

# Veterinary Case Studies

*Babette Gladstein, VMD*

**M**ulti joint Prolotherapy cases are common occurrences in the Canine. Many injuries and pathologies respond extremely well to treatments when several joints are treated verses just the site of primary injury.

OSIRUS - 11 YEAR-OLD MALE NEUTER PIT BULL  
POLYARTHRITIS, PROLOTHERAPY, AND PIT BULLS

This is not a tongue twister, but a veterinary confirmation challenge. Multi joint arthritis and drug sensitivity are issues not uncommon for the pit bull which make this breed a problematical anomaly to the owners and the veterinarians trying to treat them.

Osirus, an 11 year-old male neuter pit bull, was surrendered to the Humane society in the spring of 2010 after his owner had been relocated. When he was turned in, Osirus had a left partial ACL tear and a classic bilateral hip dysplasia, exhibited more prominently on the left hip. His elbows were exhibiting signs of dysplasia as well. He was not using his left hind leg other than a peg, and had a heavy (3 out of 5) compensatory limp on the right front of his body. On physical exam, he was painful on palpation of all joints, and in his lower back as well. (See Figures 1 & 2.)



**Osirus, an 11 year-old male neuter pit bull.**



**Figures 1 & 2. Osirus X-rays read by Van William Knox, VMD, Board Certified Radiologist.** Two digital radiographs - a craniocaudal radiograph of the right front limb from the shoulder to the antebrachium, as well as a VD pelvic radiograph that includes the stifles, dated 6/12/10. The right front limb shows elbow joint DJD that involves the lateral and medial humeral epicondyles as well as the ulnar medial coronoid process. An additional bone opacity lesion is seen proximolateral to the olecranon, either lateral to the lateral humeral epicondyle or proximal to the olecranon, that is most likely soft tissue dystrophic mineralization. The pelvic-to-stifles radiograph shows bilateral coxofemoral joint DJD that manifests as irregular and thickened femoral heads and femoral neck osteophyte formation. Spondylosis deformans affects the lumbosacral joint.

We changed his diet, included EFA supplementation (Omega 3 fatty acids), and started (weekly) Adequan injections. We scheduled five Prolotherapy sessions three weeks apart and treated his knees, hips, elbows. By the third session, his gait was back to normal and all feet were

properly bearing weight and placed firmly on the ground. On the sixth session, we included ACell<sup>1</sup> in the protocol. Within 10 days after those injections, Osirus was no longer painful on palpation of hips, knees, or elbows. In the five months since the last treatment, he has gradually improved and no additional Prolotherapy has been needed. Osirus has regained normal mobility and gate. His limping has completely resolved and he is walking, running, and playing like a normal dog. His pain level has dissipated, without the use of drugs. His worst residual issue is a bit of stiffness sitting and standing. Osirus could not stand up on his own prior to his treatments and has now returned to function; age related residual stiffness is merely a trivial affect.

#### METHODS

We did six Prolotherapy treatments in all. Five were a series of injections of dextrose, lidocaine, vitamin B12, and (Heel's) Traumeel in equal parts. The sixth was a combination treatment of the above, but the right hip and knee were also injected with ACell<sup>1</sup> (5cc). Normal needle size was 1.5-inch by 22 gauge for hip injections, and 1-inch by 25 gauge in and around the knee.

Hip treatments of 5cc were injected at the dorsal and lateral aspect of the hip at four injection sites in and around the articular capsule, surrounding the femoral head of both hips.

Knee treatments of 5cc were injected in and around both knees. Injection sites for the knee: lateral tibial collateral ligament, under the infrapatella bursa, into the tendon of the long digital extensor and deeply into the joint space under the patella ligament. Treatments took place approximately three weeks apart.

Elbow treatments of 3cc were injected in and around the elbow. Injection sites for the elbow: the radial head and the annular ligament, the external condyle of the humerus and articular ligament at the radial head, radial and lateral epicondyle at the lateral collateral ligament and the top of the lateral digital extensor on the lateral aspect of the elbow, and the joint capsule.

