Sand Colic

By Traci L. Hill Hulse, D.V.M.

Arizona, warm and sunny with beautiful desert geography enjoyed all year round, beckoning visitors to come and live here. The desert, beautiful as it is, presents a significant problem to horse owners in the southwest – SAND. If you are one of the lucky ones, your horses have the privilege of living on irrigated pastures. However, most owners in the Southwest have their horses on sand or dirt paddocks. The problem is that horses inadvertently east sand as they browse the pasture, eat off the ground, or pull their food out of the feeders onto the ground. Rarely, do horses eat sand purposely.

So what happens to the sand inside the horse? The sand usually moves quickly through the stomach and small intestine. Once the sand reaches the cecum and large colon, its movement slows and it tends to settle to the ventral (lowest) portions of the large intestine due to gravity. If the horse only ingests small amounts, most will be passed through the large intestine without any side effects. If the horse ingests large amounts of sand, the sand accumulates in the large intestine. This accumulation can reach a "critical" level where the horses become symptomatic.

There are different syndromes presented by horses with an accumulation of sand in their intestines. A common presenting complaint is ADR – "Ain't doing right, Doc".

These are common presentations of intermittent colic:

* Down and out with depression
* Losing Weight
* Unable to gain weight (regardless of what the owner feeds them.)
* Decreased Appetite
* Watery Diarrhea

As the sand accumulates in the large intestine, it acts like sand paper and erodes the intestinal mucosa (lining of the gut). One of the large intestine's functions is to absorb water. Due to the sane accumulation and irritation to the mucosal lining, water is not absorbed well, resulting in watery manure. This same theory explains why horses with a lot of sand lose weight or are unable to gain weight well. The horse's intestinal lining is damaged and does not digest nutrients as well. Because of the damage sand causes, this can cause discomfort and pain leading to depression, going off feed, or colic. A horse can show one, a combination of, or all of these signs with sand in its digestive tract.

There are various methods which an owner or veterinarian can use to diagnose a horse with a sand problem. The easiest method is to take a small amount of manure (5 or 6 fecal balls) from the top of a fresh manure pile, and dilute the manure with water in a bucket, rectal sleeve, or clear bag. First, one should break the manure apart manually and sift off the top layers slowly which will result in the sand settling to the bottom due to gravity. More then one half teaspoon of sand per 5-6 fecal balls is significant. However, horses can pas varying amounts of sand at different times, so this method should be repeated. This technique can give owners and veterinarians a ballpark idea of the degree of sand a horse has inside. Another method to diagnose sand accumulation is for the veterinarian to listen to the horse's abdomen with a stethoscope. The veterinarian will auscultate the horse at the lowest aspect of the abdomen (gravity) for sand. Sand inside a horse's intestines sounds like waves

on the beach. Again, depending on how active the intestine's motility is, sometimes a veterinarian may not hear much sand movement although the horse could have sand. They last way to diagnose a sand problem is to take abdominal radiographs (x-rays). Because the abdomen is so large, a very powerful x-ray machine must be used, usually only available through large referral clinics.

So, how is sand accumulation treated? The best way to treat sand problems is to PREVENT them, i.e. keep the horse from ingesting it. In Arizona it's difficult to prevent horses from ingesting any sand at all, but one can certainly reduce the bulk of ingestion. The primary time horses ingest sand is feeding time. To reduce the amount of ingested, some methods which work are: use rubber mats under feeders (where the horses pull their hay out), use large feeders which can't be overturned (old bathtubs, large plastic feeders), feed in stall on top of shavings or straw, or the least the expensive way – feed on old dry manure (make sure the horse is regularly dewormed).

Once a hose already has sand accumulation, PSYLLIUM is the only way to get rid of sand (short of surgery). There are many different psyllium products sold by veterinarians and feed stores, ex: Vet-Lax, Equi-Aid, etc... Psyllium looks like bran, but is not. A common misconception by owners is that bran will treat sand colic. Bran will not remove sand from a horse's digestive tract. Psyllium comes in tow different forms, a powder of flavored pellets. The pelleted form is more palatable by most horses, but tends to be a little more expensive. The powder form is less expensive, but tends to blow away more easily (if it's a windy day) and is less palatable. Do not mix psyllium with water or it will turn into an undesirable gel mass. The recommended dose of psyllium for symptomatic horses is two cups per day for 1-3 months (depending on the amount of sand in the horse). After the initial high dose therapy, a maintenance dose is one cup per day for one week a month "to clean the horse out" and prevent sand build up. Sometimes when a horse with a lot of sand first starts psyllium, the horse may act a little colicky due to the irritation and resulting inflammation of the sand passing through the gut. A veterinarian may prescribe phenylbutazone when the horses are first treated for sand colic. Phenylbutazone ("bute") is an anti-inflammatory which can reduce the initial discomfort. Some horses can get some gas distention when starting psyllium. If this occurs, exercise and small amounts of bute can ease this transient side effect.

If the horse has an enormous amount of sand and its pain cannot be medically controlled by a veterinarian, surgical intervention may be needed. This usually takes place on an emergency basis, when the horse is in extreme pain or can't pass the sand with conservative treatment. The hors is sent to a referral surgical facility and the sand is "dumped" from the large intestine by a surgeon. Usually prognosis is good, but there is risk of the large intestine rupturing during surgery due to the heavy weight of the sand - a horse can have as much as 100 pounds of sand in them!

The important thing to remember about treating a sand problem is PREVENTION! Treatment will not be effective if the horse continues to ingest more sand.

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