

BY STEPHANIE CHURCH

KISSING SPINES: COMMON BUT NOT ALWAYS CAREER-ENDING

Kissing spines are more likely to cause clinical problems in certain breeds, disciplines, and age groups.

Kissing, while generally considered favorable in its usual context, isn't so great when it comes to horses' vertebral surfaces. Overriding spinous processes — known as kissing spines — can cause severe back pain, said Tracy Turner, DVM, MS, Dipl. ACVS, but not all horses with the condition have complications because of it.

Turner, of Anoka Equine Veterinary Services, in Elk River, Minnesota, performed a study in which he determined kissing spines are more likely to cause clinical problems in certain breeds, disciplines, and ages, and that a particular combination of therapies can produce successful outcomes.

Study results have shown that back pain is a major cause of poor performance in horses, and clinical signs are highly variable. Such is the case with kissing spines, so he sought to better define the condition, its detection, and treatments.

"It's not hard to understand why back pain or anything that interferes with a horse's back will interfere with its movement," said Turner. "Any contraction in the (back) muscles causes ventral (toward the abdomen) flexion of the spine, which makes it impossible for the horse to engage its hind end and meet its athletic potential."

THE STUDY SETUP

Of 4,407 horses Turner examined for lameness from Feb. 1, 2004, to Jan 31, 2011, 7% of the cases (or 310 horses) displayed back pain (reacted with pain to pressure applied along the topline or resisted or showed agitation to such pressure). He conducted a complete lameness exam, including thermography and radiography, on each horse to rule out other potential pain causes. This narrowed the group to 212 horses (68% of the back pain horses) with kissing spines.

Turner's study comprised the following groups:

- ◆ Group 1: Horses with back pain and kissing spines.
- ◆ Group 2: Back pain, no kissing spines.
- ◆ Group 3: A control group consisting of 70 mature horses without back pain, either presented for "nose to toe" prepurchase exams or pretraining exams (the latter providing an opportunity to examine animals not yet impacted by training or riding).

RESEARCH RESULTS

In examining and comparing these groups, Turner discovered:

- ◆ Kissing spines make a horse three times more likely to have back pain;
- ◆ Group 1 contained a wide variety of breeds, but most common were Thoroughbreds, Thoroughbred crosses, Quarter Horse types, and Warmbloods;

Kissing spines can cause resistance under saddle.



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- ◆ Most Group 1 horses were 6 to 10 years old;
- ◆ In Group 1, 40% of the horses were used for dressage; 23% of Group 2 animals were dressage horses; and
- ◆ Twenty-seven (39%) of the control group horses had kissing spines; of the Thoroughbreds in the control group, six of seven had the condition (indicating a potential breed prevalence).

CLINICAL SIGNS

Horses' ground behavior in the back pain groups ranged from hypersensitivity when brushed to girthing when saddled. When ridden, horses bucked, reared, kicked out, and displayed rear limb dragging, head-tossing, and excessive shying. Riders complained these horses were hard to get on the bit, hollow, behind the leg, slow to warm up, stiffer moving in one direction than the other, and exhibited poor gait transitions.

DIAGNOSIS

Thermography is a very useful method for detecting where the pathology might be in the horses with kissing spines (99% sensitivity, but only 70% specificity), Turner said, but the condition must be confirmed using spinal radiography. Pathology in the Group 1 cases occurred between T11 and L2 (11th thoracic vertebra and second lumbar).

"In 90% of cases, T15 was involved," noted Turner. "Not surprising, because the vertebrae change direction there."

Kissing spines most commonly occurred between T15 and T18, which is roughly where the seat of the saddle rests on the ridden horse. The median number of vertebrae involved in the painful horses was four.

"Dressage horses were distinctly overrepresented," he observed. "Dressage is one-third of eventing, so over 50% of horses with kissing spines (in this study) are in some kind of dressage."

So, why dressage horses? "There are a lot of arguments ... the

KISSING SPINES

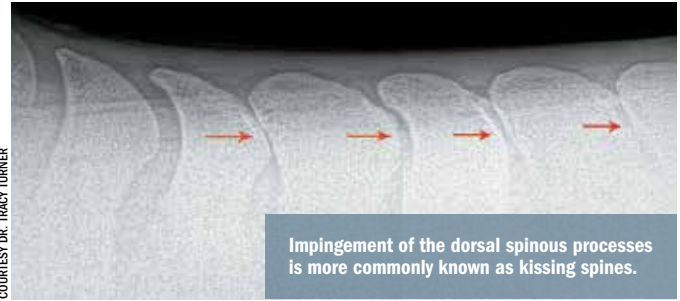
horse is asked to engage its hind end, the rider does more sitting, and the horse is compressed more," Turner opined. Also, "dressage riders are so attuned to how that horse moves (so it may be that) they complain sooner than other riders," and, thus, these horses were more likely to have veterinary exams.

TREATMENT

Treatments Turner employed in the Group 1 animals included shock wave therapy, mesotherapy (multiple intradermal—in the skin—injections made over the back, croup, and withers), corticosteroid injections, saddle fitting changes, and exercise. He assessed outcomes using owner and veterinarian evaluations of efficacy.

He found:

- ◆ Horses reached good (the horse returned to work, the owner's complaint improved, and veterinary examination showed relief of back pain, but stiffness remained) to excellent (the horse returned to work, the owner's complaint was eliminated, and veterinary examination showed no back pain) in 86% of the cases when treated with a combination of shock wave, mesotherapy, and exercise;
- ◆ Of horses that received mesotherapy alone, 63% reached good to excellent, and 59% with corticosteroid therapy alone;
- ◆ "Horses respond very markedly with age," said Turner. "I only had two (young horses, less than 5 years) improve. There were four absolute failures in the same age group (less than 5 years).";
- ◆ Ninety-five percent of horses with only two to four vertebrae involved improved to



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- good to excellent; and
- ◆ Owners refitted saddles for 29 horses, and in 13 (45%) the refit helped (11 of these—or 85%—were dressage horses). Turner concluded by describing kissing spines as a developmental condition. "I think genes cause it," he said. "It does not cause lameness but it does predispose (a horse) to lameness. Thoroughbreds are predisposed. After looking at all the data, kissing spines must go with speed or some other trait that we've bred the Thoroughbred for." He reminded the audience of

the Thoroughbred's genetic role in the Warmblood breeds, noting prevalence in those animals, as well.

TAKE-HOME MESSAGE

To counteract the ventroflexion (flexion of the cervical spine toward the underside of the barrel), a horse with back pain needs to be worked and trained to lift his back as a part of recovery, Turner explained. And, importantly, veterinarians should employ a combination of medical treatment and other approaches to address kissing spine-related pain.

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FOR KISSING SPINE YOU'LL WANT TO KISS THIS



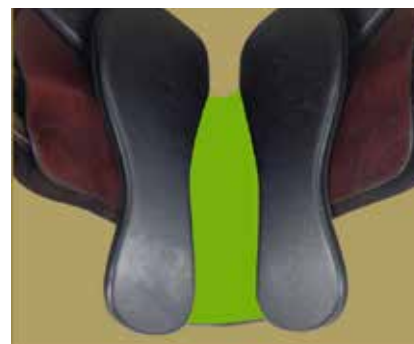
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