number of oocytes in intact ovary and the transplanted ovarian tissues was counted.

Results: The proportion of antral follicles was lower in transplanted than in control ovary (57/329 (17.3%) versus 63/282 (22.3%)), but there was no significant difference. Especially, the proportion of PMSG primed antral follicles was significantly lower in transplanted than in control ovary (31/190 (16.3%) versus 34/144 (23.6%)). And the rates of primary and secondary follicles were increased after transplantation indicating early follicular growth. The recovered oocytes from PMSG-hCG primed transplanted ovary were higher than only PMSG primed one (35.3% versus 20.0%).

Conclusions: Our results suggest that subcutaneous auto-transplantation of ovarian tissues is feasible in the mouse model. Primordial follicles in subcutaneous ovarian graft retain their developmental potential and can reach antral follicle. In addition, PMSG-hCG primed GV (Germinal vesicle) oocytes in subcutaneous ovarian graft can mature to MII stage. In conclusions, this mouse model would be useful for human clinical trial.

P-7 Analysis of DNA Fragmentation in Bovine Cloned Embryos Activated with Different Activation Protocols

Kil KS, Park SY, Yoon JY, Tae JC, Kim EY, Chung KS[1], Lee WD[2], Park SP, Lim JH[2]

Maria Infertility Hospital Medical Institute/Maria Biotech,
[1]KonKuk University, [2]Maria Infertility Hospital

Background & Objectives: This study was performed to investigate whether different activation protocols affect in vitro development and the incidence of apoptosis in bovine cloned embryos.

Method: Matured bovine oocytes were enucleated and reconstructed by ear fibroblast cells. The fused embryos were chemically activated using 5 μM ionomycin for 5 min followed by 4 hr culture in i) 1.9 mM 6-dimethylaminopurine (6-DMAP), ii) 10 μg/ml cycloheximide (CH) plus 5 μg/ml cytochalasin B (CCB) or iii) 10 μg/ml CH. Activated embryos were cultured at 39℃ in a humidified atmosphere of 5% CO_2 air. Day 7 control or NT blastocysts in each group were stained by TUNEL for the analysis of DNA-fragmented nuclei and with propidium iodide for determination of the total number of cells.

Results: Different activation protocols did not affect the rate of blastocyst formation (6-DMAP = 15.9%, CH plus CCB = 13.5%, CH = 17.0%). Total cell number of cloned blastocysts were significantly higher after activation with 6-DMAP (119.6±31.6, 60~145) or CH (121.9±31.0, 64~160) than that with CH plus CCB (87.8±35.7, 28~140). However, a significant increase in apoptotic index was observed in cloned embryos activated with CH plus CCB (9.7%) compared with DMAP (7.9%) or CH (8.0%) ($p<0.05$).

Conclusions: These results indicated that the CH or 6-DMAP treatment could be efficient method not only to improve developmental rate but also to produce good quality cloned embryo.