

Developmental Rate of Vitrified Porcine Oocytes and its Application to NT Embryos Constructed by Microinjection of Fibroblast Cells into Vitrified Oocytes

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ABSTRACT : In experiment 1, When the in vitro developmental rates of the oocytes after being culture for 0~10 hours vitrified with EDS, 5% PVP, NCSU 23 supplemented with 10% FBS were 50.0%, 22.0%, respectively. This results were lower than the control group(74.0%). In experiment 2, The fusion and developmental rates to the blastocyst stage between the NT embryos constructed with the vitrified oocytes were no significant differences, and those constructed with non-vitrified control oocytes. In experiment 3, Cleavage rates after of NT embryos constructed with oocytes activated with ethanol and cyclohexamide were superior ($P>0.05$) for ethanol (33.3%), cyclohexamide (27.7%) treatments and the control (21.3%). After maturation for 42 and 46 h, cleavage rates for ethanol (33.3 and 36.0%) and cyclohexamide (27.7 and 30.0%) were to the control (8.8 and 11.4%). Developmental rates to blastocysts of NT embryos constructed with oocytes activated with ethanol and cyclohexamide were superior for ethanol(2.8 and 5.3%, respectively), cyclohexamide(1.5 and 2.9%, respectively) treatments than that of control(0.0 and 0.0%, respectively).

Keywords: *vitrification of oocytes, NT, porcine oocytes, cleavage, development rate*