Ovarian Status, LH and Progesterone Concentrations After Intramuscular Injection of Camel Seminal Plasma and Mechanical Stimulus in Rabbits

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ABSTRACT

The objectives of this study was (1) to determine the effect of intramuscular (i.m) injection of 1 ml of dromedary camel seminal plasma on ovarian status and (2) to determine the effect of intramuscular injection of 1ml of dromedary camel seminal plasma combined with introduction of catheter into the vagina on LH and progesterone concentrations using the rabbit as a animal model. In experiment 1, four receptive multiparous New Zealand does (body weight = 3.8 ± 0.3 kg) were synchronized with i.m injection of $PGF_{2\alpha}$ and submitted to i.m injection of 1 ml of camel seminal plasma. Rabbits were sacrificed 24-36 h after treatment to examine the status of the ovaries. Only one rabbit present 1 ovulated follicle in the left ovary after treatment. Ovulatory follicles (n= 10) were observed in 2/4 rabbit does. The total number of pre-ovulatory follicles was equal to 20 follicles divided into the two ovaries. No hemorrhagic follicles were observed in all treated rabbits.

In experiment 2, four receptive multiparous New Zealand does (body weight = 3.6 ± 0.4 kg) were synchronized and subjected to vaginal introduction of an empty catheter and i.m injection of 1 ml of camel seminal plasma. Blood samples for LH measurement (EIA method) were taken every 30 min until 120 min after treatment (T0, T30, T60, T90, and T120). Progesterone concentration was assessed with RIA method and was determined 30 min before treatment and every 4 days until day 12.

The LH and progesterone concentrations were not affected by i.m injection of camel seminal plasma associated with mechanical stimulus, indicating the absence of ovulation in all rabbits. This result showed that in the conditions of this trial, the synergic effect between seminal plasma and vaginal stimulation was not sufficient to trigger the preovulatory LH surge and subsequently ovulation.

Keywords: Camel seminal plasma, Ovarian status, LH, Progesterone, Rabbits.