

Equine placentitis caused by *Stenotrophomonas maltophilia*, a multiple drug resistant organism

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Bacterial placentitis, leading to late term abortions, premature parturitions and delivery of compromised foals, is often caused by opportunistic pathogens such as *Streptococcus equi* subsp. zooepidemicus and *Escherichia coli*. *Stenotrophomonas maltophilia*, a free living, multiple drug resistant, non-fermentative, Gram-negative bacillus, has emerged as an important human nosocomial pathogen, being mainly associated with respiratory infections and endocarditis in humans. *S. maltophilia* has been associated with chronic respiratory disease in 10 horses. In the reproductive tract, *S. maltophilia* has been isolated from a clinical and an experimental case of focal mucoid placentitis in mares affected by equine amnionitis and fetal loss syndrome, associated with ingestion of Processionary caterpillars (*Ochrogaster lunifer*) or their exoskeletons.¹ A 10 year old Thoroughbred mare failed to carry pregnancy past 7 months of gestation for 2 consecutive years. After the second abortion, the mare had a grade I endometrial biopsy, noninflammatory endometrial cytology and light growth of Streptococcus sp. on uterine culture. The mare became pregnant by natural service after treatment with intrauterine infusion of amikacin. Supplementation with long acting altrenogest (225 mg q 12 days, IM) was performed throughout pregnancy. Fetal heart rate was 105 beats per minute and the combined thickness of the uterus and placenta measured transrectally was 8.5 mm on the last pregnancy monitoring examination. Twelve days later, the mare and her newborn filly were presented to our hospital 4 hours after premature delivery at 293 days of gestation. Fetal membranes representing the uterine body and nonpregnant horn weighed ~ 23.7% of the filly's body weight. Chorioallantois of the pregnant uterine horn was retained. Filly was severely compromised and was humanely euthanized. Cervical star was grossly within normal limits. A friable mass of exudate (~ 30 x 40 cm) was present on the chorionic aspect of the chorioallantois, at the uterine body. The periphery of the mass was firm and green to grey, whereas the inner portion was yellow and soft. The chorion underneath the mass was avillous and yellow/pale. Histopathologic findings included chronic, fibrosing, necrotizing allantochorionitis, with lymphocytes, plasma cells, neutrophils, and very abundant necrotic exudate; adenomatous hyperplasia of the allantois, with numerous cysts filled with neutrophils; and chronic peri funisitis, with neutrophilic, necrotic exudate. Heavy growth of *S. maltophilia* was obtained on culture and myriads of this Gram negative bacilli were seen using Giemsa, Steiner silver and hematoxylin eosin stain preparations. Retained chorioallantois was expelled 3 days later following 2 uterine lavages and ecbolic therapy. The mare was treated with antibiotic, anti inflammatories and prophylactic cryotherapy for laminitis, and was discharged 4 days later with no complications. Etiopathogenesis of placentitis induced by *S. maltophilia* and its relevance as an emerging pathogen in equine reproduction remains to be further elucidated.

Keywords: Chorioallantois, nosocomial bacteria, multiple drug resistant organisms

Reference

1. Todhunter, K. H. Pathology of equine amnionitis and foetal loss: clinical and experimental studies. <https://doi.org/10.14264/uql.2015.310>

