

 **PulseVet**®

Proven • Trusted • Authority

## Extracorporeal Shock Wave Therapy Treatment Case Studies



**VersaTron**®



**ProPulse**®



## **Case Study:**

Blue, Severe osteoarthritis, limb amputation candidate.

Courtesy of Andrea Looney, DVM, DiP/ACVA,, of Cornell University Hospital for Animals (CUHA), Ithaca, NY.

## **Background**

Blue, a 7 yr old male Labrador Retriever was brought to Dr Looney with arthritic inflammatory disease affecting multiple joints. The right elbow in particular was causing Blue, a very stoic dog, severe chronic pain. In fact, prior to being referred to Dr. Looney, the referring medicine team at the animal hospital was considering amputation. Multiple NSAIDS, gabapentin, amantadine, acupuncture, ultrasound, e-stim, and hydrotherapy were all tried with minimal success. At that point, the options under consideration were total elbow replacement, injecting the joint, or a new option, ESWT.

## **VersaTron ESWT Treatment:**

Upon discussion with Blue's owner, they decided to proceed with the shock wave treatment option. Blue was given 2 treatments, 2 weeks apart. Each treatment consisted of 400 shocks total (200 medial, 200 lateral) with an R05 trode at Energy Level E3.

## **Outcome:**

The results seen with Blue were amazing. "He was doing better after the first treatment but then after the 2nd treatment, the owner called me up and said he was running around like a puppy and putting full weight on the leg" states Looney. At a subsequent follow-up visit Dr. Looney observed Blue to be "totally sound". Five months after the first treatment, Dr. Looney and Blue's owner have not noticed any decline.



### **Case Study:**

Jackie, Shoulder and elbow OA

Courtesy of Deirdre Chiaramonte, DVM, ACVIM, Animal Medical Center, New York, NY

### **Background:**

Jackie is a 6 yr old yellow Labrador Retriever with osteoarthritis of the right shoulder and elbow. In addition to pain and lameness evaluations, the Quadruped Biofeedback System (QBS) was used to measure Jackie's degree of static weight distribution on her four limbs. Jackie's ability to bear weight on the right front limb was significantly compromised. QBS of the right front limb measured 8% of total body weight vs. the normal 30% for the front limb.

### **VersaTron 4 Paws ESWT Treatment:**

Jackie was treated at both her shoulder and elbow joint with the VersaTron 4 Paws ESWT. 600 shocks were delivered to her elbow, (the dose was split medial and lateral), at E3 with the R05 trode. The shoulder was treated with 800 shocks using energy level E5 and with the R20 trode.

### **Outcome:**

Immediately following the treatment, Jackie showed increased lameness, as is sometimes expected, but then began improving. By 1 week following treatment, the owners reported a huge improvement in lameness. A second treatment was conducted 3 weeks later using the same protocols. At 2 months from the first treatment, Jackie was still doing very well and the front QBS measured at 19% vs.

the original 8%. The owners reported that Jackie was doing well at home and a third treatment was planned to help to sustain the results.

---

### **Case Study:**

Jake, Severe OA/DJD, Lumbar Spondylosis, failing other therapies

Courtesy of Edward Leeds, DVM, DACVS, Surgical Group for Animals, Los Angeles, CA

### **Background:**

Jake, a 12 yr old male yellow Labrador, was referred to Dr. Leeds's practice for stem cell therapy to treat his severe bilateral DJD of his hips and shoulders and lumbar spondylosis. His owner reported that without the daily NSAID therapy, Jake could not even get up on his own. With the NSAID therapy, Adequan, supplements, and prednisone he could move slowly for only a short period of time and Dr. Leeds observed that he even had difficulty sitting down. Dr. Leeds recommended shock wave treatment as an alternative to stem cell therapy due to its noninvasive nature and cost-effectiveness.

### **VersaTron 4 Paws ESWT Treatment:**

During the first treatment, Jake was given Torb/Ace for pain and sedation. Both hips were treated with 500 shocks medial with the R05 trode and 500 shocks lateral with the R20 trode. The LS was treated with 500 shocks also using the R20 trode. All treatments were completed using energy level E5. A second treatment was administered to only the left shoulder approximately 6 weeks later with

the same sedation. 500 shocks were administered with the R05 trode at E6. The same sedation protocol was used.

### **Outcome:**

One week following the first treatment Jake no longer needed the NSAID therapy and was sitting and getting up much easier. He still experienced some stiffness in the morning and at night and had an occasional left shoulder limp. A month following the first treatment Jake remained off all of his medications and was getting up and down easily. The continued intermittent left shoulder limp was addressed with a second shock wave treatment two weeks later and at 8 weeks he no longer was showing any sign of lameness. Both Jake's owner and Dr. Leeds were amazed by the results seen for Jake, particularly given the variety of other treatments completed and the severity of his case. At 8 weeks following the first treatment, Jake was jumping up on furniture when he previously had difficulty lying down on the floor.



