

## Equine colic: Diagnosis and treatment

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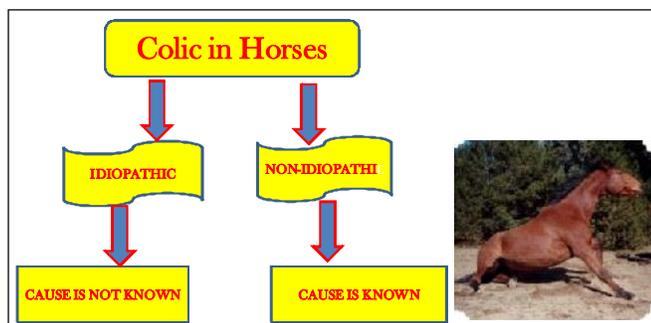
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Colic is one of the most common problems in equine management. Colic is a term used to describe a symptom of abdominal pain. In veterinary terms “colic” simply means, abdominal pain. Equine colic can be divide into two major type according to its origin. A colic case should be managed medically or surgically depends on severity of pain, involvements of system. The purpose of this article is to discuss the different cause, types, clinical signs, diagnosis and treatment of colic.

### Types of colic in horses:

*True colic* :Pain originates from Gastro- intestinal tract.

*False colic* : Pain originates from other than Gastro-intestinal tract.



### Risk factors of colic :

- Digestive disorder such as tooth problems, worm burdens and gut .
- Poor feeding regime: soiled food, inappropriate quantities, lack of fibre and/or water, or a sudden change in diet
- Stress such as hard exercise while unfit or after eating, travelling, sudden change of routine or environment
- Poor and over-grazed pasture, especially if the soil is sandy.

### Different types of colic:

*Spasmodic colic* :It is also called gas colic. It is caused by the over fermentation of food in the hindgut, builds up in the digestive tract of a horse.

*Impactive colic* : Accumulation of sand, dirt, feed or other indigestible material in horse’s colon.

*Strangulation/torsion* : A twist in the colon or small intestine of a horse results in cut of the blood supply which may lead to necrosis. It is the most lethal forms of equine colic.

*Intussusceptions*: This type of colic occurs due to tapeworms and other parasites infestation. This is a very dangerous form of colic for horses.

**Table 1 : Clinical signs of colic**

Type of colic case		
Mild cases	Moderate cases	Severe cases
Lip curling	Posturing to urinate frequently	Violent rolling
Flank watching	Lying down and getting back up	Sweating
Restlessness	Lying on their side for long periods.	Repaid breathing
Pawing the ground		Injuries to body and face from rolling and thrashing around

*Diagnosis of colic* : Diagnosis and appropriate treatment can be done only after thoroughly examination of horse. The wall of the intestine is stretched excessively by gas, fluid, or ingesta. Pain develops due to excessive tension on the mesentery, as might occur with an intestinal displacement. The abdomen and thorax should be auscultated and the abdomen percussed. The following is a brief overview of some of the parameters and the procedure to be followed during diagnosis of colic.

**Heart rate**: An elevated heart rate is usually a good indicator of pain and can often be an indicator of severity of colic.

A normal resting heart rate is around 34-40 beats per

minute.

**Mucous membranes and capillary refill time:** Colour and moistness of horse's gums by pressing on the gums to blanch them and seeing how long it takes for colour to return. Mucous membrane colour, moistness and capillary refill time help to assess horse's hydration status and are good indicators of blood perfusion.

Normal gums should be salmon pink, moist with a capillary refill time of less than 2 seconds.

**Skin tent :** By pinching up a section of skin and seeing how quickly it returns to normal can help ascertain if horse is dehydrated. Hydration is closely related to skin elasticity, however, the skin tent is not always very reliable so horses gum characteristics in association with the skin tent and other things like sunken eyes should be observed to fully gauge hydration status.

**Gut sounds :** Listening to the gut sounds through a stethoscope can get a good indication of how much activity is occurring inside the abdomen. Gut sounds are broadly grouped into 4 categories; increased, normal, decreased and absent.

