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Abortion in a mare due to umbilical torsion
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Normal foals have some degree of umbilical spiraling present at birth. Excessive torsion causes vessels to compress, causing associated edema and hemorrhage of the umbilical cord, which results in fetal death.1-3 The etiology of severe umbilical torsions is unknown but thought to be related to increased cord length.4 After death, fetuses often remain in utero long enough to undergo some degree of autolysis. Umbilical torsion is an important cause of abortion in mares.5

A six-year-old mare at 214 days gestation presented for signs of colic. Rupture of the chorioallantoic membrane and expulsion of fetal fluids was observed shortly after signs of colic were noted. Palpation of the fetus revealed a cranial longitudinal, dorsosacral presentation with neck and bilateral carpal flexion. Delivery was uncomplicated after malpositions were corrected with mutation. The umbilicus was noted to be severely twisted and swollen with areas of hemorrhage and edema along the length of the cord. Fetal membranes were incompletely expelled two hours later, with retention of the tip of the non-gravid horn. The mare was treated with flunixin meglumine, trimethoprim sulfadiazine, oxytocin, and uterine lavage. A small weight was attached via umbilical tape to the retained fetal remnant and it was expelled 12 hours later. Following an additional uterine lavage, treatments were discontinued. Necropsy of the fetus revealed severe autolysis and an umbilicus that was markedly torse and edematous with areas of marked hemorrhage. Multifocal mineralization of microcotyledonary villi and allantoic blood vessels not associated with inflammation were signs consistent with umbilical torsion. There was no evidence of viral or bacterial infection.

Umbilical torsion is reported as the leading cause of abortion in the U.K.,5 in contrast to fetoplacental infections in Kentucky.6,7 This difference may be due to regional disease trends.8

References