P-49 Does Assisted Hatching (AH) Have a Benefit ?

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Background & Objectives: To determine whether assisted hatching (AH) have a benefit to improve live birth, clinical pregnancy and implantation in women of advanced age and repeated implantation failure.

Method: From January 2001 to September 2003, retrospective controlled study. Embryo transferred IVF cycles which indication for PCOS, male factor, endometriosis III, IV were excluded from the study were analysed according to female patient's age and the cycle number of previous IVF- ET failure. Group A (124 cycles, 118 patients); Age ≥ 38 years with previous IVF- ET failure cycle ≤ 1, Group B (157 cycles, 144 patients); Age ≤ 37 years with previous IVF- ET failure cycle ≥ 2, Group C (46 cycles, 41 patients); Age ≥ 38 years with previous IVF- ET failure cycle ≥ 2. AH using zona drilling (ZD) with Acid Tyrode's solution on four- to eight-cell stage were performed in each group (AH+vs. AH−is 71 vs. 53 in Group A; 68 vs. 86 in Group B; 35 vs. 11 in Group C). Pregnancy outmes such as clinical pregnancy rate (CPR), implanation rate (IR), live birth rate (LBR) were compared in each groups using Student t-test and chi-square. $p<0.05$ was considered as statistically significant.

Results: The mean female patient age and number of previous IVF- ET failure cycles (AH+ vs AH−) were 39.7 vs. 39.8 and 1.4 vs. 1.3 in Group A, 33.0 vs. 32.3 and 4.4 vs. 4.4 in Group B and 39.7 vs. 39.7 and 4.2 vs. 4.7 in Group C. The mean number of transferred embryo was 3.2 vs. 3.0, 3.5 vs. 3.5 and 3.2 vs. 3.1 in each group. There were no significant differences in female patient age, the number of previous IVF-ET failure cycles, the number of transferred embryo. The CPR, LBR and IR per embryo transfer was 25.4% vs. 20.8%, 16.9% vs. 13.2% and 9.6% vs. 9.5% in Group A without significant difference; 29.4% vs. 43.8% ($p=0.70$), 27.9% vs. 32.6% and 13.9% vs. 15.9% in Group B without significant difference; 25.7% vs. 27.3%, 17.1% vs. 18.2% and 11.6% vs. 11.8% in Group C without significant difference.

Conclusions: These results suggest that AH may have no benefit on improving the rate of live birth, clinical pregnancy and implantation in women of advanced age, repeated implantation failure and the combined patients. But prospective randomized controlled studies are necessary to elucidate the effect of AH in these patients.