ABSTRACTS

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Effect of different egg yolk concentration on cryopreserving canine (Canis lupus) semen

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OBJECTIVES AND METHODS: The aim of the current study was to evaluated three different concentration of egg yolk (5%, 10% and 20%) used in a tris-fructose-citric acid-glicerol base extender after freezing and thawing canine semen. The same semen sample from 6 adults dogs was divided in equal volume of 1 ml and diluted with 1 ml of the extender containing 5, 10 and 20 % of egg yolk before freezing process. Sperm motility, progressive velocity and spermatozoa defects was evaluated before and after the freezing process. Motility and velocity pos thaw evaluation was done with CASA® system. Morphologic parameters were done using Panótico® and POPE stain.

RESULTS: Semen from adult dogs was collect by manual stimulation. Each semen sample from 6 adults dogs was divided in equal volume of 1 ml and diluted in 1 ml of a tris-fructose-citric acid-glicerol base extender containing 5, 10 and 20 % of egg yolk before freezing process. Each sample results generate a list by CASA® system and results together generate a unique file that was analyzed by SAS (statistical analysis system). The fresh semen motility means were: 66,66%, pos thawing motility means were: 18,16% in semen frozen in extender with 5% egg yolk, 23,33% in semen frozen with in extender with 10% of egg yolk and 22,25 % in semen frozen with extender with 20% of egg yolk. The means of pos thaw spermatozoa motility of all the samples was 21,24%. Spermatoza defects were 0,84 % total defects and 1, 92 % acrosome defects in fresh semen, 2,5%; 2,92% and 2,17 total defects and 3,45 %; 3,92%; 3% acrosome defects respectively in semen frozen with extender with 5%, 10% and 20% of egg yolk. There was no statistical difference in samples cryopreserved with extender containing the concentrations of 5%, 10% or 20% of egg yolk.

CONCLUSION: The fact that there was no statistical difference in the spermatozoa progressive motility and morphological defects means between same base extenders with different egg yolk concentrations gave us the advantage that is the use of less amount of egg yolk than the traditional 20%. With that fact the spermatozoa become more visible in normal microscopic examination and the chance of egg yolk contamination mathematically decreases.

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