

Chief Veterinary Officer Communiqué

Veterinarian update

April 2011

Neurological disease in horses

An increased incidence of severe neurological disease in horses has been reported in NSW, Victoria and South Australia.

There appear to be two distinct syndromes:

- muscle and joint pain
- nervous signs

Common clinical signs include but are not limited to:

- reluctance to walk
- stiff gait
- ataxia
- depression
- tremors
- weakness, lethargy

Less common clinical signs include but are not limited to:

- increased responsiveness to touch and sound
- facial paralysis
- hypermetria
- muscle fasciculation

To date there have been over 100 reported cases in NSW, 60 in South Australia and in Victoria there have been approximately 90 properties with affected horses.

Most cases have gradually recovered over a one to three week period. Current reports indicate between 10 and 15% of affected horses have died or have been euthanased for welfare reasons.

Initial findings

Evidence suggests that the majority of NSW cases are due to infection with one or more Australian strains of virus in the Flavivirus group, which includes viruses like Murray Valley encephalitis virus and Kunjin virus.

In Victoria there are two clusters of disease; a neurological syndrome in the north of the state and a musculoskeletal syndrome around the Ballarat region. Evidence of exposure to Ross River virus (RRv) has been detected serologically in the Ballarat cluster. While strongly suggestive of RRv infection, these results are not conclusive and convalescent sera are currently being evaluated to provide more information.

There is evidence of exposure to RRv and Murray Valley encephalitis (MVE) virus in the northern Victorian cluster, possibly explaining the more severe symptoms observed in this cluster. Positive MVE virus PCR results have been obtained from three dead horses and MVE virus isolation obtained from two dead horses.

In South Australia, several cases have been positive to Flavivirus ELISA.

Testing of samples from all affected states has ruled out other viruses such as Hendra virus and Japanese encephalitis.

Queensland situation

Discussions with Queensland private veterinarians and the Equine Veterinarians Australia indicate that an increased incidence of nervous disease in horses has not been seen in Queensland to date.

A review of 2011 laboratory submissions indicates that there have not been an increased number of sample submissions to Queensland government veterinary laboratories from horses showing neurological signs.

Queensland cases

Biosecurity Queensland welcomes samples from veterinary practitioners investigating any cases of nervous system disease in horses.

As Hendra virus is one of the differential diagnoses for horses showing neurological

clinical signs, appropriate personal protective equipment should be utilised when dealing with these cases. More information can be found in [Guidelines for veterinarians handling potential Hendra virus infections in horses](#).

Samples required:

2 x 10mL whole blood
2 x 10mL blood in EDTA
2 x 10mL blood in lithium heparin
Cases showing acute neurological signs - collect nasal, oral and rectal swabs.

Repeat sampling of convalescent animals is required to demonstrate seroconversion or rising titre. Repeat blood samples should be collected 10 -14 days after the first sample collection.

Submitting samples:

1. Complete a [specimen advice sheet](#) with a thorough history.
2. Send the specimen advice sheet and samples to your closest Biosecurity Queensland laboratory:

Biosecurity Sciences Laboratory

Health and Food Sciences Precinct
Specimen receipt (Loading Block 12)
39 Kessels Road, Coopers Plains 4108
Submission enquiries (07) 3276 6062

Animal Disease Surveillance Laboratory

203 Tor Street, Toowoomba 4350
Submission enquiries (07) 4688 1364

Tropical and Aquatic Animal Health Laboratory

180-202 River Boulevard, Oonoonba 4811
Submission enquiries (07) 4760 1524

3. Call the appropriate laboratory to ensure they know samples are on their way.

Fees are not charged for laboratory diagnostic testing; however the investigating veterinarian is responsible for transport costs associated with sending samples to a government veterinary laboratory.

National Significant Disease Investigation Program

Subsidies may be available for neurologic disease investigations under the [National Significant Disease Investigation Program](#). This program can subsidise the cost of a disease investigation by a private veterinary practitioner where there are financial limitations to the investigation. Please refer to the web site for more details on eligibility criteria for samples submitted under the program.

Personal protection

The horse is usually a 'dead-end' host for mosquito borne arbovirus infections and is not considered a likely source of new infection for people or other horses.

Prevent mosquito bites in the field by:

- covering up with light-coloured, loose-fitting clothing and covered footwear; and
- regularly applying effective repellent containing DEET on exposed skin.

Horse owners should be urged to reduce the exposure of their animals to insect bites. This can be done by using registered repellents, rugging and the use of fly masks especially in the mornings and early evenings when vectors are most prevalent.

Further information

For more details please visit:

[Flavivirus nervous disease in horses in NSW](#)

[Murray Valley encephalitis virus alert for veterinary practitioners in Victoria](#)

[Horse 'wobbles' being investigated in South Australia](#)

For more information regarding neurological disease in horses please call 13 25 23

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