



November 2007

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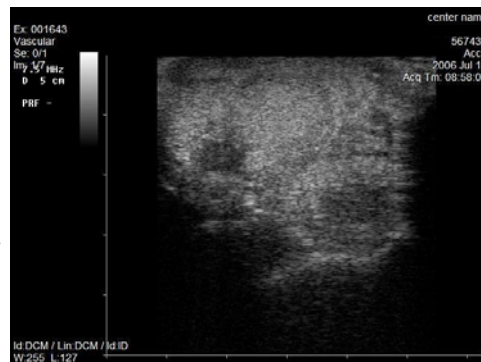
Proximal hind limb suspensory desmitis (PSD)

Part I: Diagnosis

Proximal hind limb suspensory desmitis can be a frustrating and confusing source of lameness in the horse. Depending on the severity of the damage to the proximal suspensory ligament this injury can take a long time to heal and even then can result in chronic hind limb lameness. PSD also results in lost competition time, added expenses and possible reoccurrence. This article will briefly discuss the steps taken to diagnosis proximal suspensory desmitis.

Historically the prognosis for return to athletics for horses with rear limb PSD is guarded to poor however new data suggest perhaps the prognosis is not as grim. New evidence suggests a return of approximately 80% of horses with rear limb PSD to athletic competition. This is certainly dependent on the severity of the injury.

Hind limb PSD is typically described as a chronic stretching or tearing of the proximal suspensory ligament which results in a persistent mild to moderate rear limb lameness. Rarely, a horse can have an acute severe hind limb lameness due to PSD which, is more than likely the result of an acute overload of a chronically damaged ligament. Seldom are there any clinical signs like heat, pain or swelling to indicate an injury to the proximal suspensory ligament. Lameness is typically worse on the outside limb when the horse is lunged and flexion tests are unreliable in identifying lameness from the proximal suspensory ligament. Nerve blocks at the origin of the proximal suspensory ligament are the gold standard for identifying lameness originating from this area. There are several different ways to block the proximal suspensory ligament and one should be aware of the limitations of each method. A direct infiltration of the PS can potentially block pain from the lower hock joints which can lead to a misdiagnosis. An indirect method of blocking the proximal suspensory area can avoid this problem. Blocking the lower hock joints separately and comparing the response to both blocks is another method of making a more precise diagnosis.



Once the area has been confirmed then some form of imaging is needed. Radio-

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graphs of the proximal cannon bone are the most common imaging performed. Radiographs however are very poor at imaging soft tissue injuries. Cortical bone fracture, avulsion fracture and chronic modeling can all be seen on radiographs in cases of chronic PSD. Ultrasound is very good at imaging the proximal suspensory ligament. Although ultrasound is the most valuable imaging used for PSD this area is a difficult area to visualize completely especially in large horses. Cross sectional area, ligament fiber pattern and alignment are crucial parameters when imaging this area. Also, comparison to the other hopefully normal hind limb is invaluable when imaging this area. Avulsion fractures, ligament lesions and chronic changes in the ligament are some of the abnormalities seen on ultrasound.

Nuclear scintigraphy is a type of physiologic imaging that is used in cases of PSD. Nuclear scintigraphy relies on inflammation within the suspensory ligament or bone to help in the diagnosis of PSD. Nuclear scintigraphy is limited in the imaging of soft tissue but is excellent for bone inflammation.

The diagnosis of PSD can be confusing and the results from imaging can result in one of the following categories.

1. Abnormal bone and suspensory ligament.
2. Abnormal bone and normal suspensory ligament.
3. Normal bone and abnormal suspensory ligament.
4. Normal bone and normal suspensory ligament

It is not uncommon to have normal radiographs and ultrasound of this area but still be able to block the horse's lameness in this region. What is actually the cause of lameness in these cases is unclear. Another imaging modality which is gaining popularity is magnetic resonance imaging (MRI). This modality is limited due to the expensive equipment involved but is excellent for imaging of this area.

In the next issue different treatment of PSD will be covered and evidence based review of current knowledge of return to athletics for horses with PSD.

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