



hCG administration in artificially inseminated dairy goats subjected to estrous synchronization

Administração de hCG em cabras leiteiras submetidas à sincronização de estro e inseminação artificial

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In goats, like in other ruminants, the artificial insemination (AI) success depends on the reproductive physiology knowledge and the resultant animal behavior after hormonal and/or management challenges. IA protocols are based on average intervals (male or hormonal interventions to estrus and ovulation, estrous onset to ovulation, etc). In this context two main events are listed to the unsuccessful pregnancy establishing, AI done at non adequate time and short estrous cycles (early luteal regression). The administration of luteotropic or ovulation inducer hormones can sometimes overcome these problems. The objective of this study was to check the effect of hCG administration on pregnancy rate in artificially inseminated dairy cyclic goats after estrous synchronization. A total of 20 Alpine and 67 Saanen goats received two doses 30 µg d-cloprostenol (Prolise[®]; ARSA S.R.L., Buenos Aires, Argentina) latero-vulvar seven days apart. Goats were checked for estrus twice daily and only those in estrus up to 48h after second cloprostenol administration were artificially inseminated in standing position (Embrapa Artificial Insemination Technique) 22 h after estrous onset with frozen-thawed commercial semen. Immediately after AI, goats were alternately assigned to receive 300 IU hCG (Vetecor[®] 5000; Hertape Calier, São Paulo, Brazil) (10 Alpine and 28 Saanen) or not (Control; 10 Alpine and 31 Saanen). hCG was diluted in a 0.3 mL saline solution and deposited into the vagina with the aid of a sterile insulin syringe without needle. Pregnancy rate was checked 60 days after artificial insemination by transretal ultrasonography. Qualitative variables were analyzed by qui-square test. Qualitative data were subjected to one-way analysis of variance (5% significance; SAEG[®]). A total of 2 (2%), 22 (25%) and 57 (64%) started estrus at 24, 36 and 48h, respectively, and only 6 goats were not in estrus until 96h after second cloprostenol administration. Only goats in estrus at 36 and 48 after second cloprostenol administration were inseminated. Body condition score (1 to 5 variation) was similar ($P>0.05$) for hCG treated (3.6 ± 0.3) and control animals (3.5 ± 0.3). The time elapsed from second cloprostenol administration to estrous onset and estrous onset to AI were, respectively, 26.4 ± 2.5 h and 44.2 ± 5.6 h to hCG and 26.8 ± 2.4 h and 45.1 ± 5.2 to control goats ($P>0.05$). Pregnancy rate was similar ($P>0.05$) for hCG treated (59%, 23/38) and control goats (49%, 20/41). Estrous synchronization with two doses of cloprostenol seven days apart showed to be a suitable and efficient choice in association to AI in cyclic dairy goats. Results of this study encourage the enlargement of number of goats used in further study.

Keywords: estrous synchronization, pregnancy rate, hCG, dairy goat.

Palavras-chave: sincronização de estro, taxa de gestação, hCG, caprino leiteiro.

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