Proceedings of the 8th International Symposium on Canine and Feline Reproduction

ISCFR

June 22-25, 2016
Paris, France

In a joint meeting with the XIX EVSSAR Congress

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Relation between serum and prostatic fluid acid phosphatase in dogs
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Some tests are performed to quickly diagnose prostatic disorders in dogs. Among them, the serum acid phosphatase is used as a biomarker of prostatic diseases. However, the relationship with acid phosphatase secreted in prostatic fluid is not yet known. This study aims to verify if there is any relation between serum acid phosphatase and prostatic acid phosphatase in dogs. For serum acid phosphatase analysis, two blood samples were obtained by venipuncture in 3 ml tubes without anticoagulant, centrifuged at 1840g for 20 minutes (Centribio / Daikki 80-2B®). The serum was separated and frozen at -20 °C until further evaluation. For prostatic acid phosphatase analysis, two ejaculates from each animal were obtained by digital manipulation. Blood and semen collections were performed at the same day. The first and second fractions of the ejaculate were discarded; only the third fraction (prostatic fluid) was used. Immediately after collection, a protease inhibitor cocktail was added (Sigma P8340), and prostatic fluid was centrifuged at 1840 g for 20 min (centrifugal Centribio / Daikki 80-2B®). The supernatant was frozen at -20 °C until their subsequent evaluation. To determine the acid phosphatase, a commercial kit LABTEST® was used according to the manufacturer. The absorbance was measured in a spectrophotometer (Coleman 35D®) at 590 wavelength. Data were expressed as mean and standard deviation and were analyzed using the statistical program Graphpad PRISM® version 5.01 (GraphPad Software Inc., San Diego, CA, USA). The results were submitted to Shapiro-Wilk normality test and correlated using the Spearman correlation coefficient (P <0.05). Serum acid phosphatase was 0.53 ± 0.59 U/L and prostatic acid phosphatase was 33.15 ± 0.71 U/L. A low and not significant correlation was observed (r = 0.07, P>0.05) between serum and prostatic acid phosphatase. In conclusion, there is no correlation between serum and prostatic acid phosphatase.