

CALLING OUT **COLITIS**

Many horse owners needlessly lose their equine companions to this fast-acting bowel inflammation because they don't know the warning signs.

By **Michael Mahaffey**

IT WAS JUST FIVE DAYS BEFORE THANKSGIVING 2009 WHEN JUNE TIBBETTS, mother of Women's Professional Rodeo Association Montana Circuit Director Lana Tibbetts, called four horses in from her pasture. Her 7-year-old gelding, American Rush ("Rush"), didn't show up with the others, and when Tibbetts went out to find him, he wasn't his usual self. He was lethargic and unwilling to eat or drink. He was also showing symptoms of colic—lying down and pawing at the ground—and had a dirty tail from diarrhea.

"We treated him with banamine, a probiotic, mineral oil, stretches—all the same things we always do [when horses colic] and have been very successful with in the past," Tibbetts says.

But by the next morning, Rush still hadn't eaten much, and he'd had one loose bowel movement. He had also begun to pant and sweat.

Unsure of what was wrong, Lana Tibbits loaded Rush into a trailer and drove two hours to their vet in Hysham, Mont.



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Horses will often roll to relieve the discomfort of abdominal pain. If diarrhea accompanies the rolling or other "colic" behaviors, the horse may actually have colitis and need immediate treatment.



Horses with colitis are often given IV fluids for several days to prevent dehydration and to replenish electrolytes and protein lost due to diarrhea.

It was the first step in a series of moves that ultimately saved Rush's life because the gelding wasn't colicking. He had colitis, and time was of the essence.

What is Colitis?

Colitis is an inflammation of the tissues in the horse's colon. The horse's gut is a very specialized place, containing a variety of beneficial bacteria and microbes that help it extract nutrients from the grains and grasses it eats. It also plays a vital role in water absorption.

However, when unwelcome bacteria or stress is introduced, bad things can happen.

"The equine gut is a shock organ," says Dr. Peter Heidmann, an equine internal medicine specialist at Montana Equine in Three Forks, Mont., "meaning the end stage of lots of different inflammatory events can affect the gut."

Unlike colic, an obstruction or twisting of the bowel that colitis is often mistaken for, colitis is an inflammation of the colon itself.

"Colitis, instead of being a blockage, tends to be caused by an infection," Heidmann says. "It's a pretty darn common disease."

The infection can be caused by a variety of factors, including bacteria such as *Clostridium difficile*, *E. coli*, salmonella or Potomac Horse Fever.

The major risk factor for *Clostridium difficile* is the horse simply being on antibiotics, which can knock down the numbers of the healthy bacterial content in the gut and allow the bad bugs to compromise the natural balance.

"*C. diff* will cause the signs you see on the outside," Heidmann says, "sometimes cramping like you see in a colic, but, classically, diarrhea and other kinds of inflammation."

The kind of antibiotic that helps *Clostridium difficile* take over depends on the area of the country in which the horse lives, adding an extra level of difficulty to vets who use antibiotics to treat other conditions. The concept that antibiotics can do more harm than good when it comes to possible secondary conditions in horses—like colitis—is a new concept to many vets, according to Heidmann.

"In some species, like dogs and cats, using antibiotics helps," he says, "but in horses, we almost never use antibiotics to treat colitis because it will usually promote the growth of *Clostridium difficile* and continue to kill the good bacteria, and that's exactly the last thing that you want."

Special Health and Nutrition Section

Salmonella and E. coli can both be transmitted to horses through exposure to cattle who are shedding the infectious agents or through bird droppings.

“The classic thing is someone calls up and says ‘My horse has diarrhea. I don’t get it. Why does he have diarrhea? I don’t have any sick horses. I don’t have anything else around. The horses are all vaccinated,’” Heidman says. “Well, there’s no vaccine for salmonella, and birds can carry it in from 60-75 miles away in a single day. The same with E. coli.”

Potomac Horse Fever is carried by Caddis flies. If a horse eats an infected Caddis fly, the causative agent of Potomac Horse Fever present in the gut of the Caddis fly becomes present in the gut of the horse.

“Potomac Horse Fever is predominantly a disease of wetland areas because of the Caddis fly issue, and it tends to be seasonal,” Heidmann says, “Here in Montana, the vast majority of our colitis cases are in September to November. It’s cooling down. The ground is pretty wet. We see it in spring and fall. Caddis flies are hatching, and we tend to see the diseases a lot more then. It’s a disease of wet ground.”

Quick Action

Regardless of the infecting agent, horses with colitis tend to develop severe symptoms quickly—the most prominent of which is diarrhea.

“We see horses all the time that have had diarrhea for days, and they’re fine,” Heidmann says, “but the thing that happens is they start to lose electrolytes and protein in their manure. That happens because the colon is so inflamed that it can’t do its job re-absorbing the electrolytes and maintaining the protein. The protein is oozing out of the swollen wall of the colon. Once that starts to happen, they can go downhill really, really fast without the supportive care that they need.”

