

Association of maternal and cycle-related factors to pregnancy and neonatal outcomes when excluding paternal factors by using donor sperm: a retrospective cohort study

Qian LI¹, wenhao SHI², xia XUE², and juanzi SHI²

¹The northwest women's and children's hospital

²The northwest women's and children's hospital

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Abstract

Objective: Finding the maternal and cycle associated factors that affect the pregnancy and neonatal outcomes when excluding paternal effect. **Design:** A retrospective cohort study. **Setting:** Public fertility center. **Population:** 1098 couples that received fresh IVF/ ICSI cycle with donor sperm. **Methods:** The associations of maternal factors and cycle-related parameters with pregnancy and neonatal outcomes were depicted as adjusted odds ratios (aOR) / adjusted β and 95% confidence intervals (CI). **Main outcome measures:** Pregnancy and neonatal outcomes. **Results:** Women over 35 years had a distinctly decreased pregnancy and live birth rate (aOR 0.904; 95% CI 0.317–2.584 and aOR 0.905; 95% CI 0.398–2.768). Abortion and multiple ART-cycles were linked with increased risks of pregnancy failure, the oocyte retrieval and transferred embryo numbers improved pregnancy incidence. Blastocyst transfer increased both the probability of pregnancy and live birth (aOR 1.77; 95% CI 1.035–3.026 and aOR 1.364; 95% CI 1.041–1.788). For newborn, the negative contribution of transferred embryo number to birth weight and length was observed (adjusted β -0.30; 95% CI -0.533 to -0.277 and adjusted β -0.197; 95% CI -0.789 to -0.332). Female BMI and endometrial thickness both had a positive effect on birth weight and length. **Conclusions:** Oocyte number, transferred embryo number, and blastocyst transfer were positively associated with pregnancy or live birth. Females over 35 had an abortion, and multiple ART cycles experience linked to failure pregnancy. The transfer of multiple embryo poses a threat to newborn body weight and length, while higher mother BMI and endometrial thickness had positive influence.

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Table 2 Descriptive data of ovarian stimulation.pdf available at <https://authorea.com/users/360880/articles/482431-association-of-maternal-and-cycle-related-factors-to-pregnancy-and-neonatal-outcomes-when-excluding-paternal-factors-by-using-donor-sperm-a-retrospective-cohort-study>

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Table 3 Association of maternal and ART related f.pdf available at <https://authorea.com/users/360880/articles/482431-association-of-maternal-and-cycle-related-factors-to-pregnancy-and-neonatal-outcomes-when-excluding-paternal-factors-by-using-donor-sperm-a-retrospective-cohort-study>

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Table 4 Multivariate linear regression analysis fo.pdf available at <https://authorea.com/users/360880/articles/482431-association-of-maternal-and-cycle-related-factors-to-pregnancy-and-neonatal-outcomes-when-excluding-paternal-factors-by-using-donor-sperm-a-retrospective-cohort-study>