.