

Case 041905-02: 6 Year Old Cutting Horse Traumatic Suspensory Ligament Desmitis

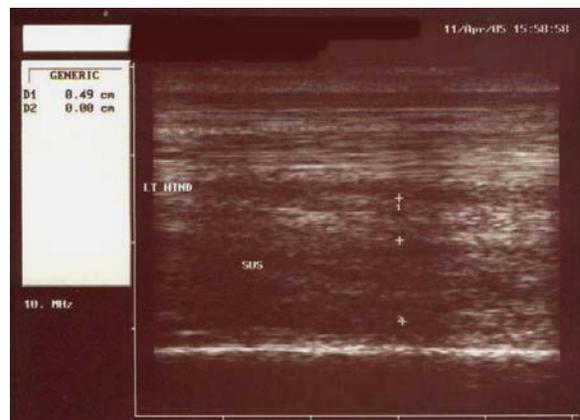
On April 7, 2005 a 6 year-old American Quarter Horse gelding presented for lameness examination. According to the owner's report, the horse was shown at a cutting event the previous evening and became very sore in the left hind limb. Previous radiographs of the left hind limb revealed no bony changes to the tarsal or metatarsal structures. Ultrasound evaluation of the left hind flexor tendons on April 11 revealed the following findings: enlargement of the body of the suspensory ligament in the mid-cannon region that measured twice as thick as the dorso-plantar aspect when compared to the contateral limb, a mixed echogenic pattern characterized by multiple, ill-defined hypoechoic regions, and a disrupted fiber pattern in both longitudinal and transverse views (Fig 1, 2, 3).



**Figure 1: Diffuse
Suspensory Lesion,
Right Hind Limb
April 7, 2005**



**Figure 2: Suspensory Lesion
April 11, 2005**



**Figure 3: Suspensory Lesion,
Longitudinal View
April 11, 2005**

Based on ultrasound appearance, a diagnosis of focal, traumatic suspensory ligament desmitis was made and the prognosis for return to function was considered guarded. The estimated time required to return this gelding to function was 12 to 15 months. On April 18, 2005, 29.5 grams of subcutaneous adipose tissue were harvested lateral to the tail head and submitted for stem cell recovery. On April 20, 26 million cells were injected to the site of injury by ultrasound guidance.

Following 2 weeks of stall rest, the horse began a rehabilitation program which consisted of alternating day aquatred therapy. At 30 day intervals, the horse was evaluated and the rehabilitation program was modified accordingly.

Physical examination on June 21, 2005 revealed the horse to be 2/5 lame at the trot with mild residual swelling around the suspensory region of the mid-distal metatarsus. Although a noticeable lesion still remained, ultrasound evaluation revealed an improved fiber patterning of the left hind suspensory ligament. (Fig 4).

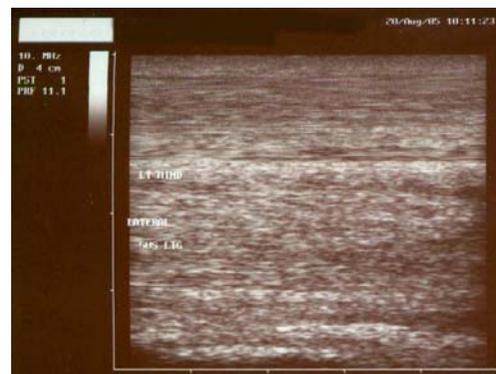


Figure 4 : Suspensory Lesion, June 21, 2005

Following 2 additional months of Aquatred therapy, ultrasound evaluation on August 20 revealed the following: filling of the original injury with uniform hyperechoic tissue, improved pattern alignment on longitudinal view, and decreased cross-sectional area. The prognosis for return to function was upgraded from guarded to fair-to-good (Fig 5, 6).



**Figure 5:
Susp
Lesion
August 20,
2005**



**Figure 6:
Longitudinal
View
Aug. 20, 2005**

In the following weeks, the rehabilitation program was adjusted to include light riding under saddle by October 1. On October 5, 2005, with minimal soreness of the horse reported by the owner, clearance was given to return to a full level of activity.

In October 2005, 6 months following the original injury, this Quarter horse gelding returned to his previous level of competition and successfully placed at a National Cutting competition. To date, he has been shown multiple times successfully without any signs of increased discomfort or lameness.