#### CONCLUSION

Polyarthritis and generalized lameness in older animals can be effectively addressed with Prolotherapy. Hips, knees, and elbows can be treated to improve ambulation,

diminish pain, and improve overall comfort of the animal without using drugs, such as NSAIDs. Using ACell<sup>1</sup> to complete the Prolotherapy treatments enhances the overall healing of all areas and lengthens the time in between needed follow up visits. ACell<sup>1</sup> also helps with the pain associated with both hip and elbow dysplasia. The cases where I add ACell to the protocol typically need fewer follow up visits for pain.

#### RUSSEL THE BRUSSELS GRIFFIN - 2½ YEAR-OLD MALE WHEN ACL SURGERIES FALL SHORT - HOW PROLOTHERAPY HELPS TO ALLEVIATE POST SURGICAL LAMENESS

Surrendered to the Humane society with an ACL rupture on the right side, after traditional ACL surgery, Russel refused to place his foot back down. He was presented to me one month post ACL repair, still holding up the leg. On palpation he was painful on the corrected knee as well as both hips. X-rays indicated hip dysplasia and since normal traditional ACL repair is always isolated to fixing the knee, the hip dysplasia and pain needed to be addressed. (See Figure 3.) We proceeded with Prolotherapy, five sessions, two weeks apart. I treated the knee and also the hips. After the third session, Russell started bearing weight. During this time, electrical stimulation was administered on either side of the knee to further help reset NMDA (N-methyl-d-aspartate nerve receptors) and drop the chronic pain response. Simple physical therapy techniques were administered to aid the rehabilitation efforts. At the end of 10 weeks, Russel was back to normal and adopted by a new owner who lived in a fifth floor walk up, and Russel continues to do well.



Russel, a 2½ year-old male brussels griffin.



**Figure 3. Russel X-ray read by Van William Knox, VMD, Board Certified Radiologist.** VD lumbar spine and pelvic digital radiograph, dated 6/29/10. DJD (degenerative joint disease) on the cranial margins of the acetabulae (hip joint) along with apparent subluxation of the right coxofemoral joint. Medially luxated right patella with lateral bowing of the distal right femur.

## METHODS

Injections of dextrose, lidocaine, vitamin B12, and (Heel's) Traumeel in equal parts. Hip treatments of approximately 3cc were injected at the dorsal and lateral aspect of the hip at four injection sites in and around the articular capsule surrounding the femoral head, of both hips.

His knee treatments of 3cc were injected in and around both knees. Injection sites for the knee: lateral tibial collateral ligament, under the infrapatella bursa, into the tendon of the long digital extensor and deeply into the joint space under the patella ligament. Treatments took place approximately two weeks apart.

A handheld TENS machine was used at low settings on either side of the surgery knee. With rubber pads and ultrasound gel, handheld for five minutes a day for 30 days.

## CONCLUSION

Small breed dogs, less than 20 lb, that do not respond well to traditional ACL surgery, may need and respond well to Prolotherapy for the injured knee. Prolotherapy can also

work well in the hips to help them to walk again and have a normal gait. Prolotherapy is helpful in facilitating and accelerating rehabilitation in knee surgery by addressing corresponding hip problems in small breed dogs.

## FLOPS - 10 YEAR-OLD MALE NEUTER SHEPHERD MIX

The diagnosis was polyarthritis of the hips and knees. On visual and physical exam, Flops was a healthy and strong dog, weighing about 70 lbs. Flops had been adopted from the Humane society as a six month old puppy, but was returned at 10 years old because the owner lost his home. On a lameness examination, Flops could not sit down —there was pain on palpations over both hips and nearly frozen painful knees. His gait was short and stilted, and stiff. We started him on EFAs and injectable (weekly) Adequan.

