

Equine Kissing Spine

By Laura Wodzinski, DVM, cVMA

In horses, kissing spine, more formally known as overriding dorsal spinous processes (ORDSP), is a condition where the spacing between the dorsal spinous processes (DSP) in the horse's back vertebrae are narrowed and there is associated back pain. Thoroughbreds are overrepresented in the breeds commonly affected. In a study performed by Dr. Tracy Turner, DVM, DACVS, DACVSMR, dressage horses were the most commonly affected discipline with eventing horses being second. There is speculation that the appearance of kissing spine in these horses could be due to overuse of the back during collection and lateral movements causing inflammation and pain at the site of impingement.¹ In this article, you will learn how kissing spine is typically diagnosed and the various treatment options available.

Diagnosis

The diagnosis of kissing spine is made after a thorough lameness evaluation and lateral radiographs of the spine. It is important to note that the presence of kissing spine radiographically without clinical signs of back pain is not necessarily a concern, however the horse may be predisposed to back pain in the future.¹ Clinical signs of back pain include resistance to digital pressure over the back and epaxial muscles. Signs of discomfort including ears pinned, tail switching, and/or kicking out often accompanies this resistance. The horse may travel with his head in the air with a stiff back or may have some difficulty bending to one side. The more severely affected horse may progress to rearing or bucking.

Radiographs of the dorsal spinous processes show a narrowed space between the vertebrae with sclerosis, or increased bone density due to bony remodeling, on the adjacent touching sides. The most common location for ORDSP is the caudal thoracic vertebrae, where the seat of the saddle sits, between T13-T18 vertebrae.¹ Other diagnostic modalities used are nuclear scintigraphy, more commonly known as a bone scan, where the affected spinous processes will have a greater radiopharmaceutical uptake.² Thermography can also be used to identify kissing spine by displaying specific thermal heat patterns.¹ This tool may help differentiate between kissing spine and other causes of back pain.¹

Treatment

There are several treatment options for kissing spine from physiotherapy management to surgery. Exercises to stretch the back include walking and trotting in a "long and low" frame and adding in ground poles to encourage further stretching. Additionally, stretches that include lateral bending and stretching their neck to their knees can be helpful in opening up the DSP spaces. Proper saddle fit is essential to the continued comfort of a horse's back. Mesotherapy is another treatment where a combination of anti-inflammatories and LRS solution is injected

with multiple very small intradermal needles over the back and croup.¹ Extracorporeal shockwave therapy (ESWT) can be used over the dorsal spinous processes and epaxial musculature to promote healing in the region. ESWT is a non-invasive technique that sends shock waves to a specific area to promote blood flow, increase the production of natural healing factors, and increases blood vessel formation.³

Injections with corticosteroid between the affected dorsal spinous showed improvement in 55% of horses.¹ Several surgical procedures have been described to physically open up the space between the dorsal spinous processes. Dr. Coomer from Cotts Equine Hospital in the United Kingdom developed a method where the interspinous ligament, the ligament that connects the spinous processes to one another, is cut to increase the spacing between the vertebrae.⁴ In his study, Coomer found that 89% of horses treated medically had initial resolution of back pain versus 95% of horse treated surgically. None of the surgical cases had a recurrence of clinical signs and radiographs following surgery revealed a significantly widened interspinous space.⁴ Visit the New England Equine Facebook page to see images from a recent kissing spine case!

There are many causes of back pain in the horse. Kissing spine is easily seen with radiographs and can be treated in a variety of ways to improve the comfort of the horse.

References:

1. Turner, Tracy A. "Overriding Spinous Processes ("Kissing Spines") in Horses: Diagnosis, Treatment, and Outcome in 212 Cases." WOUND & ORTHOPEDIC MANAGEMENT AAEP Proceedings 57 (2011)
2. DVM, Kenneth Marcella. "Kissing Spines in Veterinary Equine Patients: Easy to Diagnose, Complicated to Treat." Dvm360.com. N.p., 17 Dec. 2014. Web. 08 May 2017.
3. "Extracorporeal Shockwave Therapy." Large Animal Hospital. N.p., n.d. Web. 08 May 2017.
4. Coomer RP, McKane SA, Smith N, et al. A controlled study evaluating a novel surgical treatment for kissing spines in standing sedated horses. *Vet Surg* 2012;41(7):890-897.