

expanded blastocyst 시기에서만 ES-like 세포주가 확립됨을 알 수 있었다. 그러나 ES-like 세포주의 확립 성공률은 그다지 높지 않았으며, 이러한 이유는 배아의 체외배양 조건이 체내와 동일하지 않았기 때문이라고 생각된다. 따라서 체외배양 조건을 개선하는 연구가 활발히 이루어져야만이 향후 사람을 비롯한 많은 실험동물에서 체외수정하여 얻은 배아로부터 ES-like 세포주를 확립하는 것이 수월하게 이루어질 것이다.

P-11 Creation of Viable Oocyte using Diploid Somatic Cell-derived Nuclear Transfer Technique

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Objective: In this study, we tried to create bovine normal haploid oocyte by modified nuclear transfer technique and to produce blastocyst from these reconstructed oocytes after *IVF*.

Materials and Methods: Bovine female adult fibroblast cells arrested in G0/G1 of cell cycle using tricostatin-A were introduced into *in vitro* matured and enucleated recipient oocytes. Reconstructed eggs were activated by chemical method and cultured to permit extrusion of polar body for 18 h. Some of these eggs were stained with Hoechst to observe chromatin morphology in hourly intervals until 18 h of culture. Also, 8-cell embryos recovered at 60 h after *IVF* were examined their chromosome number using G-banding technique. And remainder were developed to blastocyst stage after *IVF*.

Results: Forty three (46.2%) of 93 donor cell and recipient oocyte units were fused. In the fused oocytes, *in vitro* survival, cleavage and development to morula and blastocyst stage were 86.0%, 53.5% and 20.9%, respectively. We confirmed that transition from premature chromosome condensation (PCC) to prophase was observed after 8 h. Especially, extruded polar bodies in reconstructed eggs observed at 18 h after fusion using Hoechst staining. Normal chromosome number was observed with blastomere of 8-cell embryos.

Conclusions: This result indicated that viable oocyte can be created using diploid somatic cell-derived nuclear transfer technique and that it may offer the pregnancy opportunity to infertile women who do not produce their own oocytes in human IVF-ET program.

P-12 수정된 배아의 전핵 상태가 배아 발달 및 임신율에 미치는 영향

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목 적: 수정된 배아의 전핵 상태가 배아 발달에 미치는 영향을 알아보고 배아의 발달을 예측하여 임신과의 관계를 알아보고자 하였다.