The first two sessions of Prolotherapy were to his hips but did not improve his stiffness or his gait. So we proceeded to take full X-rays of hips and knees. Sedation was necessary for the X-rays. (See Figures 4 & 5.) While under anesthesia, I administered another session of Prolotherapy. The X-rays showed Flops had hip dysplasia with bone spurs inside of his knees. This was his third Prolotherapy session, and this time both hips and knees were treated. The fourth session consisted of ACell<sup>1</sup> injections in both knees and the worst hip. Although the dog is still a bit stiff, the ACell<sup>1</sup> treatment was the one treatment that helped with the pain in his knees. That session was October 3rd, 2010 and as of December 15th, there is an overall improvement and abatement of clinical signs. He is practicing sit stands daily and is actually able to partially bend his knees. We will monitor this case for any signs of back sliding.



**Flops, a 10 year-old male neuter shepherd mix.**



**Figures 4 & 5. Flops X-rays read by Van William Knox, VMD, Board Certified Radiologist.** Lateral digital radiograph of the left stifle, dated 10/3/10. DJD (degenerative joint disease) on the proximal and distal patellar surfaces, trochlear ridges, gastronemius sesamoids, and tibial plateau. Increased joint fluid +/- soft tissue thickening in the cranial compartment of the stifle joint resulting in a loss of the cranial fat pad. VD pelvis-to-stifles digital radiograph dated 10/3/10. Bilateral subluxated coxofemoral joints with bilateral femoral neck thickening, left worse than right. Bilateral and marked stifle DJD. Lateral spondylitis deformans from L5 - L7.

## METHODS

Technically, we did four Prolotherapy treatments in all. There were three series of injections of dextrose, lidocaine, vitamin B12, and (Heel's) Traumeel in equal parts. The fourth was a combination treatment of the above but the right hip and both knees were also injected with ACell<sup>1</sup> (5cc). Normal needle size was 1.5-inch by 22 gauge for hip injections and 1-inch by 25 gauge in and around the knee.

Hip treatments of approximately 7cc were injected at the dorsal and lateral aspect of the hip at 4 injection sites in and around the articular capsule, surrounding the femoral head of both hips.

His knee treatments of 5cc were injected in and around both knees. Injection sites for the knee: lateral tibial collateral ligament, under the infrapatella bursa, into the tendon of the long digital extensor and deeply into the joint space under the patella ligament. Treatments took place approximately three weeks apart.

## CONCLUSIONS

Prolotherapy is helpful, although not curative, with bone spurs of the knees. It can assist with overall pain levels, and in this case, be supportive of hips and overall arthritis of both the hips and the knees. Combined with ACell<sup>1</sup>, this non-surgical solution is a great alternative to long-term functionality of large breed dogs with age-related multiple joint involvement malfunction.

1. ACell's MatriStem™ is a natural three-dimensional extracellular matrix (ECM) which provides an optimal environment for the body to regenerate site specific tissue. The body's own progenitor stem cells migrate and attach to the MatriStem™ ECM which provides everything cells need to grow and regenerate, including different types of collagens and growth factors. ACell's MatriStem™ products also contain naturally occurring anti-bacterial, anti-inflammatory and analgesic properties which facilitate healing.

SPECIAL THANKS TO VAN WILLIAM KNOX, VMD,  
BOARD CERTIFIED RADIOLOGIST

Dr. Knox has commented on these and many other of the X-rays previously submitted to the *Journal of Prolotherapy*.

Dr. Knox graduated from Princeton University with an AB in Biology in 1989. He received a VMD from the University of Pennsylvania in 1994 and completed a one year internship (small animal medicine and surgery) at The Animal Medical Center (NY, NY) in 1995, worked in small animal private practice in Maryland and Pennsylvania from 1995–2000, completed a three year residency in radiology from the University of Pennsylvania School of Veterinary Medicine in 2003, and completed a one year staff veterinarian position at the University of Pennsylvania in 2004. He currently practices at Susquehanna and Smoketown Veterinary practices in Lititz, Pennsylvania. Dr. Knox is married with two children, three cats, and one dog. Dr. Knox may be reached at Tel: 717-393-8181 or 717-656-6050. Email: [vwk4@comcast.net](mailto:vwk4@comcast.net). ■