



ACVIM

Large Animal Internal Medicine
Fact Sheet

ACVIM Fact Sheet: Colitis in Adult Horses

Overview

Colitis is defined as inflammation of the large bowel (cecum and colon) and can affect adult horses as well as foals. This condition is relatively uncommon in the overall horse population; however, it is commonly seen at equine hospitals as many affected horses require intensive treatment. Sporadic (single) cases or outbreaks may occur.

Causes can be infectious or non-infectious. Common infectious agents include bacteria such as *Salmonella*, *Clostridium difficile*, *Clostridium perfringens*, *Lawsonia intracellularis* (usually weanlings), *Neorickettsia risticii* (Potomac Horse Fever), viruses such as rotavirus (foals only) and coronavirus and parasites such as small strongyles. Common non-infectious causes are antibiotic associated diarrhea, sand impaction, dietary imbalances, neoplasia (cancer), inflammatory bowel disease, plant toxicities and drug toxicities. The use of non-steroidal anti-inflammatory drugs (NSAID's) such as phenylbutazone or flunixin meglumine can lead to a specific form of colitis termed 'right dorsal colitis.'

Depending on environmental factors such as the geographical region or season and patient factors such as age, causes can be more or less common.

Each etiology leads to inflammation of the wall of the large intestine through different pathways. Once inflammation is present, clinical signs are usually similar. The inflamed wall of the colon secretes large amounts of fluid and proteins and reduces absorption of water, electrolytes and nutrients from the intestinal content. The intestinal wall also becomes permeable to bacteria normally confined to the intestinal lumen. The bacteria and their toxins may gain access to the bloodstream (blood poisoning) and can cause a syndrome termed endotoxemia. Bacteria and their toxins are able to circulate and affect various organs, making colitis a disease affecting the entire body.

Signs & Symptoms

The main symptom of colitis is diarrhea, which can range from watery and pipe stream to cowpie in consistency, often has a foul smell and can sometimes contain blood. In rare cases, feces can be normal and other symptoms can prevail. Horses may also show signs of colic.

Affected horses are usually depressed, are often febrile, may show varying degrees of loss of appetite and are unwilling to exercise. If diarrhea is severe enough, horses lose large volumes of fluids and signs of dehydration develop. These include tacky mucous membranes (gums) of the mouth and nose, prolonged skin tent, cold periphery (ears and lower legs), poor jugular refill and a weak pulse. Protein loss leads to the typical plaque formation on the abdomen (ventral edema) and puffy lower limbs (distal leg edema).

Protein loss also leads to ‘internal edema,’ which is thickening of the intestinal wall due to fluid accumulation and which may be observed with ultrasound imaging.

Additionally, signs of endotoxemia can occur. These include increased heart rate, increased respiratory rate, reddened mucous membranes (gums) with a thin purple line above the teeth (toxic line) and decreased blood flow to body tissues. Horses can be affected in varying degrees but most horses appear very sick.

Diagnosis

The diagnosis of colitis is usually made based on clinical signs and typical changes in blood work.

To determine the cause of colitis a fecal sample is tested for the above described bacteria, viruses and parasites. Special tests on blood can be performed to test for other causes. Unfortunately in approximately 50% of cases, a cause cannot be established.

Blood work is usually performed to aid in diagnosis, assess the severity and guide therapy. Abdominal ultrasound is performed to evaluate the thickness and motility of intestinal organs, and in particular the disease ‘right dorsal colitis’ can sometimes be diagnosed based on this test. Other diagnostics that may be performed at the discretion of the responsible veterinarian include rectal palpation, nasogastric intubation or assessment of the abdominal fluid collected through abdominocentesis (belly tap).

Treatment & Aftercare

Therapy in most cases is independent of the inciting cause and is therefore started before a definitive causative agent is identified. Affected horses often have to be admitted to a clinic, as intensive treatment including aggressive rehydration is necessary.

Dehydration and ongoing fluid losses as well as electrolyte losses will be corrected. In most cases intravenous fluid therapy is initiated due to the large amounts lost. If protein loss is severe plasma transfusions may be indicated. Antibiotic therapy is usually initiated when circulation of bacteria to other organs is suspected. Anti-inflammatory and pain medication may also be administered. Endotoxemia might be treated using anti-endotoxic agents. Absorbents such as Biosponge or activated charcoal are occasionally administered. Probiotics may be administered. However, clinical efficacy of this treatment is not proven in scientific studies. Additional therapy depends on the inciting cause.

Clinical signs are closely monitored and physical exam is often repeated with various blood tests being rechecked frequently to adjust therapy.

Some causes of colitis are transmissible between horses and some bacteria can also be transmitted to humans, therefore, horses with colitis are usually isolated to prevent transmission. It is important to follow the biosecurity instructions of the veterinarian for the entire barn to prevent spread of disease.

Prognosis

Prognosis depends on the severity of disease and response to therapy within the first two to three days.

If the horse improves over one to two days, the prognosis is usually good. Complications such as laminitis or thrombophlebitis (inflammation and clotting of the jugular veins) can occur and worsen prognosis. Chronic diarrhea can follow if the damage to the intestinal wall is severe enough and might be difficult to treat successfully.

If a horse does not improve over the first two to three days or symptoms worsen then prognosis is poor.

Once the horse is fully recovered recurrence is rare and subsequent episodes are likely not related to the initial disease.

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