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EVALUATION OF A COMMERCIALY AVAILABLE LUTEINIZING HORMONE TEST TO DISTINGUISH BETWEEN OVARIECTOMIZED AND SEXUALLY INTACT QUEENS. LR Scebba, B Griffin, Scott-Ritchey Research Center, Auburn University, AL.

Domestic cats are induced ovulators. Luteinizing hormone (LH) is released from the anterior pituitary in response to both copulatory and non-copulatory stimulation. This hormone is thought to stimulate ovulation and follicular luteinization. In the sexually intact queen, LH is maintained at basal concentrations through the negative feedback influence of ovarian estradiol secretion. Following ovariectomy, this negative feedback control is lost and LH concentrations increase.

The purpose of this study was to evaluate the ability of a commercially available canine LH assay (ICG Status-LH™ canine ovulation timing test, Synbiotics Corp., San Diego, CA) to distinguish between ovariectomized and sexually intact queens. This is a semi-quantitative immunochromogenic assay using gold-conjugated LH antibodies. A positive result occurs when a visual line develops indicating that the LH concentration in the sample is > 1 ng/ml. This test was developed for use in canines.

Blood samples from 50 cats (24 ovariohysterectomized and 26 sexually intact queens) were used in this study and included laboratory and clinical case sources from Auburn University. The health status of many of these cats was unknown. Sera were stored at –20°C and tests were conducted in batch according to manufacturer's instructions.

Of the 24 ovariohysterectomized queens, all tested positive. Of the 26 sexually intact queens, 24 tested negative. Based on these results, the sensitivity of the test (the likelihood of a positive result in a spayed cat) was determined to be 100%. The specificity of the test (the likelihood of a negative result in a sexually intact queen) was determined to be 92%. The positive predictive value of the test (the probability of a positive result in a spayed queen) was determined to be 92%. The negative predictive value (the probability of a negative test result in a sexually intact queen) was determined to be 100%.

These results indicate that a single negative test result is highly indicative of a sexually intact queen. A single positive test result is suggestive of a spayed queen, although false positives may occur. This test would be clinically useful for differentiating spayed and sexually intact cats. This is important since newly adopted pet cats frequently present with an unknown reproductive status and test results could be used to determine the need for ovariohysterectomy.