History

A 4-month-old 100-kg (220-lb) Quarter Horse-Thoroughbred cross was evaluated for acute clinical signs of severe abdominal pain, which were characterized by the horse rolling severely on the ground. The horse had been treated 1 month earlier with ivermectin paste. Physical examination findings included a heart rate of 54 beats/min, respiration rate of 40 breaths/min, dark pink oral mucous membranes, and a capillary refill time of 3 seconds. Borborygmi were not detected during auscultation of the abdomen. The horse's abdomen was markedly distended; nasogastric intubation was performed, and 4 L of gastric contents were removed. Ultrasonography of the abdomen was performed (Figure 1).

Determine whether additional imaging studies are required, or make your diagnosis from Figure 1—then turn the page.
Diagnosis

Ultrasonographic diagnosis—A targetlike pattern is evident on the cross-sectional ultrasonographic image, and hypoechoic-echogenic layers are evident on the longitudinal ultrasonographic image, which are highly suggestive of cecocolic intussusception (Figure 2).

Comments

Because the ultrasonographic diagnosis of a probable intussusception indicated the need for surgical intervention, the horse was euthanatized. Invagination of the cecum into the right ventral colon and marked transmural edema of the cecum were confirmed on necropsy. *Anoplocephala perfoliata* was also detected in the cecum and colon, ileum, and jejunum.

Cecocolic intussusception is uncommon in the horse. Results of 1 retrospective study indicate that although cecocolic intussusception can develop at all ages, it is frequently diagnosed in horses between 2 and 3 years old. The most common clinical sign observed with cecolic intussusceptions is acute, moderate to severe abdominal pain. Possible causes of cecocolic intussusception include *A perfoliata* in the cecum and cecocolic orifice, treatment with an organophosphate, intramural masses, and *Strongylus vulgaris* arteritis.1-3

A definitive diagnosis of cecocolic intussusception can only be made by laparotomy; however, some physical and diagnostic findings may suggest the presence of this disorder. During abdominal examination per rectum, a mass or edematous large colon in the right dorsal abdominal quadrant may be palpable or the cecum may not be detected.3,7 Excessive peritoneal effusion, small intestinal distension, and an oval targetlike pattern in the right ventral abdominal quadrant may be seen during ultrasonographic examination.3 The targetlike pattern consists of rings that represent (from outer layer to inner layer) the echogenic intussusciptor or colon, hypoechoic fluid between the colon and cecum, echogenic intussuscipiens or cecum, and hypoechoic fluid within the cecal lumen.3

Treatment for cecocolic intussusceptions involves immediate surgical correction. Depending on the duration of the intussusception and cecal edema, manual reduction may not be possible. If manual reduction is not possible, enterotomy of the right ventral colon is performed with attempts at inversion of the cecum. This procedure is often unsuccessful and amputation of the cecal apex is required.2 Amputation of the cecal apex may permit reduction of the remaining cecum from the right ventral colon; however, if this procedure is unsuccessful, then the cecum is left in place and an ileocolostomy is performed.6 Prognosis for survival for horses with cecocolic intussusception is guarded.

Because there appears to be an association between parasitic infection, especially *A perfoliata*, and development of cecocolic intussusception, routine administration of an anthelmintic effective against tapeworms is recommended.


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