



SIETE LEGUAS EQUINE VETERINARY SERVICES AND REPRO LAB

NICOLE ELLER-MEDINA DVM

SUMMER 2011

INSIDE THIS ISSUE:

LETTER FROM NICOLE...

NICOLE'S LETTER DEWORMING STRATEGY	1
LAMINITIS	2
DEWORMING STRATEGY CONT...	3
AAEP WORKSHOP SILVER'S COUPON	4

I'm so sorry this newsletter is so late to come out! We had planned to have it out in early April, but we have been very busy and time just got away from us. April 16th we hosted the Minnesota Horse Welfare Coalition's third Castration Clinic. Assisted by Dr. Tracy Turner and Dr. Julie Wilson, along with nearly a dozen other veterinarians and many veterinary and vet tech students, we castrated 22 horses and a miniature donkey! Things went very smoothly, despite the awful weather that day, the students got some great hands-on surgical experience, and we achieved our goal of helping to cut down on the number of unwanted horses.

I was very honored to have been invited to attend the 6th Annual Emerging Leaders Conference hosted by the American Association of Equine Practitioners. This was held in Lexington, Kentucky the last weekend of April (see press release in this newsletter). I really appreciate the opportunity to be involved, and I hope to be able to use what I learned there in my work here at home.

Equine Herpes Virus (EHV-1) has once again reared its ugly head, and I have already spoken with many of you about it. This virus can cause respiratory disease, abortion in mares, neonatal foal death, and/or neurologic disease. You may have heard it called Equine Herpes Virus Myeloencephalopathy (EHM). It is important to be vigilant and aware, but there is no need to panic. This disease has been popping up sporadically for the last 35 years, and as such is not a new "epidemic". Use biosecurity measures at equine events, such as tying to your trailer rather than using stalls and keeping your horse in a place where direct contact with other horses is minimal. While traveling, monitor your horse's temperature (normal is between 99.0 and 100.5 degree F) and of course, make sure your horse is healthy before you go! Use separate feed/water buckets and grooming equipment for your horses, and avoid petting or touching other horses to minimize the chance of passing infection.

FECAL EGG COUNT HERD PRICING

1-4 PRICE \$20.00 PER SAMPLE
5-10 PRICE \$15.00 PER SAMPLE
11+ PRICE \$12.00 PER SAMPLE

PARASITE CONTROL—THE NEW STRATEGY

Over the last several years, researchers have shown that there is an increase in resistance in some of the classes of parasiticides that we have been using to treat parasites in horses. This is a concern as there doesn't appear to be any new classes of dewormers coming out for horses in the near future. If the drugs we have now don't remain effective, we will eventually run into problems maintaining healthy horses. Currently, there are three active-ingredient (chemical) classes that are generally used for parasite control in horses. The first is benzimidazoles. Common drugs in that class are fenbendazole or oxibendazole – Safe-Guard®, Panacur® and Anthelcide EQ®. The second class is tetra-hydropyrimidines. Pyrantel pamoate and pyrantel tartrate are common drugs in this category Strongid® P, Strongid® C and Rotectin® P. The third class is the macrocyclic lactones. They include ivermectin and moxidectin - Zimecterin®, Equell™ and Quest®. When this class is combined with praziquantel, the parasiticide is also capable of eliminating tapeworms. Zimecterin® Gold, Quest® Plus and Equimax™ fall in this category.

A landmark 2004 study looking at small strongyle anthelmintic resistance in horses has shown different degrees of resistance to two of the three classes among 44 horse farms. Researchers found benzimidazole resistance

Laminitis definition—the inflammation of the soft tissues of the hoof. If the delicate laminae that support the coffin bone give way, the resulting founder takes months to recover. So prevention is by far the best approach. The good news is that more research is informing us of these triggers below that can help to identify and to protect your horse.

1. Identify the “At-risk horses” – the insulin resistant or Cushing type horses are more vulnerable to laminitis. The questions you need to ask yourself are A.) Has your horse ever had laminitis before? (Because the internal structures of the hoof are weakened and more easily give way again.) B.) Does your horse come from a family or breed prone to laminitis? (You see more cases in those families/ breeds that are “easy keepers”.) C.) Does your horse’s diet include a high portions of grain? (Diets high in grain are usually high in nonstructural carbs (NSCs) and they can trigger episodes. D.) Does your horse regularly graze on lush or improved pastures? (Lush green pastures are usually rich in a sugar called fructan (NSC) that can also trigger an episode.) E.) Does your horse have Cushings disease? (Cushings horses have an increased level of the hormone cortisol in their blood; this in turn leads to elevated levels of insulin, which can cause laminitis.) F.) Is your horse insulin resistant? (When muscle, liver, and fat cells do not respond normally to insulin, the body responds by producing excess amounts of the hormone. The resulting imbalance can cause laminitis.) G.) Is your horse over weight? (Obese horses, particularly those who carry a large percentage of fat on the tailhead, by the withers and/or a cresty neck are more prone to episodes of laminitis.
2. Keep your horse’s weight in check.
3. Limit your horse’s intake of sugars and starches—NSCs in grains and fructan which is a NSC in certain grasses. The equine stomach cannot digest large amounts of NSCs all at once, so they pass into the intestine and hindgut intact, where they ferment and produce by-products that kill the normal gut flora. This triggers the cascade of inflammatory events that ultimately leads to laminitis.
4. Get to know your grass—The majority of laminitis cases are linked to pasture grass, especially when the plants are rich in NSCs. Cool-season grasses such as fescue, rye, blue grass are typically higher in NSC’s than warm-season grasses such as Bermuda or switchgrass. The NSC level of any grass fluctuates throughout the year, and peaks often occur in the spring and fall. Testing your grass periodically throughout the different seasons will help you identify patterns.
5. Use a grazing muzzle. These devices, which cover the mouth and nose, limit the amount of grass he can eat while still allowing him the drink.
6. Create a dry lot. When fructan (NSCs) levels peak, a dry lot (a paddock with no grass at all), can be ideal turnout location for at risk horses.
7. Make any dietary changes gradually. Sudden changes in diet can disrupt the balance of digestive flora in a horses gut, which can lead to laminitis.
8. Tend to a horse’s “good” foot when he is injured. Horses with a serious injury in one leg have an increased risk to develop laminitis in the opposite leg, which is bearing more of the weight.

