THE USE OF THERAPEUTIC LASER FOR BICEPS TENDINITIS IN AN ACTIVE LABRADOR RETRIEVER

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HISTORY

A 3.5-year-old, intact male black Labrador retriever named Doc presented to his regular veterinarian for a complaint of right forelimb lameness. Doc, an active field trial dog, had run a field trial about 10 days prior to presentation. The trial was over rough terrain, with a large number of obstacles and hills. Doc fell during the trial and afterward showed significant lameness. Within days of the trial, right forelimb lameness became progressively worse and Doc became minimally weight bearing. Discomfort was so pronounced that he would cry out when forced to use the limb, especially in situations where active range of motion was required, such as stairs and hills. Over the 10 days prior to presentation, Doc was not improving and seemed to be experiencing progressively more pain even with light trotting up hills or stairs.

Doc's regular veterinary team found pain with flexion of the shoulder and palpation of the biceps tendon origin. Shoulder radiographs were obtained and revealed mineralization in the region of the right biceps tendon or origin. Musculoskeletal ultrasonography confirmed a diagnosis of biceps tendinopathy in the right shoulder. Doc was put on strict activity restriction, started on carprofen (4.6 mg/kg once daily), and referred to rehabilitation for evaluation and laser therapy.

PRESENTATION

Upon initial presentation to the rehabilitation facility 2 days later, examination findings from the referring veterinarian were corroborated, with observation of moderate to severe discomfort localizing to the biceps origin. In addition to shoulder pain, however, Doc had moderate to severe thoracolumbar soft tissue discomfort. His owner was only interested in pursuing laser therapy, hoping for a rapid and complete recovery. Given the observed degree of discomfort, the rehabilitation team was skeptical of full recovery and return to field trials in a short (2-week) time frame.

TREATMENT

Initial laser therapy at the rehabilitation facility was administered: 1044 J at 6.0 W of continuous wave laser to the right shoulder, biceps, and surrounding soft tissue. After this treatment, the owner reported minimal to mild improvement, but Doc was still largely non–weight bearing on the limb.

The following day, Doc returned to the rehabilitation service with palpable warmth over the right biceps tendon, grade 4/5 lameness in the right forelimb, and marked, recurrent pain in the thoracolumbar spine. Pain evaluation at that visit was assessed at 7/10 on a modified visual analog scale. Super-pulsed laser therapy was delivered with a frequency of 50 Hz for 5 minutes.

The right biceps origin was treated for 5 minutes of super-pulsed laser therapy, and the thoracolumbar spine was treated for 15 minutes using the same settings.

Within hours after the second laser treatment, Doc's comfort level was drastically improved, according to his owner's assessment at home. Doc was more comfortable and better able to bear weight on the limb. Another super-pulsed laser treatment was performed the following day, at which time, his pain score was 3/10 and lameness had improved to grade 1/5 in the examination room. To the surprise of the rehabilitation staff, the thoracolumbar soreness had almost entirely resolved. Doc's attitude and general comfort were excellent, and his owner reported increasing difficulty keeping him activity restricted at home.

After this third treatment, Doc reached a level of comfort with which the owner was completely satisfied, and the owner began to slowly return him to activity and swimming. Doc's lameness score at this time was 0/5 in the exam room and 1/5 after activity. Per the evaluation of technical rehabilitation staff, back pain was also resolved, with a pain score of 1/10.

Doc went on to have 2 final laser therapy sessions, as the owner originally wanted to try 5 sessions. The owner and rehabilitation team noted complete resolution of his lameness. The owner was satisfied with his comfort and function in the field, and Doc was discharged back to his regular veterinarian for follow-up.

FOLLOW-UP

At follow-up 8 weeks after the injury, Doc was running well in regular field trials. Reintroduction to field trial training was gradual, beginning with lower-impact work and working up to full activity. Doc is now running on all types of terrain and exhibits no lameness in field trial training or competition. The owner/handler considers recovery to be excellent, and little time was lost in the training season as a result of biceps tendonitis and lameness.

DISCUSSION

Typically, biceps tendinitis is a very challenging condition to treat and requires prolonged therapy and a slow return to athletic function. Especially with evidence of chronic change in the tendon health, as was noted on diagnostics for this patient, it can take 3 to 6 months to achieve soundness and comfort after acute exacerbation of chronic biceps tendinosis in active dogs. Furthermore, many veterinarians are inclined to use nonsteroidal anti-inflammatory drugs and rest to help patients recover from this type of injury. Response to therapy is usually slow, and pain episodes and lameness are usually recurrent.

The addition of laser therapy for treatment of biceps tendonitis in this case, particularly when the rehabilitation team switched to a super-pulsed laser for treatment, gave the patient immediate and long-lasting improvement in comfort and mobility, allowing a rapid and successful return to athletic function. The use of this type of therapeutic laser in general and specialty practice is growing rapidly, not only because of its safety and ease of use but also because of the tremendous efficacy that is seen in so many cases. Laser therapy is known to be efficacious for treatment of inflammatory and pain conditions, healing wounds, treating infections, addressing peripheral and central nerve injuries, and reducing muscle spasm, pain, and strain after athletic injury. Tendon tissue is typically very slow to heal, and once inflammation is present, resolution of inflammation is difficult to achieve.

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