



EQUINE REPRODUCTION SVC

Equine Reproduction Embryo Recovery Embryo Transfer

ERS is the longest, continually in existence
Equine Embryo Transfer Company
in the United States

*** CLICK HERE ***

Current Articles &
Research

Reproduction
Foil Disorders
Lameness

Check back often for
new additions

The Importance of Postmortem Exams on Aborted Fetuses



Umbilical cord torsions were responsible for 5-60% of abortions in four studies of 7,800 cases.

Photo: Luke Bass, DVM, MS

Various studies report that 8-19% of equine pregnancies result in abortion for reasons ranging from placentitis to equine herpesvirus-1 (EHV-1). While not pleasant to think about, a post-mortem examination is crucial in these cases to determine what caused the abortion; confirming disease is the catalyst for taking appropriate biosecurity measures to halt its spread.

For this reason, Luke Bass, DVM, MS, Dipl. ABVP, a field service veterinarian at Colorado State University's Veterinary Teaching Hospital, in Fort Collins, reviewed the steps practitioners should take when performing a post-mortem examination on an aborted fetus in a presentation at the 2015 American Association of Equine Practitioners Convention, held Dec. 5-9 in Las Vegas.

"There are many causes of abortion, and identifying them could aid in further prevention of subsequent abortions," said Bass.

He described some of the common causes based on four retrospective studies of 7,800 cases:

- The majority (58.5-67.3%, depending on the study) of causes were infectious;
- Noninfectious causes included twinning (5%), placental insufficiencies, umbilical cord problems (torsions making up 5-60%), congenital abnormalities, and fetal resorption;
- The cause of 17% of abortions was unknown;
- Bacterial placentitis (inflammation of the placenta) is the most common cause of infectious abortion at 21%, with the primary causative bacteria being *Streptococcus zooepidemicus*;
- Viral causes of abortion include equine herpesvirus (EHV) -1 and -4 and equine viral arteritis, with EHV-1 being most common (4%); and
- 13% of bacterial causes were due to leptospirosis.

When the veterinarian arrives to examine an aborted fetus, he or she must decide whether to perform the necropsy on the farm, collect tissue samples and send them to a laboratory, or send the entire fetus to a laboratory. A necropsy on the farm might not be feasible if the veterinarian is running short on time or for legal/insurance reasons, if the owner bought prospective foal insurance.

If the veterinarian opts to perform the exam on the farm, he or she should find a well-illuminated large, flat surface to work on, said Bass. He or she should also practice biosecurity measures and wear protective outerwear until infectious disease has been ruled out.



Post-mortem exams on aborted fetuses are crucial in these cases to determine what caused the abortion; confirming infectious disease, for instance, is the catalyst for taking appropriate biosecurity measures to halt its spread.

Photo: Luke Bass, DVM, MS

"If the mare has aborted in a stall or small paddock, this is an ideal location for necropsy," said Bass. "The area is already contaminated and would require cleaning anyway."

The veterinarian should first clean, weigh, and examine the placenta for tears, missing sections, inconsistent coloring, exudate (pus), or other abnormalities. Then evaluate the amnion that surrounds the embryo and the umbilical cord, because leptospirosis and mare reproductive loss syndrome, for instance, cause umbilical cord disease, he said.

The practitioner can then move onto the fetus itself, noting its weight, length, body condition, and physical abnormalities. He or she should sample the spleen and stomach contents and collect any tissue for culture, said Bass, remembering to use clean gloves and instruments to avoid contamination and ensure accurate results. Most state diagnostic labs offer an abortion panel, which includes tests for a variety of tissues.

After finishing the necropsy, the veterinarian should clean the area and dispose of the body properly.

"Performing a necropsy to diagnose the cause of abortion is very important as well as a relatively simple and straightforward procedure," Bass said. It's worth the \$250-300 cost of the procedure and lab submission to make a diagnosis that might help the veterinarian and farm manager prevent further pregnancy losses.

Also, "Necropsies are an educational opportunity for the horse owner to get involved and see certain disease processes that can affect their horse population," he added.