Fall is the Perfect Time for a Trail Ride

Fall is an exciting time in many ways. It’s such a wonderful time of year to ride our horses as the leaves change and we are no longer melting from the summer heat. Fall is also an exciting time because the Equine Ambulatory Newsletter is sent to production! We appreciate our loyal clients so much and we hope you enjoy this newsletter as much as we enjoy having all of you as clients.

We welcomed three excellent interns to our program in June of this year, so many of you have likely already met them. Please read their interesting biographies about past experience and future plans. We are fortunate to be working with some very talented individuals. We are also very excited to be working with Amanda Trimble, an internal medicine specialist who will be helping us both on ambulatory and internal medicine services this year.

All aspects of veterinary medicine and education technology are continuously in flux as we are always working to improve patient care and our educational practices. Two of our main missions in the veterinary college are to provide state-of-the-art patient care as well as giving our students the building blocks they need to be the best veterinarians possible. For the past couple of years, Martha Scharf and I have been involved in a new class at the veterinary college called The Healer’s Art. This class focuses on the well-being of our students, giving them techniques and confidence to better understand the challenges of our industry as well as tools to overcome these challenges while maintaining a love of the profession. The goal of the course is to offer a safe learning environment for personal in-depth exploration of the values of service, healing, reverence for life and compassionate care. Not only are we instructors in the class, but we learn as we go and this has been such an incredible and inspiring opportunity.

I have had this crazy dream for the past few years of going on a horse camping trip with my family. We made this dream a reality this month and spent two beautiful days riding trails in southern Missouri. We are so lucky in this state to have so many beautiful and well-maintained trails. Although I’m a novice trail rider myself, I have such respect for you trail bosses out there. It was so much fun seeing so many people and their horses from all walks of life enjoying time together.

We would like to wish you, both horse and human, a very happy and safe holiday season. As always, we would like to thank you for your continued support of the Equine Ambulatory Service here at the Veterinary Health Center. Our students, interns and all of our veterinarians are so grateful for the opportunity to work with you.

Sincerely,

Alison LaCarrubba, DVM
Associate Teaching Professor
Diplomate, ABVP (Equine Practice)
Meet the MU Equine Ambulatory Team

Alison LaCarrubba, DVM, DABVP

Alison LaCarrubba, originally from New York, grew up riding hunter jumpers and dressage from a young age. After graduating from Cornell University with a degree in animal science, LaCarrubba moved to the Midwest to obtain her veterinary degree. She graduated from the University of Missouri College of Veterinary Medicine in 2001. LaCarrubba completed an internship in equine medicine and surgery at the university and subsequently spent a year working in an equine exclusive private practice. She returned to the university in July 2003 as a clinical instructor, and in 2009 she completed the specialty boards with the American Board of Veterinary Practitioners in Equine Practice. LaCarrubba’s love of equine dentistry has inspired her to continue her training in this area. In recent years she has attended a variety of advanced equine dental courses, which have allowed her to develop specialized skills and expertise in this field. As the equine dentist for the University of Missouri, LaCarrubba is excited to see all things dental, from routine work to more complicated extractions. When she is not at work, she is spending time with her family, enjoying riding and catching up on Missouri’s beautiful trails.

Amanda Trimble, BVMS, MS, DACVIM-LAIM

Maryland native, Amanda Trimble earned a bachelor of science degree at Dickinson College. She earned a veterinary medicine degree at the University of Glasgow in Scotland, and a master of science at Kansas State University. Trimble completed an equine internship at MU in 2014-15. She then completed residency training and board certification in large animal internal medicine at Kansas State University before returning to MU in the fall of 2018. Her research interests include equine infectious disease. Her clinical interests are equine infectious disease, gastroenterology, respiratory physiology, and neurology, as well as teaching veterinary students.

In her free time, she enjoys riding horses, watching football, and exploring with her rescue dog, Pippa.

Our interns have a special interest in working with horses and potentially going on to complete a residency, specializing in either equine medicine or equine surgery. Every June we welcome a new crop of interns. This year our interns include Lindsey Hayden, Kallie Hobbs and Meghan McCarthy.

