P-3

Effects of Individual of Bull, Sperm Type and Sperm or Oocytes Pretreatment on Male Pronucleus Formation and Development in Korean Natitive Cattles

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This study was carried out to investigate on the improvement of fertilizing and developing ability of *in vitro* matured oocytes from individuals of bulls, sperm type, pretreatment of sperm or oocytes obtained by intracytoplasmic sperm injection(ICSI).

1. The male pronuclear formation and developmental rates of oocytes obtained by ICSI treated individual of bulls were 73.9%~87.0% and 33.3%~60.9%, respectively.
2. The male pronuclear formation and developmental rates of oocytes obtained by ICSI treated fresh and frozen sperm, tail-cutting and tail-scoring sperm were 82.0%, 78.0%, 42.2 %, 51.1% and 56.0%, 42.0%, 17.8%, 22.2% respectively. and these values of fresh sperm injection were higher than that of frozen sperm, tail-cutting and tail-scoring.
3. The male pronuclear formation and developmental rates of oocytes obtained by sperm pretreated heparin, BFF(bovine follicula fluid), His, Ca Ionophore(I) and I + caffeine methods were 66.7%~82.2% and 33.3%~60.6%, respectively. and these values of treatment of I + caffeine were higher than that of other methods.
4. The male pronuclear formation and developmental rates of oocytes obtained by ICSI treated with or without zona pellucida were 80.0%, 72.0% and 46.0%, 36.0%, respectively.

(Key words : ICSI, Male pronuclear formation, Developmental rates)