Case 021005-02: 14 Year Old Dressage Horse Suspensory Desmitis & Adhesions Concurrent with Surgical Adhesion Takedown

On February 9, 2005, a 14 year-old Warmblood gelding presented was referred for lameness of the right hind limb. Diagnostic anesthesia by the referring veterinarian had isolated the source of lameness to the origin of the right hind suspensory ligament.

Magnetic Resonance Imaging (MRI) of the right hind limb distal to the tarsus revealed a small centralized tear at the origin of the suspensory ligament. In addition, the suspensory body was adhered to the mid portion and distal aspects of the cannon bone (Fig 1). Significant enlargement of the lateral splint bone on the axial surface was present with the presence of multiple blind splints (Fig 2).

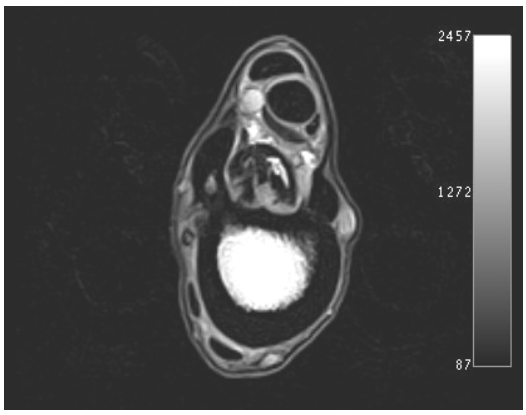

Figure1: MRI Image, Origin Suspensory Tear February 9, 2005

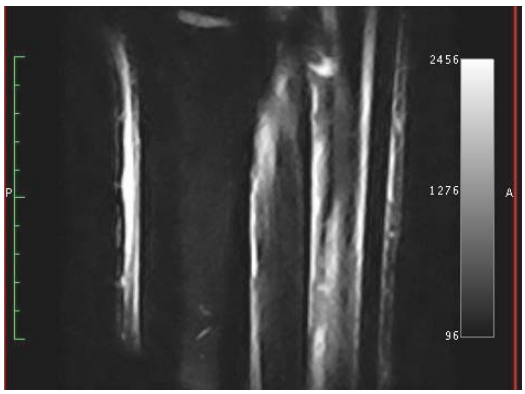

Figure 2: MRI Image, Mid-Cannon Bone February 9, 2005

Under standing sedation, 17.5 grams of subcutaneous adipose tissue were harvested from the region dorso-lateral to the tail head over the gluteal muscles on the left hind limb and submitted for stem cell recovery.

On February 11, under general surgery, multiple adhesions were broken down from the suspensory ligament origin, body, and lateral branch to the distal ½ of the cannon bone, proximal ¼ of the medial splint bone, and most of the lateral splint bone. Multiple blind splints were removed from the proximal medial splint bone as well as a large blind splint from the plantar aspect of the cannon bone, which had adhered to the suspensory ligament body. A centrally located tear in the proximal suspensory ligament origin was then injected with 420,000 viable cells using ultrasound guidance.

The horse was discharged on February 12 with instructions to restrict activity to stall rest for 2 weeks, followed by 5-10 minutes of hand walking for two weeks, and then increase walking periods up to 30 minutes per day over a 4 week period.

Ultrasound evaluation of the right hind limb on March 25 revealed significant healing of the tear within the proximal suspensory ligament origin, improved fiber patterning on longitudinal view, and no evidence of adhesion. The rehabilitation

was modified to add 5 minutes of trotting to the daily exercise routine beginning at 60 days post procedure.

Ultrasound evaluation on May 5, 2005 revealed resolution of the lesion within the origin of the suspensory ligament, normal fiber patterning, and no evidence of adhesion formation. Lameness examination found the horse to be sound at the walk, trot, and canter. Following this evaluation, the horse was cleared to return to competition following a 6 week conditioning program.

In July 2005, both owner and patient returned to their previous level of competition. (Fig 3 competition 7 months post treatment)

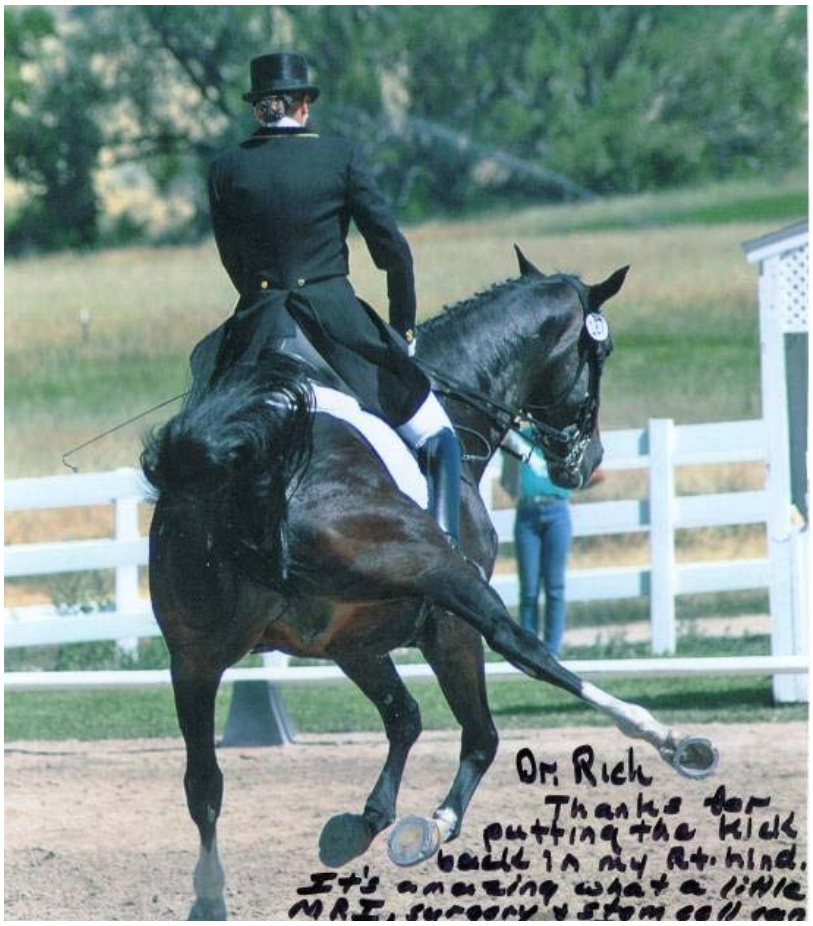

Figure 3: September 2005