



## Tularosa Equine Clinic

### What is Colic?

The word that scares every horse owner, “COLIC”. Justifiably, since colic is the number one killer of horses. But really, what is colic, how do we differentiate types of colic, what are the symptoms, how do we treat it, what causes it, and how do we prevent (if we can)?

The first thing to understand is that colic merely is a description of abdominal (belly) pain. There are many causes and many types. Symptoms of colic vary widely from horse to horse (similar to illnesses in people) and those symptoms may or may not be indicative of the severity. Since the horse can not speak to us, we have to be detectives. That is why veterinarians ask many questions when working a colic up. Several diseases can mimic a true colic, things like renal (kidney) failure, liver failure, acute hemorrhage and the administration of certain drugs (Lutalyse®, Tildren®, etc).

Symptoms of colic are generally grouped into categories of mild, moderate, severe. However, realize some horses are very stoic and may show minimal clinical signs despite how sick they are truly are. Generally, mild colic symptoms include a refusal to eat, “stretching out” (similar to urination posture), intermittent pawing and lethargy. More moderate colic symptoms may involve the horse looking at his sides, laying down, occasionally rolling but with willingness to stand. Severe colic symptoms are usually easy to spot. The horse is generally violently painful, repeatedly rolling, panting and non responsive to pain medication.

To evaluate a horse with colic, we usually start with a physical exam (if severe we may skip to intervention immediately). The physical exam helps us evaluate all other body systems for pertinent problems as well as assessing the abdominal cavity for gut sounds and pain level. History questions will be asked during this exam to include any medications given, response, changes in feed, hay, water consumption, previous history of colic and/or surgery and how long has this horse been colicing. Evaluation of heart rate (greater than 60 beats per minute may indicate the need for surgical intervention), mucous membrane color (ideal is pink & moist) and capillary refill time (less than 2 seconds) provide a quick snapshot of systemic health. Next, a rectal examination is performed. This gives vital information about abdominal contents and may colics may be categorized

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with these findings. Nasogastric (NG) intubation (passing a tube via the nostril in to the stomach) is important for several reasons. We need to make sure the stomach is not so distended that it ruptures, we need to evaluate for the presence of reflux which may indicate a problem with the small intestine and we may need to use this as a route for fluid administration. We may gain subtle clues by the character of the odor or the color of reflux additionally. In some cases, ultrasound of the abdomen may prove extremely useful, but realize there is still an 18” cube in the center of most horses that simply can not be reliably imaged. Finally, laboratory tests can help both with diagnosis and treatment. Complete blood count (CBC) and fibrinogen can help us determine if an infectious agent is part of the problem. Lactate, packed cell volume and total protein can be used to determine hydration status and severity. A chemistry panel is useful to determine other organ status (liver, kidney, etc). Fecal evaluation is frequently used for diagnostic reasons (parasites, sand). Specialized testing (PCR) may be indicated depending on the total evaluation.

Treating a horse with colic is a reflection of symptoms, history and colic evaluation. The first decision we have to make is whether this is a surgical or medical case. Many times, I will ask if the horse is a surgical candidate if the balance of evidence indicates surgical intervention. This is because early surgical intervention has a much much higher positive outcome for the horse. The most common medical colic is impaction colic and may involve more than one are of the digestive tract. The most common surgical colic is a displacement of the large colon. Routine treatment of an uncomplicated medical colic may be very simple and involve medication (see table 1)and oral administration of fluids while a complicated medical or surgical colic will require more intensive management.

Table 1

Medication	Route	Pros	Cons
Flunixin (Banamine®)	IV or PO (mouth)	Quick onset, long acting (12 hours), effective for most	Can be nephro toxic, can slow gut motility, can mask surgical colic
Xylazine (Rompun®)	IV or IM	Quick onset, short acting, relieves spasms, not nephro toxic	Can decrease blood pressure, very mild pain control at 1cc (usual colic dose)
Detomidine (Dormosedan®)	IV, IM PO	Quick onset longer duration than xylazine	Profoundly decreases blood pressure
Butorphanol (Torbugesic®)	IV or IM	Long duration, true pain control	Have to have xylazine, detomidine on board, may affect motility

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Medication	Route	Pros	Cons
Phenylephrine	IV slow	Simple to give increases blood pressure	Only for nephrosplenic entrapment, may cause spontaneous hemorrhage
Amphotericin B	IV in fluid	Combats endotoxemia	Can be nephro toxic.
Lidocaine	IV in fluid	Pain control, improves motility	Can be toxic, can cause ataxia
Gastrogard®	PO	Treats/heal gastric ulcer	May take up to four days for full effect
Antibiotics	IV, IM PO	Treats bacterial infection	May cause colitis (diarrhea)

The decision to use oral or IV fluids is based on the severity of dehydration, shock, type of colic and anticipated length of administration. Fluid therapy using balanced electrolyte solutions is used to replace deficits and for maintenance and may be given orally (if dehydration is mild and no reflux present) or IV (larger volumes required). It is not unusual for an impaction colic to have a significant need for IV fluid therapy. Occasionally, hypertonic saline is used in a shock situation to prevent cardiac collapse and other fluid products that may have an impact include plasma and colloids (hetastarch). Oral therapy may also include mineral oil, magnesium sulphate or psyllium. Mineral oil does not soften an impaction but rather coats it and acts as a cathartic, while magnesium sulfate can both soften and act as a cathartic. Psyllium is generally used on significant sand impactions and as a monthly preventative.

Many of the causes of colic are only noticed in hindsight such as decreased water consumption, abrupt changes in feed or hay (remember horses are hindgut fermenters and the microbes need time to adjust to different feedstuffs), poor dentition (look for unequal stem length in fecal balls), parasite burdens, bacterial overgrowth, stress, medication, toxic plants or insects (oleander, blister beetles). Still others are situational like sand, post foaling or even neoplasia.

Preventing colic really should be addressed as minimizing colic factors. Horses have exceedingly long digestive tracts and the inability to vomit makes colic a scenario waiting to happen. Monitor your horse's water consumption and fecal output. Many impactions occur days after water consumption drops (during sudden cold snaps) so feeding electrolytes can help. Avoid sudden feed changes. Plan to take 5 - 7 days to switch to a new feed or hay type. Base your parasite control strategy on fecal results (EPG's) to avoid developing anthelmintic

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(dewormer) resistance. Maximize turnout to minimize stress and preventatively treat susceptible individuals. Manage routine dental care as needed.

Finally, plan for the unexpected. Make sure you recognize signs of colic and have a good professional relationship with your veterinarian. Talk with your veterinarian about options like CareCredit®, Colicare® and equine insurance.

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