Proceedings of the 47th British Equine Veterinary Association Congress
BEVA

Sep. 10 – 13, 2008
Liverpool, United Kingdom

Next Congress:

BEVA CONGRESS
British Equine Veterinary Association
9-12th September - Birmingham, UK

Reprinted in IVIS with the permission of the British Equine Veterinary Association – BEVA
http://www.ivis.org/
15.20–15.40
Causes of late fetal loss and abortion
Ken C. Smith
Royal Veterinary College, University of London, UK.

Equine abortion is defined as pregnancy loss prior to 300 days of gestation, whereas fetuses dying after 300 days are classified as stillbirths (Acland 1993). There have been several surveys of the causes of equine abortion in the UK (Platt 1973; Whitwell 1980; Smith et al. 2003). This review is based on the most recent survey, which concerned the diagnoses for 1252 equine fetuses and neonatal foals examined at the Animal Health Trust in Newmarket during 1988–1997, together with some more recent observations.

The most common cause of abortion in the Newmarket survey was umbilical cord torsion (38.8% of cases). This diagnosis was most common in mid-gestation and was associated with vascular compromise in the umbilical cord, which was oedematous, congested or haemorrhagic with variable dilation of the urachus. Fetal death generally occurred in utero. Extreme umbilical cord length is the principal risk factor for this condition (Whitwell 1975).

Twinning was a rare cause of abortion in the Newmarket survey and generally presented in mid-gestation. The majority of twins were of type A, with one fetus occupying the uterine body and one horn and the other (smaller) fetus occupying the other horn (Jeffcott and Whitwell 1973).

Placentitis accounted for 9.8% of cases and generally occurred in the last trimester of gestation. Most cases of placentitis were ascending and E. coli and Strep. zooepidemicus were the most frequent pathogens isolated. Leptospirosis, a common cause of abortion in Kentucky broodmares (Donahue et al. 1991) was not diagnosed in the Newmarket survey but has subsequently been diagnosed on the UK mainland (Anon 2007). Fungal placentitis, or mixed bacterial and fungal infection, accounted for a minority of the placentitides and these infections were generally chronic with the causal fungus being Aspergillus or Absidia spp.

Equine herpesvirus-1 (EHV-1) infection accounted for 6.5% of abortions in the Newmarket survey and cases were generally single rather than multiple on affected premises. Post mortem changes in the fetus and placenta of EHV-1 abortions have been well documented for several decades (Westerfield and Dimock 1946) but data on lesions associated with EHV-4 infection are more limited (Whitwell et al. 1992). Experimental data from previous vaccination-challenge studies (Smith et al. 1992) and more recent field data (Smith et al. 2004) have also illustrated an atypical presentation of EHV-1 abortion in which infection is restricted to the placenta. The clinical presentation of these atypical EHV-1 abortions is similar to a typical EHV-1 abortion in that the fetus is expelled live, often enclosed in the incompletely everted or unruptured placental membranes.

Mare reproductive loss syndrome, an important cause of early fetal death and late abortion in Kentucky in the early years of this decade, was not identified in the Newmarket survey or in more recent diagnostic records from large equine diagnostic laboratories in Newmarket (Animal Health Trust and Beaufort Cottage Laboratories, unpublished data). The absence of this disease in the UK presumably relates to the unique epidemiological features seen in the USA (Cohen et al. 2003).

Late fetal losses in mares may present close to the anticipated foaling date. In addition to the causes of late abortion identified above, these cases include intrapartum stillbirths. These accounted for 13.7% of diagnoses in the Newmarket survey and generally had a predisposing cause such as relative or absolute fetal oversize, fetal malpresentation (particularly contracture of the carpal joints) or unattended foaling.

Miscellaneous causes of late fetal loss and abortion accounted for 14.2% of final diagnoses and were a disparate group that included lethal congenital anomalies, fetal tumours, premature placental separation, fetal diarrhoea syndrome, body pregnancies and other noninfective placental anomalies.

Detailed investigation of equine fetal losses is strongly encouraged as a means of improving the reproductive health of individual brood mares and the efficiency of stud farm enterprises.

REFERENCES


