



# EQUINE REPRODUCTION SVC

## Equine Reproduction Embryo Recovery Embryo Transfer

ERS is the longest, continually in existence  
Equine Embryo Transfer Company  
in the United States

\*\*\* CLICK HERE \*\*\*

Current Articles & Research

Reproduction  
Foil Disorders  
Lameness

Check back often for new additions

### Nephrosplenic Entrapment Treatment, Recurrence, and Survival



A decreased colic frequency following ablation suggests that it's a successful NSE preventive measure in horses prone to this type of colic, researchers found.

Photo: Anne M. Eberhardt/The Horse

If you're faced with the difficult decision of whether to continue potentially unsuccessful therapy on a colicky horse or opt for euthanasia, it might help to know how often, on average, horses recover from 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.

Recently, a team from Colorado State University (CSU) recently took a closer look at the treatments, survival rates, preventive measures, and recurrence rates for one type of colic—nephrosplenic 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. 5-9 in Las Vegas.

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 colic surgery).

Nelson said veterinarians can treat the condition medically or surgically. 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.

During the rolling procedure, which is gaining popularity as a treatment option, the anesthetized horse, beginning lying on one side, is rolled to the other with the help of a hoist: "A hoist is attached to their hind legs with hobbles, and their hind end is lifted off of the ground," Nelson said. "Then we push—called ballottement—on the horse's left side to help dislodge the colon from the nephrosplenic space. Then the horse is rolled onto its left side for recovery."

Veterinarians believe the positional movement that longeing and rolling provide helps relieve the entrapment.

Surgical options include celiotomy, flank laparotomy, and laparoscopy. Veterinarians can also conduct a nephrosplenic space ablation, which involves placing sutures (or, in some cases, a mesh) in the nephrosplenic space to induce fibrosis; this causes the space to collapse and prevents future colics due to NSE.

Nelson said researchers have found that recurrence rates range from 3 to 8% and even as high as 21% in one European study.

He and colleagues evaluated 231 NSE cases from 2002 to 2014 in their retrospective study. They reviewed the horses' signalment (age, sex, breed, etc.), physical exam findings, laboratory results, diagnostic imaging results, treatments, and survival rates.

The team learned that:

- Of the 231 cases, 192 horses had one hospital visit, 18 had two, and one horse had three;
- Thoroughbreds, Warmbloods, and geldings appeared to be predisposed;
- 91.8% of horses survived to hospital discharge;
- Of the 136 hospital cases with at least two years of follow-up information available, at least 83% survived for one year following colic, and 82% survived for at least two years following colic;
- Overall, there was a 23% recurrence rate; - Veterinarians treated the majority of cases with rolling and/or longeing and fluid therapy; in 12 cases in which rolling failed, veterinarians took those horses to surgery and successfully corrected the lesion;
- 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 treatment; this increase can be indicative of dehydration and/or poor perfusion (blood supply);
- 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
- Older horses were less likely to survive long-term than younger ones—for each year older at admission, horses' rate of long-term nonsurvival increased by 7.8%.

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.

"Survival is high following NSE correction," he summarized, adding that decreased colic frequency following ablation suggests that it's a successful NSE preventive measure in horses prone to this type of colic.