

DETERMINING THE ONSET OF PARTURITION IN THE GOAT USING CITE PROGESTERONE TESTS

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There are currently few methods that can be used to assess impending parturition in the goat. It can sometimes be difficult to distinguish between an uncomfortable or distressed doe and one showing signs of dystocia, particularly if exact breeding dates are unknown. It would be valuable to have a quick, on-site method to evaluate late gestation and decide whether or not parturition is imminent. One indicator of the onset of parturition is a decrease in the doe's blood progesterone level approximately twenty-four hours prior to delivery. Laboratory progesterone assays commonly require twenty-four hours or more to obtain results, as well as being quite expensive. CITE progesterone assays are available to determine blood progesterone levels in dogs and cows. These tests have the advantage of being fast, easy to run, and relatively inexpensive. This study was designed to evaluate whether CITE progesterone test kits could be used to determine blood progesterone levels in does during late gestation, and whether a correlation could be made between the test results and the time of parturition.

Plasma samples were collected twice daily from sixteen pregnant does starting on day 143 of pregnancy and ending one day following delivery. The samples were used to perform three CITE (qualitative) progesterone tests (ICG Status Pro Canine Ovulation Timing kit, Synbiotics Corporation, TARGET Rapid Bovine Progesterone kit, Biometallics, PreMate Ovulation Timing kit, Camelot Farms) and a solid-phase radioimmunoassay progesterone test (Coat-A-Count Progesterone kit, Diagnostics Products Corporation). The progesterone levels indicated by the three CITE tests were compared to one another and to a radioimmunoassay, and assessed for any relationship to the actual time of parturition.

Test results indicating low progesterone levels (<1.0-2.8 ng/ml) from the Status Pro, TARGET, and PreMate tests were found to be correlated 100%, 83.3%, and 100% with the onset of parturition within the next 24 hours. Test results indicating high progesterone levels (>5.0-7.8 ng/ml) from the Status Pro, TARGET, and PreMate tests were found to be correlated 100%, 100%, and 82.2% with lack of parturition during the next twenty-four hours. The radioimmunoassay agreed with the progesterone ranges given for Status Pro, Target, and PreMate tests in 75.7%, 58.8% and 53.7% of the cases. Intermediate levels of progesterone were not as accurate as high or low levels in predicting events for the next twenty-four hours.

This study shows that CITE progesterone tests can be useful when evaluating late gestation in the doe. High and low levels of progesterone can be determined and used to predict the likelihood of parturition occurring within the next 24 hours. Although the three CITE tests varied in their accuracy and ease of use, all three could be used to determine relatively high or low blood progesterone levels. These tests can provide the practitioner with a quick, easy, and relatively inexpensive way to monitor and assess late stage pregnancy in the doe.

Key words: goat, progesterone, parturition, CITE tests