

# COLIC IN THE THOROUGHBRED RACEHORSE



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*Figure 1. Uncontrollable rolling is often associated with more severe cases of colic.*

'Colic' is a word used to describe abdominal pain. While the potential causes of colic in the horse are many, horses typically manifest signs of 'colic' similarly. Signs typical of a horse with abdominal pain include: pawing, flank watching, rolling and lying down. The intensity of the signs seen is directly related to the severity of the pain. (Figure 1)

Colic in young Thoroughbred racehorses in race training is not common, particularly when compared to the general horse population. The incidence of colic in the general horse population is somewhere around about 5% of the population having a colic episode per year. And a resultant mortality (death) rate as a result of colic of less than 0.5% per year. In the past parasites did play a major role in many cases of colic. With the advent of effective anthelmintics (wormers) combined with worming

strategies parasite burdens in well maintained Thoroughbred racehorses are minimal. We do occasionally still see weanling aged Thoroughbreds with parasite burdens particularly tape worms that can

contribute as a predisposing factor in some colic cases.

Horses evolved on the grass plains and have developed a very efficient gastrointestinal system for the digestion of plant material. The

resultant anatomy of their gastrointestinal system is not however without its flaws.

Horses have a very mobile large colon that can end up in the wrong position within the abdomen or worse still twist on itself. They also have up to 60 feet of small intestine that is spread through out the abdomen and is relatively mobile. Even in the normal abdomen there are areas where bowel can become entrapped or incarcerated. Occasionally congenital abnormalities can also contribute to a bowel obstruction or strangulation.

The horses gut is designed to be working all the time, at pasture horses are grazing approximately 22 of the 24 hours a day. Any disruption to this constant transit of food immediately results in a back up of gas, fluid and ingesta. Such disruptions also result in rapid systemic dehydration since large volumes of saliva and gastrointestinal secretions fail to transit to the hind gut where they are absorbed under normal circumstances. The horse also does not have a functional vomit reflex and obstructions of the fore gut can result in stomach rupture and loss of the animal. Generally the pain seen in colic is due to tension on the bowel. The tension may occur at the site of the blockage or as a result of a back up of gas and ingesta oral to the site.

In most cases of colic the normal flow of ingesta is disrupted. This may be due to a temporary loss of co-ordinated bowel movement resulting in a failure of normal transit. Or it may be a more permanent disruption to the flow of ingesta. These may be due to an intra-lumi-



Figure 2. Medical management such as intravenous ('drip') fluids are required in some medical cases and most surgical cases of colic.

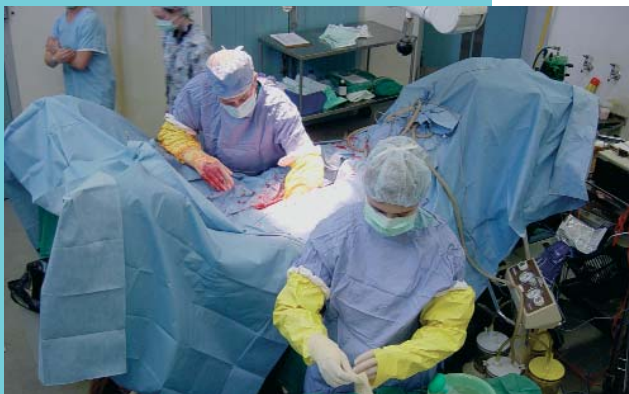


Figure 3. Surgical colic cases require a large well trained team to maximise successful outcomes.



Figure 4. As described the large colon is a large and mobile structure, as seen here with the majority of the colon exteriorised out of the abdomen on a purpose built tray.



Figure 5. Lively Medley, a well known West Australian pacer after successful colic surgery at Randwick Equine Centre.

nal obstruction within the bowel such as a foreign body, impaction of feed material, gravel or sand. Or an obstruction due to the bowel being displaced, entrapped or incarcerated within the abdomen causing an extra-luminal obstruction. Obstructions may also affect blood supply to the bowel which can lead to death of that section of bowel and eventual rupture. Rupture of bowel within the abdominal cavity in all circumstances results in loss of the animal to overwhelming peritonitis.

## THE COLIC CASE

The primary goal of the veterinary examination in a case of colic is to determine the most appropriate treatment. While the cause may not be apparent most importantly the horse should be classified as a case that should be treated medically, or one that would require surgery. This distinction is often difficult to make early in a colic episode. Apart from the history and a basic

clinical examination a variety of diagnostic tools are available to the veterinarian including but not limited to nasogastric intubation, rectal examination, ultrasound, blood work, abdominocentesis (abdominal fluid analysis) and radiology. These tools when used appropriately contribute to the decision making process.

## MEDICAL COLIC CASES

The majority of colic cases fall into this category, with most responding to one dose of analgesics (pain killers). Others will require more supportive therapy including oral fluids, mineral oil or cathartics (such a magnesium sulfate) in order to resolve the problem. Occasionally horses will require hospitalisation in-order to be monitored and treated appropriately with the occasional case requiring intravenous fluid support and electrolyte replacement. (Figure 2)

## SURGICAL COLIC CASES

Occasionally a colic case will require surgical intervention. The key to success in surgical cases is early identification and rapid correction of the problem.(Figure 3 and 4) It is these surgical cases that if not identified and dealt with appropriately initially will have a poor to grave prognosis. Even a couple of hours can make the difference between a good and grave prognosis. For this reason it is important for all colic cases to be properly assessed by a veterinarian in order to identify potential surgical cases as early as possible.

The success rates for surgical colic have improved dramatically over the last 20 years with improvements in pre-operative, intra-operative and post operative management of these cases.(Figure 5) An uncomplicated surgical case should be able to re-enter race training as early as 60 days after surgery.

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