EVALUATION OF HOWLER MONKEYS (*ALOUATTA CARAYA*) SEMEN AFTER COOLING AT 4°C USING TWO DIFFERENT EXTENDERS

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INTRODUCTION

Non-human primates (NHP) are excellent models for biomedical research, and neotropical primates (NP) are not an exception. A lot of NP species have been used in many studies, such as vaccine tests and cancer research. The study of NP reproductive biology and assisted reproduction are extremely important for the establishment of stable colonies in captivity and for preservation of threatened species. The present investigation was carried out as an attempt to investigate the action of two different extenders on howler monkeys (*Alouatta caraya*) sperm after cooling at 4°C, and as a result improve the reproductive efficiency of Brazilian monkeys raised in captivity.

MATHERIALS AND METHODS

Semen from five adult male howler monkeys was collected by rectal electroejaculation (1), added to ringer lactate solution at 37°C to a final volume of 0.5mL to avoid coagulation. At this moment, semen was analyzed for motility, forward progressive sperm motility (FPSM), concentration and abnormal cells. The final solution was added to two different extenders, TEST and RINGER at room temperature (26°C) into 1:1 proportion, submitted to cooling at 4°C into a common refrigerator and evaluated for motility and forward progressive sperm motility each 30 minutes for 5 hours.

RESULTS AND DISCUSSION

After a total of 31 semen samples analyzed, both extenders showed satisfactory results. Mean motility and standard deviation (SD) at initial analysis was 81 ± 15% and for FPSM was 74±19%, concentration was 869.7±946.4 $x10^6$ sperms/mL, major defects were 18.38±0.07% and minor defects 13.23±0.05%. First analysis after cooling were 74±20% on TEST and 71±20% on RINGER for motility and for FPSM were 65±24% and 63±23% on TEST and RINGER, respectively. After 150 minutes, motility on TEST and RINGER were 57±25% and 54±26% and FPSM on the same extenders were 50±26% and 47±26%, both respectively. At final analysis, mean values and SD for motility on TEST and RINGER were 43±26% and 39±27%, and for FPSM were 36±24% and 33±25%. Our results indicate that there are no significant differences ($p<0.05$) between both extenders TEST and RINGER after cooling at 4°C for 5 hours and a high correlation between both parameters analyzed, motility and FPSM.

(1) Valle, R.R., Guimarães, M.A.B.V., Muniz, J.A.P.C., Barnabe, R.C., Vale, W.G. (In Press) Theriogenology.

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