

SINGLE BLASTOCYST TRANSFER NOT ONLY MAINTAINS HIGH PREGNANCY RATE BUT ALSO MINIMIZES MULTIPLE PREGNANCY RATE COMPARED TO DOUBLE BLASTOCYSTS TRANSFER IN CERTAIN AGE GROUP

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Purpose: Although assisted reproductive technology (ART) has been used widely, lately multiple pregnancy is a serious problem in the world not only medically, but also socioeconomically. Multiple embryos are usually transferred to maintain high pregnancy rate in the practice of clinical ART, but it causes high multiple pregnancy rate on the patients with great risks. Single cleaved stage embryo transfer has been attempted to minimize multiple pregnancy rate. However, transfer of single cleaved embryo decreased pregnancy rate at the same time. Recently, blastocyst transfer is performed, and high pregnancy and implantation rates are reported. Therefore, the present study was conducted to determine whether single blastocyst transfer could prevent multiple pregnancy without hindering pregnancy rate compared to double blastocysts transfer.

Materials and Methods: Totally 188 cycles of fresh blastocyst transfer with either conventional IVF or ICSI between January 2003 and December, 2005 were analyzed retrospectively. Among these cases, single blastocyst transfers were 55 cycles (54 patients) and double blastocysts transfers were 133 cycles (128 patients). The rates of clinical pregnancy, implantation, multiple pregnancy, and miscarriage were compared between single and double blastocyst transfer groups. These comparisons were also performed in the following age groups in each group; less than 29 years old, 30~34 years old, 35~39 years old. Furthermore, pregnancy and implantation rates according to the quality of blastocyst were also analyzed.

Results: The rates of pregnancy and implantation (32.7%; 18/55 and 32.7%; 18/55, respectively) in single blastocyst transfer were not different from those in double blastocysts transfer (39.6%; 53/134 and 24.1%; 64/266, respectively). However, multiple pregnancy rate in single blastocyst transfer (5.6%; 1/18) was significantly lower than that in double blastocysts transfer (20.8%;11/53). The miscarriage rate in single blastocyst transfer (5.6%; 1/18) was also significantly lower than that in double blastocysts transfer (22.6%;12/53). In the age group of 35~39 years old, pregnancy rate in double blastocysts transfer (35.6%; 26/73) was significantly higher than that in single transfer (26.5%; 9/34). Transfer of high quality blastocyst achieved higher pregnancy rates in double blastocysts transfer (46.4% ;13/28) compared to single blastocyst transfer (25.0%; 5/20) in the same age group.

Conclusion: Pregnancy rate in single blastocyst transfer was identical to that in double blastocysts transfer. However, multiple pregnancy rate in single Blastocyst transfer was minimized compared to double blastocysts transfer. In 35~39 years old age group, pregnancy rate in double blastocysts transfer was significantly higher than that in single blastocyst transfer even with high quality Blastocyst. The present study suggested two conclusions. Single blastocyst transfer is able to minimize multiple pregnancy rate without hindering pregnancy rate in the age group of 34 years old or younger. Double blastocysts transfer could not be abandoned to achieve high pregnancy rate in the age group of 35 years old or older.