Clinical use of recombinant FSH in non-cycling mares
K. Lu, W. Zent, S. Hughes, J. Roser, I. Boime, M Colgin, E.L. Squires
Hagyard Equine Medical Institute, Lexington, KY; Gluck Equine Research Center, University of Kentucky, Lexington, KY; Department of Animal Science, University of California-Davis, CA; School of Medicine, Washington University, St. Louis, MO; AspenBio Pharma, Castle Rock, CO

There are several reproductive states where mares are slow to develop pre-ovulatory follicles or to ovulate (spring transition, postpartum). Recently a recombinant equine FSH (reFSH) has been used to stimulate follicle development.

The study was conducted on client-owned mares in central Kentucky in 2008 and 2009 and no control treatments were available. Mares were categorized in three groups. Group 1 (n=8) were transitional mares that had not cycled (<20mm follicles). Group 2 (n=9) mares had cycled but later returned to anestrus with follicles <20mm; and Group 3 were post-partum mares that had failed to ovulate.

The criterion for initiation of reFSH treatment was the presence of at least one ≥20 mm follicle. Mares were given twice daily injections of reFSH (0.5 mg per injection IM, AspenBio Pharma, Inc., Castle Rock, CO) until mares acquired one or more ≥35 mm follicles. Twenty-four hours later, 2,500 i.u. of hCG was given to induce ovulation and mares were mated naturally. Mares were examined daily with ultrasound until ovulation. Pregnancy examination was performed 14-16 days after ovulation.

This study tested the hypothesis that reFSH could be used in a clinical setting to induce ovulation in mares failing to develop a pre-ovulatory follicle. The objective was to evaluate the ovarian response of mares in transition and post-partum to reFSH.

Transitional mares were treated in early (Group 1) and late April (Group 2). These mares were treated with reFSH for 6.1 and 4.2 days, respectively. Number of ovulations for Group 1 and 2 mares was 2.6 and 3.1, respectively, and number of pregnancies was 1.9 and 1.7, respectively. Fourteen of 17 transitional mares became pregnant on the cycle after reFSH treatment. Mares in Group 3 (n=6) foaled an average of 44 days prior to reFSH treatment. After 6.5 days of treatment, mares had 3.7 ovulations and 1.8 pregnancies per mare. Five of six mares were pregnant after mating on the reFSH cycle.

In summary, the response to reFSH was similar to that reported previously for eFSH and equine pituitary extract. Recombinant equine FSH was useful to stimulate follicular activity in mares that had “shut down” in late transition and after foaling. Since multiple pregnancies were obtained, management of twins becomes essential after the use of reFSH.

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