

Equine Colic

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ABSTRACT

Equines (Horses, donkeys and mules) are monogastric animals with their distinct behaviour. Colic being a clinical symptom complex is very common among equines as compared to other species and can be fatal also. Equine colic is identifiable by symptoms like rolling, flank watching, pawing, sweating, increased body temperature, etc. Colic in horses can be diagnosed using a variety of techniques, including history, abdominal auscultation, rectal palpation, physical examination, and ultrasonography. Equine colic can be treated with surgery, decompression of the stomach and large intestine, analgesics, rehydration, etc. Colic is the most prevalent symptomatic sickness in equines as a result, and it has a significant mortality and morbidity rate.

INTRODUCTION

Colic is considered to be any abdominal pain; however, this is a clinical symptom and not a disease. There are several reasons why horses get colic, but most of them have to do with the microbiota and anatomy of the gastrointestinal tract. All types of painful gastrointestinal diseases, as well as other causes of abdominal pain unrelated to the

digestive system, can be referred to as colic. Colonic disturbances are a common cause of the most prevalent types of colic, which are of a digestive character. Colic can have a number of distinct reasons, some of which are potentially lethal without surgical treatment. Colic is the main cause of death in domesticated horses. Clinical signs of colic usually require

veterinary assistance. Colic can become life-threatening in a short period of time.

ETIOLOGY: Numerous factors, including those based on disease classification scheme that divides colic's causes into obstructive, displacement, gaseous, parasitic, and enteritis, are among the etiological agents for this clinical illness.

Risk Factors Associated with Equine Colic

Species: Equines are more prone to colic than ruminants because of the physiological and anatomical characteristics of their digestive tract.

Managemental factors:

Food and water: Important risk factors for colic include the type of food consumed, an abrupt change in diet, and feeding practises. A horse is more prone to sand colic when fed on the ground or in meadows with little or no grass, and poor-quality hay is generally difficult for horses to digest. Reduced water intake is thought to increase the risk of equine colic.

Control of internal parasite: It involves history of its occurrence, treatment of worms within seven days preceding colic and extensive usage of ivermectin. Frequent usage of ivermectin increases the risk of colic due to tapeworm infection, but fortunately this problem can be overcome by administration of anticestodes.

Exercise: Exercise-related risk factors for colic include abrupt and frequent changes in exercise routine, which decrease large intestine peristalsis and lead to colon blockage and distension. Equine's digestive system becomes paralysed as a result of exposure to cold, tiredness, exhaustion, wet, stormy weather, and overwork, making them more prone to colic.

Types of Colic

Tympanic colic: Also known as Gas colic, is the result of accumulation of gas within the horse's digestive tract due to excessive

fermentation within the intestines or due to reduced ability to expel out the gas.

Impaction colic: This occurs because of impaction of food material (water, grass, hay, grain sand and stone). The most common causes of its occurrence are when the horse is on box rest and/or consumes large volumes of concentrated feed, or the horse suffers with some dental disease and is unable to masticate properly.

Displacement (extra-luminal) colic: It occurs as a result of mechanical intestinal deformation or obstruction, which interferes with blood flow. The digestive system of the horse may twist in its axis at several places. Either the small intestine or a portion of the colon is where it will most likely develop. A painful disorder that obstructs the blood flow causes rapid deterioration and necessitates immediate surgery.

Spasmodic (Spastic) colic: Periodic spasmodic contraction of the gut muscle or visceral pain are its defining features. It is the most prevalent type of colic and is brought on by eating inappropriate food stuffs, being overexcited, and drinking cold water after work.

CLINICAL SIGNS:

The most typical symptoms include repeated pawing with the front foot, looking back at the flank area, curling the upper lip and arching the neck, repeatedly raising the back leg or kicking at the abdomen, lying down, rolling from side to side, sweating, stretching out as if to urinate, straining to defecate, abdominal distention, loss of appetite, depression, and a decrease in the frequency of bowel movements. The specific clinical indications are reliable predictors of abdominal discomfort, but they do not reveal which region of the GI tract is affected or whether surgery would be required.

DIAGNOSIS:

Auscultation of the thorax and abdomen is necessary, as is abdominal percussion. The abdomen has to have many sites of auscultation

(cecum on the right, small intestine high on the left, colon lower on both the right and left). When there is pain, intestinal noises could be a sign of an intraluminal obstruction (eg, impaction, enterolith). Percussion aids in locating an intestinal segment that may need to be trocarized (cecum on right, colon on left). Additionally, a diaphragmatic hernia may be the source of colic.

The rectal examination is the most conclusive aspect of the evaluation. The aorta, cranial mesenteric artery, caecal base and ventral caecal band, bladder, peritoneal surface, inguinal rings (in stallions and geldings) or the ovaries and uterus (in mares), pelvic flexure, spleen, and left kidney should all be palpated by the vet consistently.

The degree of intestinal damage is frequently visible in a sample of peritoneal fluid (obtained via paracentesis carried out aseptically on midline). For the assessment of organs that are not accessible by rectal examination, ultrasound is used. Percutaneous ultrasonography is utilised to confirm the diagnosis of gastric rupture, which is indicated by an increase in peritoneal fluid volume.

TREATMENT:

Medical treatment: pain relief, fluid therapy, intestinal lubricants and laxatives, deworming.

Decompression of stomach and large intestine: Nasogastric intubation can be used to decompress a stomach that has become bloated or fluid-filled; this procedure should be repeated until there is no evidence of gastric reflux. The most frequent location for gas accumulation is the caecum, which is pierced from the outside, in the right flank, to remove the gas.

Analgesics: Analgesics make the colicky animals relax and prevent it from injuring itself, the most used pain killers during colic period are: non-steroidal antiinflammatory agent including flunixin meglumine, ketoprofen, phenylbutazone and meloxicam.

Rehydration: Colic cases with dehydration, almost have metabolic acidosis, so fluids containing carbohydrate such as infusion of 50gram in one litter intravenously and fluids with potassium and calcium should be administered according to the laboratory investigation.

Surgical treatment: The majority of colic-related deaths occur as a result of complications following surgical colic treatment. The majority of deaths are discovered within the first ten days following surgery. Only when intestinal blockage has been correctly diagnosed may surgery be performed. Long-term disease duration, significant general health deterioration, and severe stomach pain—both of which are caused by caecal hypertrophy and do not respond to analgesics—are all good signs of the necessity for surgical intervention, particularly in right dorsal colon impaction instances.

PREVENTION:

By limiting access to simple carbohydrates, such as sugar from feed with too much molasses, providing clean feed and water, preventing the ingestion of dirt or sand by using an elevated feeding surface, maintaining a regular feeding schedule, routine deworming, routine dental care, maintaining a regular diet that does not change significantly in content or proportion, and preventing heatstroke, the incidence of colic can be decreased. If you live in a high-risk area for sand colic, adding the previously described kind of psyllium fibre to your diet may help.

CONCLUSION:

The most typical ailment in equines, known as colic, causes mild to severe gastrointestinal pain and has a high mortality and morbidity rate. Equine are hindgut fermenters, and environmental and physiological changes can rapidly modify their caecal flora. Negative factors like breed age, species, and management practises might raise the risk of equine colic.

Therefore, it is crucial to comprehend the origins, symptoms, diagnostics, treatment, and prevention of colic in order to improve the quality of life for horses.

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