

PORT PERRY VETERINARY SERVICES

-QUARTERLY-

RECURRENT AIRWAY OBSTRUCTION IN HORSES

Recurrent airway obstruction (RAO) is the more technical term for the condition “heaves” in horses. This condition has also been called chronic obstructive pulmonary disease (COPD). RAO is caused by inhalation of particles such as dusts and molds. The particles cause an allergic reaction which in turn causes the small airways of the lungs to constrict, become inflamed, and produce excess mucus. This condition generally happens in horses that are older than 10 years of age.

Typically horses with RAO do not have a fever like they do with other conditions such as pneumonia or viruses. In early stages they usually have exercise intolerance and coughing during work and while eating. With the progression of the condition, the frequency and severity of coughing worsens, the horse’s nostrils will flare when they breathe, they wheeze, and the horse works harder to breathe causing a visible enlargement of the abdominal muscles (the so-called “heave line”). Sometimes nasal discharge is apparent as well.

Your veterinarian can often diagnose this condition using the horse’s history and by performing a physical exam. When the lungs are auscultated, wheezes are heard and sometimes crackles when the horse exhales. In some cases, blood work may be used to rule out conditions like pneumonia. Endoscopy of the upper respiratory tract might show a greater than normal accumulation of mucus. A test called a

bronchoalveolar lavage (BAL) can be performed to confirm the condition. This involves putting a solution into the lower airways and then collecting it so that it can be submitted to the lab and the types of cells present in the airways can be identified; particular cell types are in a greater abundance in cases of RAO.

Treatment of recurrent airway obstruction involves reducing the inflammation and reducing the constriction of the airways. Anti-inflammatory medications called corticosteroids are a mainstay of treatment and come in oral, injectable and inhalant forms. Bronchodilators are also a commonly used adjunct treatment. Environmental management is hugely important for helping resolve

or manage the condition. Horses with RAO should have as much turnout as possible, they often need their hay soaked, and they should not be allowed to put their faces in round bales. They also should not be kept inside when stalls are mucked or when the aisles are swept. In severe cases, affected horses may require pelleted hay and grain and wood shavings or cardboard (or other minimally dusty) bedding.

RAO is similar to an inflammatory airway condition called inflammatory airway disease (IAD). This condition is generally seen in younger horses and is accompanied by less severe clinical signs (usually exercise intolerance and intermittent coughing).

WHAT’S NEW AT THE CLINIC?

Congratulations to Dr. Rachel Busato and her husband Dan! In August they welcomed a little girl, Emily Sarah, into the world.

On Tuesday October 29 we will be hosting a talk & lunch for our dairy and beef clients during the day, & in the evening there will be a talk for our equine clients. The topics are to be determined. These events will take place at the Scugog Memorial Arena. For more information, call the office at 905-982-1243 or visit our Facebook page.

Dr. Allison Doherty spent several days in North Carolina at a Focus on Dentistry meeting where she learned about a variety of topics related to equine dentistry. Over the next few months the vets will be taking in many of these types of learning opportunities.

Do you have expired large animal medications or pesticides collecting dust? The Ontario CLEANFARMS program is offering disposal of these items at numerous locations throughout Ontario during the month of October. Visit www.cleanfarms.ca for more information.

Recently, the clinic hired a new part-time staff member, Ericka. Please welcome her when you stop by next!

UROLITHIASIS IN THE SMALL RUMINANT

Urolithiasis is a big word to describe stones in the urinary system. These often go undetected until they cause an obstruction somewhere along the urinary tract. The most common location for these stones to create a blockage is in the urethra, which is the drainage tube connecting the bladder to the outside world.

Male sheep and goats are at higher risk for obstructive urolithiasis as they have an 's' shaped urethra, as opposed to a fairly straight urethra seen in females. The bends in the urethra create areas where a stone can much more easily get stuck. Males also have an extension of the urethra at the tip of the penis, known as the vermiform appendage. It gets its name based on its wormlike appearance. This small thin tube at the tip of the

penis is the most common point for a stone to get stuck.

An affected male often begins to show signs of being dull or depressed in the pen and may exhibit signs of straining to urinate or stretching. The stretching and straining can be confused with a constipated appearance. Because the kidneys will continue to produce urine and drain it into the bladder, the clinical signs can progress to swelling of the prepuce if the urethra ruptures, or abdominal distension and a very sick animal if the bladder ruptures. For this reason it is considered an emergency issue and needs prompt treatment.

The stones most often are struvite (magnesium ammonium phosphate). These stones begin as crystals and are generally a direct result of a high grain diet. The high

phosphorus and magnesium in the diet combined with low calcium will predispose the animals to this type of stone. On top of that, poor water supply or an inadequate amount of salt in the diet to induce drinking will promote the perfect environment for the stones to develop. In older rams and bucks a diet often high in alfalfa will encourage the development of calcium carbonate crystals and stones that can create blockages.

Treatment often involves removing the vermiform appendage and altering the diet. Ammonium chloride drenches help to create a more acidic urinary environment to decrease struvite stone development and possibly dissolve any struvite crystals. In cases where the blockage is further up the urethra surgery may be performed, but this is usually not economical.

LEUKOSIS IN CATTLE

Bovine Leukemia Virus (leukosis) is a common retrovirus that affects all breeds of cattle, but we mainly see clinical signs in dairy cattle. This virus has major economic impact in the dairy industry as overseas markets often require the animals to be from a leukosis free herd.

This virus is spread through close contact of infected animals, mainly through blood contamination. The transmission from one cow to another can be from biting flies, or tools contaminated with blood (dehorners, rectal sleeves, needles, etc). In some rare cases (less than 20%), calves born to infected dams can be infected through placental transfer of the virus. Sperm and eggs are not directly infected, so an embryo from an infected dam, properly washed, is safe to use in

embryo transfer.

Many herds have a high prevalence of this virus among their cattle. Roughly 30% of positive cows become persistently infected which means that they have high levels of the virus circulating in them and can infect other cows. Only a small amount (5-10%) of infected cows have a mutation of the virus to go on to exhibit fatal clinical signs.

Clinical signs begin in older cattle, around 4-8 years old. The virus starts to replicate and produce tumors. These lymphoma tumors commonly occur in the lymph nodes, spinal cord, abomasum, heart, spleen, kidneys, uterus and brain. Enlarged lymph nodes can be palpable on rectal examination and some cows may appear as though their eyes are bulging out if the lymphoid tissue behind the eyes

is affected. Cows with an abomasal tumor can present as a displaced abomasum and in performing surgery, the tumor may be felt by the veterinarian. Another common presentation is a suddenly down or wobbly cow that has the tumor affecting the spinal cord. Unfortunately there isn't a vaccine or a cure for this disease, but the virus can be easily detected with a blood sample.

Prevention of the spread of the disease is aimed at not using instruments contaminated with blood on other animals and quarantine of new arrivals until a test has been done. Herd screening can be beneficial to determine if leukosis is prevalent in a herd to determine if an eradication program should be instituted.