

Multiple pregnancy rate and single transfer of either fresh or cryopreserved embryo.

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Context: High obstetric risks of multiple pregnancies require reducing the frequency of their occurrence. The most effective strategy in this case is single fresh or cryopreserved embryo transfer getting more popular recently.

Objective: to evaluate the effect of fresh and cryopreserved single embryo transfer on clinical outcomes.

Methods: Fertilization and culturing of embryos to the blastocyst stage was conducted in «Global total» medium («Life Global», USA). The embryos were vitrified by M. Kuwayama method in our own modification. Freezing and subsequent storage was performed in CryoTec (Cryotech, Japan).

Patient(s): Between January 2011 and December 2016 274 women in the age $32,5 \pm 3,1$ underwent treatment in ART- reproductive clinic in Kharkov were retrospectively analyzed.

Intervention(s): 212 women (group 1) and 62 women (group 2) underwent the transfer of one blastocyst to day 5 after IVF in fresh cycle and one vitrified-warmed blastocyst respectively.

Main Outcome Measure(s): Clinical outcomes were analysed after single transfer of either fresh or cryopreserved embryo.

Results: The pregnancy rate in group 1 was 47.6% and 61.3% in group 2. There was observed an increasing level of human chorionic gonadotropin (hCG) to day 12 after embryo transfer, the hormone level was 394 ± 46.6 mIU/ mL in 2 group, compared to group 1, that was 259.4 ± 56.2 mIU/mL ($p < 0.05$). Despite the single embryo transfer in group 1 was found two monoamniotic monochorionic pregnancies, e.g. twins and triplets, which amounted 1.9% of total pregnancies, in group 2 these were 3 monoamniotic monochorionic twins, that amounted 4.8%.

Conclusions: The hCG level and frequency of multiple pregnancies were higher after a single transfer of the cryopreserved embryo if compared with a single transfer of fresh embryo. The couples offered a single embryo transfer should be informed about benefits and possible risks of multiple pregnancy.

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