PARASITE STRATEGY CONT...

in 97 percent and oxibendazole resistance in just over 50 percent of the farms. For the pyrantel group, 40 percent of the farms showed resistance. In the macrocyclic lactone group, there was no small strongyle resistance identified. However, recent research has shown that small strongyles begin shedding eggs sooner after treatment with macrocyclic lactones than when the drugs were first released. Fortunately, the decreased egg reappearance does not appear to be wide spread but it has become a concern. In addition to the small strongyle issues, ascarid (roundworm) resistance has been identified in all three parasiticide classes. However, the prevalence of ascarid resistance has not been determined.

To limit the development of widespread parasite resistance, especially to the broad-spectrum macrocyclic lactones, we need to reassess the goals of a parasite control program. While in the past the goal was to eliminate all parasites in the horse, the new goal is to maintain the health of horses while simultaneously maintaining the effectiveness of the parasiticides currently available for as long as possible. This means that instead of just blindly using parasiticides in a one-size-fits-all fashion, not knowing if they are working on a given farm, we need to make sure that the parasiticide we use is still effective. And because the more you expose a parasite population to a drug, the greater chance it will develop resistance, we need to determine which horses we should treat at which intervals/frequencies. The overall effect will likely reduce the number of times we deworm the majority of horses while being able to maintain healthy animals.

New parasite control strategies are based on determining which horses are most likely responsible for the majority of pasture contamination with eggs and subsequent parasite transmission (high-egg shedders) and to selectively target those horses and reduce the number of treatments in the other horses. Using fecal egg counts, horses on a farm can be classified into two to three groups as low to high shedders. Only 20 to 30 percent of horses would likely be high shedders. Low to moderate shedders would be treated less often, and high shedders would be treated more often. Fortunately, the vast majority of horses are considered low to moderate shedders. We also need to look specifically at the geographic area of the country in which the horse lives, the housing situation and the expected parasite species and burden that horse would have. Then we can determine whether he is in an environment that would allow him to continue the transmission. For example, if a horse is on shavings bedding in a stall most of the day and a dry lot when turned out, the transmission rate of strongyles to other adult horses is reduced, because the natural environment for that parasite is not quite right. Strongyle egg maturation into infective larvae, which is picked up when horses graze, occurs more readily in a grassy area.

Veterinarians should be involved in this process on multiple fronts, including the "determination of shedding" category, the testing of which drugs still work on your farm and the recommendations for which drugs and intervals to use based on the variables above. For low shedders, in most cases, the product of choice is a broad-spectrum parasiticide, such as the macrocyclic lactones with the addition of praziquantel, once or twice a year, given in late fall/early winter and perhaps repeated in the spring. Again this would be based on many factors.

High shedders should be dewormed more frequently to reduce their transmission of eggs to the environment where other horses can pick them up. These horses would likely be dewormed four to five times a year at strategic times and intervals based on expected parasite transmission likelihood. Moderate shedders would be treated somewhere in between.

What does all this mean for the individual horse owner? You need to determine your horse's level of shedding and transmission by having your veterinarian do a fecal egg-count test, where the number of eggs your horse sheds in a measured amount of manure is determined. Is he a low, moderate or high shedder? Based on this, your horse will be treated with an appropriate dewormer. Two weeks after your horse has been treated, a fecal-egg-count-reduction test needs to be done. This test will determine if the drug you've used is actually working.

Additional environment management techniques also need to be utilized. Rotating pastures, rotating species of animals when possible, composting of manure before spreading on grazing pastures and dragging pastures only when appropriate are non-chemical based ways of helping to reduce transmission of parasites.

These new methods of parasite control are designed to keep your horse healthy while at the same time helping to ensure the parasiticides maintain their effectiveness for as long as possible.

DR. NICOLE ELLER-MEDINA ATTENDED WORKSHOP FOR VETERINARY LEADERS

Nicole Eller-Medina, DVM, of Siete Leguas Equine Veterinary Services in Cold Spring, MN joined a group of 37 future leaders of the American Association of Equine Practitioners during the organization's Emerging Leaders workshop, April 29–May 1 in Lexington, KY.

During this bi-annual workshop, AAEP members with a strong background of involvement with the association and the veterinary profession receive training in effective leadership. Attendees are selected by current members of the AAEP board of directors and receive a private invitation. The 2011 class of emerging leaders is comprised of private, specialty, and academic veterinarians from the United States, Canada, and Europe.



SIETE LEGUAS EQUINE
VETERINARY SERVICES AND
REPRO LAB



Coupon 20% Off any regular priced item!!
(excluding select saddle, consignment and
Grandeur Pads)

www.silversequestrian.com

320-274-0403 silversequestrian@gmail.com

Open Tues-Fri 10:30–6:30; Sat 10:30–5:00

Highway 75, St. Joseph, MN



WWW.AAEP.ORG

PHONE: 320-685-8730

EMERGENCY AFTER HOURS: 320-274-2223

FAX: 320-685-9858

EMAIL: SIETELEGUASEQUINEVET@GMAIL.COM

WEBSITE: SIETELEGUASEQUINEVET.COM