

TRANSFERRING THE DAY 3 EMBRYOS CONSISTING OF MORE THAN 10 BLASTOMERES WITHOUT COMPACTION LEAD TO INCREASING A RISK OF MISCARRIAGE

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Purpose: Selecting good embryos for transfer is a critical issue in an assisted reproductive technology to achieve more successful outcome. To evaluate the embryos on Day3, we verified a hypothesis that the existence of high cell numbers without evidence of compaction is related to a poor outcome of pregnancy.

Materials & methods: Two hundred and eighty-two women who had embryo transfer from 2004 to 2006 (286 cycles in total) were enrolled in this study. All of them had two embryos transfer on Day 3. According to the number of blastomeres of the embryos, they were classified 3 groups as follows; Group A (at least one embryo was reaching compaction stage), Group B (both of the embryos were 8 cells or 9 cells), and Group C (at least one embryo consisted of more than 10 cells)

Results: Pregnancy rates were (HCG>2.0 mIU/ml) A: 52.3%, B: 50.0%, C: 49.5%. Implantation rates were (detection of gestational sac by ultrasound monitoring) A: 30.7%, B: 32.9%, C: 28.2%. Chemical or early stage abortion rates were A: 17.4%, B: 11.4%, C: 44.2% and multiple pregnancy rates were A: 21.7%, B: 31.4%, C: 13.7% respectively. Differences were assessed by Pearson's chi-square test. There were no statically differences of pregnancy rates or implantation rates among 3 groups. But the miscarriage rate of group C was significantly higher than those of group A and B. And also the multiple pregnancy rate (all of them were twin pregnancies) were higher in group B compared to group C.

Conclusion: This study shows that the embryos consisting more than 10 cells on Day 3 are likely to result in miscarriage compared to the ones reaching compaction stage. The appearance of compaction from early embryo stages seems to be a favorable marker at the selection of better embryos for transfer.