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Dr. Hannah Cooper was born and raised in Sonoma County, California. She spent most of her youth riding hunter jumpers, sailing, and camping. She moved to Stillwater, OK to attend Oklahoma State University, where she received a Bachelor's degree in Animal Science.

Upon graduation she attended veterinary school at the University of Glasgow in Scotland. Hannah's professional interests include soft tissue surgery, sport horse medicine, and neonatal critical care.

In her free time, she enjoys exploring Florida's wonderful nature and spending as much time as possible on the water, whether that be kayaking or paddle boarding.

Colitis in the Adult Horse

Hannah Cooper, BVMS

Colitis is inflammation of the colon. When the colon wall becomes inflamed, the inner lining of the colon becomes damaged, affecting its ability to carry out normal function. Fluids, electrolytes, and proteins will leak into the intestine and are passed out in the manure. Additionally, the intestinal wall once inflamed can become permeable to toxins and bacteria which are normally contained within the colon. These can leak into the bloodstream, causing a syndrome called endotoxemia or bacteremia, which are life-threatening conditions.

Equine colitis can range from mild, to a severe life-threatening disease, which is why early recognition of clinical signs and immediate start of intensive treatment is vital. Diarrhea is the most common clinical sign seen with colitis, which can range from frequent loose manure to pipestream watery diarrhea, and can be associated with a foul smell. Colic is also a frequent sign seen with colitis. Some horses may never develop diarrhea but will have other associated clinical signs. These include high fevers, dull demeanor, loss of appetite, dehydration, and edema of the ventral abdomen or limbs. Edema develops due to the loss of systemic protein through the compromised colon, which is referred to as a Protein Losing Enteropathy. Additionally, signs of endotoxemia can occur. This includes a high heart and respiratory rate, and red gums with a thin purple line above the teeth, commonly referred to as a "toxic line".

The colon can become inflamed for a variety of reasons, which can be divided into infectious and non-infectious causes. Infectious causes include bacteria (*Salmonella*, *Clostridium species*, *Lawsonia intracellularis*, Potomac Horse Fever), viruses such as Coronavirus, and parasitic infection with small strongyles. Non-infectious causes of colitis include antibiotic associated diarrhea, non-steroidal anti-inflammatory (NSAID's) toxicity, inflammatory bowel disease, sand ingestion, dietary imbalances, neoplasia, and plant toxicities. The use of NSAID's such as flunixin meglumine (Banamine)

or phenylbutazone (Bute) can lead to a specific type of colitis which is referred to as 'Right Dorsal Colitis'. Regardless of the cause of colitis, many affected horses will require intensive treatment and hospitalization.

Early diagnosis and prompt treatment are essential. If your horse has any of the previously stated clinical signs it is important to notify your veterinarian. Diagnosis of colitis is commonly made based off clinical signs and bloodwork. Bloodwork will assess the severity of disease, dehydration and any concurrent problems guiding the veterinarian in determining an appropriate treatment plan. An abdominal ultrasound maybe performed to assess the gastrointestinal tract including intestinal wall thickness and motility. Other diagnostic tests include abdominal radiographs to look for sand impactions and an abdominocentesis or "belly tap" to collect a sample of the abdominal fluid for laboratory assessment. A fecal sample can be collected to test for bacteria, viruses and parasites.

In roughly 50% of all colitis cases, the inciting cause is not determined. To further help determine the cause of the colitis, a thorough history will be taken. Information including the clinical progression of the clinical signs, the horse's typical management routine, whether any other horses on the farm are affected, the deworming protocol followed and any medications the horse may have been receiving recently will be collected.

Treatment of colitis in the adult horse is often intensive and requiring hospitalization of the affected horse. As the cause of colitis can be infectious to horses and people, horses are typically kept in isolation facilities during treatment. Therapy is mostly supportive care: dehydration and electrolyte imbalances will be corrected with intravenous fluid therapy and if protein loss is severe, a plasma transfusion may be recommended. Anti-inflammatories, and pain medications will be given to keep your horse comfortable. Antibiotics and anti-endotoxic drugs are frequently started to treat the cause of the colitis or when there is suspicion of leaked toxins/bacteria circulating, to prevent the development of sepsis. Diarrhea can be managed by administration of products such as an absorbent clay such as BioSponge, fecal transfaunation, probiotics, and psyllium. If lab and diagnostic imaging results are able to conclude the causative agent of the diarrhea, additional targeted therapies can be started. Frequent monitoring and rechecking of exam findings, pertinent lab work and repeat ultrasounds or radiographs allow adjustments so that your horse receives the correct treatment throughout its stay. Prophylactically applying ice to the feet may help prevent laminitis which is often a complication of colitis.

Prognosis and length of treatment required depends on the severity of colitis, and whether secondary complications occurred. A horse with mild colitis may recover quickly within a few days, where as a horse with a more severe infection such as *Salmonella* will require a prolonged hospitalization stay. Secondary complications can occur, which can be just as serious as the initial colitis. Complications including laminitis, thrombophlebitis (occlusion of the jugular vein from inflammation and/or infection), coagulation issues, and secondary infections such as pneumonia. If the intestinal wall is damaged severely enough, chronic diarrhea may occur which can be difficult to treat successfully. Response to treatment within the first couple of days is a good indicator of prognosis. Fortunately, once the horse recovers fully from colitis, recurrence is rare.

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