

receiving hCG (2500 units IV). Mares were inseminated 12 h later with 500 million progressively motile sperm, and rebred with cooled semen the following day. Ovulation was confirmed via daily transrectal ultrasonography and embryo recovery was attempted 7 or 8 d post-ovulation. Data were analyzed with Fisher's Exact Test and ANOVA, and results are tabulated below:

Group	No. of cycles	Ovulated (%)	Ovulation rate*	Embryos recovered per flush**
Control	19	100	1.31 ± 0.51 ^a	0.77 ± 0.38 ^a
eFSH, 12.5 mg	11	81.8	3.04 ± 0.64 ^{b,c}	2.38 ± 0.57 ^b
reFSH, 0.35 mg	14	78.6	2.11 ± 0.59 ^{a,c}	1.41 ± 0.49 ^{a,b}
reFSH, 0.5 mg	11	100	4.59 ± 0.64 ^b	1.48 ± 0.48 ^{a,b}
reFSH, 0.65 mg	12	91.7	3.34 ± 0.62 ^{b,c}	2.69 ± 0.48 ^b

Within a column, values without a common superscript (a, b, c) differed ($P < 0.05$).

* Includes data from all mares treated.

** Only mares that ovulated were flushed.

In summary, for the three reFSH doses evaluated, ovulation rates per cycle were highest in mares given 0.5 or 0.65 mg twice daily. However, there was no significant difference among doses in embryo recovery rates per flush.

Keywords: Superovulation; FSH; Embryo; Equine; Horse

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Efficacy of medroxyprogesterone acetate in suppression of estrous behavior and follicular activity in cycling mares

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Various progestins are used in performance mares to pharmacologically suppress estrous behavior, including injectable medroxyprogesterone acetate (MPA). However, there have been no scientific studies to evaluate the efficacy of MPA in suppressing estrus in the mare. The purpose of our study was to evaluate the effects of MPA on ovarian follicular activity and estrous behavior. Eighteen cycling Quarter Horse-type mares were randomly assigned to one of three treatment groups: MPA (Wedgewood Pharmacy, Swedesboro, NJ, USA), saline, or altrenogest (Regu-Mate[®], Intervet, Millsboro,

DE, USA). Treatments started 7 d after ovulation. Mares in the MPA treatment group ($n = 6$) were treated with 1600 mg MPA IM initially, then 400 mg once weekly for 5 weeks. Saline-treated mares ($n = 6$) were given saline IM once weekly for 6 weeks. Altrenogest-treated mares ($n = 6$) received 10 mL altrenogest (22 mg) orally daily for 48 d. During treatment and 18 d after treatment ceased, mares were teased daily by an experienced stallion and were categorized as displaying behavior characteristic of estrus or diestrus. Transrectal ultrasonographic examinations were performed thrice weekly, or daily beginning when a 35 mm follicle was identified until ovulation. Blood samples were collected weekly and serum frozen for analysis of progesterone. Assessments of behavior, follicular activity, and serum progesterone concentrations were done in the blind. Data were analyzed by Chi-square and ANOVA, with pair-wise comparisons.

Mares given saline versus MPA had no significant differences in duration of diestrous behavior (mean ± S.D., 14 ± 2 and 16 ± 4 d, respectively) or estrous behavior (8 ± 2 and 7 ± 1 d, respectively) for the duration of the study. No altrenogest-treated mares displayed signs of estrous behavior during the treatment period, but four resumed estrous behavior 6–18 d after cessation of treatment. All mares in the saline and MPA treatment groups had normal follicular development and ovulations throughout the study. No mares given altrenogest ovulated during the treatment period; four resumed normal follicular development after treatment ceased. Least squares means showed significant differences in the interovulatory interval of mares given altrenogest versus saline and those given altrenogest versus MPA ($P < 0.0001$ and $P < 0.0001$, respectively), with no differences in interovulatory interval between saline versus MPA mares ($P = 0.7$). Serum progesterone concentrations were consistent with follicular and behavioral activity for all mares. In conclusion, MPA did not effectively suppress estrous behavior or follicular activity in normal cycling mares; therefore, it is not recommended for this purpose.

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Keywords: Estrus suppression; Estrous behavior; Medroxyprogesterone acetate; Equine; Horse

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