

# Efficacy of sharing oocytes from compensated donors between two recipients

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## Summary

**Purpose:** To see if sharing of donated oocytes from a compensated donor lowers outcome following embryo transfer compared to recipients keeping all oocytes.

**Method:** Retrospective review. Recipients have the option of keeping all oocytes or sharing to reduce costs.

**Results:** There were equal clinical, and ongoing/delivered pregnancy rates and implantation rates in the two groups. There were almost twice as many frozen embryos available to recipients who did not share for potential future use.

**Conclusions:** Sharing of oocytes between two recipients reduces the financial burden for the recipient without affecting efficacy. Such a policy would make more oocytes available to recipients and thus shorten the long waiting times.

**Key words:** Donated oocytes; Recipients; Sharing; Financial compensation.

## Introduction

Donated oocytes are at a premium in most in vitro fertilization (IVF) centers and waiting times may be quite long. One solution to this dilemma would be to share the oocytes retrieved from a paid donor between two recipients.

Sharing of oocytes would not only improve the number of recipients who can be helped but would reduce the cost since the donor's fee would be shared along with costs of anesthesia, monitoring and medication. However, since the generation of more embryos allows a better opportunity to select the best morphologically normal embryos, the question arises as to whether these advantages have to be weighed against a possible reduced pregnancy rate.

## Materials and Methods

If a recipient chooses a paid donor she has the option of keeping all the oocytes or sharing them with another recipient to reduce costs.

Recipients without ovarian function are started on graduated oral estradiol tablets 2-6 mg over two weeks and then the estrogen is maintained when progesterone vaginal suppositories 200 mg twice daily and progesterone in oil 100 mg I.M. daily are added. Recipients without ovarian function would have been on a smaller dosage (usually 1 mg) of estradiol up to this point. Recipients with ovarian function would be treated similarly except they would usually have their own ovarian function suppressed by leuprolide acetate 0.5 mg which would be reduced to 0.25 mg once the estradiol was started.

Embryos were transferred on the fourth day of progesterone administration. Assisted embryo hatching was frequently performed prior to the transfer of the 3-day-old embryos [1].

A comparison of pregnancy outcome between those recipients sharing the oocytes vs those keeping them all from January 1, 1997 to May 1, 2002 was made. Also the respective number of cryopreserved embryos available for a future transfer was tabulated.

## Results

More recipients chose to share oocytes rather than to keep them all. Thus 80 paid donors provided oocytes for 160 recipients and 74 donors provided oocytes for 74 recipients who kept them all.

The clinical pregnancy rate (ultrasound evidence of pregnancy at 6 weeks' gestation) for those sharing oocytes was 55.6% (89/160) and the ongoing/delivered pregnancy rate was 51.9% (83/160). The implantation rate was 31.8% (148/465). In comparison the clinical and ongoing/delivered pregnancy rates in the recipients keeping all oocytes was 52.7% (39/74) and 51.4% (38/74) ( $p = \text{NS}$ ). The implantation rate was 25.2% (61/242). Chi-square analysis found no significant differences in clinical or ongoing/delivered pregnancy rates or implantation rates in recipients sharing oocytes vs those keeping them all.

The mean number of embryos that were transferred was 2.9 for those recipients sharing oocytes vs 3.3 for those not sharing. The average number of embryos cryopreserved was 3.5 in the recipients who shared oocytes vs 6.0 for those not sharing ( $p < .05$ , ANOVA).

## Discussion

In the United States it is not considered unethical to pay a donor who has no interest in becoming pregnant herself to help a woman conceive who has a paucity of good quality oocytes [2-4]. This policy is not accepted in

all countries [5-7]. However sharing of oocytes is a common practice especially when an infertile woman is willing to share up to half of her retrieved oocytes in exchange for financial help for her IVF cycle [8-13].

The pregnancy rates and implantation rates per fresh embryo transfer for infertile donors is lower than for their respective recipients [11]. This phenomenon is probably related to the adverse effect on the uterine environment by controlled ovarian hyperstimulation (COH) [14]. However, the difference is narrowing with the formation of heartier embryos due to advances in the IVF laboratory [14].

Controlled ovarian hyperstimulation though, is not a factor when two recipients share oocytes from a paid donor. Nevertheless by sharing, there may be theoretically fewer embryos from which to choose the ones with the best quality, and thus the pregnancy rates for these recipients could be lower. The data presented here clearly show that this possible diminished potential for selecting the best embryos does not decrease the likelihood of a successful outcome following fresh embryo transfer. The only negative effect is fewer embryos available for future frozen embryo transfer. Nevertheless, even the recipients who shared the donated oocytes had enough frozen embryos left for a future frozen embryo transfer.

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