

(0%), monosomy 8예 (12.9%), structural abnormality 3예 (4.8%). Group II에서 trisomy 35예 (36.5%), polyploidy 10예 (10.4%), mosaicism 0예 (0%), monosomy 2예 (2.1%), structural abnormalities 9예 (9.4%)로 통계적 유의한 차이가 없었다.

결론: 본 연구에 따르면 임신제1삼분기에서 자연유산된 경우, 질식초음파로 확인된 태아심장박동 유무에 따른 유산수태물의 염색체이상의 빈도와 특성의 차이를 발견할 수 없었다.

P-8 Bovine Eggs Fertilized using Male Haploid Somatic Cell Derived from Sequential Nuclear Transfer without Sperm

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Objective: In this study, we evaluated whether bovine eggs reconstructed using male haploid somatic cell derived from sequential nuclear transfer without sperm could be normally developed *in vitro*.

Materials and Methods: Bovine GV oocytes were recovered from slaughtered bovine ovary and matured in TCM-199 supplemented with 10% FBS. At 22 h after IVM, recipient oocytes were stained by with 5 µg/ml Hoechst and their 1st polar body (PB) and MII plate were removed by enucleation micropipette under UV filter. Then, G0/G1 stage bovine male ear skin cells were introduced into enucleated recipient oocytes. Reconstructed eggs were activated using ionomycin. Eighteen hours after activation, each nucleus of the constituted eggs containing 2 sets of chromosomes from somatic cells was again direct injected into normal MII oocytes. Reconstructed eggs produced by the sequential nuclear transfer, and then morphological characteristics of developed eggs were observed under phase-contrast microscope.

Results: In the results, 455 (57.1%) of 797 oocytes were fused and 64 (17.1%) of 374 survival oocytes were pseudo-pronucleus with a haploid karyotype after activation by 7 min incubation in ionomycin. After the sequential nucleus transfer of 64 haploid pronuclei, 105 (82.0%) of 128 eggs were recovered, and 28 (26.7%) eggs with 2 sets of chromosomes were normally extruded 2nd PB. Five (17.9%) embryos reconstructed with sequential nuclear transfer developed to two-cell stage.

Conclusion: This result suggested that bovine eggs reconstructed using male haploid somatic cell derived from sequential nuclear transfer can be fertilized without sperm and that the advantage of this technique is for men who can not produce sperm in human IVF-ET program.