LIFE NEWBORNS FROM 2-0 ZYGOTES: CASE REPORT

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Introduction: Zygotes whit 2PB and 0PN are typically discarded at fertilization check. We designed a study where the normal mitotic spindle was observed in the central position, by using a polarized microscope. These embryos (2-0) were not selected for transfer, instead, they were cultured up to blastocyst stage, and the good quality ones were frozen. During this work, we came across some patients were the 2-0 embryos were the best quality ones or were the only ones available. In these situations they were exceptionally transferred.
Material and methods: 5166 IVF cycles were performed from January 2009 to March 2010. 200 zygotes 2-0 with mitotic spindle in central position from 115 patients were cultured up to blastocyst stage; these embryos were either frozen or transferred in the situations mentioned above (n=4).
Results: Pregnancy was achieved in the four cases.
Cases with 100% implantation rate included: 1) PGD patient where 1 out of the 2 day 5 blastocysts transferred was a 2-0 zygote. Both embryos were chromosomically normal for the analysed chromosomes (13, 16, 17, 18, 21, 22, 15, X, Y). Twin ongoing pregnancy was achieved. 2) Patient with a single blastocyst resulting in a biochemical pregnancy and 3) patient with a single blastocyst resulting in a newborn.
The fourth case had a mixed transfer (2-2 and 2-0 blastocysts) with a 50% implantation rate. This case ended up in a clinical abortion.
Conclusions: 2-0 zygotes may result in life newborns. Further studies are needed to avoid discarding 2-0 zygotes after conventional fertilization assessment.