



AMERICAN SOCIETY FOR
REPRODUCTIVE MEDICINE



American Society for Reproductive Medicine 2015 Annual Meeting
October 17 to 21, 2015 • Baltimore, Maryland

Title:

DOES ELAPSED TOTAL TIME FROM BIOPSY TO VITRIFICATION AND WARMING TO TRANSFER OF A EUPLOID EMBRYO AFFECT PREGNANCY OUTCOME?

Authors:

Rose Marie A. Moschini, MSc¹; Michael Whitehouse, BA¹; ; Jorge Rodriguez-Purata, MD¹; Joseph Lee, BA¹; Richard Slifkin, BA¹; Benjamin Sandler, MD^{1,2}; Alan B Copperman, MD^{1,2}; Marlena Duke, MSc¹

Affiliations:

1. Reproductive Medicine Associates of New York, 635 Madison Ave 10th Floor New York, New York, United States, 10022
2. Obstetrics, Gynecology and Reproductive Science, Mount Sinai School of Medicine, Klingenstein Pavilion 1176 Fifth Avenue 9th Floor New York, New York, United States, 10029.

Objective:

Vitrification followed by rewarming and transfer of embryos results in impressive cryo-survival and clinical pregnancy rates (PRs), while enhancing clinical results after preimplantation genetic diagnosis (PGD). Limited research has examined if the time from biopsy to vitrification and from re-warming to the embryo transfer (ET) has an impact on clinical outcomes. We sought to determine whether the total elapsed time of euploid embryo culture after biopsy up until frozen embryo transfer (FET) has an impact on PRs.

Design:

Retrospective analysis

Materials and Methods:

Autologous and donor FET cycles with a euploid single embryo transfer (SET) were analyzed. Re-warmed euploid embryos underwent a trophectoderm biopsy (TE) and vitrification during a previous cycle. Two groups were identified by ranking the total elapsed culture time from biopsy to vitrification, and from warming to transfer: same day biopsy/vitrification cycles (SDBV) (embryos were biopsied on day 5 or day 6 and vitrified on the same day); and next day



AMERICAN SOCIETY FOR
REPRODUCTIVE MEDICINE



Icahn
School of
Medicine at
Mount
Sinai

biopsy/vitrification (NDBV) (embryos were biopsied day 5, vitrified day 6). A logistic regression analysis was used to determine a correlation of elapsed time in culture from biopsy to FET and PR.

Results:

A total of 362 cycles met criteria for inclusion (SDBV=325 and NDBV=37). PR observed for SDBV was 75.2% and for NDBV was 70.3%. No correlation was found between time in culture from biopsy to FET and pregnancy outcomes ($p>0.05$).

Conclusions:

Vitrification is an excellent tool in the IVF laboratory, enabling better clinical flexibility in planning a patient's IVF protocol. This study is the first of its kind to analyze the impact of delayed vitrification of biopsied embryos. We found no correlation between time in culture to successful ET. Embryologists can be reassured that prolonging culture of embryos following biopsy does not negatively impact implantation.

SUPPORT:

None.