

17th World Congress of the Academy of Human Reproduction

15–18 March 2017
Rome, Italy

TITLE

IMPLANTATION RATE FOLLOWING FROZEN EMBRYO TRANSFER IN LEUKEMIA INHIBITORY FACTOR SUPPLEMENTED MEDIUM.

AUTHOR/S

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ABSTRACT

Context: Leukemia inhibitory factor (LIF) plays a central role in the control of implantation. LIF regulates multiple processes prior to and during implantation such as endometrial transformation into receptive state, embryo-endometrial interaction, stromal decidualization, tropfoblast invasion, blastocyst growth and development and uterine leukocyte infiltration. Abberant LIF production is linked to implantation failure.

Objective: The aim of the study was to determine whether LIF enriched transfer medium improves implantation and pregnancy rates in FET cycles.

Methods: 1712 blastocysts with a grade of BB or higher were cryopreserved on day 5 or day 6 by vitrification technique. Warming was performed at least two hours prior the sheduled frozen ET. 798 blastocysts (737 cycles) were then cultured and transferred in global HP medium containing 10ng/ml LIF. The rest 914 blastocysts (812 cycles) cultured and transferred in global HP medium served as controls. For all transfers the volume of medium injected with the embryos did't exceed 20mkl. Clinical pregnancy was confirmed by the sonographic observation of a gestational sac. Data was statistically analyzed using Chi- square test.

Patient(s): Prospective controlled study. Results are presented for 1542 IVF cycles with FET between April, 2014 and September, 2015. Main outcome measures: Implantation rate, clinical pregnancy rate.

Results: The mean female age (34.6 ± 2.8 vs 35.2 ± 2.4) and number of embryos per transfer (1.1 vs 1.1) were comparable between two groups. The clinical pregnancy rate per transfer and implantation rate were 41,8% and 39,2% in LIF group, 42,5% and 39,6% in controls (NS, $p > 0.05$).

Conclusions: Supplementing transfer medium with 10ng/ml LIF does not appear to improve implantation and pregnancy rates following FET.

Study funding: By Russian Science Foundation, project 14-50-00029.

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