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EFFECT OF hCG ON FOLLICULAR DYNAMICS IN SANTA INÊS EWES SUBMITTED TO FTAI

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The aim of the present study was to investigate the effect of human chorionic gonadotrophin (hCG) injection on a synchronization protocol in Santa Inês ewes. The experiment was conducted in two consecutive steps, 9 ewes at each stage. The animals were randomly divided in one of two treatments: Control Group (GC) and hCG Group (GhCG). The ewes in the GC received an intravaginal progesterone device (Primer-PR®, Tecnopec, Brasil) on D0. The progesterone device was removed on D9, injected 100µgof d-cloprostenol (Prolise®, Syntex, Argentina) and 250 UI of eCG (Folligon®, Intervet, Holanda). The ewes in the GhCG, received the same protocol of GC, but 24 h after device withdrawal 500 UI of hCG was injected (Vetecor® - Hertape Calier-Espanha). Ultrasound examinations (Aloka SSD-500) were performed every 12 h from D9 until ovulation. Moreover, blood samples were taken 11 days after device removal for progesterone concentration analysis. Statistical analysis was performed by GLM of the Statistical Analyses System (SAS). Data were tested for normality of residuals and homogeneity of variances and transformed when necessary. There was no difference between groups in the diameter of the largest follicle at time of device withdrawal (GC: 4,56±0,99 mm *vs.* GhCG: 4,39±0,65 mm; P=0,68) and the maximum diameter of the preovulatory follicle (GC: 5,78±0,30 mm vs. GhCG: 5,36±0,69 mm; P=0,09). But there was difference between experimental groups in the interval between device removal and ovulation (GC: 79,9±15,4 h vs. GhCG: 54,7±4,9 h; P=0.001). Besides, ovulation occurred more synchronized in animals that received hCG. Moreover, the progesterone concentration 11 days after device removal was higher in GhCG (10,9±3,4 ng/ml) than GC (8,22±1,3 ng/ml). It can be concluded that hCG administration in Santa Inês ewes induced earlier and synchronized ovulation, and improved progesterone production on Day 11 after device removal. **Acknowledgments:** Hertape-Calier - FAPESP: Proc. No. 08/05175-5

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SERUM PROGESTERONE PROFILE AND EFFICIENCY OF LONG PROTOCOLS WITH AND WITHOUT CIDR REPLACEMENT IN SANTA INÊS EWES DURING ANOESTRUS SEASON

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The aim this study was to evaluate serum progesterone (P4) concentration during long protocols with and without CIDR replacement and the efficiency of treatments for ovulation rate and quality of the corpus luteum in Santa Inês ewes. The experiment was conducted in southeasterm Brazil (21º15'18"S e 48º19'19"W) during anoestrus season. Twenty-three ewes were randomly divided into two groups (GI, n=12 e GII, n=11). Estrus was synchronized with a P4 device (CIDR™) for 14 days. However, in GII, the CIDR was replaced by a new one on D7 (D0 = P4 administration). Doses of 2.5mg of dinoprost (PGF2á) i.m. were administered on D0 and 14. All ewes received 300 IU of eCG on D14. Blood samples for serum P4 determinations were taken daily during the protocol, one day after the end of treatment and on days 5, 10 and 15 post-ovulation. Data were analyzed by ANOVA by using SAS. Although the study has been performed during anoestrus season, 62.5% (GI) and 37.5% (GII) of females had corpus luteum of the previous cycle, at onset of treatment. On D0, P4 concentration was 2.56±0.49 and 2.60±0.66ng/ml for the respective groups (P>0.05). There was an increase (P<0.01) of P4 concentration for D1, reaching 5.49±0.56 and 5.07±0.65ng/ml, for the respective groups. In GI, P4 concentrations decreased continuously (P>0.05), reaching 1.06±0.11ng/ml on D14 and, 0.16±0.30ng/ml on D15. However, in GII, P4 concentration declined progressively (P>0.05) until D7, when was observed the value of 2.08±0.35ng/ml. Due to CIDR replacement in this group, was observed increase (P<0.01) P4 concentrations to 4.67±0.40ng/ml on D8, with subsequent decrease (P>0.05) until 1.59±0.26 and 0.30±0.09ng/ml on days 14 and 15, respectively. There was no statistical difference between groups for this variable, even for days after CIDR replacement in GII (P>0.05). Additionally, all ewes ovulated after the end of the protocols. The ovulation per animal was 1.33±0.49 and 1.36±0.67 for GI and GII, respectively (P>0.05). The diameters of CL at Day 5, 10 and 15 post-ovulation were 11.52±1.81^{a}, 13.28±1.51^{b}e 12.79±1.3^{ab}in GI (^{ab}P<0.01) and 11.48±1.74, 12.94±1.87 and 12.94±1.66 in GII (P>0.05) respectively. The P4 levels at these times respectively were 2.47±1.21^{a}, 4.62±2.82^{b}e 4.30±1.82^{b}ng/ml in GI(P<0.04) and 2.65±1.54, 3.90±2.06 and 3.82±1.96ng/ml in GII(P>0.05). We concluded that P4 profile showed an expected pattern for each group. However, there was no significant variation between groups. Finally, the protocols were effective to promote ovulation and formation of corpus luteum functional. Acknowledgments: FAPESP.