PROSPECTIVE AND RANDOMIZED STUDY TO COMPARE TWO PH LEVELS (7.20-7.25 VS 7.35-7.40) IN REGULAR PATIENTS

S. Carmona Guede[1], J.M. Molina Sabater[1], A. Mojica de la Iglesia[1], M. Riqueros Arevalo[1], M. Esbert Algam[1], A. Ballesteros Boluda[1], A. Pellicer[2], G. Calderon de Oya[2]
[1] *IVI Barcelona*
[2] *IVI Valencia, Spain*

OBJECTIVE: Study the effect of culturing embryos of in vitro fertilization (IVF) cycles with low pH levels (7.20-7.25) or high pH levels (7.35-7.40).
DESING: Prospective, randomized controlled study of 53 regular patients.
MATERIALS AND METHODS: Fifty-three IVF cycles of regular patients were randomly allocated the day before oocyte retrieval in two groups: Group A (low pH level); Group B (high pH level). Half of the incubators setting were modified for a low pH level (7.20-7.25) and the other half for high pH level (7.35-7.40). Same culture media was used in all cases and embryo replacements were performed on day 3 of development.
Student t-test and chi-square test were used for and statistical analysis.
RESULTS: Both groups were comparable in terms of women's age, number of oocytes retrieved and mean number of embryos replaced.
Fertilization, embryo development, clinical pregnancy and implantation rates were not influenced by the pH level.
However, multinucleation (MN) rate, determined by at least 1 MN blastomere, was significantly higher in group B. This was observed in embryos in Day2 and Day3 (group A: 9.36% vs. group B: 19.29%; p-value: 0.020) and total embryos with MN blastomeres (group A: 35.67% vs. group B: 47.86%; p-value: 0.016) were statistical different.
CONCLUSION: Although no significant differences in overall clinical outcomes were found, results showed that with high pH levels, embryos present more multinucleation. On the other hand, a good assessment and selection of viable embryos makes this increase not to have deleterious effects on the overall outcomes.