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Equine News

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Thank you for all the positive feedback concerning our newsletters! My goal over the next few months is to continue to discuss and present cases that involve the equine foot with contributing statements from the farriers I work with.

Thrush—What is it?, Typical Scenarios, Case Studies

Thrush is the term commonly used to describe an inflammation of the frog caused by a bacterial infection. The collateral and central region of the frog is invaded by bacteria causing degeneration and breakdown of the frog tissue, accompanied by the presence of foul-smelling black material.

Fusobacterium necrophorum is reportedly the most commonly isolated organism, but published data on the true incidence of the presence of this organism is lacking. The organism is part of the normal fecal flora of a number of large animal species, including cattle and horses. It is everywhere in the environment. *Fusobacterium necrophorum*, as with other bacteria involved in this condition, are classified as opportunistic pathogens with little ability to penetrate and invade normal tissue. This classification suggests that there must be predisposing factors to the establishment of infection, such as trauma or a poor blood supply. Once the *Fusobacterium* organism is established, it can release tissue destroying factors that facilitate its spread into the deeper structures of the foot. Invasion into the sensitive structures of the corium of the frog, the digital cushion, and the heel bulb region leads to inflammation and lameness.

A commonly held belief is that the cause of thrush is a damp environment and poor stable sanitation. However, not all horses kept in unsanitary environments, such as feedlots or persistently wet environments, develop thrush. Most farriers have seen thrush in horses kept in well-managed stables. This supports the theory that there is an underlying cause in many cases besides the environment. Many of the gaited horses that wear pads have thrush, but these horses also have very long hoofs with contracted heels and a poorly developed frog. **In my experience, the most common causes of thrush are poor foot health from lack of exercise, lack of proper trimming, general hoof care, or foot imbalance leading to sheared heels - Dr. Matt Schaefer**

Sheared heels (hoof imbalance)

Most horses I see having this condition are a result of an angular deformity. The condition is further accentuated by improper / or infrequent trimming. Horses that are base wide or base narrow should especially be on a regular trimming schedule and carefully watched to be properly balanced. I see many show horses that pound their feet hard such as the long footed Morgans. Saddlebred and Arabians are especially prone to sheared heels. Usually by supporting the limb with a shoe, properly trimming the foot to the axis of the leg and getting the horse to land as flat as possible will prevent the problem from escalating. In extreme cases where the central sulcus is inflamed or bleeding, a heartbar shoe or "floating" the sheared heel will allow the horse to be on a positive track.

Sheared heels: The characteristic signs of foot imbalance are upward displacement of the medial heel and flaring of the opposite side of the hoof. At a trot and at a walk, these horses usually land on the outside wall of the foot first and then load the medial heel as the weight comes onto the hoof, displacing it proximally. These horses are usually lame and have a deep cleft or fissure in the central sulcus of the frog that extends down into the sensitive tissues of the heel. The fissure extends through the hairline into the digital cushion. The heels move independently with simple thumb pressure. Insertion of a hoof pick or tongue depressor into the fissure elicits pain and bleeding as it contacts the sensitive tissues of the frog. **(Pictured above)**

Long and contracted heels with no evidence of hoof imbalance

The only thing to say is "no foot, no horse!" I see these feet from time to time, theses are mostly found on halter-type Quarter horses. The conformation specific breeding of horses has allowed big bodied horses to be put on small feet. Feet tend to be pin-cushions with their distal joints commonly affected as well. They end up getting injections to the coffin, pastern, and fetlock joints. Keeping the Hoof/Pastern alignment, medio- lateral balance and commisures of the frog clean is all a farrier, in my opinion, can do. Working as a team with the veterinarian allows us to radiographically evaluate the foot axis and localize pain if it exists. The net result will give us a best possible chance for a positive outcome. **-Joe Nygren, CJS, farrier (920-857-7200)**

Long and contracted heels w/ no evidence of hoof imbalance: This is a foot that appears to be balanced side to side, but has a very long heel with contracted heel bulbs that extend >2cm over the weight bearing surface of the caudal hoof. There is poor frog quality and a deep central sulcus fissure.

(Pictured on the right and left)

Strangles Update

Earlier this year, a few of you graciously contributed a small amount of serum form your horses and funded a study that allowed us to measure the level of antibody protection to strangles in your horses. For this I am very grateful! Going into this, we were expecting that mature horses (8 years old or >) given multiple intranasal administrations or exposed to naturally occurring disease would be carrying long lasting protective titers (anti-body ratio 1:1600). However, to our surprise only 1 of 43 horses had this level. Greater than 90% of all the horses tested were below half this level!

So what did we learned from this?

1. Most importantly we did not have any hyperresponders (those that could be at risk for vasculitis from an inoculation).
2. There were no horses to suspect as chronic carriers, - having high titers with no outward signs.
3. There is definitely a need to re-vaccinate horses if going into a high risk situation—such as travelling to a lot of shows with young horses present.

All of the above was good information to the individual horse owner!

Questions that remain…..

A lot of the horses tested were not easy to inoculate. It is no secret that they object to the "straw up the nose" and I wonder how much gets sprayed into the air? Could this be a problem with administration? Almost all the horses have been re-vaccinated by myself this year with hopes of doing a follow-up titer in 6 months to date.

It is important to remember that a low titer does not necessarily reflect in poor protection to naturally occurring disease. There is a level of protection that we do not know about, such as IgA or local immune response that is primed and is protective at the respiratory tract itself. This would be there despite low IgG levels and would be hard to measure.

Again, a big thank you to all my clients who contributed to this. I will be re-testing at different intervals of the previously sampled horses to get a good feel for IgG levels. I also will be working with the manufactures of the vaccine to further update us on what a good booster recommendation is and just how long these titers last and how important they are. - Dr. Matt Schaefer

Spring Fecals:

As a **reminder,** it is time again to gather fecals to re-evaluate your **deworming program**. It is important that you have not given dewormer in the last 2 months. Beginning in April, fecal samples should be taken from the horse immediately after you observe it hitting the ground. It then can be refrigerated for up to 3 days before looking at it under the microscope. If you would like, please call our office and we will personally pick up your fecals at your location or a nearby drop off location (depending on request area) on April 28th as a service to you. Please place your fecals in a bag (labeled horse's/owner's name) in a box with ice by your barn entry. Again it should be gathered fresh that day or the night before. Please refer to our website www.dairylandvet.net in the equine services under deworming brochure for more information.