Medical Xpress

Application of comprehensive chromosome screening could improve IVF success

October 27 2016

An increase in the frequency of polymorphic variants among infertile patients compared with fertile donors suggest they have an impact on fertility.

Chromosomal polymorphisms have an impact on fertility, increasing the chromosomal abnormalities in male gametes and embryos. While previous studies have reported a higher incidence of chromosomal polymorphisms in infertile patients, the relationship between these variants and infertility is still unclear.

"Chromosomal polymorphic variants increase aneuploidies in male gametes and embryos" examines the relationship between polymorphisms and infertility. The study and its findings were published in the latest issue of *Systems Biology in Reproductive Medicine*. The results showed an increase in the frequency of polymorphic variants among infertile patients compared with fertile donors, suggesting they have an impact on fertility.

Further results revealed that female polymorphism carriers have a higher risk for embryo aneuploidy than females with a normal karyotype.

"The application of a comprehensive chromosome screening to select euploid embryos could improve IVF success rates among chromosomal polymorphism carriers," Article co-author Ruth Morales of IB Biotech in Alicante, Spain explains. "One may consider withdrawing donated oocytes with polymorphic variants from the donation program, and

analysing the rate of sperm aneuploidy in sperm donors carrying a polymorphism.

More information: Ruth Morales et al. Chromosomal polymorphic variants increase aneuploidies in male gametes and embryos, *Systems Biology in Reproductive Medicine* (2016). DOI: 10.1080/19396368.2016.1212949

Provided by Taylor & Francis