Manual Reduction of Twins in the Mare: Effect of Operator, Mare Age, and Treatment

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Pregnancy loss after manual reduction of a twin vesicle between 14 and 20 days of gestation varied between veterinarians performing the procedure and was highest in mares >15 yr of age. Treatment with flunixin meglumine and a progestin at twin reduction increased live foal rates. Author’s address: Rood and Riddle Equine Hospital, PO Box 12070, Lexington, Kentucky 40580-2070; e-mail: psheerin@roodandriddle.com. © 2010 AAEP.

1. Introduction
This study was performed to determine whether pregnancy loss after manual twin reduction was affected by veterinarian performing the procedure, drug treatment, or mare age.

2. Materials and Methods
Medical records from Rood and Riddle Equine Hospital were reviewed to identify mares that underwent manual reduction of a twin pregnancy between 13 and 20 days of gestation. Mares diagnosed with a single vesicle from the same farm served as control. Effects of mare age, operator (n = 14), and treatment (n = 22 combinations) on live foal rate were analyzed.

3. Results and Discussion
Ninety-seven percent of mares were Thoroughbreds and ranged in age from 3 to 24 yr, with an average age of 9 yr. Live foal rate of mares that underwent a twin reduction was lower (1199/1493; 80.3%) than that of control mares (1195/1378; 86.7%; p < 0.05). There was no difference in live foal rates in mares that underwent a twin reduction on days 13–16 of gestation and mares 17–20 days of gestation (p = 0.4). Veterinarian performing procedure affected live foal rates, but differences were not related to experience. Mare populations may have impacted these results, with experienced practitioners being referred for difficult reductions. Twinning mares >15 yr of age had a lower foaling rate (139/210; 66.2%) than younger mares (1037/1246; 83.2%) or control mares (p < 0.01). Control mares older than 15 yr of age also had lower foaling rates compared with young control mares (77.6% versus 89%; p < 0.001). Mares treated with flunixin meglumine and progesterone had higher foaling rates than mares receiving other treatment or no treatment (82% versus 77%; p = 0.02).