Port Perry Vet Services Quarterly

January 2019

What's New at the Clinic?

We hope you all had a very Merry Christmas and we wish you all the best in 2019! Fortunately for the veterinarians (and all of you!) the animals were kind to the vets on call over the holidays by staying healthy and out of trouble for the most part, so the vets got to spend most of the time with family and friends.

Starting in January, Dr. Allison Doherty will be off on maternity leave. We wish her and her family all the best and will keep you posted on how her new addition is doing and when she will be available for appointments! We have a new staff member that has joined the PPVS team. You'll see Bridgitte out on the road with the vets as a veterinary assistant. She comes to us with extensive horse experience and we are excited to have her!

We are going to celebrate animal dental health month again this February. In honour of this, we will be offering no mobile fee on all dentistry appointments using the powerfloat for the month of February. For more information about this or to book an appointment, please call the office at 905-982-1243.

We are offering our Equine Wellness Plans again this year! The choices include our standard package with optional add-ons that covers the vaccination and dentistry needs of companion and show horses alike. We also have two other plans, an Equine Geriatric Wellness Plan and an Equine Neonatal Wellness Plan. In the coming weeks we will be sending out more information about these programs via email, and will post everything on our Facebook page and website.

We are eagerly awaiting the arrival of a new ultrasound machine, which will primarily be used for equine reproduction and abdominal and thoracic imaging.

Good news! Just in time for calving season, we have found out that Vitamin A&D will be available again. We should have it on the shelves sometime in the next week. We are currently unable to acquire any short-acting oxytetracycline (Oxyvet 100 LP, Oxymycine LP, etc...) as it is on an indefinite backorder. Please feel free to speak with a veterinarian if you need an alternative medication recommendation to treat one of your animals.

The veterinarians have been hiding from the cold by doing some continuing education recently. In November, Dr. Brad McLaughlin attended the Ontario Association of Bovine Practitioners Fall Continuing Education meeting where he primarily learned about various topics related to bovine surgery. In December, Dr. Rachel Busato attended the American Association of Equine Practitioners Annual Convention in San Francisco. She took in lectures on podiatry, lameness, reproduction, anesthesia and medicine.

Mycotoxins in Feed

Due to the wet and humid growing conditions we experienced this year in Ontario, most of the corn and corn silage that you will be feeding your cattle and small ruminants over the winter contain mycotoxins in higher than normal levels. Mycotoxins are produced by molds and can have various effects on the systems of ruminants depending on the type of mycotoxin being produced. This year the two that seem to be most prevalent and are causing the most problems are deoxynivalenol (DON or vomitoxin) and zearalenone.

DON was called vomitoxin because it caused vomiting in swine, however it has different effects on cattle. It is produced by *Fusarium* fungus. It is still largely unknown what the effects are, but there are studies showing a link with DON and reduced feed intake and decreased milk production. It is believed to work by altering rumen fermentation and thus decreasing the amount of usable protein in the intestines thereby causing a reduction in milk production by up to 13% according to some studies. In field trials, levels as low as 1.5 - 2.5 ppm in the ration have been associated with clinical signs in dairy cattle, however studies that added pure DON at levels as high as 66 ppm to the feed were not associated with signs. This has led to the belief that DON is an indicator of potential mycotoxins and may interact with other less studied ones to cause the decreased performance seen in dairy cattle. Current acceptable feed levels have been established at 5 ppm total ration.

Zearalenone is also produced by *Fusarium*, however its effects on the dairy cow are vastly different. It has estrogenic effects on

the animals so it will cause reproductive problems. Studies on this one are also variable, with some reporting only lowered fertility (25% lower) and smaller CL's and others reporting abortion, vaginitis, enlarged mammary glands, increased reproductive tract infections and reproductive failure. On a positive note, zearalenone is degraded by the rumen, so the effects are not as pronounced as in animals with only one stomach. Therefore, accepted levels in the total ration are 25 ppm.

