



Sand Colic

By Billie Zeller-Barrett, DVM

As a Florida veterinarian and horse owner, sand impaction colic is all too familiar to me. Sand colic is a plague that threatens all horses in our area. Since this is one form of colic that we can prevent, it is our responsibility to try and do so. Working in a surgical facility, I get the opportunity to see many different types of colic. In 2008, approximately 20% of all of the colics that came into our hospital for medical and surgical treatment were due to sand accumulation in the GI tract.

Sand colic is a potential problem for any horse that is turned out no matter what time of year. Whether the horse is in a grass pasture or on a sand lot, sand ingestion is inevitable. The sand is ingested when the horse grazes or picks its feed off the ground. Some horses will choose to eat sand even when good grass or hay is available. The sand then accumulates in the large colon where it can create an impaction.

One of the first signs that sand may be an issue for your horse is intermittent piles of loose manure. Horses develop loose manure even before they develop true signs of colic. The loose manure can then progress to diarrhea. The cause of "sand diarrhea" is multi-factorial. Some horses develop diarrhea due to the impaction itself. The impaction clogs up the colon and only allows the small particles and fluid to pass through. Another cause of sand diarrhea is the abrasiveness of sand. Sand can abrade the mucosa or inner surface of the colon and cause inflammation. When this occurs, the colon does not function normally and therefore fluid absorption by the colon may be inhibited to varying degrees. In my experience, sand is the #1 cause of diarrhea in an adult horse that lives in Florida.

Horses with sand colic may also have a mild fever (rectal temperature over 101.5°F). Horses with colic symptoms secondary to sand may have diarrhea or fever as discussed. They will also likely exhibit typical colic symptoms such as lying down, pawing, rolling, kicking or biting at their abdomen, etc.

Other than clinical signs, there are a few other diagnostic tools that your veterinarian can use to diagnose sand colic. A useful tool in a hospital setting is abdominal radiography. With a high-powered machine, an x-ray can be taken of a horse's abdomen and sand can be imaged. In the field, we rely on clinical signs and a rectal examination is often useful in diagnosing sand colic. Many times the impaction can be palpated in the large colon. I describe the colon as feeling like a sand weight that you put on the end of a bouquet of balloons. Frequently the feces that are evacuated from the rectum will contain a large percentage of sand and the inner surface of the rectum may have a classic "gritty" feel to it.

There are many different schools of thought when it comes to preventing and treating sand impaction. You can read 5 different scientific articles and get 10 different protocols. Many

available treatments have been proven to work and also disproved. As a practicing veterinarian I have the luxury of experiencing the protocols that work and don't work in my hands.

As a general rule, I include a psyllium based product (i.e. Equi-Aid™, Sand Clear™, Fiberpsyll™, Metamucil™) in my preventative and treatment protocol. For adult horses (~1000-1200 lbs.), I recommend preventing sand accumulation by feeding 8 ounces of your preferred product once daily for 7 consecutive days one week per month and repeat monthly. For horses in a high sand area, in addition to the above protocol, feed 8 ounces one day a week for the other 3 weeks of the month. Through my experience, this has been the protocol that has been the most effective.

Other feeding protocols that seem to help would be to include a weekly bran mash in your horse's diet. There have also been reports that mineral oil in the bran mash is beneficial as well. Feeding good grass hay (i.e. timothy, orchard) may also be beneficial in removing sand from your horse's intestinal tract.

For horses that tend to accumulate more sand than others, limiting the amount of sand ingestion is our primary goal. A simple way to limit your horse's sand intake includes feeding hay and grain up off of the ground. Not everyone has access to a stall, but feeding hay and grain over a rubber mat, on concrete or over a tarp are easy alternatives. When it comes to sand colic, prevention is the best treatment.

Because treatment of sand impaction colic can be somewhat difficult, if you suspect a sand impaction as your source of your horse's colic please call your veterinarian immediately. As with prevention, there are many different protocols for treatment. My treatment protocol includes low doses of Banamine™ to control inflammation, nasogastric intubation with mineral oil and psyllium (daily as needed) and controlling feed intake. Once your horse displays signs of sand colic, limiting hay and feed intake is important. You do not want to aid in an impaction by packing more feed material into the colon. Some horses will develop moderate to severe dehydration and may need extensive intravenous fluid therapy in order to pass the sand impaction. The longer the sand sits in the colon or the larger the impaction gets, the more dangerous the situation can become. Cases of sand colic that are not responding to conservative medical management may require surgical intervention to correct the problem. These cases often have a complete obstruction of the outflow tract of the colon by sand and ingesta resulting in significant gas accumulation and potentially colon displacement secondary to the gas distention.

The common site of a sand impaction is the pelvic flexure, a part of the colon that is not attached to the body wall. When this area becomes heavy it can change positions and create a dangerous situation. There have been many horses that come into the clinic that end up needing surgery for "sand colic" because the colon will displace or "twist" secondary to sand impaction.

As I mentioned earlier, approximately 20% of all hospitalized colics at our clinic in 2008 were confirmed sand impactions. A good preventative program, careful environment management,

and appropriate treatment by your veterinarian will go a long way in potentially eliminating the need for hospitalization for sand impaction.

Contact [Brandon Equine Medical Center](#) at 813-643-7177 or email info@brandonequine.com with any questions regarding this topic.

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