



Reutilization of autoclaved intravaginal progesterone device to estrous induction in Toggenburg goats

Reutilização de dispositivos intravaginais de progesterona autoclavados para indução de estro em cabras da raça Toggenburg

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Introduction

Intravaginal devices impregnated with natural or synthetic progesterone are used worldwide for estrous induction in sheep and goats. As protocols for estrous induction shortened the time of exposure to progesterone, devices were able to be reused until three times to induce estrus (Zambrini et al., 2005). However, despite a good cleaning has been employed, there is no total warranty that all microorganisms are eliminated. Thus, sanitary risks are associated with devices reutilization. The purpose of this study was to evaluate the effect of autoclaving on efficacy of reutilization of intravaginal progesterone devices for estrous induction in Toggenburg goats.

Materials and Methods

This study was done in October of 2008, in Coronel Pacheco, MG, Brazil. Fourty two Toggenburg nulliparous (n=20; 35.2±7.0 kg and 3.5±0.2) and pluriparous (n=22; 50.3±10.2 kg and 3.4±0.3) goats were equally assigned according to weigh and body condition score into three treatments. Animals received new devices containing 0.33g progesterone (Eazi-Breed CIDR[®], Pfizer do Brasil Saúde Animal, São Paulo, Brasil; n=17, 41.5±8.5 kg, 3.4±0.2), autoclaved devices previously used for 6 days (n=13, 43.5±11.0 kg, 3.5±0.3) or 12 days (n=12, 44.9±16.1 kg, 3.5±0.2). Additionally, 5 mg dinoprost (Lutalyse[®], Pfizer do Brasil Saúde Animal) latero-vulvar were administered on the day of device insertion, whereas, 200 IU eCG (Novormon 5000[®], Sintex Indústria Bioquímica, Buenos Aires, Argentina) latero-vulvar 24 h before the device removal. Devices remained for 6 days period in all treatments. After removal goats were bred twice daily with fertile bucks at estrous onset and 24 h later if they were still in estrus. Statistical analysis were performed using all tests for statistical significance at the 95% confidence interval.

Results and Discussion

The estrous response and conception rate did not differ (P>0.05) among new device (86.6/60.0%), 6 (100.0/58.3%), and 12 days (100.0/66.7%) treatments, respectively. Two goats of new device lost their inserts and a doe from 6 days got sick; these animals were taken out of the experiment. Interval to estrus was similar (P>0.05) for animals of new device (35.1±14.3 h), 6 (33.8±10.4 h) and 12 days (32.0±9.3 h) treatments or between nulliparous (33.5±11.0 h) and pluriparous (32.7±11.2 h) goats. The estrous duration was the same (P>0.05) in all treatments (32.3±9.0 h; 32.0±10.7 h; 32±9.4 h, for new devices, 6 and 12 days treatments, respectively) and for nulliparous (27.5±12.6 h) or pluriparous (28.0±10.1 h). All treatments were efficient to induce estrus in Toggenburg goats in nonbreeding season. The autoclaving process did not affect the efficiency of reutilizing intravaginal progesterone devices for Toggenburg goats. This technique can be a simple and valuable tool to reduce sanitary risks of disease transmission without altering fertility in goats.

References

Zambrini FN, Fonseca JF, Bruschi JH, Viana JHM, Palhão MP, Santos AFA. Induction estrus in goats using reused intravaginal devices. *Acta Scientiae Veterinarie* 33 (Supplement 1), 2005.

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Palavras-chave: CIDR autoclavado, indução de estro, cabras, anestro.

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