The combination of these two mycotoxins in the feed this year is going to make for a rough winter for dairy farmers if it is not addressed. The most common way to deal with this is to add a binder to your feed. Binders are either clay based or yeast based and work by binding the toxin to their surface to decrease the amount available for absorption in the intestines. Acidic diets have also been shown to exacerbate the effects of mycotoxins, so attempts at providing more dietary fiber and using buffers can also help mitigate the effects of the toxins. Most people are likely already using binders anyway, however the levels this year are higher than normal and will likely require a review of the binder with your feed representative to make sure it is working for you. You should be having your feed analyzed regularly for toxins and then your feed representative can make suggestions on how to deal with the levels. If you have any further questions please call the office to speak to one of our veterinarians.

Resources:
https://articles.extension.org/pages/11768/mold-and-mycotoxin-issues-in-dairy-cattle:-effects-prevention-and-treatment
https://fyi.uwex.edu/forage/mycotoxin-effects-on-dairy-cattle/

What's New with Cases?

We have seen a large number of cases of coccidiosis in young lambs and goat kids this winter. If you have any concerns with poor doing youngsters, particularly if they have diarrhea, we can run fecal samples at the office to check for coccidiosis. Based on the results, the veterinarians can best advise you on next steps, treatment, prevention etc...

Lyme Disease in Horses

Although Lyme disease has not historically been much of an issue in this area, with the increased number of ticks being found further North every year, it is something that should be increasingly on our radar.

The tick that causes Lyme disease is Ixodes Scapularis, commonly known as a deer tick that has been infected with *Borrelia burdorferi* - the bacteria that causes Lyme disease. The tick carries this organism in its digestive system. When the tick first attaches to a host, it simply drinks the blood, but if left attached, the blood will be sent to the tick's digestive system and then regurgitated back into the host. If the tick is infected, it is at this time that the organism is spread to the host. Research has found that it requires attachment of at least 24 hours for transmission of disease to occur. Once the organism is in the horse, it can now also serve as reservoir for further spread of the disease.

Given the time it takes for infection to occur, as long as a tick is found and removed within 24 hours, infection can be prevented. It is therefore important to pay close attention when grooming your horse daily, especially during the spring and summer months when ticks are most likely to be around. The most common places to find a tick on a horse are the base of the mane, neck, under the tail and at the ears. To remove the tick, a pair of fine tweezers should be used to grab it gently as close to the skin as possible and then pull up straight and slowly. Do not apply anything to the tick while still attached as it can cause the tick to regurgitate which would increase the likelihood of infection with the causative organism. The tick can be put into a clean, dry container to be sent for testing.

If you do find a tick on your horse, the tick can be identified and tested for *Borrelia burdorferi*. If positive, a blood test can be done on the horse if desired, approximately 2-3 months after the tick was found. Treatment is usually reserved for horses that actually display clinical signs.

Clinical signs of Lyme disease are very non-specific and are often mistaken for other diseases. A diagnosis is often made after other conditions are ruled out. Common signs include stiffness, lameness, increased reactions to outside stimuli (sensitivity to light or sound), pain on palpation anywhere on the body, swollen joints and changes in behaviour, lethargy or unwillingness to work. The most common of these being inconsistent lameness, and since there are so many causes of equine lameness it can take a while to eliminate other causes before coming to a diagnosis of Lyme disease. Unlike in other species, disease of the heart, liver or kidneys has not been seen in equine Lyme disease.

Treatment of Lyme disease involves antibiotic therapy. There are several options including intravenous oxytetracycline or oral doxycycline. Extended protocols of at least 2-4 weeks are often required for full resolution. Unfortunately, infection does not give animals immunity and they can be re-infected after treatment.

Given the difficulty in establishing a diagnosis of Lyme disease in horses, it is important to take steps toward prevention. Keeping pastures clear of any brush or wood piles and keeping grass well mowed are important steps to keep the number of ticks down. Sprays or wipes containing permethrin can be used when riding through woods or in long grass. As with any topical solution, water or even sweat will get rid of the product, causing the need for re-application. Careful inspection of horses daily to find ticks is the best way to prevent infection. If you do find a tick on one of your horses, do not hesitate to call the clinic to discuss further options.