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# Effect of Ovary Transport Temperature on Survivability and Maturation Rate of Canine Oocytes

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This study examined the viability of canine oocytes following storage at 4 or 38℃ for 5 hrs. The ovaries were collected from domestic dog following ovariohysterectomy at a local veterinary clinics and transported to laboratory in two different transport temperature at 4 or 38℃ within 5 hrs. The cumulus oocyte complexes (COCs) were recovered after slicing with blade. In Exp. 1, the oocytes collected were matured in DMEM supplemented with 10% FBS, 0.6 mM/ml cysteine, 0.2 mM pyruvic acid, 20 ng/ml $E_2$ and 1 ㎍/ml *b*ST at humidified atmosphere containing 5% $CO_2$ 38℃ for 24 or 48 hrs to analysis of survivality. In Exp 2, to assess nuclear development at 38℃ group, the oocytes were matured in maturation medium for 24, 48 or 96 hrs. Survivability was judged by a morphological appearance and PI staining. Survivability rates were analyzed by General Linear Models procedure in SAS. The survival rates at 4℃ ovary transport group showed significantly lower than at 38℃ group (0 vs 72.9% in 48 hrs and 13.2 vs 77.8% in 24 hrs; $P<0.05$). The nuclear development of oocytes to MI to MII stages at 24, 48 and 96 hrs was 8.3% (6/72), 8.9% (9/101), and (9.5% 8/84).

These results showed that the canine oocytes were remarkably sensitive to a low temperature and did not increase nuclear development rate depend on maturation time to 96 hrs.

Key words) *Canine, Oocyte, Transport temperature, survivability*