According to Heidmann, dehydration and losing electrolytes compromises the horse’s cardiac and muscular function, and when their protein level goes down, their blood pressure becomes compromised, as well.

While some cases progress slower than others, how quickly symptoms take over often depends on both the health of the horse before infection and the organism that has caused the colitis.

“Horses infected by salmonella are really bad for going downhill really fast,” Heidmann



Horses with colitis will often appear lethargic in the early stages of the disease, but will quickly begin to sweat and pant as the inflammation progresses.

says. “Twelve hours is a pretty good time frame. There’s an old cowboy expression, ‘Don’t let the sun set twice on a colic,’ and I would say don’t let it set once on a colitis horse.”

It took less than 24 hours for the Tibbetts’ to get American Rush to a veterinarian after first noticing signs that he was in distress. Tests run by the vet in Hysham showed that Rush had a low blood count in addition to the symptoms he had shown at home. After a referral call to Montana Equine, a diagnosis came relatively quickly, and the nearly four-hour trip from Hysham to Three Forks began.

Heidmann believes colitis is just as dangerous to a horse’s long-term health as colic, so it is better for owners to err on the side of caution, like the Tibbetts’ did, when it comes to taking action.

“Horses with colitis will often times have cramping,” Heidmann says, “so they may show signs that we would call colic signs—getting up and down, not wanting to eat, pawing—and you can’t necessarily tell from the outside whether the problem is colic or colitis. Sometimes, it takes us doing diagnostic testing to determine a distinction between

them. That’s why jumping on it sooner is pretty darn important.”

Perhaps the biggest single red flag that a horse may have colitis is the presence of diarrhea. But, according to Heidmann, the best way to determine if there is an underlying medical cause is to take your horse’s temperature.

“If it has a fever, anything over 101.5, you need to call your vet right away,” he says. “At least 101.5 warrants further investigation.”

Heidmann says a regular digital thermometer for humans sold at a grocery store can be used to take a horse’s rectal temperature.

“To me, it’s a critical part of a horse owner’s toolkit to have a thermometer,” he says.

Taking temperatures was something that June Tibbetts began doing immediately to the other three horses that had been pastured with Rush.

“We took temperatures of the horses still at home for a week to make sure they didn’t start to show signs, too,” Tibbetts says.

Luckily, Rush was the only member of her herd to get sick, but she remained puzzled as to how he became infected. It was an answer

that Heidmann was unable to provide, even after conducting more tests, including a rectal exam, abdominal fluid sampling, blood work and an abdominal ultrasound.

For veterinarians, perhaps the most confounding aspect to colitis is that, even though there are several known causes, it is not always possible to identify what has caused an individual horse to develop the condition. The bacteria can be relatively far upstream in the horse's system or only present in low concentrations. The clinical signs are there on the outside—the horse has diarrhea—but, according to Heidmann, vets can sample the horse's manure twice a day for two weeks and never recover the causative agent. In 60-70 percent of cases, a firm diagnosis is never made.

"That doesn't mean we can't treat it effectively," Heidmann says. "It just means we don't have a name for the bacteria that caused the clinical signs."

This has led the veterinary community to give owners a diagnosis of "Colitis X."

"It's basically a 'we don't know' diagnosis," Heidmann says. "It could be caused by salmonella, but we haven't found it. It could be E coli, Potomac, but we haven't found it. All our tests are negative, so we're going to call it 'Colitis X.' It's a handy way to attach a name to something that doesn't have a name."

Treating Colitis

When it comes to treating colitis, veterinarians target the inflammation present in the colon instead of treating the infection itself.

"We talk a lot about infection vs. inflammation," Heidmann says, "so the analogy I use is if I kick you in the shins, you're going to get a goose egg on your shin. That's inflammation. If I've got hobnail boots on, and I cut the skin on your shins and manure gets in there, that's infection."

"There's a bit of both with colitis. There's the infection part [from the invading bacteria], but the inflammation part is probably the most important, and by treating the inflammation instead of treating the bacterial infection, that's how we usually get ahead of the problem."

According to Heidmann, once the invading bacteria attacks the horse's colon, it starts to cause a breakdown of the gut wall. It starts to

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-Dr. Peter Heidmann



Loose bowel movements (shown right) accompanied by a fever may indicate that your horse has colitis.

leak across the compromised gut, eventually getting into the bloodstream and causing reactions like fevers and high heart rates. The bacteria can also get into the abdomen and cause a free infection in the abdomen, or peritonitis.

Heidmann says American Rush showed all of the typical signs of a horse with colitis when he arrived at Montana Equine. He had a high fever and heart rate and was showing several of the signs of colic, in addition to continued diarrhea.

"He was very classic in that he had a low white blood cell count, and that's a

hallmark," he says. "It's very different from what a small animal would do or what a person would do. A small animal or person with colitis has a very high white blood cell count. In horses, those white blood cells are going into the wall of the colon, where all of that inflammation is, so when we measure it, it's very low."

