

June 18, 2021

Eastern Equine Encephalitis Confirmed in One Horse – United Counties of Stormont, Dundas and Glengarry

On June 17, 2021, the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) was notified of a confirmed case of eastern equine encephalitis (EEE) in a 26-year-old horse located in the United Counties of Stormont, Dundas and Glengarry. The unvaccinated horse developed intermittent bouts of recumbency with somnolence and mild muscle fasciculations with periods of normal behaviour and mentation in between. These signs occurred over the course of several days. The horse is recovering. Laboratory diagnostic testing confirmed infection with the EEE virus (EEEV).

EEE is not transmissible from horses to people. Birds are the natural hosts for EEEV, which is transmitted to horses and humans by mosquitoes which have bitten an infected bird.

Effective equine vaccines for EEE are available and veterinarians should encourage clients to keep their horses' vaccinations current. Once clinical infection develops, treatment options are limited to supportive care. The mortality rate in unvaccinated horses is high.

Veterinarians in Ontario should consider EEE as a differential diagnosis in horses exhibiting neurological signs and can identify positive cases through appropriate testing. IgM antibodies to the EEEV can be detected in serum from horses with neurological signs. As well, RT-PCR testing can be performed on brain tissue if available.

Clinical signs of EEE, including circling, head-pressing, ataxia and depression, can mimic a variety of encephalitides, including rabies, West Nile virus (WNV), botulism, hepatic encephalopathy, equine protozoal myeloencephalitis, and equine herpes myeloencephalopathy. Most equine cases of EEE in Ontario occur between the months of August and October and end with the onset of frost.

EEE affects mainly equine species in eastern North America and can cause severe disease in humans in rare cases. EEEV has also caused fatal infections in pheasants, quail, emus, alpacas, llamas and dogs.

EEE has been reported in horses in Ontario since 1938. Equine neurological cases are posted on the OMAFRA website at:

<http://www.omafra.gov.on.ca/english/livestock/horses/westnile.htm>

Ontario's local public health units are conducting mosquito surveillance for WNV and will report EEEv if found. Birds are the natural hosts for both viruses, which are transmitted to horses and humans by mosquitoes which have bitten an infected bird. As of June 18, 2021, no mosquito pools have tested positive for EEEv.

<https://www.publichealthontario.ca/en/DataAndAnalytics/Pages/WNV.aspx>

Questions about EEE in horses can be directed to:

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