Gastrointestinal Tract

Using a stent bandage significantly reduced the likelihood of incisional infection post-colic surgery.

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Stent Bandage Prevents Infection

Applying a stent bandage—a thick, nonadhesive bandage attached by sutures over the incision line—following colic surgery can dramatically decrease the risk of incisional infection, said Aziz Tnibar, DVM, PhD, Dipl. ECVS, of the Department of Large Animal Sciences of the University of Copenhagen.

In a comparative retrospective study evaluating the effects of stent bandage placement following colic surgery, Tnibar and his colleagues found that horses with stent bandages placed prior to anesthetic recovery were more than eight times less likely to develop incisional infections than horses without stent bandages.

The study involved 135 horses that had undergone abdominal surgery via a ventral midline approach and had survived more than 10 days post-surgery. Horses were assigned to one of two groups based on whether a stent bandage had been placed following surgery. Bandages were left in place for as many as five days with daily disinfection of the stent sutures, followed by use of a flat belly band.

Surgeons were randomly distributed across the two groups, so the effect of the surgeon on postoperative infection was thought to be negligible. Outcomes were assessed on the basis of whether they were infected or not. Tnibar reported a 2.7% infection rate in the stent group vs. a 21.8% infection rate in the nonstent group.

Tnibar said the stent bandage appears to create an ideal environment for healing by decreasing the tension on the suture line, reducing swelling, and protecting the incision from external contamination.

Because this was a retrospective study, Tnibar suggested that researchers would need to conduct a randomized, controlled study to accurately assess the specific effect of a post-surgical stent bandage. "This study showed that the use of a stent bandage significantly reduced the likelihood of incisional infections in horses undergoing colic surgery," he summarized.

Decoding Small Intestine Problems with Ultrasound

The sooner a veterinarian can determine whether a colicking horse requires surgery, the better the horse's chances of survival. Colic of the small intestine can be particularly tricky since it is not always easily felt on rectal palpation. Ultrasound examination can be used to gain visual clues into some causes of small intestinal colic.

Michelle Henry Barton, DVM, PhD, Dipl. ACVIM, Fuller E. Callaway Endowed Chair and professor of Large Animal Medicine at the University of Georgia's College of Veterinary Medicine, reviewed transabdominal ultrasound techniques for diagnosing colic caused by problems in the small intestine. Veterinarians can use a low-frequency, curvilinear ultrasound probe placed on the horse's flank to assess key features of the small intestine, including motility, degree of distension, intestinal wall thickness, and intestinal contents.

Barton said veterinarians can identify a normal small intestine on transabdominal ultrasound in only 10-30% of healthy, fed horses. In the healthy horse, waves of contraction called peristalsis move ingested food along the intestine. When this motility gets interrupted, it's called ileus. Veterinarians can identify the distinct pattern of ileus using ultrasonography. As gas builds up in the intestine, it creates an increasing series of hairpin turns that make the intestine resemble a series of switchback trails rather than a long, winding road.

In mild ileus cases resulting from paralysis secondary to a medical condition such as enteritis (small intestine inflammation) the intestinal wall might appear normal, whereas in more severe cases it might look thicker and possess irregular "lasagna noodle" mucosa. In either case, this ileus should resolve gradually with fluid therapy and time, said Barton, and veterinarians should see some motility on ultrasound.

In contrast, mechanical ileus continues to worsen, despite therapy, resulting in a larger number of hairpin turns. In some cases the intestine becomes so distended that the loops of bowel look like nearly perfect circles when the probe is turned so as to view a cross-section of the intestine.

Vets can also use ultrasound to distinguish between strangulating and nonstrangulating obstructive lesions. In the case of nonstrangulating, ultrasound might help the veterinarian determine if the obstruction is severe enough to warrant surgery.

In summary, Barton said ultrasound can be a valuable aid to practitioners when assessing the cause and severity of colic secondary to small intestine disease.

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