A149 Folliculogenesis, Oogenesis and Superovulation

Effect of the FSH dose in superovulatory protocols on ovulatory follicle dynamics in ewes

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The objective of this study, was to evaluate the exogenous FSH dose effect on gonadotrophic treatment over ewes ovulatory follicle dynamics. Twenty four Santa Inês ewes were submitted to estrus synchronization with intravaginal progesterone device (CIDR®, Pfizer, Hamilton, New Zealand) inserted on Day 0 and remaining until the Day 8. On Day 0 and Day 8 were intramuscular (IM) administered 0.125 mg of PGF2α synthetic analogue (Sincrocio®, Ouro Fino, Cravinhos, Brazil). The gonadotrophic treatment started 48 hours before the progesterone removal (Day 6) when females were randomly allocated into three experimental groups according to the total dose of exogenous porcine FSH (Folltropin-V®, Bioniche, Belleville, Canada): G200 (n = 8) - 200 mg; G133 (n = 8) - 133 mg, and G100 (n = 8) - 100 mg. Total doses were administered in eight IM injections with 12 hours intervals (20, 20, 15, 15, 10, 10, 5 and 5% of a total amount). On Day 6, the females received 300 IU of eCG IM (Novormon®, Shering-Plough S. A., Syntex S.A., Buenos Aires, Argentina). B-mode ultrasonography was performed to assess the follicular growth and ovulation moment of the ovulatory wave. The statistical analysis was performed with software R® (R Foundation for Statistical Computing, Vienna, Austria) and results were compared using the Kruskal Wallis test and Dunns posttest ($P < 0.05$) (mean values ± standard deviation). Rates were compared by Chi-square test. The day of emergence (6.17 ± 0.92), maximum diameter (mm; 5.96 ± 0.86), day of maximum diameter (9.38 ± 0.58), duration of growth (h; 78.76 ± 18.38), rate growth (mm/day;1.06 ± 0.30) and ovulatory diameter (mm; 5.76 ± 0.78) showed no statistical difference between the experimental groups ($P > 0.05$); ovulatory moment occurred later in animals from G200 (h; $P = 0.0037$; 45.36 ± 11.46) compared with G100 subjects (40.39 ± 12.19) and G133 (39.61 ± 11.11); preovulatory follicle size reduction and preovulatory follicle size reduction rate were greater (mm; mm/day; $P = 0.0027$ e 0.0024, respectively) in the G200 ewes (0.26 ± 0.38; 0.52 ± 0.77, respectively) compared with the G100 (0.13 ± 0.30; 0.25 ± 0.59, respectively), however were similar on G133 (0.23 ± 0.39; 0.46 ± 0.83, respectively). It was concluded that different exogenous FSH doses (100, 133 and 200 mg) does not interfere in the ovulatory follicle dynamics in superovulatory protocols, exception for ovulatory moment, preovulatory follicle size reduction and preovulatory follicle size reduction rate.

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