Reproduction in Domestic Animals

Vol. 47 • Supplement 4 • August 2012

Proceedings of the 17th International Congress on Animal Reproduction (ICAR)

Vancouver, Canada
29 July – 2 August 2012

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Expression of kisspeptin neurons in the arcuate nucleus of the goat during the follicular and luteal phases – A preliminary study

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Hypothalamic kisspeptin (KP) is regarded as a key factor regulating GnRH release from the hypothalamus. Using immunohistochemical staining techniques, neurons expressing KP have been identified in the hypothalamus of many species. However, there seems to be no report about the distribution of KP neurons, in cyclic and anestrous goats. A subsequent trial, using a larger number of animals, we intend to record the change of expression of KP in the female goat hypothalamus to study the pattern of KP expression in the arcuate nucleus of sexually mature native goats (Abadeh goats: age: 3–5 year, mean BW: 40 kg) to study the distribution of KP neurons, in cyclic and anestrous states.

**Key Words:** Sexual maturation, heifers, phytoestrogens, soybean, canola

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Transrectal ultrasonography in measurement of uterine diameter in ewe lambs after progestagens stimulus

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The beginning of sexual activity for both males and females is very important when it comes to animal rearing, especially due to the profit gains that only begins when the animals return to the productive phase (Montero et al., 2010). At puberty progestrone cyclical changes occur followed by estrogen stimulation and it is likely that previous exposure to progesterone change the mechanisms by which tissues respond to estrogen in the female prepuberal causing the final development of the reproductive tract (Lewis & Berardinelli, 2001). The aim of this study was to evaluate the response of prepubertal Santa Ines ewe lambs to exogenous administration of norgestomet (CRESTAR®). Eighteen Santa Ines prepubertal ewe lambs with average of 160 days-old and 29.6 ± 0.32 Kg of weight and 91.6 ± 2.5 of corporal mass index (Montero et al., 2010) were used. The females were randomly assigned to three different groups. In the first group (G1) the ewe lambs were isolated from the other two groups and were not subjected to any treatment. In the second group (G2) the females were submitted to the insertion of ear implants of 1.5 mg norgestomet (CRESTAR®) for 12 days. In the last group (G3), the females were submitted to the insertion of ear implants of 1.5 mg norgestomet (CRESTAR®) for 24 days (two consecutive insertions). After treatments (first removal (M1) and second removal (M2) of the implants), during 5 days, every 24 h all females were submitted to transrectal ultrasonic exams to measurement the diameter of uterus. For rectal examinations (the Aloka Prosound®) two was used with a 7.5 MHz prostatic probe. Data was analyzed by ANOVA followed by SNK test (Student Newman Keuls p < 0.05). The means and standard deviations of measurements of diameter of the uterus in the right and left in M1 were 0.93 ± 0.10 and 0.95 ± 0.06 for G1, 1.16 ± 0.12 and 1.10 ± 0.17 for G2 and 1.11 ± 0.11 and 1.2 ± 0.10 for G3, respectively. In M2 were 1.02 ± 0.04 and 0.98 ± 0.05 for G1, 1.11 ± 0.01 and 1.10 ± 0.08 for G2 and 1.17 ± 0.07 and 1.2 ± 0.12 for G3, respectively. In the first and second moments measures of right and left uterine diameter of G1 were statistically different from G2 and G3 (p ≤ 0.05) but G2 and G3 did not differ between them. It can be deduced that the Santa Ines lambs subjected to administration of a norgestomet promoted final development of the reproductive tract but no difference between one treatment (12 days of exposure) or two treatments (24 days of exposure) was observed. Financial support of FAPESP (2009/15270-8 and 2009/18419-2).

**Key Words:** Ewe lambs, progestagens, puberty, ultrasound, uterus

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Effect of melatonin treatment on plasma IGF-I level, and gene expression of β-lactalbumin, BCL2, BAX, and BCLX in the mammary epithelium in sheep

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Long-term melatonin treatment used for cycle induction affects negatively milk production in lactating dams. One of the proposed ways of action is that persistent melatonin signal has inhibitory effect on the growth hormone (GH) – insulin-like growth factor-1 (IGF-I) – mammary gland axis. On the other hand significant data from literature showed the favorable, anti tumor-growth impact of melatonin treatment when used for estrogen-sensitive breast cancer, both in...