

Conclusions: Immediately after thawing, the testicular sperm did not showed motility. Although motility was gained after incubation, many cases the sperm remained non-motile until optimal insemination time. However, *in vitro* incubation of frozen-thawed testicular sperm showed positive reaction. And presence of motile- and viable sperm remarked HOS test could be an alternative method for the selection of viable sperm for ICSI.

B-17 DNA Synthesis and Sperm Mitochondria in Porcine Oocytes Following Porcine and Mouse Sperm Injection

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Objective: To get insight into the nature of foreign mitochondria and syngamy during mammalian fertilization we compared fate of sperm mitochondria, DNA synthesis, and syngamy in porcine oocytes following microinjection of porcine or mouse spermatozoon.

Methods: At 8~10 and 18~20 hour following sperm injection, pronuclear movement, sperm mitochondria, and DNA synthesis were imaged with propidium iodide, mitotracker, and BrdU under confocal laser scanning microscope.

Results: Intracytoplasmic injection of either porcine or mouse spermatozoon activated porcine oocytes without additional parthenogenetic stimulation. Foreign mitochondria in either mouse or porcine sperm midpiece were introduced into porcine oocytes following sperm injection, but rapidly disappeared from the actively developing porcine oocytes. BrdU experiment showed new DNA synthesis in porcine oocytes following injection of mouse spermatozoon or sperm head. At 24 h after injection of mouse isolated sperm head or a spermatozoon, mitotic metaphase was seen in oocyte, but they did not go to normal cell division.

Conclusion: Pronuclear formation, foreign mitochondria disruption, DNA synthesis and syngamy during fertilization are not species specific processes.

B-18 생쥐 배반포기배의 초자화동결 · 초급속융해에 관한 연구

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목 적: 생쥐 배반포기배를 사용하여 초자화동결에 적절한 동결보존제와 방법을 확립하고자 하였다.

대상 및 방법: 6주령 F1 hybrid (C57BL/6×CBA/♂)를 과배란 유도하여 체외수정시킨 후 수정이 확인