### **Case Study:**

Keyla: Osteoarthritis of the elbow

Courtesy of Kristin Kirkby, DVM, University of Florida College of Veterinary Medicine, Gainesville, FL

### **Background:**

Keyla, a 9 yr old female Rottweiler was hit by a car at a young age and sustained a left distal humeral fracture and left acetabular fracture. While she was lucky enough to avoid any limb amputations, neither fractures were properly repaired surgically, leading to the development of severe arthritis. The extreme lameness due to the OA in her left elbow was very evident upon visual and force plate examination. The OA in both joints was previously being managed with acupuncture and daily NSAIDs therapy.

### **VersaTron 4 Paws ESWT Treatment:**

For Keyla's first treatment, she was sedated with medetomidine and provided hydromorphone for pain. 800 shocks total were delivered to her hip (split medial and lateral) with the R20 probe at E5, and 800 shocks were delivered to her elbow at E4 using the R05 trode. A second treatment was administered to her elbow 3 weeks later. At this time, the patient was given only medetomidine and therefore a lower energy level was used (E2). 800 shocks were again administered with the R05 trode. A final treatment was administered for her elbow OA 6 weeks after the second using the same protocol.

### **Outcome:**

Keyla showed great improvement following the first treatment and with the second treatment, her owner was able to completely remove her from the NSAID therapy she had relied on for years. At 6 months post-treatment Keyla continues to do great!

## **Case Study:**

Marge, Abnormal muscle tension

Courtesy of Michael Stewart, DVM, River Meadow Farm Animal Rehabilitation Center, Windsor, CT

## **Background:**

Marge is a 4 yr old female Weimaraner and an actively competing show dog. She was referred to Dr. Stewart through her trainer and presented with shoulder and pelvic soreness. She also had a very stiff and pacy gait

Upon exam, clinical findings included:

- Resistance to shoulder extension and neck rotation
- Preferred gait is to pace
- Weak pectoral sling
- Limited carpal extension
- No orthopedic issues

## **VersaTron ESWT Treatment:**

In addition to the typical rehab he would recommend for this case, Dr. Stewart decided to use VersaTron ESWT on Marge, which he has long used for his equine patients with tendon and ligament injuries. Dr. Stewart and his team conducted massage and bio-mechanical work on the patient and treated her shoulders and the base of her neck with 300 shocks at Level 1 with R05 trode. Marge instantly appeared relaxed and had decreased tension. She was more playful and her owners and trainer reported an increased activity level.

Three months later, Marge returned to Dr. Stewart presenting some additional problems. Her carpal extension was limited and she had “bowed tendons” on both of her fore legs. Based on the successful outcome with the first shock wave treatment, Dr. Stewart again turned to shock wave to treat Marge. This time she was treated along her digital and carpal flexor muscle groups with 200 shocks at Level 1 with the 5mm trode.

## **Outcome:**

Following the second treatment, Marge was in perfect form and went on to win “Best in Group” at the Westminster Kennel Club show in January 2008.



## **Case Study:**

Phil, Chronic carpal injury

Courtesy of Michael Stewart, DVM, River Meadow Farm Animal Rehabilitation Center, Windsor, CT

## **Background:**

Phil is a young female German Shepherd police dog. "Officer" Phil's injuries were a long term result of a terrible accident a year before in which Phil was trapped in a burning police vehicle. While Phil was lucky enough not to incur any burn injuries, she did have a variety of orthopedic problems as a result of thrashing in the confined space.

Phil was in supreme shape and didn't let her injuries slow her down in the least; however, the head bob at a trot and the swollen right carpus were signs that Phil could use a little help from Dr. Stewart.

## **VersaTron ESWT Treatment:**

For the pre-treatment work-up and procedure, Phil was administered medetomidine hydrochloride to keep the patient comfortable and allow Dr. Stewart to palpate the areas of tension. Once all areas were identified, the shock wave treatment was applied at the carpus area and extended to the ulnar carpal flexor muscle and the carpal extensor muscle. Dr. Stewart delivered 1000 shocks at Energy Level 3 with the R05 trode.

## **Outcome:**

Following the treatment, the immediate results seen were amazing according to Dr. Stewart. The swelling in the carpus visually improved immediately and in the weeks that followed, Phil regained and has sustained fully normal function.



---

*Special thanks to:*

*Animal Medical Center, Cornell University Hospital for Animals, River Meadow Farm Animal Rehabilitation Center, Surgical Groups for Animals and the University of Florida for contribution of information.*

