

INTERVALS TO OVULATION AFTER TREATMENT WITH ESTRADIOL
CYPIONATE (ECP) OR BIORELEASE DESLORELIN (BRT-Des)

P. Fleury¹, M.A. Alonso¹, M.A. Alvarenga² and R. H. Douglas³

¹Fleury Equine Reproduction`CP 169 Sao Jose do Rio Pardo-SP 13720 Brazil.

Email:fleury@rantac.com.br.²FMVZ-UNESP/Botucatu/SP-Brasil.³BET LABS/BioRelease Technologies LLC.

A preliminary study (Fleury et al, 2003) found that when deslorelin was injected Intramuscularly (IM) in estrous mares with ovarian follicles 35mm or greater at a dose of 1.0,1.5 or 2.0 mg/ml in BRT deslorelin vehicle (www.BETPharm.com) ovulation occurred in 44.1,49.8 and 48.7 hours, respectively, as compared to 100 hours in controls. The BRT deslorelin vehicle was designed to release deslorelin for approximately 6 to 36 hours. The present trial was designed to test efficacy of a lower dose of BRT-Des and since estrogens induce LH release in the mare, ECP as well as the combination of these two drugs on intervals to ovulation was also studied. Two doses of BRT-Des (0.5 vs. 1.0 mg) and 10 mg of ECP were evaluated in a total of 142 barren mares, which were either M. Paulista or M. Marchador, and between 7 and 15 years of age during November through February in Brazil. Effects of follicular size were evaluated such that mares were further assigned to one of two follicular size groups: 30 to 35 mm or greater than 35 mm in diameter. Ultrasonic examinations of each ovary every 12 hours following treatment detected the occurrence of ovulations. Data for intervals to ovulation were analyzed by one-way analysis of variance for a 2X6 factorial experiment and Dunnetts test was used to make among mean comparisons. Treatment effects were significant (P<0.05) and data are shown in Table 1.

TABLE 1

INTERVALS TO OVULATION AFTER TREATMENT WITH ECP, BRT-DES OR ECP
+BRT-DES IN MARES WITH OVARIAN FOLLICLES THAT WERE 30 TO 35 OR
GREATER THAN 35MM IN DIAMETER

	CONTROL		10 mg ECP		DES 0.5 mg		DES 1.0 mg		DES 0.5 mg + ECP		DES 1.0 mg + ECP	
	30-35 mm	> 35mm	30-35 mm	> 35mm	30- 35mm	> 35mm	30-35 mm	> 35mm	30-35 mm	> 35mm	30-35m m	> 35mm
X	104.4 ^a	81.0 ^b	123.1 ^c	99.6 ^d	49.0 ^e	45.8 ^e	44.8 ^e	40.8 ^e	57.6 ^e	48.0 ^e	57.3 ^e	45.6 ^e
sem	6.4	3.7	4.2	3.6	3.2	4.5	2.4	2.0	9.6	3.1	7.4	3.0

Means with different superscript letters are different (P<0.05)

Results indicate that a low dose of BRT-Des (0.5 mg) was as effective as 1.0 mg in significantly reducing the interval to ovulation as compared to controls or ECP treatment. The interval was reduced by approximately 45 hours. ECP actually prolonged the interval to ovulation. The interval to ovulation in mares with follicular diameters of 30 to 35mm was about 5 hrs longer than in mares with >35mm follicles when BRT-Des was given.