

Diagnosing the Horse with Recurrent Colic
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Introduction

Diagnosis and treatment of horses with colic have certainly improved in the last 20 years. However, horses with recurrent colic continue to be a diagnostic and often management challenge for both owners and veterinarians. Recurrent colic is typically defined as 3 or more episodes of transient or prolonged colic over a period of months or one year or more. The causes of recurrent colic are varied and can include parasites, gastric ulcers, sand accumulation, impactions, ileal hypertrophy, intermittent gas colic, enteroliths, intra- or extra-luminal masses resulting in partial obstructions, inflammatory bowel disease (such as eosinophilic enteritis or enterocolitis), colonic displacements, and many others. Although a definitive etiology cannot always be determined without exploratory surgery, many diagnostics are currently available to assist in determining the most likely cause.

Diagnostic Evaluation

A complete history and thorough physical examination with laboratory analysis by a veterinarian is indicated for horses with recurrent colic. The physical exam should include an oral examination to evaluate the horse's teeth. Horses in need of routine dental care may have difficulty chewing and can be predisposed to impactions. The physical examination should always include thorough auscultation of the heart and lungs. Recurrent colic is typically considered gastrointestinal in origin; however, rare cases of other disease within the thoracic cavity (heart, lungs) may result in flank watching and the perception of colic signs. A complete blood cell count and biochemistry profile will evaluate red blood cells, white blood cell count, electrolytes, total protein, albumin, and liver and kidney values. Initial evaluation should also include a rectal palpation, and may include passing a nasogastric tube if the horse is actively displaying signs of colic. Evaluation of a fecal sample for parasites and a thorough discussion about the horse's deworming program, diet, and pasture management is also recommended. Suspending manure in a plastic rectal sleeve with water to test for sand can also be informative, but does not definitively diagnose the absence of sand or quantify the amount of sand if it is present.

If the initial evaluation has not revealed a likely cause for the colic episodes, additional diagnostic testing may be suggested by your veterinarian. Some of these tests may be performed on the farm, while others will require referral to a larger hospital with the necessary equipment. Additional tests may include an abdominocentesis (also called a belly tap), endoscopy of the stomach, ultrasound examination of the abdomen, radiographs of the abdomen, and small intestinal and/or rectal biopsy. Abdominocentesis can be performed under light sedation with a local anesthetic. This procedure samples fluid from the abdominal cavity that surrounds the organs and intestine. Inflammation or infection within the abdomen can result in changes in the color and cell types seen in this fluid.

Gastric ulcers are a common problem in performance horses, and have been reported in 66-93% of racehorses in training (Murray 1996, Hammond 1986, Vatisias 1999), 67% of endurance horses (Nieto 2004), and 58% of show horses (McClure 1999). Horses with equine gastric ulcer syndrome (EGUS) may exhibit poor performance, decreased appetite, weight loss, and recurrent mild to moderate signs of colic. Endoscopy of the esophagus, pylorus, and stomach in a fasted horse enables a definitive diagnosis of EGUS. Endoscopy can also facilitate small intestinal biopsy of the duodenum if an infiltrative (similar to inflammatory bowel disease) process is suspected. Prior to endoscopy, feed should be withheld for 12 hours.

The veterinarian can use ultrasound of the abdominal cavity to evaluate visible portions of the kidneys, liver, spleen, and intestinal tract. Thickening of the intestinal walls can be identified in conditions such as right dorsal colitis and other infiltrative and/or inflammatory intestinal diseases. He or she might also be able to identify abnormal abdominal masses such as an abscess or cancer on ultrasound. Sand can be visualized as well; however, abdominal radiographs are ideal for documenting intestinal sand. Radiographs also are valuable to determine if enteroliths (intestinal stones/concretions) are present.

Despite all of the aforementioned examinations, diagnosis can unfortunately still be elusive in some cases of recurrent colic. With advances in diagnostic techniques and surgical procedures, additional options include standing laparoscopic surgery and abdominal exploratory under general

anesthesia. In miniature horses, foals, and some ponies, CT scan and MRI may be available at select referral centers. Most CT and MRI units are not capable of abdominal scans on animals larger than 300 pounds. If an abnormality is identified with CT or MRI, surgery may still be required to correct the underlying problem. Fortunately, complications from abdominal surgery have diminished and success rates have improved considerably for horses that require surgical intervention. The exact prognosis will depend on the underlying cause.

Prognosis

In one study (Mair and Hillyer, *EVJ* 1997), causes of chronic colic included colonic impaction (31%), peritonitis (16%), no diagnosis (8%), enteritis/colitis (7%), colonic displacement/torsion (6%), lymphosarcoma (4%), and to lesser extent, intestinal adhesions, ileal obstructions, liver disease, cecal impactions, thromboembolic disease, and intussusceptions. Exploratory surgery is necessary in many cases to make a definitive diagnosis, but owners should be aware that some cases are not amenable to treatment. The prognosis for successful resolution is determined by the cause, as for any type of colic, but is probably comparable to the prognosis for acute forms of colic. In some horses in which a specific cause is not found at surgery, clinical signs can persist after surgery, and usually dietary and management changes are recommended for these horses. Thorough evaluation and understanding of possible causes of the problem can assist the owner and veterinarian in determining the most likely etiology of the colic. Treatment and management of affected horses are most effective when they can be targeted at a specific established diagnosis.

References

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