

Contagious Equine Metritis

Contagious equine metritis (CEM) is a transmissible, exotic, venereal disease of horses caused by the bacterium *Taylorella equigenitalis*. Thoroughbred horses appear to be more severely affected by the disease than other breeds. Because animals may be asymptomatic, the disease is difficult to detect and control. There is no evidence that CEM affects people.

CEM is a serious disease because it is highly contagious. When coupled with the fact that mares can be bred only during certain seasons, CEM can have a devastating effect on equine reproductive efficiency. Should CEM become established in the United States, the horse industry would suffer great economic losses.

History

The first case was diagnosed in England in 1977. Because of the insidious nature of the disease, it is difficult to determine its origin or how widely it is distributed throughout the world. Countries known to be affected with CEM include Austria, Belgium, Bosnia-Herzegovina, Croatia, the Czech Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Guinea-Bissau, Ireland, Italy, Japan, Luxembourg, the former Yugoslavian republic of Macedonia, Montenegro, the Netherlands, Norway, Serbia, the Slovak Republic, Slovenia, Sweden, and Switzerland.

The first cases of CEM in the United States were diagnosed on March 9, 1978, on thoroughbred farms in central Kentucky. In April of the following year, an outbreak occurred in Missouri. The disease was rapidly eradicated from both States and has not subsequently been found in the U.S. horse population.

Transmission

CEM is commonly transmitted directly during sexual intercourse between undetected CEM-positive breeding mares and stallions. Transmission may also occur indirectly by artificial insemination or contact with fomites, such as contaminated hands or instruments. Outbreaks usually occur at breeding facilities following international horse shipments.

Undetected carrier mares and stallions are the source of infection for acute outbreaks of the dis-

ease. During the breeding season, a carrier stallion may infect several mares before the disease is suspected or diagnosed.

Clinical Signs

Initial exposure to the disease usually results in infertility. An infected mare may fail to conceive (revealed by an early return to estrus after breeding) or she may spontaneously abort. Abortions related to CEM are rare, however. Stallions exhibit no clinical signs but can carry the CEM bacteria on their external genitalia for years.

There are three general degrees of infection in mares.

- **Acute:** Active inflammation of the uterus causes an obvious thick, milky, mucoid vulvar discharge 10 to 14 days after breeding.
- **Chronic:** Milder uterine inflammation causes less obvious vulvar discharge, and infection may be more difficult to eliminate.
- **Carrier:** The bacteria are established in the reproductive tract. The mare, though asymptomatic, is still infectious and can remain a carrier for several months or longer.

Diagnosis

Two of the most common genital infections in mares are caused by *Klebsiella* and *Pseudomonas spp.* bacteria. Differentiating these infections from CEM cannot be reliably done except by laboratory isolation of *T. equigenitalis*.

Swabs for bacteriologic cultures from mares are taken from the cervix or endometrium of the uterus during estrus, clitoral fossa, and clitoral sinuses. Swabs from stallions should be taken from the penile sheath, fossa glandis, and urethral sinus. Bacterial samples must be delivered in Aimes transport medium (with charcoal) under refrigeration (4 to 6 °C) to an approved laboratory within 48 hours.

In mares, various blood tests may be used to detect antibodies to the CEM bacteria. In stallions, detectable antibodies do not develop.

Treatment

The mare cannot be successfully treated until the CEM bacteria clear from the uterus, a process that may take several months. The external genitalia of the mare and stallion can be treated with disinfectants and antibiotics. Once daily for 5 consecutive days, the external genitalia should be gently scrubbed with 2-percent chlorhexidine in a mild

detergent solution and rinsed with a warm saline solution. The external genitalia should then be coated with an antibiotic ointment, such as nitrofurazone. Due to the effectiveness of this treatment, surgical removal of the clitoral sinuses is rarely required.

Prevention and Control

- Quarantine and test all imported fillies, mares, and stallions of foreign origin, and mares and stallions not previously bred in the United States that are older than 731 days (2 years).
- Quarantine and test the first three mares bred to a stallion of foreign origin.
- Quarantine all suspects until all test results are negative.
- Avoid breeding any CEM-positive horses until they have been successfully treated and certified CEM negative.
- Maintain strict hygiene when handling mares and stallions (e.g., use disposable gloves, change gloves between horses, and thoroughly clean and disinfect instruments).

Report Suspicious Cases

Veterinarians and equine owners who suspect that an animal may have CEM or any other foreign animal disease should immediately contact State or Federal animal health authorities.

Additional Information

For more information, contact
U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Veterinary Services, Emergency Management
4700 River Road, Unit 41
Riverdale, MD 20737
Telephone (301) 734-8073
Fax (301) 734-7817

Current information on animal diseases and suspected outbreaks is also available on the Internet; visit the APHIS Web site at <http://www.aphis.usda.gov/vs>.

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