**Shared egg donation: comparison of pregnancy rates in fresh or thawn embryo transfers between donors and recipients**

**Introduction:** In Brazil, as the commercial use of eggs in Assisted Reproduction is not allowed, shared donation is a widely used resource for patients who wish to have children and have limitations in the use of their own eggs.

**Objective:** Determine the chances of clinical pregnancy and live births in donors and recipients in the first fresh or thawed embryo transfer.

**Methods:** Retrospective, cross-sectional study where 211 egg donation cycles and 211 egg reception cycles were studied, from January 2016 to December 2020, in a private clinic. The study investigated pregnancy-related rates in donors and recipients, as well as evaluating pregnancy rates in fresh and thawed embryo transfers. Variables that could interfere with the chance of pregnancy in both donors and recipients were also evaluated.

**Results:** Between donors and recipients there was no statistical difference for clinical pregnancy (p=0.7585) and live births (p=0.5786). The index of clinical pregnancy and live births in donors showed no statistical difference (p=0.6701 and p=0.2056) for fresh and thawed transfers. There was also no statistical difference for recipient patients. Among the variables studied that could interfere with the results, only the blastulation index showed a statistical difference in the chance of clinical pregnancy in donors and recipients.

**Conclusion:** The studied variables that could interfere in the results showed statistical difference only for the blastulation index in both donors and recipients. The clinical pregnancy rate in the donors was 37.70% and 36.10% in the recipients. There was no difference in the chances of pregnancy between donors and recipients, and there was also no difference in pregnancy rates between fresh and thawed transfers. The results showed no statistical difference in clinical pregnancy and live births when comparing D4 versus D5-D6 transfers.

Keywords: egg donation, shared egg donation, in vitro fertilization, embryo freezing, embryo transfer.

Table 1 - Pregnancy results in donors: 1st transfer, fresh or thawed.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Fresh (113)**  |  **Thawed (86)** | **p**  |
| Biochemical pregnancy  | 4/113 (3,53%)  | 5/86 (5,81%)  | 0,5041  |
| Clinical pregnancy  | 41/113 (39,82%)  | 34/86 (39,53%)  | 0,6601  |
| Implantation  | 51/267 (19,10%)  | 40/182 (21,97*%)*  | 0,4747  |
|  Clinical abortion | 13/41 (31,70%)  | 5/34 (14,70%)  | 0,1078  |
| Live births  | 28/113 (24,77%)  | 29/86 (33,72%)  | 0,2056  |
| Multiple pregnancy  | 5/28 (17,85%)  | 6/29 (20,68%)  | 1,0000  |
| Ectopic pregnancy  | 1/113(0,88%)  | 0  | 1,0000  |

Table 3 - Pregnancy outcomes in recipients: 1st transfer, fresh or thawed.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Fresh (168)**  | **Thawed (40)**  | **p**  |
| Biochemical pregnancy  | 11/168 (6,54%)  | 2/40 (5,00%)  | 1,0000  |
| Clinical pregnancy  | 60/168 (35,71%)  | 15/40 (37,50%)  | 0,8559  |
| Implantation  | 80/391 (20,40%)  | 23/87 (26,40*%)*  | 0,2486  |
| Clinical abortion  | 18/60 (30,00%)  | 3/15 (20,00%)  | 0,5351  |
| Live births | 42/168 (25,00%)  | 12/40 (30,00%)  | 0,5493  |
| Multiple pregnancy  | 12/42 (28,57%)  | 2/12 (16,66%)  | 1,0000  |
| Ectopic pregnancy  | 0  | 0  | 1,0000  |