Lindsey Hayden, DVM

Lindsey Hayden is a 2017 graduate of Auburn University College of Veterinary Medicine. Following graduation, she completed a surgical internship at Hagyard Equine Medical Institute in Lexington, Kentucky. She has an interest in surgery, lameness and sports medicine. Hayden is a native of Connecticut and grew up riding and showing hunter-jumpers in the Northeast. In her free time, she enjoys riding her horse, hiking with her dog, yoga and cooking.

Kallie Hobbs, DVM

Kallie Hobbs graduated from the University of Illinois College of Veterinary Medicine in May 2017. Following graduation, she began an internship at Tryon Equine Hospital in Columbus, North Carolina. She has an interest in surgery, lameness and sports medicine.
Diligence Needed to Keep Ticks in Check

Martha Schart, DVM, DABVP

T
icks are a constant problem for humans and animals in Missouri, seemingly regardless of the weather and conditions. Yet, this year the tick problem seems further amplified, potentially due to increased temperatures or wildlife populations. Ticks are not species-specific, meaning that the same ticks that bite horses will also bite you and your other animals. The small insects perch at the tip of plant leaves, tree branches, and grass blades with their front legs outstretched, waiting to climb aboard a nearby host. Ticks know when to jump onto their hosts by detecting ammonia, given off by a mammal’s breath and sweat, or by sensing heat, moisture and vibrations.

Once aboard the animal, ticks migrate to thin skinned areas, often settling on the horse’s chest, underbelly, mane, tail, and flank. The ticks then attach, bite, and fill with blood before dropping off to continue their lifecycle. Often, the leaves behind a firm nodule and a small crusted wound on the skin.

In most cases, tick bites also produce localized tissue irritation, which can lead to skin reactions, abrasions, and hair coat damage. When present in large amounts, ticks may have wolf teeth or caps (retained deciduous teeth). As feeding garlic, spraying vinegar or alcohol, applying nail polish or petroleum jelly and burning with a match head, have not been shown to be effective.

Oral ivermectin products can be effective short term, but do not provide a broad strategy for prevention or treatment. Ivermectin does not prevent ticks from moving and feeding but it will kill or sterilize those that bite within 24 hours of treatment, reducing some of the future reproductive population.

As we continue to grow and develop as a veterinary college, we are always looking for innovative ways to improve upon our teaching in order to build the most skilled, productive and prepared students to enter the profession of veterinarians and leaders in the industry. The human medical field has been using simulations and models for their students for decades. This tool is coming to light in veterinary education.

Just this month our faculty were fortunate enough to attend the International Veterinary Simulation Teaching Conference. This conference hosts a group of international veterinary educators dedicated to promoting and advancing the use of simulation in veterinary education.

So what exactly is a simulation? Veterinary simulations can either be realistic models used to practice procedures or experiences the students gain in practice sessions with actors pretending to be veterinary clients. The goal of simulations is to build technical skills as well as develop the communication skills required to be successful. Veterinary simulation models allow veterinary students to gain knowledge and experience prior to working with client-owned animals. Techniques, such as learning a variety of suture patterns, can be learned on “skin” made from silicone or other materials.

During orientation for CVM third-year students who are entering the clinical portion of their education, our students undertake a communication simulation, using the medical school’s simulation center. The students spend about 10 minutes in a mock exam room, practicing taking a complete history and communicating clearly and effectively with a client. These sessions are watched by faculty, reviewed by the student themselves, and feedback is provided.

This stressful, yet fun experience provides our students with invaluable feedback prior to being in an exam room with an actual client, allowing them to hone their interpersonal skills.

As we work toward building a simulation center in our veterinary college, there are many incredible tools we can now use. The conference was an excellent resource regarding the most creative experiences for students, such as practicing vegetation, castrations and even passing a nasogastric tube, something we do frequently during colic work-ups. We are excited for what the future holds regarding veterinary models and simulations.

Ticks, continued from page 4

It is also strongly recommended to avoid skin rubbing and other tick-carrying animals that can bring them onto your property into the pasture. Conversely, a small domestic flock of chickens or guinea hens on your farm may help reduce your tick burden by indiscriminately feeding on many different stages of the tick.

Ticks are hardy and persistent pests, making the disease threats to your horse ever present. But, advancing research is continuing to make strides in keeping the risks and control under control. At home, continued diligent inspection or your horses and a complete preventive care plan can help send them on their way.

