

Case Courtesy of: Aimee Mathers, RVN

Scout, a 4-year-old, crossbreed dog, presented to see Dr. Andrew Armitage at Greenside Veterinary Practice with intermittent lameness after exercise. She was bunny hopping on her left hind leg and exhibited intermittent reluctance to jump.

A thorough physical examination carried out by Dr. Armitage indicated the possible start of a medial buttress on the left pelvic limb and slight joint effusion. A cruciate test elicited a pain response as did full extension, and internal rotation, but cranial drawer was negative.

On Gulick tape muscle measurement there was a 2 cm difference in muscle diameter, the left hind limb at 42 cm compared to right hind at 44 cm. On palpation she was also painful at lumbosacral region and had sciatic pain throughout the limb. Also, there was iliopsoas pain on palpation of the muscles and tendon of insertion.

Gait analysis showed a 7 cm reduction in stride length on the left hind limb and a substantial reduction on weight bearing through the limb at walk.

Stance analysis showed she was only applying 13% of her weight to her left hind limb, shifting weight across onto her right forelimb.

Radiographs showed sclerosis of the end plates at L7-S1, osteoarthritis and early stage spondylosis in the lumbar spine. Both hips had osteoarthritic changes, which were worse on the right, and there was evidence of left cruciate degeneration.

Musculoskeletal ultrasound showed there were significant changes to both iliopsoas tendons, (which was more advanced on the left). Disc degeneration at L6-L7, joint effusion on both hips, (which was worse on right) and a joint effusion on left stifle were also noted.

Investigation found that Scout had left cruciate disease, bilateral hip osteoarthritis, iliopsoas tendinopathies, spondylosis and lumbosacral disease - a lifelong debilitating situation for the patient of only 4 years old without intervention.

The decision was made to start Scout on a non-steroidal anti-inflammatory and joint supplements, and also to begin both a regenerative medicine and rehabilitative program. This included Adipose Derived Mesenchymal stem cells, platelet rich plasma and laser therapy (Class IV) to treat both hips, left stifle, the spine and both iliopsoas tendons.

Once Scout's own stem cells had completed culture expansion, the patient was sedated and injection took place. Stromal cells and PRP were intra-articularly injected into both hips and the left stifle. An epidural was performed to introduce stem cells into the lumbosacral region and ultrasound guided implantation was performed into both iliopsoas tendons. Initial laser to all areas post injection using a Companion Therapy Laser was performed to help re-energize cells and reduce pain and inflammation. A total of 6 laser sessions were performed over a 2 week period.

Scout was restricted to gentle lead exercise with a gradual increase over the following 6 weeks. She was re-examined by Dr. Armitage. Her general demeanour and willingness to play had greatly increased. On physical exam there were several improvements noted: no back pain, no cruciate pain or joint effusion, iliopsoas pain still present but reduced. Gulick measurements had improved to a 0.5 cm difference in muscle diameter.

Stance analysis showed that her bearing in the left hind had improved to 14% but she was still off loading. Hydrotherapy (underwater treadmill) was advised.

Exercise continued to increase and at 12 weeks, a re-examination showed further improvements, and further reduction of pain. She is continuing her hydrotherapy sessions and re-examinations. Owner notes overall improvements are fantastic.

