Port Perry Veterinary Services -Quarterly-

Equine Herpesvirus Myeloencephalopathy

With the recent outbreaks of Equine Herpesvirus-1 (EHV-1) causing neurologic disease in Throughbreds and Standardbreds, we thought it would be a good idea to inform our clients about this disease.

Etiology EHV-1 is a common cause of respiratory illness in horses and can transform into a neurologic strain and cause the condition Equine Herpesvirus Myeloencephalopathy (EHM). It is not known what causes this transformation, and why only certain horses affected with EHV-1 develop neurologic signs. The time from infection to visible illness is about 7 days. Many respiratory vaccines include both EHV-1 and EHV-4, however it is unknown whether or not these vaccines will provide protection against the neurologic strain of the virus.

Clinical Signs Initial clinical signs include fever, cough and nasal discharge, which oftentimes are missed, as they can be very subtle. Approximately two days later neurological signs commence. These can vary from just clumsiness in the hind limbs to stiffness to "dog-sitting" to recumbency. Also, horses often cannot urinate as the bladder is paralyzed. They will have decreased tail tone (meaning the tail is easy to lift up), they can be mildly depressed and pregnant mares will abort the fetus.

Diagnosis Taking a nasal swab or blood and doing PCR (a type of lab test) on it is the easiest way to make a diagnosis. You can also check for antibodies to herpes virus in the blood, however if the horse has been vaccinated, you cannot differentiate between the antibodies from the vaccine versus those from having the disease.

Treatment There is no treatment for EHM other than time and supportive care. This can include IV fluids, anti-inflammatories and urinary catheterization amongst other treatments.

Prognosis Many horses recover if given enough time, even ones that become recumbent. It can take anywhere from several days to a year for the signs to completely resolve.

Prevention There is no vaccination available to protect against the neurologic form of EHV-1. While it is not proven that the respiratory vaccines will protect against the neurologic form, at the recent Woodbine outbreak, it was recommended by the experts at the University of Guelph to vaccinate all horses on the property in an attempt to prevent spread of the disease. EHV-1 is spread through respiratory tract secretions so the best way to prevent it is to avoid contact with other horses. At shows it is advisable to not let your horse touch other horses, to use your own water bucket and equipment and not to stable overnight if possible. When bringing new horses into the barn or allowing show horses to return, keeping them away from the other horses in the barn for a week is ideal and taking their temperatures on a daily basis to try to catch the disease early on is beneficial.

What's New at the Clinic?

This month Dr. Rachel Busato will be starting her maternity leave. She is due at the beginning of August. We wish her all the best & look forward to her return in 2014!

We are pleased to welcome Lauren Wilson as a part-time receptionist for the summer. Lauren is a 3rd year veterinary student at the Ontario Veterinary College. You may notice students travelling with us this summer. These are 4th year vet students completing their large & small animal summer work placements.

The renovation of our office is complete & the vets are enjoying new office space! Although the vets have been busy with farm calls the last few months, they took some time to learn about cow comfort & nutrition. Dr. Bob McCrae attended a course about new dairy technologies & the latest on dairy reproduction.

To learn more about our services, newsletters & more, visit us at www.portperryvetservices.ca

When Ruminants Act Strange
– A Look at Neurological Diseases

Most herds have experienced an animal that is acting strange, ie: staggering, tilting its head, head pressing, shaking, circling, blind, etc. The more common diseases that you should be aware of causing neurologic signs are explained below.

Polioencephalomalacia - This disease is common in both cattle and small ruminants and is due to a deficiency in thiamine (Vitamin B1). The deficiency can be from lack of thiamine in the diet, from too much sulfate in the diet or from an abundance of a certain type of bacteria in the rumen that produce thiaminase, which will break apart thiamine and not allow it to be used by the animal. We often see this in young animals but it can occur at any age. They present as blind, stiff or down and unable to stand. If caught early enough treatment with thiamine for 3 days can be curative. If caught too late the brain damage will be too extensive.

Listeriosis - This disease is also common in both small ruminants (much more susceptible then cattle) and cattle. It is caused by a bacteria called Listeria monocytogenes. The bacteria are in the environment, and is often associated with feeding a more basic pH silage/haylage that is contaminated with soil. Bacteria can also be shed in milk and infect young. The bacteria get into the bloodstream through small cuts in the animal's oral cavity. After 2-3 weeks it will start to form many small abscesses in the brain and the animal will begin to show single sided neurologic signs (head tilt, circling, facial paralysis) and a fever. Treatment is removing the source, steroids, antibiotics and supportive care. Listeriosis can spread to people, especially immune suppressed and pregnant individuals.

Hypomagnesemia - This is often referred to as grass tetany and associated mostly with spring pasture feeding when the grass has lush, rapid growth. Heavily fertilized pasture with nitrogen and potassium will also compete with soil magnesium for uptake in the plant, making less available to the animal. Older cattle and ewes in the first 6-8 weeks of lactation, and any high producing cows are at greatest risk. These individuals will present staggering, drooling, stiff gaited, down, nervous and agitated. This will lead to tetany and convulsions. Treatment is with magnesium as well as changing the diet to include legumes (have higher magnesium content), salt blocks with magnesium, etc.

Pregnancy Toxemia - This was discussed in our January 2013 newsletter which you can view online.

Encephalitis - Young and immune compromised animals are more likely to develop encephalitis from an infection. Infection and inflammation of the brain will lead to many neurologic signs with or without a fever. The most common causes are bacterial infections, and as a result, supportive care and antibiotics are warranted. This can happen also with viral and fungal infections.

Nervous Ketosis - Ketosis is primarily seen in dairy cattle and 10% of these ketotic cows can develop neurologic signs often due to advanced disease. These cows may circle, stagger, become more aggressive and eventually become weak and go down. Treatment is still the same as for ketosis (glucose supplementation) and possible chemical restraint initially if very dangerous to work with.

Less common diseases to consider are Tetanus, many different toxicoses (lead, organophophates, etc), brain or spinal abscesses and CAE/Maedi Visna. Although rare, Rabies, Scrapie and BSE should also be in the back of your mind as they are reportable.