Proximal Suspensory Desmitis of the Hind Limbs

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Hindlimb lameness in the horse can be a very frustrating experience. It can be difficult to pinpoint the exact anatomical location of the lameness because the joints of the rear leg of the horse move together in unison and are not easily isolated from one another. The hock, stifle, hip, and lower limb joints and associated tendons and ligaments are all structures that can contribute to a hindlimb lameness. One common cause of lameness in the rear leg is Proximal Suspensory Desmitis.

Proximal Suspensory Desmitis commonly affects performance horses causing chronic lameness issues. It is most commonly seen affecting horses age 8-10 years of age that are used for dressage, general purpose competition, and eventing. Horses with extremely straight hocks or with hyper-extended fetlock joints seem to be predisposed to proximal suspensory desmitis of the hind limbs.

Diagnosis of proximal suspensory desmitis is based on clinical signs, physical examination, regional anesthesia of the deep branch of the lateral plantar nerve which innervates the proximal suspensory ligament, ultrasound examination and radiographic examination of the proximal palmar aspect of the cannon bone of the hind limb.

The hind limb lameness seen with this condition is usually characterized by a decrease in the arc of foot flight with a shortened cranial phase. Lameness is most obvious when the horse is ridden and usually exacerbated in 85% of the horses by flexion of the affected limb.

Confirmation of the diagnosis is achieved by elimination of the lameness with local anesthesia of the deep branch of the lateral plantar nerve and ultrasound of the proximal suspensory to evaluate the origin of the suspensory as well as the cross sectional area. Enlargement (hypertrophy) of the proximal suspensory ligament is usually identified on ultra-sonographic examination. A radiograph of the origin also supports the diagnosis. Horses with proximal suspensory desmitis will exhibit sclerosis at the origin of the suspensory ligament and in severe cases can even have avulsion fractures which, if evident, will decrease the prognosis for recovery. With the introduction of MRI (Magnetic resonance imaging) to equine practice it can be used as the gold standard for a conclusive diagnosis of proximal suspensory desmitis.

There are 3 treatment options for proximal suspensory desmitis of the hind limbs. Extended stall rest for a period of 9-12 months has shown a success rate of approximately 15%, in a retrospective study of having these horses return to their intended use and remain sound for a 1 year period. Shockwave therapy can also be employed, and the success rate has been shown to be approximately 40% for return to athletic soundness. There is also a surgical treatment which was developed in the last few years in the United Kingdom which involves removal of a segment of the deep branch of the lateral plantar nerve. I have performed over 50 of these procedures, and the success rate in my hands of return to athletic soundness is approximately 80%. This is supported by a retrospective study which looked at 271 horses where this procedure was performed; 214, or 79%, of these horses returned to athletic soundness. The post surgery rest period varies from 4-8 weeks depending on the severity of the desmitis.

This condition, which was once thought to be a career ending problem, can now be diagnosed easily and treated depending on the owner’s wishes.