

The sharing of eggs by infertile women who are trying to conceive themselves with an egg recipient for financial advantages does not jeopardize the donor's chance of conceiving

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Summary

Purpose: To determine if the sharing of oocytes by an infertile woman with an egg recipient for financial advantages has any negative impact on the success rate for the donor. **Methods:** A matched controlled study was performed comparing pregnancy outcome of women undergoing in vitro fertilization-embryo transfer (IVF-ET) but sharing half of their eggs with a recipient vs women undergoing IVF-ET but not sharing oocytes. **Results:** Even though more women sharing oocytes deferred fresh transfer and cryopreserved the embryos because of a greater likelihood of ovarian hyperstimulation syndrome, there was no difference in pregnancy rates between the two groups after their first embryo transfer whether it was with fresh or frozen-thawed embryos. **Conclusions:** Sharing of oocytes by a woman undergoing IVF-ET does not jeopardize her chance of a successful outcome following embryo transfer.

Key words: Infertile egg donors; Sharing of oocytes; Recipient; Pregnancy rates.

Introduction

One source of donor oocytes for recipients in need of oocytes is from infertile women willing to share their harvest of oocytes [1]. The donation is usually associated with some type of relief of the financial burden for the donor's in vitro fertilization (IVF) cycle.

There are data showing that the pregnancy and implantation rate in recipients using eggs from infertile donors are not reduced when compared to paid donors [2]. One question that arises, however, is whether the sharing of oocytes may be at the expense of a reduction in the pregnancy rate of the donors.

The present study evaluated the outcome of women undergoing controlled ovarian hyperstimulation and oocyte retrieval with sharing half of the oocytes retrieved with a recipient vs women who were not egg donors keeping all the oocytes themselves.

Materials and Methods

Over an 8-year-period infertile women donating half of their retrieved oocytes to recipients in exchange for free IVF services were matched to the next woman going through IVF who did not share oocytes. The match had to be in the same year, the age of patient within six months and the number of eggs retrieved within one (but could be two if otherwise matching would not be done in same year), and the same infertility diagnosis. Pregnancy outcome following the first fresh embryo transfer was then compared.

Sometimes because of the risk for ovarian hyperstimulation, all embryos were frozen. Therefore, the pregnancy rates were

also calculated according to the pregnancy rate per first transfer which would include the first frozen embryo transfer if the fresh one was deferred. All embryos were transferred on day three.

Results

There were 325 infertile egg donors having IVF and egg retrieval donating half the eggs to a recipient compared to 325 matched women undergoing IVF-ET who were not donating any eggs. There were 194 fresh embryo transfers of > 2 embryos in donors vs 256 in non-donors.

The results are shown in Table 1. There were no significant differences in clinical or ongoing/delivered pregnancy rates or implantation rates.

There were 101 retrievals in donors where the fresh embryo transfer was deferred but a frozen embryo transfer had been performed within the same time of the study period. The comparable number for non-donors was 46. The usual reason for not transferring fresh embryos was the risk for OHSS (n = 91 for donors vs 36 in non-donors). Fresh ET was deferred for inadequate endometrial thickness (< 8 mm) or adverse homogeneous hyperechogenic pattern upon evaluating the endometrium by sonography in ten women in each group.

Embryos were formed in all retrievals. The difference of 22 donors and 15 non-donors having oocyte retrievals and no transfer (fresh or frozen) was that at the close of the study, they had not transferred the frozen embryo as yet.

The pregnancy outcome of the first embryo transfer (fresh or frozen) is shown in Table 2. There were no significant differences in the clinical or ongoing/delivered

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Table 1. — Pregnancy outcome in first fresh embryo transfer of at least two embryos in donors vs non-donors.

	Donors	Non-donors
No. retrievals	325	325
No. fresh transfers	202	264
No. transfers ≥ 2 embryos	194	256
Average age	31.0	31.1
No. follicles	8962	4713
No. eggs retrieved	3500	3406
No. metaphase II eggs	2938	2801
No. inseminated	3179	3060
No. fertilized	2165	1993
No. pregnancies	111	135
% pregnant/transfers	57.2	52.7
No. clinical pregnancies	105	124
% clinical/transfers	54.1	48.4
No. chemical	5	8
No. ectopic	1	3
No. live/delivered	97	115
% live/delivered	50.0	44.9
No. miscarriages	9	11
% miscarriages	8.6	8.9
No. embryos transferred	567	780
Average no. embryos transferred	2.9	3.0
No. sacs implanted	167	200
Implantation rate (%)	29.5	25.6
No. twins	37	43
% twins/clinical pregnancy	35.2	34.7
No. triplets	12	9
% triplets/clinical pregnancy	11.4	7.3
No. quads	1	3
% quads/clinical pregnancy	1.0	2.4

pregnancy rates or implantation rates in donors vs non-donors following their first embryo transfer (fresh or frozen) (Table 2).

Discussion

The greater number of first transfers being frozen in donors vs non-donors might be related to the tendency for the doctor monitoring the cycle to push the gonadotropins a little more aggressively in oocyte donors to insure enough eggs for donors and recipients. This policy did not seem to adversely affect pregnancy outcome since there was no difference in pregnancy rates or implantation rates following the first embryo transfer despite the fact that frozen transfers accounted for 33.3% of first transfers for donors vs 14.8% of non-donors.

Theoretically the fact that the donor gives away half of the eggs might lead to less top quality embryos to trans-

Table 2. — Pregnancy outcome in first transfer (includes frozen ET).

	Donors	Non-donors
No. retrievals	325	325
No. transfers	303	310
No. pregnancies	167	158
% pregnant/transfers	55.1	51.0
No. clinical	152	145
% clinical/transfers	50.2	46.8
No. chemical	12	10
No. ectopic	3	3
No. live/delivered	138	134
% live/delivered	45.5	43.2
No. SAB/TAB/FD	20	14
% SAB/clinical pregnancy	13.2	9.7
No. embryos transferred	875	929
Average no. embryos transferred	2.9	3.0
No. sacs implanted	243	232
Implantation rate (%)	27.8	25.0
No. twins	56	47
% twins/clinical pregnancy	36.8	32.4
No. triplets	12	12
% triplets/clinical pregnancy	7.9	8.3
No. quads	2	3
% quads/clinical pregnancy	1.3	2.1

fer which could theoretically lower the pregnancy rate. The fact that the pregnancy rate in the first fresh embryo transfer showed no difference indicates this was not the case.

The only disadvantage of sharing oocytes is fewer embryos available for future frozen embryo transfers. However, many still have frozen embryos available after the first transfer. If not they could always donate again.

References

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