

PORT PERRY VETERINARY SERVICES

-QUARTERLY-

WHAT'S NEW AT THE CLINIC?

Dr. Sarah Shaw will be leaving the clinic in May to go to Equine Medical Centre of Ocala for a position as an intern. We will miss Dr. Shaw greatly and wish her all the best in her new position.

On a happier note, Dr. Allison Doherty will be joining the clinic in May. Allison grew up in the Brooklin area and many of you have probably met her working at the Brooklin Veterinary Hospital for the last five years or on her externship last summer with our clinic. Allison and her husband, Curtis, have moved into Port Perry where they live with one dog and three cats. She also owns two aged mares named Teddy and Misty. Allison has been riding horses since she was 10 and has competed locally and while she was in Guelph.

Allison is interested in all aspects of bovine and equine medicine but she especially enjoys lameness, ophthalmology, reproduction and dentistry. Her other interests include hockey, baseball, snowboarding, gardening and baking. We are very excited to have Allison join the practice and know she will be a great asset to the clinic.

AN IN DEPTH LOOK AT NSAIDS

NSAIDs (Non Steroidal Anti-inflammatory Drugs) are commonplace in nearly every horse owner's medicine cabinet. As the name suggests, NSAIDs reduce inflammation, and therefore they also decrease or control pain.

ACTION/USE: NSAIDs have analgesic (pain control), anti-pyretic (fever-reducing) and anti-inflammatory effects.

Bute (Phenylbutazone) is still the most effective drug for musculoskeletal pain, used preferentially for laminitis, foot abscesses and orthopaedic surgery. Banamine (flunixin) and Anafen (ketoprofen) are usually selected for soft tissue and gastrointestinal pain and are used for colics and eye pain. Previcox (firocoxib) is not labeled for equine use in Canada but has been used in the United States. It is used typically to treat horses with chronic pain from arthritis, ringbone, and chronic stable laminitis as it has fewer side effects than other NSAID's.

FORMULATIONS: Banamine is available in injectable form. It should be given in the vein rather than in the muscle, as rarely an intramuscular injection of banamine will cause a serious and potentially fatal clostridial (bacterial)

reaction. Luckily, the injectable form may also be given orally at a slightly higher dose if injection into a vein is not an option for an owner. Orally banamine is very effective, though slightly slower to take effect and has a very bitter taste. Bute is typically given orally as the injectable form must be given in the vein and will cause a painful local reaction if any Bute leaks outside of the vein. Bute is sold as a powder, liquid and paste. Previcox is a small animal medication but a single 57mg pill (the equivalent for a small dog) is the daily dose for a horse.

POTENTIAL SIDE EFFECTS: NSAIDs are very safe when used appropriately and side effects are generally dose-dependent. Gastric ulceration is one of the most common side effects. Colitis (diarrhea) may also result from NSAID use. Kidney damage is seen secondary to NSAID use, especially if these drugs are given to a dehydrated horse. If used in conjunction with steroids (ie. Prednisone), the risk of gastric ulceration increases significantly.

CONSIDERATIONS: NSAIDs are a very broad class of drugs with various uses. It is best to consult with a veterinarian regarding which drug and at what dosage is appropriate for your horse.

TOXIC MASTITIS

DEFINITION – Toxic mastitis is typically caused by gram negative, or coliform, bacteria (*E. Coli* and *Kelbsiella*). Once infected, bacterial numbers peak rapidly and elicit an acute inflammatory response. Inflammatory and systemic changes are a result of lipopolysaccharide (LPS) endotoxin release from the cell wall of the bacteria. Massive endotoxin release from dying bacteria results in endotoxic shock and, if left untreated, death.

SIGNS – Signs include fever, dehydration, elevated heart rate and respiratory rate, diarrhea, milk from affected quarter(s) that is often translucent and brown-coloured or blood-tinged, anorexia, mild hypocalcemia, weakness, and recumbency.

TREATMENT – Treatment is directed at managing endotoxic shock, as typically maximal release of LPS has occurred by the time therapy is initiated. IV fluids, electrolytes and anti-inflammatory

drugs must be administered immediately. Cows should be offered free choice water. Calcium may be administered if an affected cow is showing signs of hypocalcemia. Non-steroidal anti-inflammatories (NSAIDs) help to bind endotoxin and moderate endotoxic shock, so Banamine or Anafen are typically administered in the vein. Oxytocin is administered to promote milk production such that the quarter can be stripped hourly until signs subside.

Once the quarter has been stripped, an intramammary treatment directed at coliform bacteria is necessary. Systemic antibiotic selection depends on severity of clinical signs. Trivetin or Oxytetracycline are typically given, and while Excenel does not distribute well to the mammary glands, it may be given to manage systemic signs. Most importantly, rapid veterinary intervention is crucial in reducing the mortality rate of toxic mastitis.

PREVENTION – Vaccination has been shown to reduce the severity of coliform mastitis, but is not entirely preventative. Cows are vaccinated at 7 months of age or at dry off and re-vaccinated 1 to 3 weeks prior to calving.

Culturing cases of mastitis on farm prior to treatment is an excellent way to ensure that treatment is specific to the causal bacteria. In cases of toxic mastitis, treatment is often initiated before culture results are returned but results can be helpful in treating future cases. Coliform mastitis is considered 'environmental' so clean, dry housing is essential.

In addition, *Klebsiella* infections have been associated with sawdust and sand type bedding materials. Removing udder hair, preventing teat trauma, preventing fly exposure and frostbite, and reducing udder edema all have a positive impact on the control of environmental mastitis.

SMALL RUMINANT: OUT OF SEASON BREEDING

If you are looking to breed your sheep or goats at this time of year, you need to help them cycle using hormones. There are two effective ways to do this: CIDR's (controlled internal drug release) or MGA (melengestrol acetate). Other hormone manipulation programs will not work when the animals are anovulatory (out of season). However, using lights can be an effective and cheaper way to manipulate the cycle, but it can be difficult to get the barn dark enough to work, especially for sheep.

The method using CIDR's involves placing a CIDR in the vagina

of the ewe/doe for 14 days. When you remove it, you give a shot of 500 IU's of PMSG (Pregnenol 6000, Folligon) and introduce the ram/buck 24 hours later. Using MGA is similar, except you have to feed the MGA as a supplement for 14 days, then you give the PMSG 8 hours after the last supplement and introduce the ram/buck as above. Using CIDR's has the advantage that you know the animal is getting the medication. When feeding MGA, it is difficult to know that each animal is eating the correct amount in order to get the dose of hormone that they need for the

regime to be effective. Some of the more aggressive animals will get a higher dose and the more passive animals will get a lower dose, so it may not be effective in these animals. However, placing the CIDR takes more time than feeding MGA and involves running the animals inside one more time than feeding a supplement.

Another thing to consider is that when you introduce the male animals, you should be using a ratio of 1 male to 5 females in the off season versus 1:10 in the regular season.