A healthy white blood cell count for a horse is at least 5,000-12,000. Rush's level was around 2,000.

"He was also very typical in that we didn't get a diagnosis," Heidmann says, "so some people would have diagnosed him as a Colitis X."

According to Heidmann, the chances of a horse surviving a bout of colitis are much, much greater if it is caught early and if the budget is there to do the supportive care that needs to be done.

"If we catch it early, they're less debilitated," he says. "Their immune system is more intact, and we're able to reverse the trend of inflammation in the colon, so you don't have continued losses of electrolytes and protein and fluid."

Within 45 minutes of arriving at Montana Equine, Rush was placed on IV's, which were administered non-stop for the next four days, and which replaced the fluids and electrolytes Rush was losing through continued diarrhea, helping to restore the acid/base balance in his gut. He was given plasma twice to get his blood count back up and to replace the proteins he was losing, as well as a low dose of banamine.

Heidmann says horses with colitis will typically remain in the hospital for 3-7 days and up to

10 days in extreme cases.

Rush turned around very quickly, due in part to the actions taken by the first veterinarian to see him and the fact that the Tibbetts' allowed Heidmann to take whatever steps were necessary to bring Rush back to full health.

"If we intervene early with aggressive IV fluid therapy and plasma when it's needed and electrolytes and get their acid/base status corrected," Heidmann says, "that gives us the best chance for a rapid turnaround and gets them out of the hospital."

Treatment Isn't Cheap

While colitis is an imminently treatable condition if caught in time, the time spent in the hospital and the round the clock care needed in the first few days of treatment make it a costly effort.

"Although most horses with colitis, if the budget is there, are savable," Heidmann says, "it's difficult to say it is worth another \$750 in three liters of plasma to try to get the horse out of the hospital a day or two earlier. A lot of times, people guess and second-guess any decisions on how much to intervene. From a vet's perspective, from a healing horses perspective, hitting these things hard with everything really makes a huge difference."

Heidmann says the cost of treating a single horse with colitis can be between \$1,000-\$2,500, with extreme cases running as high as \$10,000. For owners who find more than one of their horses infected, costs can quickly skyrocket. Much of the cost is due to the sheer amount of fluid, electrolytes and proteins that have to be administered during treatment.

"It's difficult to provide IV fluids in any referral hospital for much less than \$1,000 because horses are big enough, and most of



June Tibbetts and American Rush won the 2D Average at their first race four and a half months after Rush recovered from his bout with colitis.

COURTESY JUNE TIBBETTS

these horses are at least five percent dehydrated," Heidmann says.

In a typical horse, that five percent amounts to about 25 liters of lost fluid. According to

Heidmann, it usually takes twice that amount to replace the deficit plus keep up with the ongoing losses and the horse's maintenance needs because they're not drinking well.

After Recovery

Horses recovering from colitis take time to return to full health. Heidmann suggests that a horse be rested at least one week for every day of fever.

"Usually, if your horse has had fevers for 5-6 days, you're talking about a month to month and a half of rehab time after they're clinically well for them to continue to rebuild that colon wall and replace the lost protein and conditioning," he says

Rush remained at Montana Equine for one week and was quarantined for two more weeks after returning home.

"We had to keep him blanketed," Tibbetts says. "He had a relatively good appetite as soon as he got home. He started eating really well. Probably a month later, he was looking pretty darn decent."

Once a horse has recovered from a bout of colitis, Heidmann says he is no more prone to catching it again than any other horse.

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"If anything, they may have enhanced protection," he says. "It depends on which bacteria caused the disease, but they should be just like any other horse at that point."

In April 2010, four and a half months after recovering from colitis, Rush and Tibbetts made their return to the barrel pattern at a UBRC race in Billings, Mont. In their first run back since October 2009, the duo won the 2D average championship.

"There's not a thing wrong with him," Tibbetts says. "A lot of people don't even know that he had colitis. He's just big and powerful."

But even though Rush has returned to full health, Tibbetts says the incident has her monitoring his condition, and that of her other horses, even more so than before.

"We check them all the time and monitor things," Tibbetts says, "and if we ever see one of them with this thing again, he'll be at Three Forks in a minute. We won't mess around."

"Dr. Heidmann is fantastic. We were just very thankful that we had this place in Montana because I don't know where we would have gone that would have saved his



COURTESY JUNE TIBBETTS

Rush was back to near normal weight five weeks after recovering from colitis.

life. Going to that great vet who knew what he was doing and the power of prayer saved this horse's life."

For his part, Heidmann simply hopes horse owners will act quickly whenever their horses show signs of ill health, as it could very well save their horse's life.

"The phone call to your vet is free," he says. "If only to get the piece of mind, call and have your vet tell you, 'No, I'm not wor-

ried about it.' It's really important because early intervention makes such a big difference. Take the horse's temperature and call your vet, even if the horse doesn't have a fever. It's definitely worth making the call and just running it past them."

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