BIOPHYSICAL CHARACTERISTICS OF UTERINE MILIEU INTERIEUR IN NELORE COWS SUBMITTED TO OVULATION AND ESTROUS SYNCHRONIZATION PROTOCOLS

Nascimento, V.A.[2]; Torres, C.A.A.[3]; de Oliveira, M.M.N.F.[4]; Mourão, L.L.[5]; Carneiro, C.[6]; Dias, M.[2]; Sousa, K.R.S.[5]; Oliveira, F.A.[7]; Viana, J.H.M.[8]

[1] Parte da dissertação de Mestrado do 1° autor, financiada pela CAPES, [2] Doutorando do DZO/UFV, 36571-000, Viçosa–MG, Brasil, [3] Professor do DZO/UFV, 36571-000, Viçosa–MG, Brasil, [4] Professora do DZO/UFVJM, Diamantina-MG, Brasil, [5] Mestranda do DZO/UFV, [6] Estudante de Zootecnia/UFVJM, [7] Estudante de Medicina Veterinária/UFV, [8]Pesquisador da EMBRAPA-CNPGL, *Agradecimentos às empresas Tecnopec e Sensoglass pela colaboração.
vinicioaraujo@vicosa.ufv.br

Reduced uterine pH during the luteal phase may lead to a decrease in fertility due to alterations in the progesterone profile and result in poor conditions for embryonic development. The aim of this work was to evaluate uterine pH and rectal temperatures in Nelore cows submitted to estrus and ovulation synchronization protocols. Thirty cows were allocated at random to three treatments. For T1, a progesterone-releasing device (DIB, Argentina) was inserted on day 0 and cows were injected (im) with 2 mg estradiol benzoate (BE, RIC BE, Argentina). The DIB was removed on day 8 cows received 300 IU eCG (Novormon, Argentina) im and 0.15 mg PGF2α (Prolise, Argentina). Artificial Insemination (AI) was performed 48 hours after DIB removal, simultaneously with an injection, im, of 25 mg Lecirelina, (GnRH, Gestran Plus, Argentina). The T2 was similar to T1, except that GnRH was replaced with injection of 1 mg of BE, im, on day 9 and AI was performed 50-56 hours after DIB removal. For T3, cows received a PGF2α injection, im, and AI was conducted 12 to 18 hours after the estrus detection. Cows were weighed (LW) and body condition (BC) evaluated on a 1 to 9 scale. Uterine pH and temperature were measured in the same day of AI using a portable pHmeter (master, São Paulo, Brazil). Rectal temperature was measured five consecutive times at 6 hour intervals, from 6 hours before to 18 hours after scheduled AI using a digital thermometer. The SAEG 8.0 software was used for statistical analysis. A 5% probability was considered for significance. Duncan test was used for mean comparissons. Randomly allocated animals among groups presented similar LW, BC, days of postpartum, age and parity (P>0.05). Measurements of uterine pH were 7.20; 7.24 and 7.26 for the animals of T1, T2 and T3, respectively. Values were greater than ones reported by BUTLER et al. (Journal of Dairy Science, v.81, p.2533-2539) and OLIVEIRA et al. (Revista Brasileira de Zootecnia, v.33, p.123-127). Animals from T1 and T2 had higher pH than those of T3 (7.41 vs 7.25) in the third measurement; on the fourth, uterine pH from T3 (7.42) and T2 (7.34) were higher than T1 (7.24); and, on fifth, uterine pH from T2 (7.41) was greater than T1 (7.34) and T3 (7.34). Uterine temperatures were 37.51; 37.63; and 37.51°C for cows in T1, T2 and T3, respectively. The temperatures of the animals of T1 and T3 were less than the reported by LEWIS et al. (Journal Dairy Science, v.67, p.146-152) for cows in estrus (37.74°C). Rectal temperatures were 38.51; 38.80; and 38.68°C for the animals of T1, T2 and T3, respectively. JASKOWSKI (Bulletim Veterinary Institute Pulawy, v.39, p.43-47) verified that cows in induced estrus (PGF2α) presented a peak of rectal temperature associated with ovulation, but in the present experiment such increase was not verified. The estrus and ovulation synchronization were not affected by uterine pH and temperature or rectal temperature.