

leptospira vaccine coupled with oxytetracycline treatment did not improve the reproductive performance in beef cows.

Keywords: Beef cows; Leptospira; Artificial insemination; Pregnancy rate

DOI: 10.1016/j.theriogenology.2007.05.005

PROGESTERONE CONCENTRATIONS IN GOATS RECEIVING SMALL RUMINANT CIDR[®]s VERSUS MODIFIED BOVINE CIDR[®]s

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Administration of exogenous progesterone is an important part of estrus synchronization and superovulation protocols used in goat reproduction. Currently, progesterone implants for small ruminants are not available in the United States, but bovine controlled internal drug releasing devices (CIDR[®]s) containing progesterone have been approved. The purpose of this study was to compare the concentrations of serum progesterone produced using small ruminant CIDR[®]s to concentrations produced using modified bovine CIDR[®]s.

Six alpine does in anestrus were used in a crossover design. Three does had small ruminant CIDR[®]s (Eazi-Breed CIDR[®], InterAg, Hamilton, New Zealand) placed in the vagina, whereas the remaining does received bovine CIDR[®]s (Eazi-Breed CIDR[®]) that had been modified by removing one-third of the outer silicone shell containing progesterone, and threading this onto an 8 in. cable tie which was tightened to pull the shell into a 5-cm inverted V shape to fit into the vagina. Blood was collected daily for 3 days prior to CIDR[®] insertion, and for 14 days after insertion. The CIDR[®] was removed and blood was collected for an additional 3 days. The treatments were then reversed and blood was collected as above for a total of 37 days. Progesterone concentrations were determined by solid-phase radioimmunoassay (Coat-A-Count Progesterone RIA Kit, Diagnostics Products, Corporation, Los Angeles, CA, USA); data were analyzed using a two-way repeated ANOVA test (to compare concentrations over time). With the exception of Day 13 after CIDR[®] insertion, there were no significant differences between the concentrations of progesterone produced by the small ruminant CIDR[®]s and the modified bovine CIDR[®]s. The average serum proges-

terone peak was at, or just below, 4 ng/mL (average 3.85 for small ruminant and 4.01 for modified bovine CIDR[®]s) on the day after CIDR[®] insertion. Concentrations began to decline immediately, falling to <3.0 ng/mL by 8 and 9 days post-insertion for the small ruminant and modified bovine CIDR[®]s, respectively.

In summary, modified bovine CIDR[®]s produced serum progesterone concentrations comparable to those produced by small ruminant CIDR[®]s. These data could be important as evidence to support the use of modified bovine CIDR[®]s as an extra-label source of progesterone in small ruminant reproduction in the United States. In addition, bovine CIDR[®]s could potentially be modified to study the effects of prolonged sub-luteal and large-dose progesterone concentrations on estrous synchronization and superovulation in small ruminants.

Keywords: Goat; Progesterone; CIDR; Estrus synchronization

DOI: 10.1016/j.theriogenology.2007.05.006

DETERMINATION OF TESTICULAR BLOOD FLOW IN LLAMAS USING VASCULAR CASTING AND DOPPLER COLOR FLOW ULTRASONOGRAPHY

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Background: Information on reproductive abnormalities in camelids, specifically those pertaining to spermatogenesis, is extremely limited. Many male camelids have a high percentage of spermatozoa with abnormal morphology. These abnormalities include variable sperm head sizes and sperm head and midpiece vacuolar defects. In cattle, swine and humans, it has been shown that such abnormalities, in addition to genetic reasons, can result from poor scrotal thermoregulation or decreased testicular blood flow. We hypothesize that this is also true for camelids.

Materials and methods: A fertile 6-year-old male alpaca was heparinized (40,000 IU sodium heparin IV) and exsanguinated under anesthesia (xylazine, guaifenesin and ketamine IV). Sixty liters of heparinized saline was flushed through the aorta and out of the caudal vena cava. Batson's No. 17 casting material was infused first through the aorta (red plastic) and then through the caudal vena cava (blue plastic) to determine position and size of the major vessels entering and