We can perform routine dental examinations and balance the mouth at VHC on your farm. We are excited the dental program is developing and growing as a part of our core care program. Horses between 2 and 4 years of age may have wolf teeth or caps (retained deciduous teeth). These teeth can cause problems with incisors and improving comfort and performance.

If you have any questions or concerns about your horse’s oral cavity health please call. We are always happy to discuss equine dentistry! For more on equine dentistry, visit our Facebook page, MU VHC Equine Hospital, or watch a video at https://vimeo.com/287069871

Simulations in Veterinary Education

From the Horse’s Mouth

Alison LaCarrubba, DVM, DABVP

A
Treating Puncture Wounds to the Hoof

Any puncture wound to the hoof should be considered an emergency.
Meghan McCarthy, DVM,

It is an all too common scenario: You walk out to see your horse, and he is non-weight bearing on one leg. You pick up the foot and see a nail sticking out of the sole of his foot. So what do you do next?

While you may feel the urge to remove the nail to make your horse more comfortable, it is best to leave it in place until you speak to your veterinarian. During this conversation you may be asked about the vaccination status of your horse. If it has been more than six months since the last tetanus vaccination was administered, it is strongly suggested you repeat this vaccination.

Any puncture wound to the hoof should be considered an emergency. Though it may seem inconsequential to pull a small nail out of your horse’s hoof there are many synovial (joint) and bony structures that can be affected by even the smallest defects in the hoof. Penetrating wounds through the sole will lead to infections of the coffin bone (distant phalanx), whereas wounds around the frog or heel could affect the deep digital flexor tendon, navicular bursa, coffin joint, digital flexor tendon sheath, distal sesamoidean impar ligament, and digital cushion.

So why would your veterinarian ask you to leave the nail in place until they arrive? Leaving the penetrating object in place gives them an idea of how aggressive a treatment plan needs to be.

When your veterinarian arrives, a complete physical exam will be performed and then they typically sedate the horse and numb the affected area to reduce movement and further trauma to the foot. Radiographs are taken to give an idea of the extent of the trauma and how aggressive treatment should be. Puncture wounds affecting bony structures will not show immediate radiographic changes, but will provide an idea of how aggressive a treatment plan needs to be.

After determining the extent of the wound, your veterinarian will clean the area and remove the foreign object. At this point, the wound is sometimes opened to allow for better drainage and to inhibit the growth of anaerobic bacteria. Next a hoof bandage is put in place to keep the area clean and to prevent further contamination.

Many puncture wounds to the hoof will be treated with NSAIDs (phenylbutazone or Banamine) and oral antibiotics, if deemed necessary. If the puncture affects the sensitive structures of the hoof, the best course of action would be referral to the MU Veterinary Health Center.

In the clinic the wound can be cleaned under anesthesia to ensure the best outcome. In some cases, antibiotics are applied directly to the wound, injected into an affected synovial structure, or administered intravenously in a regional limb perfusion. Local administration of antibiotics allows for greater concentrations of antibiotics to reach the hoof.

Simple, superficial wounds have a good prognosis, and you will see your horse’s comfort level dramatically improve in one to two days. Deeper wounds have a variable prognosis depending on the extent of the damage to the surrounding structures. Generally, addressing puncture wounds quickly, and aggressively, will help improve your horse’s prognosis.

In the simplest of cases, it is best to have a re-check after a few days of therapy. For more complex cases, management on the farm may require more frequent visits or referral to the VHC. If at any point during the course of treatment the horse is not improving or the condition is worsening, you should contact your veterinarian for a re-evaluation.

Why a Veterinarian Should Vaccinate

Katie Hobbs, DVM,

One of the most common questions made by horse owners is, “Is it ok to vaccinate our own horses?” It is common for many people with horses and other livestock to give their own vaccinations rather than going through a veterinarian. In Missouri, by law, the rabies vaccine must be given by a veterinarian, but other vaccines are not legally mandated. Outside of this, many show grounds require veterinarian-administered vaccines to enter some premises.

Legally an owner can give their own vaccines, owners can buy vaccines at feed stores or online, as they are easily available to clients. With this in mind, what is the problem with owners giving vaccines?

