

Equine Viral Arteritis

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Equine Viral Arteritis (EVA)

- Caused by Equine Arteritis Virus (EAV)
- 1 of 4 major respiratory viruses in horses
- Rarely life threatening to healthy horses
- Special concern to horse breeders due to
 - Abortions
 - Death of young foals
 - Stallions can be permanent carriers
- Outbreaks occur mainly in breeding populations

Signs of infection

- No signs
- Fever
- Swelling of legs, scrotum, sheath, mammary glands, eyes
- Loss of appetite
- Depression
- Conjunctivitis
- Skin rash
- **Abortion from 2-11 months of pregnancy**
- **Pneumonia in young foals**
- Short term infertility in stallions for up to 16 weeks after infection – from fever and swollen scrotum

Diagnosis

- Blood sample to look for antibodies
 - Test cannot tell the difference between antibodies from a vaccine or antibodies from a previous infection
- Semen sample to look for the virus

Transmission

- Respiratory: infection from nasal secretions
- Venereal: infected semen is transmitted to mares through breeding
 - Shipped semen can spread the virus
 - Natural cover can spread the virus
- Indirect contamination: from clothing or dirty equipment (such as a dirty Artificial Vagina)
- In utero: from mare to fetus while in womb

Stallions and EVA

- Sexually mature colts or stallions may be permanently infected
- Testosterone dependent carrier state
- Geldings or immature colts are not permanently infected
- **Carrier stallions**
 - May or may not show signs of disease from initial infection
 - No clinical signs of being a carrier
 - Accessory sex glands harbor the virus and spread it through AI or natural breeding
 - No adverse effects on fertility

Prevent and control of abortions and venereal disease spread

- Isolate new arrivals for 3-4 weeks
- Segregate pregnant mares from other horses
- Blood test breeding stallions for antibodies
- Check semen of unvaccinated antibody positive stallions
- Vaccinate all breeding stallions annually
- Do not breed EVA shedding stallions to unvaccinated or seronegative mares
- **Only** breed EVA positive stallions to vaccinated mares or antibody positive mares
- Vaccinate mares 3 weeks prior to breeding to an EVA positive stallion
- Isolate mares for 24 hours after breeding to a positive stallion

Abortion

- Not as a result of breeding a mare to EVA positive stallion
- Occur from exposure to virus when already pregnant
 - Usual cause: unvaccinated mare bred to an infected stallion and then in contact with pregnant mares
 - Another cause: pregnant mare comes into contact with an aborted fetus/placenta

Carrier stallions

- Testosterone required for establishment and maintenance of the carrier state
- Principal reservoir of the virus
- Very important in transmission of EVA
- No signs of disease
- Constant shedder of the virus
- No adverse effects on fertility
- Transmits virus to 85-100% of vulnerable mares

Vaccine (Arvac[®])

- Modified Live Virus
- Labelled as safe and highly effective in non-pregnant mares and stallions
- Does not cause carrier state with vaccinal strand in stallions



THANK YOU



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