

this characteristics were continued for 26 days (14~40 days from the beginning). When gene-expression related germ cell and oocyte differentiation was examined using RT-PCR analysis, Vasa (a marker of postmigratory germ cells), FIG- (a transcription factor required for the expression of ZP protein) and three zona pellucida (ZP1, ZP2 and ZP3) were all expressed in those follicle-like structures. Also, after 35 days culture, we confirmed ZP protein expression in some of oocyte-like structures using immunocytochemistry.

**Conclusions:** Further study on developmental potential as in vitro fertilization and blastocyst development in those developed oocyte-like structures is under way. These results concluded that oocyte-like structures can be derived from the mouse embryonic stem cells in vitro.

## P-5                      Half-ICSI: An Insemination Method to Prevent First Cycle Fertilization Failure or Low Fertilization In Non-male Factor Infertility

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**Background & Objectives:** To determine an optimal insemination technique in patients undergoing first IVF trial.

**Method:** Between January 2001 and July 2005, a total of 247 patients undergoing their first IVF cycle due to female factor or unexplained infertility, were included in the study and in which Half-ICSI were performed. 3580 oocytes were retrieved and 3082 sibling oocytes were randomly allocated to conventional insemination (1564 oocytes) or ICSI (1518 oocytes). The rates of fertilization and cleavage were compared in two groups. Patients with poor responder. Ovum donation and male factor patients were excluded.

**Results:** The mean age (M±S.D) of the patients was 32.8±4.0 years old, and the duration of infertility was 5.2±3.1 years. The mean number of oocytes retrieved per patient was 14.5±7.4. The fertilization rates following conventional insemination and ICSI were 77.2% (1207/1564) and 84.9% (1289/1518) respectively in total studied patients. Fertilization rate after ICSI was significantly higher than that after conventional insemination in non-male factor infertility patients. Complete fertilization failure occurred in two unexplained infertility patients following conventional insemination.

**Conclusions:** ICSI could be used to solve the unexpected fertilization problem such as reduced or absent fertilization in couples with unexplained infertility or other female factor infertility. A trial of Half-ICSI in the first cycle of IVF could be considered to reduce fertilization failure or low fertilization rate, especially, in couples with non-male factor infertility.