Department of Primary Industries
primefact

Equine herpes virus abortion

July 2017, Primefact 943, first edition
Animal Biosecurity and Welfare, NSW DPI

There are many causes of abortion in mares. Non-infectious causes of abortion are more common than infectious causes. Problems associated with the umbilical cord, disorders of the placenta, disorders of the foetus, twins, stress and trauma are examples of non-infectious causes of abortion. Infectious causes of abortion include: bacterial infections such as *E. coli, Streptococcus zooepidemicus* and *Leptospira* spp.; fungal infections such as *Aspergillus*; and viral infections such as *equine herpes virus* type 1 (EHV1).

Infection of horses with EHV1 usually occurs via the respiratory route. When a horse is infected with EHV1, unless the horse is pregnant, you wouldn't expect to see any sign of infection. Once infected with EHV1 the horse will usually be latently infected for life. This means that the virus lies dormant in lymph nodes or nervous system tissue, and if the horse is stressed the virus can be activated again.

If a pregnant mare becomes infected with EHV1, or if she is latently infected with EHV1 and is stressed while pregnant so that EHV1 is reactivated, the virus can cross the placenta and cause the foal to be aborted. Abortion can occur from 2 weeks to several months after infection or reactivated infection. Abortion usually occurs in late pregnancy but can occur as early as the 4th month of pregnancy. If a mare is infected during late pregnancy, her foal may be stillborn or born alive, but die within a few days of birth.

Healthy foals can be infected if they contact infected aborting mares, aborted foetuses or infected foals. These foals are capable of spreading the virus to other horses.

EHV1 is very common in the horse population; therefore mare owners should treat all pregnant mares as if they are at risk of EHV1 abortion.

Prevention of EHV1 abortion

- The most important thing is to avoid anything that will cause stress in a pregnant mare.
- Keep pregnant mares in small groups segregated from all other horses.
- Keep pregnant mares in their established group (don't disturb their social structure by introducing a new horse to the group or moving a pregnant mare to a new group of horses).
- Do not transport mares late in gestation (within 2 months of foaling).
- Feed and care for pregnant mares so they are in good health (provide good nutrition, control internal parasites, provide a clean environment and shelter and ensure fresh water is available at all times).
- In a stud situation, pregnant mares should be handled and fed by different staff using different equipment; otherwise ensure that pregnant mares are handled and fed first in the day.
- Vaccination is available as an aid in the control of EHV1 abortion; however vaccine alone will not prevent abortions.

Management of abortions

While EHV 1 is not zoonotic there are other causes of infectious abortion in horses that cause illness in humans. Primefact 1465 Biosecurity advice when handling aborted material from horses" on the NSW DPI website at should be consulted for more details.

It is extremely important to have your veterinarian investigate any abortion as soon as possible so that the cause may be diagnosed.

- Remove the mare that has aborted from the paddock to an isolation area.

- The aborted foetus and membranes should be sent to the laboratory for diagnostic testing. Always use gloves and a disposable face mask when handling foetuses and membranes.
- Abortion/birth fluids should be thoroughly cleaned away and the area disinfected with a standard disinfectant. Keep other horses away from the abortion site, preferably for at least 2 weeks after the area has been cleaned and disinfected.
- If other mares have been in contact with the mare that aborted, keep them in small groups and segregated from other horses until they foal or abort.

Diagnosis

All aborted foetuses, or tissue samples from aborted foetuses, should be submitted to a veterinary laboratory for a definitive diagnosis of the cause of the abortion. This is the most reliable way to diagnose EHV1 abortion. In cases where EHV1 abortion is suspected but the foetus and membranes could not be found, paired serum samples from the mare may help determine if EHV1 was the cause of abortion.

Reporting

EHV1 abortion is a notifiable disease in NSW.

Any case of abortion where EHV1 is diagnosed as the cause must be reported to an authorised officer under the *NSW Biosecurity Regulation 2017*. See Notifiable animal pests and diseases in NSW on the NSW DPI website.

The reason why EHV1 abortion is a notifiable disease is because countries we export horses require government certification that the horses do not come from a property where there has been a case of EHV1 abortion. Apart from requiring EHV1 abortion to be reported, there are no other mandatory legal measures for EHV1.

Since EHV1 abortion is diagnosed when an aborted foal (or tissue samples from an aborted foal) is sent to a laboratory, it is usual practice for the veterinary pathologist to report the disease.

Minimising disruption to breeding enterprises

Where EHV1 abortion is detected and managed rapidly and effectively, disruption to the breeding enterprise will be minimised. Open and honest communication between mare owners about an abortion event is important to facilitate safe movement of horses between properties and avoid further losses.

Acknowledgments

This primefact is based on information from the AEVA Guide to Management of EHV1 Abortion.

ISSN 1832 6668

INT16/156236