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Human Embryo Cryopreservation: Missing The Fear

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Background: Embryo cryopreservation is now a routine procedure in assisted reproductive laboratories. Currently, is more important than ever for the cumulative pregnancy rate after In vitro Fertilization (IVF) [2]. Recently, increases in success rates after frozenthawed embryo transfer (FET) are nearing the success rates of fresh embryo transfer (ET) and this can encouraging the use because reduces risks like low birth weight and prematurity, ovarian hyperstimulation syndrome (OHSS), among others. Furthermore, the controlled ovarian hyperstimulation affects the endometrial maturation [3].

Objective: To evaluate ongoing pregnancy rates after FET cycles and compare with the success of ET described at the literature.

Materials and Methods: A retrospective study of 72 patients under IVF treatment that where indicated cryopreserved all embryos because of OHSS risks. The patients parameters evaluated was age, infertility factor, number of retrieved and mature oocytes, fertilization rate, embryos transferred per patient, pregnancy, implantation and abortion rate.

Results: The average age was 30.5 years; male factor was indicated in 42% of cases. The number of aspirated oocytes per patient was 28,11 which 74,35% were mature. The fertilization rate was 80,53%, the average of embryos transferred was 2.78 per transfer, the average number of transfer per patient was 1,8. The pregnancy rate per transfer was 49.59% and per patient was 83.3%. The implantation rate was 35.7%. Abortion rate was 13.89%.

Conclusions: Until now, there is no consensus between different groups around the world about the best protocol, day of embryo cryopreservation, freezing method, selection criteria for which embryos to freeze, method of embryo thawing and endometrial preparation for transfer of frozen-thawed embryos. However, it has been reported a greater implantation and pregnancy rates with FET when compared with ET, suggesting superior endometrial receptivity in the absence of ovarian stimulation. Ours results agrees with recently reported data and emphasizing that we can use frozen embryos without fear. High-quality randomized controlled trials should be pursued to find out which cryopreservation protocol is the best and when will be the time to completely abandon fresh embryos transfer.

Biography

Biomedic from the University Center Uni FMU (2003). Master degree-Medicine Department of Nephrology-Federal University of São Paulo-UNIFESP (2006). PhD by Gynecology Department-UNIFESP and Cleveland Clinic (2011). Pos -doc by Department of Gynecology-UNIFESP (in progress). Young Scientist Award in 2011 (14th World Congress on Controversies in Obstetrics, Gynecology and Infertility-Paris, France). Now, acting as embryologist and Researcher at the Federal University of São Paulo. She has experience in Biochemistry, with emphasis in Human Reproduction, mainly following themes: oxidative stress, antioxidants, superoxide, Endometriosis.

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