

Case 091603-01: 3 Year Old Thoroughbred Racehorse Traumatic Tendonitis

On August 8, 2003, a 3 year-old thoroughbred mare presented for evaluation of a large tendon bow in the right front limb. While in formal training, the patient had become acutely lame during a workout the previous week. The bow was treated utilizing non-steroidal anti-inflammatory medications along with hydrotherapy several times daily and topical poultice applications.

At the time of examination, the initial swelling had decreased, however a significant bow was present in the mid cannon region of the right front limb. Physical examination revealed the horse to be lame at a walk, the affected region was painful upon manipulation, and mild dependent edema was present in the distal limb. Ultrasound evaluation of the right front flexor tendons revealed a prominent core lesion of the superficial digital flexor tendon extending through zones 2B and 3A (Fig 1).

The patient was discharged with instructions to limit activity to stall rest only, continue oral and topical anti-inflammatory therapies and to re-evaluate in 30 days.

Physical examination on September 15 found persistence of focal swelling of the mid cannon flexor region while ultrasound evaluation of the right front flexor tendons revealed no changes in the lesion size or characteristics within any region. Utilizing moderate sedation and local anesthesia, 16 grams of subcutaneous adipose tissue were recovered from a region dorso-lateral to the tail head and submitted for stem cell recovery.



**Figure 1: Centralized Core Lesion,
Zone 2B
August 8, 2003**

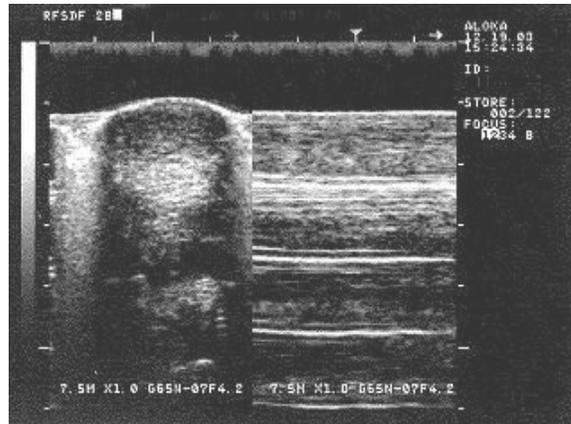
On September 17, 2003 20 million viable cells were delivered to the core lesion by ultrasound guided injection. The horse was discharged with instructions to limit activity to stall rest for 1 week and then to initiate a physical rehabilitation program.

Ultrasound evaluation on October 22 revealed filling of the original injury in both zones 2B and 3A with uniform normo-echoic tissue, improved fiber pattern linearity on longitudinal view, and decreased peri-tendonous swelling.

During the following 6 months, the horse continued through a progressive rehabilitation program consisting of incrementally increasing periods of hand-walking, automated walkers, and eventually brief periods of controlled turn out.

Ultrasound evaluations were performed at 30 day intervals from October 2003 through March 2004. (Fig 2 Three month post treatment ultrasound).

Ultrasound evaluation in November 2004 (Fig 3) revealed resolution of the original lesion, complete filling by normal appearing tissue, normal fiber pattern alignment on longitudinal view, and overall normal appearance of the affected tendon when compared to the normal limb.



**Figure 2: Zone 2B
December 19, 2003**

After a 15 month rehabilitation from the time of stem cell therapy, the patient was officially returned to training; recording 13 workouts between January and May of 2005.

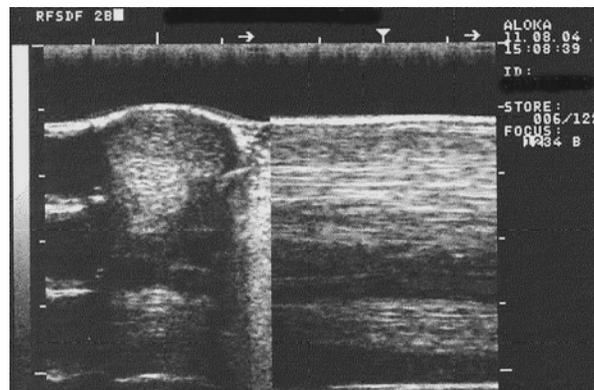


Figure 1: Zone 2B, November 8, 2004

In May of 2005, the filly recorded her first ever race and raced three times in May and June recording 1 win, 1 place, and 1 show. Following a successful return to racing, the mare was sold in July of 2005 and transferred training staff.