

Production of Embryos by Intracytoplasmic Sperm Injection (ICSI) in Pig

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The objective of this study was to assess the development of porcine follicular oocytes fertilized by ICSI. Cumulus-oocyte-complexes (COCs) were collected by aspiration from follicles of 2-7 mm in diameter from a local slaughterhouse ovaries. Oocytes matured for 40-44 h were centrifuged at 12,000g for 6 min and then injected with sperm prepared by swim-up procedure in the presence or absence of 5 mM dithiothreitol (DTT). Injected oocytes were cultured in NCSU 23 medium during 6 to 8 days. IVF controls were compared to those of resulting embryos. The results obtained were as follow:

1. The rates of cleavage and development rates into blastocyst by ICSI were not significantly ($P<0.05$) different between with (53.0% and 19.7%) or without (48.3% and 23.8%) centrifugation, respectively.
2. The cleavage and developmental rates to blastocyst after ICSI with or without 5 mM DTT treated-sperm were not significantly ($P<0.05$) different (60.4% vs 16.4% and 48.5% vs 22.2%, respectively).
3. The cleavage and the developmental rates to blastocyst were not significantly ($P<0.05$) different between the zygotes obtained by IVF (51.8% vs. 22.4%) and ICSI (51.4% vs. 21.6%).
4. The number of blastomere in blastocyst stages after IVF or ICSI was not significantly different (46.7 ± 2.9 and 41.9 ± 4.6).

(Key word) *centrifugation, DTT, IVF, ICSI, pig*