

Clinical pregnancy after low-level +20 aneuploid mosaic embryo transfer

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INTRODUCTION

Low-level mosaic embryos present between 30 and 50% of aneuploid cells in the biopsy. Recently, the conduct that should be taken regarding the transfer of these embryos has been discussed, since they could result in viable pregnancies, but often end up being discarded.

CASE REPORT

A 40-year-old female and a 37-year-old male patient wanted to assess fertility. Ovarian reserve tests: E2: 2.9 ng/dL; FSH 6,3 mIU/ml; HAM: 1.27 ng/ml; CFA: 15; preserved pelvic anatomy and patent tubes. He had a history of cryptorchidism and contralateral inguinal hernia repair. Spermogram: volume: 2.2 mL, round cells: 50,000/mL, azoospermia; confirmed in a second examination with an interval of three months. Ultrasound showed atrophic left testicle and normal right testis; andrologist palpated deferens. Intracytoplasmic sperm injection with percutaneous epididymal sperm aspiration (PESA) was indicated. The couple underwent two cycles of IVF. The first, with controlled ovarian stimulation with 136 mcg of deltafolitropin. PESA (various motile and immobile sperm) was performed. Seven mature eggs were inseminated, 2 fertilized normally, resulting in 1 blastocyst biopsied and analyzed by NGS with a complex aneuploid result. The second cycle, with 128 mcg of deltafolitropin and frozen sperm from PESA, resulted in 3 mature eggs inseminated on the day of the procedure and 3 in vitro matured eggs inseminated after 24 hours; total fertilization of 5 eggs, resulting in 2 blastocysts (fertilized eggs on the day of the procedure) and 1 blastocyst (from eggs inseminated after 24 hours). Genetic analysis showed 2 complex aneuploid embryos and low-level + 20 aneuploid mosaicism for the post 24 hour embryo. Mosaic embryo transfer was performed, resulting in ongoing clinical pregnancy, with normal first and second trimesters morphological ultrasound.



Figure 1. Mosaic embryo transferred that resulted in viable clinical pregnancy.

CONCLUSION

Mosaic embryo transfer has been a topic of great discussion. In the case reported, a clinical pregnancy developed, with normal morphological ultrasounds, from a mosaic embryo. Although certain levels of mosaicism do not seem to pose any risk to the safe development of the fetus, the phenotypic change could present late and, therefore, care must be taken and patients must be involved in the decision to transfer these embryos or not.

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