

Retrospective Study of Early Pregnancy Loss in Thoroughbred Mares

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Aims: Advances in management of broodmares has led to an increase in conception rate, however the incidence of pregnancy failure before 65 days of gestation has remained largely unchanged. This retrospective study sought to determine the timing, clinical characteristics and risk factors associated with early pregnancy loss (EPL). **Methods:** The breeding and clinical records of 614 Thoroughbred (TB) mares that lost either a single or twin pregnancy before 65 days post mating between 1996-2004 (63 mares) and 2005-2010 (551 mares) were collected from six stud farms and two veterinary practices in the Newmarket area. Data was recorded into a Microsoft Excel spreadsheet and statistical analysis performed using SPSS. **Results:** Between 2005-2010, significantly more pregnancies were lost per year between 16-30 days (44.2 ± 3.4) than 31-45 days (25.0 ± 4.5 , $p < 0.001$) and 46-65 days (2.3 ± 0.4), $p < 0.001$). The timing of EPL was not affected by the previous breeding history or the presence of twins. Conceptus death occurred earlier in mares aged ≥ 9 than mares aged ≤ 8 years ($p < 0.05$). At first negative pregnancy diagnosis ($n=207$ mares), 61.8% mares presented with no conceptus, 24.1% with embryonic and/or placental remnants and 14% had no comment noted. Acute endometritis was associated with EPL in 13/102 (12.7%) mares. Transrectal ultrasonographic features of mares suffering EPL included uterine cysts (19.3%), uterine fluid (3.9%), and foetal and/or placental abnormalities (24.6%). Multiple (2+) and recurrent (3+) EPL affected 6% and 1.5% of mares respectively. **Conclusions and Practical Significance:** EPL occurs most commonly before 30 days post mating, a time of rapid foetal and placental development. Infectious causes account for 13% of EPL, whilst no diagnosis is reached in approximately 80% of affected mares. Future work must focus on identifying the aetiology of EPL if we are to improve reproductive efficiency in TBs. **Acknowledgements:** Stud farms and veterinary practices for contributing data.