



Equine Viral Arteritis

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As another breeding season is upon us, it is time to begin to prepare our horses for another successful year. Last breeding season, a disease that had predominantly been seen in Standardbreds and Warmbloods reared its ugly head in Quarter Horse breeding populations in several western states. Equine Viral Arteritis (EVA), originating from a Quarter Horse stallion in New Mexico, was spread through the use of infected shipped semen. The result of this regional outbreak was the abortion of approximately 50% of the pregnancies on affected farms.

EVA is a contagious disease of horses caused by Equine Arteritis Virus. Once on a farm, the virus can spread quickly from horse to horse via aerosol or respiratory secretions. The virus is present in respiratory secretions up to 16 days after infection. Although EVA uncommonly causes severe illness in infected horses, it causes abortions and severe illness in newborn foals of mares that are exposed during pregnancy.

Horses that have recently been exposed may exhibit clinical signs or may have no apparent signs of illness. Clinical signs develop typically in 5-14 days after exposure and last about 1 week. Clinical signs of EVA are elevated body temperature, decreased appetite, depression, edema of the distal limbs, scrotum, or mammary glands, excessive tearing and inflammation around the eye. Treatment for recently infected horses is symptomatic.

During an EVA outbreak abortion rates typically range from 10-70%. Mares greater than 3 months pregnant are susceptible to aborting with the abortion occurring 1-3 weeks following initial exposure to the virus. Stallions may exhibit a short period of decreased fertility related to the increased body temperature and scrotal edema after initial infection.

The virus is also spread venereally via infected semen. When infected with EVA, stallions may become carriers which shed the virus in their semen. Infection rates of mares bred to carrier stallions is up to 85-95%. EVA can also be transmitted using artificial insemination from fresh, fresh cooled and even frozen semen from carrier stallions. It is believed EVA will not cause abortion in a mare which is infected at breeding however the recently infected mare may shed the virus via respiratory secretions expose nearby horses. Since EVA carrier status is testosterone dependent, geldings and mares will not become carriers and castrating a stallion will eliminate him from being a carrier.

Determining if a horse has been exposed or vaccinated to EVA is done by a blood test. The test measures levels of antibodies the body has made against the EVA virus. However the test cannot determine whether the increase in antibodies is due to natural exposure or vaccine response. Tests can also be performed on fresh or frozen semen using PCR or Viral Culture.

Vaccination of breeding stock can significantly decrease the risk of EVA outbreaks. The EVA vaccine is a modified live vaccine which is effective for an entire breeding season. It is recommended to verify EVA status of individual animals prior to vaccination and keep good records of vaccination dates since the blood test for EVA cannot differentiate increased antibodies due to vaccination or natural exposure.

The EVA vaccine is approved for stallions and non-pregnant mares. The AAEP vaccination guidelines suggest vaccinating colts intended to be used as breeding stallions at 6-12 months of age, boosting vaccination yearly. Breeding stallions should be tested prior to their first vaccination to verify they are not carriers, and then vaccinated yearly; at least 1 month before breeding season begins. Non-pregnant seronegative mares should be vaccinated before breeding to a seropositive stallion. Vaccinated mares should be isolated for 21 days after vaccination and breeding due to the possibility of the mare shedding virus into the environment and infecting non-vaccinated horses.