

West Nile Virus

West Nile virus (WNV) is a *Flavivirus* belonging to the Japanese encephalitis virus complex, and may cause outbreaks of febrile disease and encephalitis in horses and humans^{6,15}.

Spread

The life-cycle of WNV is between mosquitos and birds. Birds are the natural reservoir hosts and the virus gets amplified by the continuous spread between mosquitos and birds during periods of adult mosquito blood feeding¹⁰. Humans and horses can be infected if a mosquito carrying the virus feeds on them. Even though a horse or human infected with the virus may show clinical signs the quantity of virus that they carry is so small that they are unable to spread the virus if a non-infected mosquito feeds on them, they are also not contagious to other humans and horses they may come into contact with therefore humans and horses are considered 'dead-end' hosts^{1,9,15}.

Clinical signs

Not all horses infected with WNV will develop clinical signs, however if a horse does develop clinical signs 90 % will show neurologic disease^{6,9,15}. Horses can show weakness, loss of control of bodily movements which can progress to paralysis and inevitably recumbency and unable to stand up¹⁵.

Depression, muscle tremors, fever, blindness, twitching face, drooping lip can all also occur¹⁵.

Up to 20 % of diseased horses can end up with residual effects such as weight loss, cranial nerve deficit, lethargy and loss of control of bodily movements that may never go away¹.

Some of the clinical signs that infected humans can show are joint and muscle pain, rash, fever, mild flu like symptoms and neurological disease^{7,9}.

Diagnosis

Due to the fact that some WNV infected horses can show no clinical signs, and that the clinical signs if they do present can look similar to some other diseases or syndromes (eg:rabies, botulism, herpes etc) samples from the infected horse need to be sent to the laboratory in order to confirm the diagnosis^{1,3}.

Treatment

Unfortunately the only treatment that can be given is supportive care such as anti-inflammatories, intravenous fluids and slings^{1,15}.

Prevention

There are 2 methods that can be used for prevention and control of the disease:

Mosquito control: repellants, control mosquito breeding sites-remove stagnant water, stable horses during peak periods of mosquito activity (dusk and dawn), no lights inside the stable, fans are all examples of ways you can reduce exposure to mosquitos^{1,15}.

Vaccination: is the most efficient prevention strategy¹. Effective vaccination reduces frequency of disease and reduces the disease severity in horses that become infected with WNV¹⁰. Horse can be vaccinated from 6 months of age with Duvaxyn[®] WNV, followed by a booster 3 - 5 weeks later and then

annually. It is recommended that the booster be given 4 weeks before the beginning of the mosquito season¹⁵.

References:

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For animal use only.

Duvaxyn[®] WNV. Reg. No.: G4071 (Act 36/1947). Each millilitre contains inactivated West Nile virus, strain VM – 2.

For full prescribing information refer to the package insert approved by the medicines regulatory authority.

Full product information available from Zoetis South Africa (Pty) Ltd., Co. Reg. No.: 2012/001825/07, 85 Bute Lane, Sandton, 2196. PO Box 783720, Sandton, 2146, South Africa. Tel.: +27 11 245 3300 or 0860 ZOETIS (0860 963847). www.zoetis.co.za

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