CLINICAL OUTCOME FOLLOWING INTRAUTERINE MELATONIN INFUSION

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Abstract Body

Objective: The purpose of this study was to evaluate the effectiveness of endometrium treatment with melatonin in vitrified-warmed blastocyst transfer cycles.
Study Design: Prospective, controlled experimental study.
Material and methods: On day 1 to day 4 of secretory phase of menstrual cycle, 305 patients of experimental group (average maternal age 35.9 years; 1.12 embryo per transfer) were subjected to intrauterine melatonin infusion (0.2 μM melatonin in 1.5 ml Global total medium). Control group included 5844 patients (average maternal age 35.8 years; 1.10 embryo per transfer) without infusion. Vitrified-warmed blastocyst transfer (≥3BB according to the grading scale proposed by Gardner et al.) was performed on day 5 after ovulation or after the initiation of progesterone treatment, in natural or hormone replacement cycles, respectively. 341 blastocysts were transferred in the experimental group, and 6444 blastocysts – in the control group.
Main outcome measures included: clinical pregnancy, implantation, live birth and cesarean section rates. Data was analysed using the Chi-square test and p value <0.05 was considered significant.
Results: Clinical pregnancy and embryo implantation rate in the experimental and control groups was 37.4 vs. 36.2% (p = 0.68) and 35.2 vs. 33.7% (p = 0.45), respectively. The average number of fetuses per pregnancy in the experimental and control groups was 1.04 and 1.03, respectively. In the subgroup of women who underwent hysteroscopy (160 and 2261) clinical pregnancy and implantation rates were 38.1 vs. 33.1% (p = 0.19) and 35.8 vs. 31.1% (p = 0.19) in experimental and control groups respectively. Other clinical outcomes (biochemical pregnancy, miscarriage rate, ongoing pregnancy rate, live birth + cesarean section) did not statistically significant differ between the groups too.
Conclusion: Intrauterine infusion with melatonin before vitrified-warmed ET does not statistically significant affect the clinical outcome.
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