Medical Versus Surgical Treatment of Ileal Impaction in Horses: A Retrospective Evaluation of 245 Cases

P.O. Eric Mueller, DVM, PhD, Diplomate ACVS; and Kelly Fleming, DVM, Diplomate ACVIM

Horses with an ileal impaction are likely to be managed successfully with medical treatment if they are diagnosed early in the disease, show abdominal pain that is responsive to analgesic therapy, and do not develop gastric reflux during treatment. Horses with persistent gastric reflex, progressive small intestinal distention, signs of abdominal pain not responsive to analgesic therapy, and/or deteriorating cardiovascular status are candidates for exploratory celiotomy and surgical correction. The long-term prognosis for horses treated with either medical or surgical management is good. Authors’ addresses: Department of Large Animal Medicine, College of Veterinary Medicine, University of Georgia, Athens, Georgia 30602-4385 (Mueller); and Oklahoma Equine Hospital, 2652 Reece Lake Road, Washington, Oklahoma 73093 (Fleming); e-mail: emueller@uga.edu. © 2009 AAEP.

1. Introduction

The most common site for intraluminal impaction of the small intestine in horses is the ileum. Although ileal impactions in horses have been treated successfully by both medical and surgical treatment, the decision to continue with aggressive medical therapy or yield to surgical intervention may be difficult. The objective of this study was to identify clinical parameters that would assist the clinician in determining the probability of a successful outcome with medical management versus the need for surgical intervention. Our hypothesis was that horses with ileal impaction that received aggressive medical therapy, did not produce significant amounts of nasogastric reflux, and were responsive to analgesic therapy would respond favorably to medical management, whereas horses with persistent abdominal pain and positive nasogastric reflux would require surgical intervention.

2. Materials and Methods

Medical records of 245 horses admitted for suspected or confirmed ileal impaction were reviewed. Criteria for horses with a suspected diagnosis of ileal impaction that were included in the study were a history of recurrent abdominal pain, a diet that included Costal Bermuda hay, and clinical signs consistent with non-strangulating small intestinal obstruction determined by evidence of small intestinal distention based on transrectal palpation and/or abdominal ultrasound examination. Horses were placed into two groups: horses successfully treated with medical therapy alone (med) and horses that required surgery for resolution of the impaction (sx).
Data retrieved from the medical records for both groups during hospitalization included persistence of abdominal pain, type and frequency of analgesic medication, development or persistence of gastric reflux, time to resolution of clinical signs or surgery, and 1-yr survival. Parametric numerical clinical parameters were compared between the med and sx groups using a paired t-test. Non-parametric data between groups was compared using a $\chi^2$ test ($p < 0.05$).

3. Results

One hundred thirty-three horses (54%) were managed with medical therapy alone, and 112 horses (46%) required exploratory celiotomy to resolve the impaction. There were no significant differences at admission in age, breed, sex, signs of abdominal pain, heart rate, or borborygmi between groups. The ileum was palpable on transrectal examination in 66 of 245 horses (27%). In all horses, small intestinal distention was evident either on transrectal examination or ultrasound evaluation. Cytologic evaluation of peritoneal fluid revealed abnormalities in 118 of 245 horses (48%). There were no significant differences in peritoneal fluid cytology between groups. Of the 133 horses that were managed medically, only 20 (15%) produced gastric reflux during treatment, which was significantly less compared with 69 of 112 sx horses (62%). Post-operatively, 56 of 112 sx horses (50%) produced reflux, and the majority of cases resolved within 48 h of surgery.

All horses were treated with an indwelling nasogastric tube, IV balanced isotonic fluids, and continuous monitoring. Seventy-two percent of med horses showed signs of abdominal pain that required repeated administration of analgesics for successful resolution of clinical signs. Of the med horses, 56% required a single administration of analgesia, and 16% required 2–4 analgesia administrations. Ninety-two percent of med horses survived ≥1 yr. In all sx horses, exploratory celiotomy was performed after failure of medical therapy. Ninety-six percent of the impactions were reduced by infusion of the impaction with a mixture of sodium carboxymethylcellulose, balanced isotonic fluids, and lidocaine. Ninety-one percent of sx horses survived ≥1 yr., and the 1-yr survival rate between the med and sx groups was not significantly different. Re-impaction of the ileum occurred in two horses from each group (1.6%).

4. Discussion

The diagnosis of ileal impaction should be considered in horses evaluated for clinical signs consistent with non-strangulating small intestinal obstructive disease that were fed Coastal Bermuda hay or dewormed with an anthelmintic with poor efficacy against tapeworms. Horses with ileal impaction that are likely to be managed successfully with medical treatment are diagnosed early in the disease, show abdominal pain that is responsive to analgesic therapy, and do not develop gastric reflux during treatment. Horses with persistent gastric reflux, progressive small intestinal distention, signs of abdominal pain not responsive to analgesic therapy, and/or deteriorating cardiovascular status are candidates for surgical intervention. The long-term prognosis for horses treated medically or surgically is good.