

Contagious Equine Metritis

This equine venereal disease can be passed through breeding or via contaminated equipment

Overview

Contagious equine metritis (CEM) is a highly contagious venereal (sexually transmitted) disease of horses caused by the bacterium *Taylorella equigenitalis*. CEM is important not because it is a deadly disease (it isn't), but due to the massive economic losses that can be associated with the disease as a result of its devastating effects on reproductive efficiency. These losses are related to the mare's inability to become pregnant, fetal loss, and costs related to testing, quarantining, and treatment.

CEM is primarily transmitted via direct sexual contact between horses (frequently a carrier stallion). The bacterium can also be introduced indirectly via semen during artificial insemination, by horse handlers, and on fomites (including breeding equipment, tools, and hands). Foals born to infected mares can also become infected, and foaling equipment can become contaminated and spread the bacterium to other foaling mares if not cleaned properly.

CEM is a foreign animal disease and, thus, must be reported to state and federal officials if diagnosed in the United States. It was first reported in this country in late 1978 when an outbreak occurred in Thoroughbreds in Kentucky. The most recent outbreak was first diagnosed in December 2008 in a Quarter Horse stallion in Kentucky; the original source of infection for that outbreak was being traced at the time of this writing. All previously diagnosed cases in the United States have been traced back to imported horses. CEM is endemic in many countries worldwide, and all breeding mares and stallions imported into the United States must be certified CEM-free.

Clinical Signs

Stallions do not develop clinical signs or, strictly speaking, become infected. They carry the bacteria on the external genitalia. In contrast, there are two phases of infection in mares: acute and chronic (carrier). The



The bacterium that causes CEM can be transmitted indirectly via semen during artificial insemination. Horse handlers and fomites (including breeding equipment, tools, and hands) can also spread it.

acute phase of disease frequently results in a thick, mucoid/milky white discharge from the vulva that is obvious within 10 to 14 days post-breeding. Carrier mares are those with an established bacterial infection in the clitoral area (sinuses and fossa) or the uterus with or without clinical signs of disease. These mares are highly infectious until the infection is cleared. Note: not all mares will develop a discharge when infected with *T. equigenitalis*.

Mares infected with *T. equigenitalis* are usually temporarily infertile, as evidenced by an early return to estrus (heat) after breeding. Abortions due to CEM occur very rarely. Affected horses do not appear systemically ill. Some mares with CEM can maintain their pregnancies and deliver live, healthy foals.

Diagnosis

Veterinarians should suspect CEM in mares based on early return to estrus and the presence of a vaginal discharge. CEM must be differentiated from endometritis (inflammation of the endometrium, the

inner lining of the uterus) caused by other bacteria.

A definitive diagnosis can only be established by isolating the causative agent. In mares this is achieved by swabbing the vaginal discharge, clitoris (including the clitoral fossa and sinuses), and cervix or endometrium during estrus. In stallions swabs are obtained from the penis, prepuce, urethral fossa and sinus, distal urethra, and pre-ejaculatory fluid. *T. equigenitalis* is difficult to culture, and since represents a foreign animal disease, swabs must be shipped to a laboratory approved by the USDA for testing.

Some carrier stallions harbor few organisms on their external genitalia, and it can be challenging to detect the causative bacterium. Generally, if a stallion cultures negative he is bred to two test mares. The test mares subsequently are tested by culture and serology for *T. equigenitalis*. Tests to identify the bacterial genetic material (polymerase chain reaction or PCR tests) are also available, but they are of limited use in clinical practice. Serological assays

(to detect antibodies against *T. equigenitalis*) are available, but their usefulness is limited to detection of mares' recent exposure to the bacterium. They are of no use in the stallion.

Treatment

In the carrier stallion or mare, the bacterium is typically harbored on the external genitalia. To treat such horses the external genitalia are thoroughly washed with not less than a 2% chlorhexidine solution (or similar product) and rinsed with warm saline. The area is then coated with nitrofurazone or silver sulfadiazine ointment. This is repeated for five days.

While response to a single course of treatment is usually rapid in stallions, mares might require more than one course of treatment. In rare cases surgical excision of the clitoral sinuses and fossa might be called for in mares that do not respond to several courses of treatment. Systemic administration of antibiotics is indicated in some horses; however, this practice is not widely recommended since it is thought to contribute to the development of persistent infection in mares. Once infected horses

have been treated and certified CEM-free, they can be used for breeding.

Prognosis

After diagnosis and proper treatment, the prognosis for recovery from CEM is excellent. There are no reported cases of horse death due to CEM. Rapid identification and quarantine of all CEM cases is essential to expedite eradication of CEM from North America.

Prevention

Stallions are tested prior to and following U.S. importation.

U.S. semen shipped overseas must be collected from a stallion that tests free of CEM. Stallions should be tested for CEM and other sexually transmitted diseases at the beginning of each breeding season and, if indicated, during a breeding season. Imported mares and fillies must be tested and proven CEM-free before breeding in the United States. Disease prevention is further ensured (even in countries free of CEM) by the use of good hygiene, decontamination of fomites, and sanitation during breeding and foaling.

FAST FACTS

- Contagious equine metritis (CEM) is a highly contagious venereal (sexually transmitted) disease of horses caused by the bacterium *Taylorella equigenitalis*.
- CEM is primarily transmitted via direct sexual contact between horses (frequently a carrier stallion). The bacterium can also be spread through shipped semen.
- Stallions do not develop signs of infection. CEM should be suspected in mares that have an early return to estrus (heat) after breeding to a fertile stallion and/or the presence of a vaginal discharge.
- A definitive diagnosis is achieved by isolating the causative agent from swabs of certain sites in the reproductive tract.
- Treatment involves disinfecting the external genitalia, followed by the application of an antibiotic ointment.
- Prognosis for a full recovery is excellent.
- Prevention of the spread of CEM is achieved via testing and quarantine measures.

You must report all suspected cases of CEM to your veterinarian who will contact the appropriate state and federal animal health authorities. ◀



TRY THE DIGITAL EDITION OF






the **HORSE**
YOUR GUIDE TO EQUINE HEALTH CARE

FOR ONLY

\$7.99

The Horse Digital Edition delivers the EXACT news and in-depth, veterinarian-approved articles as the print edition - without the delivery fees. Plus, you'll get your digital copy of *The Horse* delivered days ahead of the print edition - all for only \$7.99!

Here are some more reasons to try the Digital Edition:

-  Convenient format that eliminates paper use and is available from any computer
-  Instant email notification when issues are online
-  Each issue is searchable and includes links to online content
-  Available days before the print edition
-  No international delivery charges



Click here to subscribe now or call 1-800-582-5604