

## **Human Oocyte Cryopreservation: Successful Pregnancy from Frozen Donor Egg Bank Oocytes with Frozen PESA Specimen – A Case Report**

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**Objective:** To describe the successful use of frozen donor egg bank oocytes with a frozen PESA specimen.

**Design:** Case report.

**Materials and methods:** A 38-year old patient was treated for diminished ovarian reserve and obstructive azoospermia. She underwent one unsuccessful *in vitro* fertilization cycle and canceled one fresh donor egg cycle due to donor non-compliance. A second attempt with another donor was cancelled due to the donor's FSH level. Frustrated with the selection difficulty of a fresh egg donor, the couple inquired into an alternate donor choice of frozen eggs from our frozen oocyte bank. The informed couple decided to attempt a pregnancy using frozen eggs .

At our clinic, oocyte donors gave consent and underwent controlled ovarian hyperstimulation for ultrasound guided oocyte retrievals. After egg pick up, all metaphase II oocytes were cryopreserved using a modified 3 step slow freeze dehydration protocol of 1, 2 – propanediol with sucrose.

To synchronize the recipient's endometrium, the patient was given estradiol and when the endometrium reached > 8 mm thickness, progesterone in oil was started followed by embryo transfer on day 4 of progesterone administration.

**Results: Two weeks after embryo transfer, the** recipient's initial serum  $\beta$ -hCG level was 349 mIU/ml. An initial ultrasound at the seventh week of gestation revealed a single gestational sac with cardiac motion. The patient delivered a healthy baby girl at term in February of 2007.

**Conclusion:** This case illustrates that using frozen oocytes and cryopreserved PESA sperm can result in a normal pregnancy and a healthy baby. Recipients of frozen oocytes cycles can now avoid the difficulties encountered during the fresh egg donor selection process. Additionally, the intended father's sperm is used to create the couples embryos. When comparing pregnancy rates for frozen oocytes versus fresh oocytes from 2006's cases, the fresh oocyte pregnancy rate for patients under 35 was 55.7% and the frozen oocyte pregnancy rate was 58%. These results illustrate no noticeable difference between fresh and frozen oocyte pregnancy rates. The 2006 frozen embryo pregnancy rate for patients under 35 years was 46%, while the frozen oocytes pregnancy rate was 58%. These differences show that the frozen oocytes yield a high success rate with the new protocol.

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