When a veterinarian vaccinates your horse you are getting more than just a vaccine. As part of a vaccine protocol you are getting knowledge of up-to-date information on disease prevalence in your area. This can help to decide which vaccines your horse needs. For example, a horse that lives with one other horse and never leaves the farm may not need to be vaccinated for EHV, but a horse that shows up for a weekend would need this vaccine. With every vaccine appointment also comes a physical exam, which helps to ensure your horses are in good overall health. Along with this it is not unusual to find potential health problems during a routine physical examination, such as cardiovascular disease (heart murmur or arrhythmia), PPID/Cushing’s disease, weight loss, dental care and hoof care.

In its most recent update, the American Association for Equine Practitioners cites several other good reasons why a veterinarian is your best choice for administering vaccines:

Proper Handling of the Vaccine

Many vaccines require special handling and storage. For instance, a vaccine may require protection from temperature extremes or exposure to light to preserve its effectiveness. Rely on a licensed veterinarian to store and handle the vaccine properly. Another aspect of proper handling is ensuring that the vaccine has not passed its expiration date. Veterinarians are keenly aware of the effective life of a given vaccine.

Safe Administration

Part of safe administration is a clean environment and injection site, otherwise you may put pathogens into your horse’s system instead of protecting against them. Some vaccines cannot be given at the injection site. Your veterinarian will know which vaccines and medications can react with each other. Your veterinarian will document the vaccine’s serial number as it administers it, especially important in the event of a manufacturer’s recall. This is one instance when poor documentation could put your animal in peril.

Availability of treatment for adverse reactions or failures

Any injection can result in adverse effects. Maybe it’s only mild swelling at the injection site. Or, it could be lethargy and a slight fever for one to two days. In some animals, it can be as severe as an immediate outbreak of hives or life-threatening anaphylaxis. In some circumstances, it is wise for the veterinarian who is administering the vaccine, they will know what to do to counteract a reaction — and they will have the medicine to do it.

Additionally, most pharmaceutical companies provide reimbursement for anywhere from $100-$50,000 for treatment and diagnostics should your horse contract a disease for which they have been vaccinated by a veterinarian. As the average horse that contracts West Nile virus has a medical bill of $3,000, this can go a long way if a veterinarian vaccinated your horse. If there is a problem with the vaccination, the pharmaceutical companies often reimburse the client for costly or untoward effects if the vaccine was administered by a veterinarian.

It is said that an ounce of prevention is worth a pound of cure. The ounce of prevention that comes attached to veterinarian-administered vaccines is certainly worth it. Forming a good relationship with your veterinarian though vaccine appointments can help alert owners to general health problems that may save money if caught early.
A 2-year-old horse gelding was found to be non-weight bearing on the right hind limb when the trainer arrived to feed the horses. An 8 cm laceration was found on the back of the leg above the fetlock. There was a large amount of swelling in the limb, as a result of soft tissue swelling and air between the layers of tissues. When the wound was cleaned and the dried blood was removed, the superficial digital flexor tendon was visible through the wound. The tendon did not appear to be disrupted when it was examined through the wound.

Due to the location of the wound and the visualization of the tendon, it was determined that the laceration extended into the tendon sheath. The digital tendon sheath encompasses the superficial and deep digital flexor tendons, and it extends from the initial third of the cannon bone to the level of the navicular bone. The tendon sheath functions to provide frictionless movement as the tendons pass over the bony prominences of the flexor joint. At this time, there were many options for treatment, and it was elected to treat the horse at the farm. The gelding was sedated, and the affected area was clipped and thoroughly cleaned. The area was then blocked with carbocaine, which temporarily numbed the area to provide pain relief while the wound was explored. Tissue was excised.

The gelding sedated and the area sufficiently blocked, we explored the laceration by inserting a sterile probe into the wound. To determine how far the probe extended into the tendon sheath, the digital sheath was explored, flushed and sutured. The affected area was clipped and thoroughly cleaned. The area was then blocked with carbocaine, which temporarily numbed the area to provide pain relief while the wound was explored. Tissue was excised.

