Embryology

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Elective single embryo transfer in oocyte donation IVF: strategy, outcome, and efficiency

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Background and aims

To evaluate the efficiency of each oocyte donation cycle and what the optimal transfer strategy for competitive live birth with low risks of multiple pregnancy is.

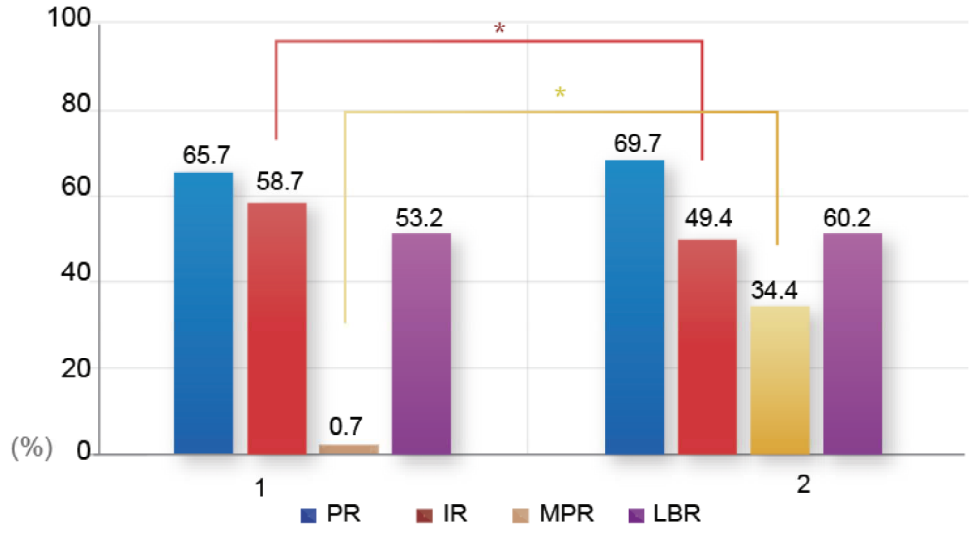
Methods

Three hundred eighty four donors matched with distinct recipients were included in this study. Each recipient was received frozen blastocyst transfer (FBT). The efficiency of elective single embryo transfer (eSET) / double embryo transfer (DET) were assessed by cumulative reproductive outcomes. Moreover, to illustrate what the optimal transfer policy is, the FBT cycles of recipient were classified into three groups: A. eSET in first FBT then eSET in second FBT (n=149), B. eSET in first FBT then DET in second FBT (n=170) and C. DET in first FBT then DET in second FBT (n=283).

Results

Mean age of recipient was 41.06 and 41.00 of eSET and DET in the first FBT, respectively. There were no significant difference in pregnancy rate (PR, 65.7% vs. 69.7%) and live birth rate (LBR, 53.2% vs. 60.2%) between the eSET and DET; however, multiple pregnancy rate (MPR, 0.7% vs. 34.4%) was significantly higher in the DET than eSET.

Reproductive Outcomes After First Transfer



For assessing the optimal FBT strategy, there were no significant difference in cumulative PR (65.8%, 66.5% and 68.6%) and cumulative LBR (53.0%, 54.1% and 59.0%) among three different groups. Remarkably, cumulative MPR (0.7%, 4.1% and 33.2%) was significantly higher in group C than others.

Conclusions

Accordingly, the risk of multiple pregnancy has been a crucial issue in assisted reproductive technology (ART) field. How to optimize the transfer strategy to achieve appropriate LBR with lowest MPR is worthy of attention. Therefore, with convinced results, eSET in the first FBT was recommended in oocyte donation cycle since there were no significant difference in LBR and simultaneously contained significantly lower MPR than DET.

	Group A (eSET/eSET)	Group B (eSET/DET)	Group C (DET/DET)
Cycles (n)	149	170	283
eSET % (n)	100.0 % (149)	84.1 % (143)	0.0 % (0)

Reproductive Outcomes of Each Strategy Group