Nephrosplenic Entrapment Treatment, Recurrence, and Survival

Nephrosplenic entrapment occurs when the large colon migrates between the spleen and the abdominal wall and becomes trapped over the nephrosplenic ligament (which attaches the spleen to the left kidney). Affected horses generally display mild to moderate colic signs, and veterinarians diagnose NSE using rectal palpation, abdominal ultrasound, laparoscopy, or celiotomy (exploratory surgery). NSE treatment options include medical therapy, phenylephrine administration (a vasoactive drug that induces contraction of the spleen, making room for the colon to dislodge from the nephrosplenic space), longeing, and/or rolling under general anesthesia. Veterinarians believe the positional movement that longeing and rolling provide helps relieve the entrapment (or NSE). PhD candidate Brad Nelson, DVM, MS, Dipl. ACVS, presented the results at the 2015 American Association of Equine Practitioners’ Convention, held Dec. 5 in Las Vegas.

Recently, a team from Colorado State University (CSU) recently took a closer look at the treatments, diagnostic imaging results, treatments, and survival rates. They reviewed the horses’ signalment (age, sex, breed, etc.), physical exam findings, laboratory results, and how long they survive following treatment, and whether the colic is likely to recur. While these statistics are available for some types of colic, researchers are still working to elucidate them for others.

The team learned that overall survival rates, preventive measures, and recurrence rates for one type of colic following NSE correction were high, with 91.8% of horses surviving to hospital discharge; 82% survived for at least two years following colic; 76% survived for at least one year following surgery; and 57.7% survived for at least five years following surgery. They also found that recurrence rates range from 3 to 8% and even as high as 20% in one European study. Nelson said researchers have found that recurrence rates range from 3 to 8% and even as high as 20% in one European study.

Nelson cautioned attendees that nephrosplenic space ablation will only prevent future NSE episodes; it won’t help reduce the likelihood of other types of colic occurring. Surgical options include celiotomy, flank laparotomy, and laparoscopy. Veterinarians can also conduct diagnostic imaging, perform surgery, or treat the condition medically. Medical options include fluid therapy, phenylephrine administration (a vasoactive drug that induces contraction of the spleen, making room for the colon to dislodge from the nephrosplenic space), longeing, and/or rolling under general anesthesia.

Horses that underwent a nephrosplenic space ablation were less likely to colic following NSE than horses that didn’t have an ablation; 86% of owners reported fewer colics following NSE treatment, while the remaining 14% saw no change or more colic; 93% of owners reported being satisfied with the treatment outcome; and 86% of owners reported fewer colics following NSE treatment, while the remaining 14% saw no change or more colic.

Of the 231 cases, 192 horses had one hospital visit, 18 had two, and one horse had three; overall, there was a 23% recurrence rate; horses were less likely to survive to discharge if their packed cell volume (PCV, the percentage of red blood cells in a the horse’s whole blood) increased after treatment, relative to values before admission; horses’ rate of long-term nonsurvival increased by 7.8%; and owners were more satisfied with results when their horses were correctly identified as having NSE and treated appropriately. Of the 136 hospital cases with at least two years of follow-up, 91.8% of horses survived to hospital discharge; 82% survived for at least two years following colic; 76% survived for at least one year following surgery; and 57.7% survived for at least five years following surgery.