

Controlled internal drug release device, another tool for the transitional mare

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Several studies tried to identify strategies to hasten the first ovulation of the year to have foals born as close to the first of the year as possible in the Northern Hemisphere. Despite many advances in our knowledge of the mare's estrous cycle, the transitional phase continues to frustrate equine clinicians. Multiple studies have shown that progesterone releasing intravaginal devices can be used to hasten the onset of estrus in the transitional mare without repeated daily hormone injections.¹ However, only a few studies used a Controlled Internal Drug Release device (CIDR). There were 2 objectives: 1) evaluate at which stage of transitional estrus the use of a CIDR would be most effective; and 2) determine ovulation and pregnancy rates. A total of 24 mares were used. For each, the perineum was scrubbed aseptically with chlorhexidine and/or ivory soap. The CIDR was placed intravaginally by hand and the plastic tail trimmed so it did not protrude from the vulva. After 7 days, the CIDR was removed and mares concurrently received 250 µg cloprostenol IM, followed by routine breeding management. Mares were categorized by their relative stage of transition and defined as follows: anestrus (no luteal tissue and follicles < 10 mm), early transition (follicles 10 - 20 mm), mid transition (follicles 20 - 30 mm), and late transition (follicles > 30 mm). Data regarding reproductive status at CIDR placement (maiden, barren, and postpartum), culture results (pre and post CIDR placement), comorbidities, and pregnancy rates from the CIDR cycle were analyzed. Of the 24 mares, 2 were in anestrus, 8 early transition, 13 mid transition and 1 in late transition. Seventeen mares (65.4 %) responded to therapy as defined by subsequent breeding and ovulation within 10 days of CIDR removal. Of these, 5 (29.4%) were in early transition and 12 (70.6%) were in mid to late transition. Ovulations following CIDR removal appeared fairly predictable with 11 (65%) ovulating within 4 - 6 days after CIDR removal. Nine mares (53%) were diagnosed pregnant via transrectal ultrasonography at 14 day pregnancy diagnosis, whereas the remaining 8 mares that did not become pregnant continued to cycle and became pregnant on subsequent cycles within the respective breeding season. In conclusion, CIDR devices were regarded as an effective alternative strategy for use in transitional mares, and response rates appeared better in mares more advanced in the transitional stage relative to anestrus and early transitional mares.

Keywords: Mare, transitional mare, CIDR, progesterone releasing intravaginal device

Reference

1. Klug E, Jöchle W: Advances in synchronizing estrus and ovulations in the mare: a mini review. *J Equine Vet Sci* 2001;21:474-479.

