

Quality of Salvaged Epididymal Spermatozoa in Local Dogs

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Abstract

The quality and quantity of epididymal spermatozoa and their relationship to scrotal circumference and testicular weight for local dogs in Malaysia were successfully determined. The longevity of spermatozoa in an alternative storage medium was also determined. The salvage of epididymal spermatozoa was done in twenty-two humanely euthanised adult local dogs. The overall mean \pm SEM of the total number, general motility, progressive motility, and percentage live and abnormal spermatozoa of cauda epididymal spermatozoa salvaged per dog were $408 \pm 55.31 \times 10^6$, $80.91 \pm 1.84\%$, $46.25 \pm 3.34\%$, $72.43 \pm 1.47\%$ and $6.80 \pm 0.95\%$, respectively. The scrotal circumference and testicular weight were not appropriate indicators of the number of salvageable cauda epididymal spermatozoa as indicated by moderate correlation coefficients of 0.545 and 0.546, respectively. There was a significant difference ($P < 0.05$) in general motility, progressive motility and live percentage of spermatozoa during storage (4-8°C) between an extender based on 0.9% NaCl and a commercial canine semen extender over time. However, for the first 2 days, these parameters were similar in value. Therefore, 0.9% NaCl should be further investigated as a potential medium for short term storage of epididymal spermatozoa.

Keywords: canine, epididymal spermatozoa, scrotal circumference, testicular weight, extender