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In vitro aging of porcine oocytes

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[fulltext]

Porcine oocytes matured *in vitro* develop in various ways if they are further cultivated. In our studies these oocytes were cultivated for 1 to 5 days (*in vitro* aging). During the 1st day of aging, most of them remained at the stage of

metaphase II (98%). Then many oocytes underwent the spontaneous parthenogenetic activation. The portion of activated oocytes reached its peak after 2 or 3 days of aging *in vitro* (39 or 45%). The portion of fragmented oocytes peaked at the same time (28%). During subsequent aging *in vitro* (i.e. day 4 or 5 of aging), the portion of lysed oocytes significantly increased (30 or 37%). The highest portion of spontaneously activated parthenogenetic embryos at a pronuclear stage (35%) was observed during the 2nd day of aging *in vitro*. These pronuclear embryos had mainly one polar body with two pronuclei (47% of all pronuclear embryos) or two polar bodies with one pronucleus (38% of all pronuclear embryos). During the 3rd and 5th day of *in vitro* aging, there was a significant increase in the portion of parthenogenetic embryos cleaved to the 2-cell or 3-cell stage. When considering the prolonged *in vitro* culture of porcine oocyte, only the first day of aging should be taken into account, since beyond this time significant changes, i.e. parthenogenesis, fragmentation or lysis, occurred in oocytes under *in vitro*

Keywords:

pig; oocyte; parthenogenesis; fragmentation

[fulltext]