**Rectal examination :** The most definitive part of the examination is the rectal examination. Most horses will require sedation to perform rectal examination. If there are any major abnormalities present such as an impaction or if there is a distended loop of bowel due to a twist can be examined by this method.

**Passing a nasogastric (Stomach) tube:** An important aspect of the physical examination is passing a nasogastric tube. Because horses can neither regurgitate nor vomit, adynamic ileus, obstructions involving the small intestine, or distension of the stomach with gas or fluid may result in gastric rupture passing a tube through horse's nose and down into its stomach is both diagnostic and therapeutic. Gastric reflux occurs when there is a blockage in the bowel (usually the small intestine) that causes the build up of fluid in front of it. The presence of gastric reflux is often a major indicator for surgery. If gastric reflux is not present, then fluid can be given and treat colic.

**Abdominocentesis :** Abdominocentesis is a procedure that involves placing a needle into the abdomen to see if there is any free fluid in the abdomen. If obtained, analysis of this fluid can indicate the health of the bowel.

**Sand colic :** There are various methods which an owner or veterinarian can diagnose a horse with sand problems. The easiest method is to take a small amount of manure (5-6 faecal balls) from the top of a fresh manure pile and dilute the manure with water. This can be mixed in a bucket, rectal sleeve or clear bag. First, one should break

apart the manure manually and then sift off the top layers, which will result in the sand settling to the bottom due to gravity.

**By ultrasonography :** Ultrasonographic evaluation of the abdomen may help to differentiate between diseases that can be treated medically and those that require surgery. The most common abnormalities identified by ultrasonography include inguinal hernia, renosplenic entrapment of the large colon, sand colic, intussusception, enterocolitis, right dorsal colitis, and peritonitis.

**Treatment of colic in horse :** For mild cases of colic, may administer drugs to relieve pain and relax the horse, which may allow the gut to start working properly. In more serious cases that do not respond to initial drug treatment, may recommend surgery.

**Correction of dehydration by fluid therapy :** Fluid therapy help to prevent dehydration and maintain blood supply to the kidneys and other vital organs. The volume and type of fluid to be given are determined by the severity and cause of the problem. Fluid therapy must be started before laboratory results are available, particularly when the horse is showing clinical signs of circulatory shock.

**Use of spasmolytic drugs to relief pain :** Medications used commonly for abdominal pain are NSAIDs that reduce the production of prostaglandins. Clinical experience suggests that flunixin meglumine may mask the early signs of conditions that require surgery and, therefore, must be used carefully in horses with colic. Pain relief usually is provided by analgesics, there are other important ways to reduce the degree of pain.

**Use of intestinal lubricants and laxatives :** Mineral oil is the most commonly used medication in the treatment of a large-colon impaction. Dioctyl sodium sulfosuccinate



Fig. 1 : Colic in horse

(DSS) is a soap-like compound that acts by drawing water into the dry ingesta. It is more effective than mineral oil in softening impactions; however, it may interfere with the normal fluid absorptive functions of the colon and can be toxic. Thus, DSS can be given safely in two equal parts in 48 hours.

**Use the larvicidal deworming :** Modern Deworming medications, such as ivermectin and moxidectin, are used against migrating *S. vulgaris* larvae. Fenbendazole kills migrating strongyles if given at twice the recommended dosage daily for 5 days. As a result of common use of these anthelmintics, chronic intermittent colic once thought to be caused by thromboembolism or parasite larval migration has largely been eliminated from equine practice.

**Surgery :** Surgery usually is necessary if there is a

mechanical obstruction to the normal flow of ingesta that cannot be corrected medically or if the obstruction also interferes with the intestinal blood supply.

**Conclusion :** Unfortunately for the domesticated horse intestines have not adapt to meet sudden changes in diet and, as a consequence, susceptible to digestive upset. In horses feeding add more quality forage and smaller amount of concentrate. Slow food intake by adding chaff (chopped hay) to meal to help reduce risk for colic in horses. A diet chart should be planed and consisting of high fibre content, using hay or other high fibre equivalent feeds. Over grazing should not be allowed. Regular deworming should be maintained.

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