Pregnancy loss following twin ablation on a Thoroughbred breeding farm in Beijing

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Introduction

The occurrence of twins is recognised as one of the most important and preventable causes of reproductive wastage in Thoroughbred horses. Early manual reduction (ablation) to a single vesicle under ultrasonographic guidance is the accepted method to prevent the occurrence of twin fetuses in equines. Evidence to support peri-ablation treatment of mares with NSAIDs and progestagens is lacking. The objective of this study was to assess the pregnancy outcome of Thoroughbred mares with twin conceptuses following manual reduction without any peri-ablation pharmaceuticals. We hypothesised that a higher rate of pregnancy loss would occur in this group of mares.

Materials and methods

The study took place in Beijing, China with the first day of the Northern Hemisphere breeding season designated as 14 February 2001. Mares were bred according to accepted Thoroughbred breeding practices, with *per rectum* ultrasonographic pregnancy diagnosis carried out at 14—19 (EPD), 21—30 (MPD), and 40—65 (FPD) days after service. All mares that were pregnant at EPD and had completed pregnancy diagnoses at MPD and FPD (as required) prior to 03 July 2001 were included in the study. Twin pregnancies were detected at EPD, and typically the largest of the two vesicles was manually ablated. No pharmacological treatment was available for administration to any mare. A univariable logistic regression model in which the outcome was maintenance or loss of pregnancy following EPD and the determinant was ablation of a twin conceptus.

Results

The total number of mares eligible for the study was 361 mares. Only 4 mares were pregnant more than once (twice each); therefore, clustering was not accounted for in the analysis. The proportion of mares with twin conceptuses was 12.1 %. Of the 44 mares that underwent twin ablation, 4 lost pregnancies post-EPD (6.8 %). Of the 321 mares with single conceptuses diagnosed at EPD, 31 lost pregnancies post-EPD (9.7 %). There was no significant difference (OR =1.46, 95 % CI 0.48—6.42, P = 0.55) between these two groups.

Discussion

The twinning rate in this population is consistent with that reported in other studies, as are the rates of pregnancy losses post-EPD to FPD with and without ablation of a conceptus despite the lack of peri-ablation pharmaceutical administration.

Conclusion

This study does not support the hypothesis that the manual ablation of a twin conceptus in mares without NSAID and progestagen treatment increases pregnancy loss between EPD and FPD.

Keywords: Mare, twin ablation, pregnancy loss, progestagens