The goal was to flush out the bacteria and any dirt or debris that were within the tendon sheath. Antibiotics were then infused directly into the tendon sheath following the lavage. The wound was then sutured closed. The tendon sheath itself was not closed, but the skin over it was. A sterile bandage was applied which would apply pressure to the wound.

Wedges were then taped to the bottom of both hind feet to elevate the heels. This was done for two reasons: to relieve the weight that is placed on the back surface of the limb and to prevent overloading the non-injured limb. The gelding was left to recover. With the gelding sedated and the area sufficiently blocked, we explored the laceration by inserting a sterile probe into the wound. To determine how far the probe extended into the tendon sheath, the digital sheath was explored, flushed and sutured. The affected area was clipped and thoroughly cleaned. The area was then blocked with carbocaine, which temporarily numbed the area to provide pain relief while the wound was explored. Tissue was excised.

The fluid appeared to be slightly abnormal (cloudy and bright yellow). There was also a mild elevation of protein, indicating inflammation of the sheath. Sterile fluids were put into the sheath, and the fluid from within the tendon sheath was removed. This was repeated multiple times. The goal again was to remove any bacteria or debris within the sheath.

The wounds were cleaned and the dried blood was removed; the superficial digital flexor tendon was visible through the wound. The tendon did not appear to be disrupted when it was examined through the wound.

The goal was to flush out the bacteria and any dirt or debris that were within the tendon sheath. Antibiotics were then infused directly into the tendon sheath following the lavage. The wound was then sutured closed. The tendon sheath itself was not closed, but the skin over it was. A sterile bandage was applied which would apply pressure to the wound.

The case study was continued on page 9.
Severe Gastric Ulceration of a horse that consumed blister beetle.

Beetle, continued from page 9

radin your horse was exposed to, and how quickly he is treated. Treatment goals are aimed at eliminating toxin exposure and supportive care. A toxin adsorbant, such as activated charcoal or biosponge may be given down a nasogastric tube. Intravenous fluids with calcium would most likely be given to balance the electrolytes, correct dehydration, and to protect the kidneys from further damage. Due to the severe ulceration seen within the gastrointestinal tract, a course of GasTroGard (omeprazole) – helps ulcer healing) and sucralfate – coats the mucosa – would be prescribed. An easy-to-digest diet consisting of warm mash would be offered until appetite increases.

How can you be sure my horse’s signs are from cantharadin?
Typically, clinical signs are indicative of this disease. Veterinarians can also submit urine or gastric contents for a laboratory test looking specifically for Cantharadin.

How can I prevent this toxicity? Blister beetles live in alfalfa hay, so if you do not feed alfalfa, you have a much lower risk of your horses being exposed. If you do feed alfalfa, be wary of late cuts. Usually first cuts of alfalfa are best, as the beetles have not yet clustered in the fields. If you notice any of the above signs, promptly contact your veterinarian! Remove all other horses access to alfalfa. Your vet may want to look at the alfalfa to see if there are any beetles present.

Equine Inspiration
Quotes from Fellow Enthusiasts

“There is something about the outside of a horse that is good for the inside of a man.”
— Winston Churchill

“No hour of life is lost that is spent in the saddle.”
— Winston Churchill

“When I hear somebody talk about a horse or cow being stupid, I figure it’s a sure sign that the animal has outfoxed them.”
— Tom Dorranse

“A horse! A horse! My kingdom for a horse!”
— William Shakespeare

“The sunshine’s golden gleam is thrown, on sorrel, chestnut, bay and roan.”
— Oliver Wendell Holmes

“A horse is the projection of people’s dream about themselves — strong, powerful, beautiful — and it has the capability of giving us escape from our mundane existence.”
— Pam Brown

“I love the horse from hoof to head. From head to hoof and tail to mane. I love the horse as I have said. From head to hoof and back again.”
— James Whitcomb Riley

“People ought to quit worrying so much about whispering to their horses and just start listening to them.”
— Greg Darnall

“The horse, with beauty unsurpassed, strength immeasurable and grace unlike any other, still remains humble enough to carry a man upon his back.”
— Amber Senti

“I can make a general in five minutes but a good horse is hard to replace.”
— Abraham Lincoln

“It is best not to swap horses while crossing the river.”
— Abraham Lincoln

Crossword Puzzle for Horse Lovers

Solution can be found on page 12.