

Does recipient's age changes the clinical pregnancy rate in an egg sharing donation program?

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Introduction: The influence of the recipient's age in the results of egg donation cycles has been recently questioned. The objective of this study was to compare pregnancy rates in in vitro fertilization (IVF) cycles between recipients < 45 and ≥ 45 years old.

Materials and Methods: All egg sharing donation (ESD) cycles from January 1993 to December 2004, in a Brazilian reproduction center were analyzed. One hundred and sixty-one donors were stimulated, resulting in 216 transfers among 160 recipients. The selection criteria for donors included: being between 18-36 years old, genetic screening, basal FSH < 10 UI/L, and normal karyotype. The selection criteria for recipients were: the need for oocyte donation for IVF cycle, being in good health and less than 51 years old. Pituitary down regulation was done in donors and recipients with ovarian function, with GnRH agonist in the mid-luteal phase. Ovarian stimulation was done with FSH and/or HMG. Patients commenced using estradiol valerate in increasing doses, from 2 mg to 6-8mg/day at the same day that donors started stimulation. The harvested eggs were divided equally between donors and recipients. Luteal support was done with progesterone intramuscular or vaginal. Embryo transfer was performed on day 2 or 3. The recipients were divided in group 1, < 45 years and group 2, ≥ 45 years old. Recipient's and donor's age, number of oocytes injected, embryos transferred, implantation and pregnancy rates (presence of heart beat at ultrasound) and abortion rates were analyzed. Statistical analysis was performed by Statistical package for social science (SPSS) version 10.0, Mann Whitney U test and Student's t-test.

Results: The median age of recipients in group 1 was 39.5 ± 3.8 vs 47.3 ± 2.4 years old in group 2. Donors in group 1 was 29.6 ± 3.2 vs 29.9 ± 3.3 years old in group 2. The median of oocytes injected and embryos transferred for group 1 and 2 were respectively 9.0 vs 9.1 and 3.7 vs 3.8. The implantation and clinical pregnancy rates were respectively for group 1 and 2: 18.4% (97/527) vs 12.9% (38/293) and 41.7% (58/139) vs 35% (27/77). Abortion rates were 18.9%(11/58) in group 1 and 22.2%(6/27) in group 2. Only the differences in clinical pregnancy (p = 0.033) and implantation rates (p = 0.028) were statistically significant at 95% confidence interval.

Conclusions: We divided the recipients in two groups according to the age in order to analyze the impact of recipient's age on IVF outcomes. The recipient's age ≥45 years old, negatively affected the implantation and clinical pregnancy rates, in an egg sharing donation program.