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Preservation and Transfer of Bovine Embryos by Vitrification Method

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Bovine embryos produced by *in vitro* maturation, feretilization and development was examined for presevation and transfer. The fertilization medium used BO medium with 5 mM/mℓ caffeine and 10μg/mℓ heparin and adjusted to a pH of 7.2 to 7.4. The final concentration of spermatozoa was adjusted to 1×10^6 cells/mℓ motile sperm during fertilization *in vitro*. At 8~10 hrs after insemination, the oocytes were transferred into CR1aa medium and cultured for 7 days. Embryos were preserved by vitrification method for transfer. When the embryos of early, blastocyst and expanded blastocyst stages were frozen-thawed, the proportions of embryos with normal morphology 83.6, 88.1 and 85.2%. The embryos cultured after frozen-thawed in expanded blastcysts than early blastocysts stage were significantly ($P<0.05$) higher developed to hatched embryos stages. On the other hand, when the embryos transferred to Korean Native Cattle, the conception rates were higher than in Holstein cows. The effect of parity on conception rate transferred embryos in recipient cows were examined. The conception rates in 0~3 parity were higher than 4 parity, but there are no significant differences in the various parity. In another experiment, the conception rates in embryos transferred in cows with natural heat were higher than in recipient cows with synchronization treatments. The effects of AI center on conception rates were examined. The conception rates (0~50%) were significantly ($P<0.05$) differ among the 6 AI center.

Key words) ***Korean Native Cattle, Vitrification, Embryo Transfer, Conception Rates, In vitro culture***