

# ***Swiftsure Equine Veterinary Services***

***Dr. Danica Olenick, DVM, Dr. Kaitlin McDonald, DVM***

***& Dr Katharine White, DVM***

## **Chronic Diarrhea or “Squirts”**

Chronic diarrhea, or liquid expelled before or after solid manure production, is a very common symptom in horses. Diagnosing and treating diarrhea however, can be very frustrating. Confirming a diagnosis and effective treatment, isn't always achievable. One of the reasons for this is that there are many causes for diarrhea and very few diagnostics and treatment options. If your horse is one of the lucky few to have a clear cause and available treatment, then clearing diarrhea is achievable, but if not, we are left with trial treatments in hopes that we can improve the condition, at best.

The possible causes of chronic diarrhea include:

- 1) Food allergies
- 2) Altered microbial flora and altered fermentation from changes in diet, medications, health status, immune system etc.
- 3) Sand ingestion
- 4) Parasites and scarring from previous infections
- 5) Infectious bacteria, viruses
- 6) Inflammatory bowel diseases
- 7) Neoplasias (cancer) of the GI tract
- 8) Gastric or colonic ulcers, excessive acid production
- 9) Small intestinal malabsorption disorders
- 10) Heart disease, kidney disease, liver disease

Diagnostic or trial treatment options for each cause are as follows:

- 1) Food allergies: We try an exclusion diet of timothy hay exclusively plus salt, but no other hay or supplements for 6 - 8 weeks
- 2) Altered flora: We try to maintain the horse on a single hay source/diet for 6 to 8 weeks and include as much fresh grass as possible and safe to see if the flora can re-normalize. We often add probiotics but have limited success. One of the reasons of the limitation to the success is that there are millions of different microbes in the gut. If we supplement with the right probiotic it will work, but if its not the one the horse is requiring, then it may not work. And if the body cannot adjust to the new concentrations once rebalanced, and re-stabilize, then as soon as we reduce or remove the probiotics from the diet, the symptoms return. If the original cause of the imbalance such as the immune system or health status hasn't been corrected, then the diarrhea will return.
- 3) Sand: This is an easy test to perform by the owner: take some poop in a long rectal sleeve or large Ziplock bag, add water and see if any sand settles to the bottom. If so, we add Psyllium to the diet to help bind and carry the sand out of the gut.
- 4) Parasites and scars: Deworming removes the parasites, but any remaining scars will cause permanent defects in the mucosal lining causing chronic diarrhea.

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5) Infectious bacteria and viruses: We can test, or repeatedly test for these agents as sometimes they are shed intermittently, and you can get false negative results. Alternatively, we sometimes choose to treat with metronidazole instead of repeatedly test. Metronidazole antibiotics helps kill bacteria but not viruses. However, after treatment we often see an unbalanced gut flora as antibiotics do not discern between "good" and "bad" bacteria when it kills them off.

6) IBD: It is very difficult to diagnose and treat. We talk about doing either rectal biopsies or biopsies in the duodenum using the gastroscope (go past the stomach and into the duodenum). Biopsies help diagnose only 50% of the 4 types of IBD in horses (2 out of 4 types). Otherwise the best places to biopsy are between the duodenum and rectum, in the small and large intestine, but they are not accessible unless you want to do surgery. We sometimes try treating with steroids with varying success.

7) Cancers such as lymphosarcoma: Again, like IBD, neoplasia is not easily diagnosed, and we treat with steroids. Sometimes they work for a short time, sometimes they don't work at all.

8) Ulcers: We can diagnose and treat GASTRIC ulcers, but it is nearly impossible to diagnose colonic ulcers ante-mortem. We try the fecal blood tests but unless the ulcers are bleeding heavily, you will often see false negative results. Treatment for colonic ulcers is also not straightforward. Sometimes a product that coats the mucosal lining, Sucralfate, in copious amounts can pass down the long digestive tract and coat the colonic ulcers to help them to heal, sometimes we try other therapies with limited success such as Saccromyces probiotics, aloe vera juice, L-glutamine.

9) Small intestine malabsorption disorders: There is a test we can do for these types of disorders called a xylose absorption test where you feed a horse xylose and then see how much of it is absorbed in the blood stream. It doesn't however give us a definitive diagnosis, as many diseases such as cancer, IBD, etc. can cause malabsorption. We also see villous atrophy (villi of the mucosal lining of the small intestine are injured/damaged from a previous infection when horses are foals) which leads to permanent malabsorptive disorder.

10) Misc organ disease: We can usually rule these in or out with listening to the heart and bloodwork to look at liver and kidney function.

Usually the plan is to try a few diagnostics followed by one trial treatment at a time. If the horse appears sick or if the diarrhea occurs suddenly, we usually recommend the fecal testing and bloodwork, plus the fecal hardener Bio-Sponge. If it was an infectious agent or toxin that disturbed the system, the sooner we return it to normal, the lower the chance the flora will be disturbed. If the diarrhea is more chronic and the horse is not sick, we rule out parasites and sand, then try probiotics such as Succeed, Equine Choice, Gs formula etc. for 6 to 8 weeks, first in high doses, then taper down or off if the cause of the imbalance has been corrected. If one probiotic hasn't improved the diarrhea (after the 8-week trial), then we suggest trying a different probiotic. The next step is to try the elimination/exclusion diet for 6 to 8 weeks. Following that, we try metronidazole, steroids, or ulcer treatment, if appropriate. Lastly, we can do rectal or duodenal biopsies or the xylose malabsorption testing, before concluding the cause is not

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treatable assuming the cause is one of the following: IBD, cancer, parasitic scars, villous atrophy, or another malabsorptive disorder.