



What Is Your Diagnosis?

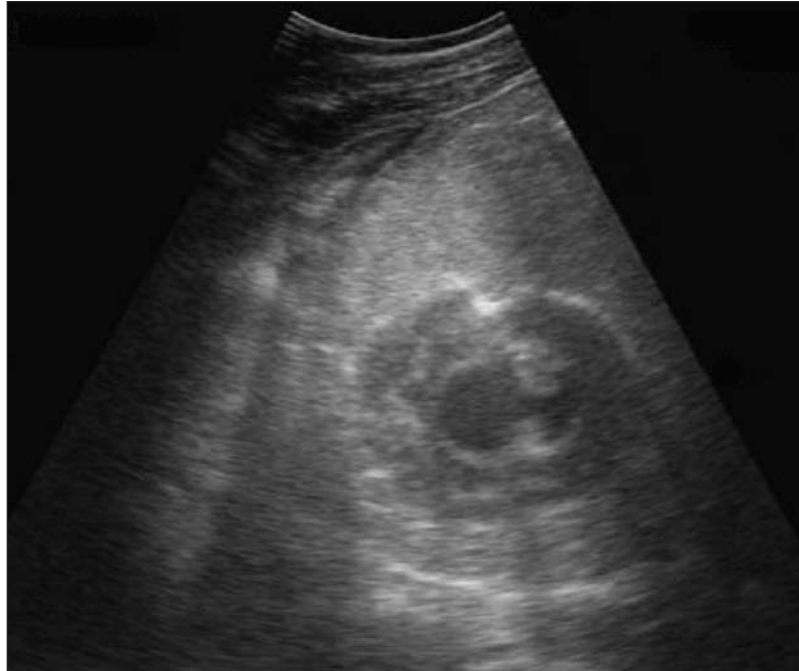


Figure 1—Transverse ultrasonographic image of the right ventral portion of the abdomen of a 1-year-old horse with signs of acute abdominal pain of a few hours' duration. Lateral is to the right side of the image. The image was obtained with a 3.5-MHz convex array transducer at a displayed depth of 20 cm.

History

A 1-year-old Thoroughbred was evaluated for signs of abdominal pain of a few hours' duration. Analgesics and sedatives had been administered by the referring veterinarian, but there was no improvement in the horse's clinical signs. The horse had been kept in a pasture with Bermuda grass hay, and a high-protein (16%) pelleted feed had been added to the diet 7 days prior to evaluation. On physical examination, the horse was alert and responsive; however, severe signs of pain and distress (sweating, kicking, and wanting to lie down) were detected. On physical examination, the horse had moderate tachycardia (56 beats/min; reference range, 28 to 44 beats/min), had congested mucous membranes with a slightly prolonged capillary refill time (2 to 3 seconds; reference range, < 2 seconds), was estimated to be 6% to 7% dehydrated, and had decreased intestinal borborygmus in all 4 abdominal quadrants. No gastric reflux was obtained after nasogastric intubation. Tight intestinal bands were palpated during rectal examination. 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 ▶

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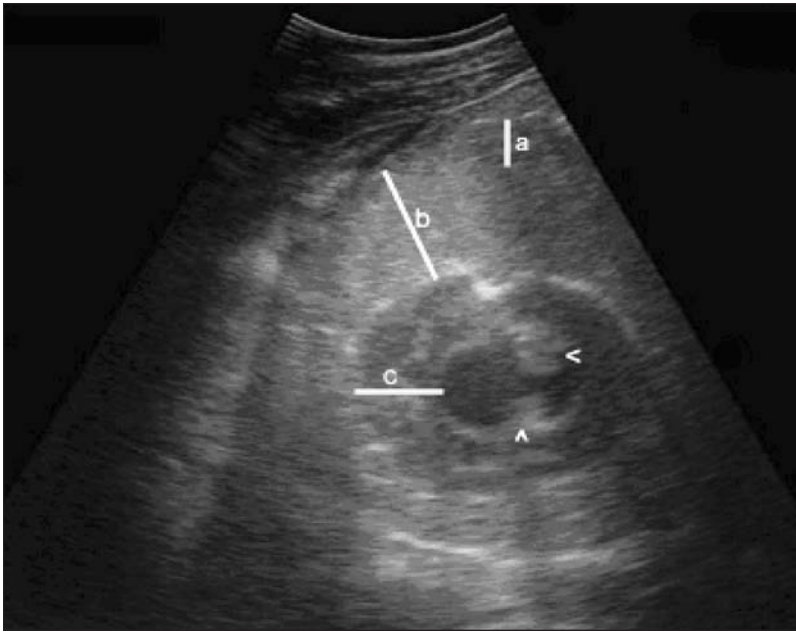


Figure 2—Same ultrasonographic image as in Figure 1. Notice multiple concentric circles representing the large colon wall (a), fecal material and fluid within the lumen of the colon (b), and the cecum (c) and cecal bands (arrowheads). The anechoic center of the image corresponds to free abdominal fluid.

Diagnostic Imaging Findings and Interpretation

A thick hypoechoic ring (cecal edematous muscular layer) delineated by 2 hyperechoic rings (cecal serosa and mucosa layers) inside a similar structure corresponding to the colonic serosa, edematous (thick hypoechoic) muscularis, and mucosa layers is evident. These ultrasonographic findings are compatible with a cecocolic intussusception (Figure 2). The cecal and colonic walls are separated by liquid fecal material in the right ventral colon. These ultrasonographic findings were visualized in almost the entire ventral portion of the abdomen on the right side from the level of the lumbar vertebrae to the level of the eighth and ninth ribs. The cranial extent of the lesion helped to distinguish a cecocolic from a cecocecal intussusception, where the latter would have a similar ultrasonographic appearance but would have been detected in a smaller area within the abdominal cavity.

Comments

Cecocolic intussusception results from invagination of the cecum (intussusceptum) through the cecocolic orifice into the right ventral colon (intussusciens)¹ and is characterized by a single episode of acute abdominal pain or a chronic and intermittent colic, which results in wasting disease.² Cecal intussusceptions (cecolic or colocolic) develop frequently in horses < 3 years old.³ The preoperative diagnosis of cecocolic intussusception

is difficult to determine; it can be suspected on the basis of finding a mass or edematous intestine in the right caudodorsal aspect of the abdomen during rectal palpation.⁴ Ultrasonographic evaluation of the abdominal cavity in horses with colic can be valuable in the preoperative diagnosis of intussusceptions. This condition can be identified as multiple concentric rings (bull's-eye) separated by fluid corresponding to the transverse view of the different layers of the intussusception.⁵ In the horse of this report, cecocolic intussusception was preoperatively diagnosed on the basis of the ultrasonographic findings evident in the right caudal portion to the right cranial portion of the abdomen in which the right ventral colon usually exists.

Surgical intervention is required for correction of cecocolic intussusceptions. Different techniques have been described, including manual reduction,⁶ reduction with partial typhlectomy,⁷ cecal amputation through a right ventral colotomy in nonreducible cases,¹ total typhlectomy,³ or bypass by ileocolostomy.⁴ In the horse of this report, the intussusception was manually reduced, and a partial typhlectomy of the apex of the cecum was performed because the apex did not appear viable. The horse recovered without complications and remained in the hospital for 7 days. Results of other studies indicate that 7 of 8 horses¹ and 14 of 17 horses⁴ survived long term after undergoing surgical correction of cecocolic intussusceptions through manual reduction alone or reduction through a colotomy, with or without partial typhlectomy or ileocolostomy.^{1,4}

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